

Nutrient Trading Expansion Regulatory Advisory Panel
DEQ Piedmont Office
Wednesday, March 20, 2013
10:00 a.m.

Regulatory Advisory Panel Members Present

Philip Abraham, Virginia Association of Commercial Real Estate
Doug Beisch, Williamsburg Environmental Group
Sarah Cosby, Dominion
Jack Frye, Chesapeake Bay Commission
Brent Fults, Chesapeake Bay Nutrient Land Trust
Steven Herzog, Hanover County
Taylor Goodman, Balzer and Associates
Ann Jennings, Chesapeake Bay Foundation
Whitney Katchmark, Hampton Roads PDC
Joseph H. Maroon, Maroon Consulting
Adam Meurer, ECS Mid-Atlantic, LLC
Tim Mitchell, City of Lynchburg
Chris Pomeroy, VAMSA/AquaLaw
Nikki Rovner, The Nature Conservancy
Mindy Selman, World Resources Institute
Tom Simpson, Water Stewardship Inc.
Jack Storton, Babcock and Wilcox/VMA
Shannon Varner, Troutman Sanders
Brian Wagner, Ecosystem Services, LLC

Facilitator

Kristina Weaver, Institute for Environmental Negotiations

Agency Staff Present

Emilee Adamson, DEQ
Russell Baxter, DEQ
Diane Beyer, DCR
Allen Brockenbrough, DEQ
Michael Fletcher, DCR
Matthew Gooch, Office of the Attorney General
Deb Harris, DEQ
Darrell Marshall, VDACS
Ginny Snead, DCR
Kathleen O'Connell, DEQ
Buck Kline, DOF

Others Present

Erik Allen, Watershed Consulting
Casey Jensen, CBNLT
Sara Walker, WRI

Welcome and Introductions

Ms. Snead called the meeting to order and welcomed attendees to the 4th meeting. She reviewed the agenda.

Ms. Weaver thanked members for attending and referenced the meeting guidelines.

Regulatory Action Overview, Committee Charge and Regulatory Timeline Including Discussion of Future RAP Meetings and Revised Work Plan

Ms. Snead reviewed the RAP overview and charge.

Ms. Snead said that the next meeting would be on Monday, April 15 at the DEQ office in downtown. Other meetings scheduled were:

May 31, DEQ Main Street Office

June 6, DEQ Main Street Office

World Resources Institute Calculation Tool

Ms. Selman and Ms. Walker gave the following presentation.

NutrientNet/NTT (Nutrient Tracking Tool) Quantifying Agricultural Nutrient Reductions

NutrientNet/NTT

Nutrient Net:

- Registry
- Marketplace
- Calculation Tools (NTT + GIS + policy)
- Feedlot calculations handled separately

NTT:

- APEX
- Uses SURGO soils, daily weather, RUSLE2 management
- Nutrients, Sediments, Carbon, and Pesticides

Ms. Selman said that World Resources Institute began developing NutrientNet 13 years ago to track costs. WRI worked with Maryland and used USDA tools.

NTT (Nutrient Tracking Tool) is a leading farm based biophysical model.

Applications

- Maryland
- Multistate (MD, VA, PA, WV, DE) – under development

Best Management Practices Handled by NTT

- Nutrient management
- Cover Crops
- Contour strip cropping
- Rotational grazing
- Alternate rotations
- Low-till/No-till
- Enhanced nutrient management
- Phytase/dairy precision feeding/alum

Structural BMPs (applied post-NTT)

- Buffers
- Wetlands
- Fencing/offstream watering
- Conservation plans
- Precision Agriculture
- Stream restoration
- Water control structures
- Nursery water reuse
- P-sorbing materials

Mr. Baxter asked how conservation plans would fit in this model.

Ms. Selman said they could be handled as efficiencies of the model.

Advantages

- Farm specific
- NTT built and maintained by NRCS
- NTT will serve as foundation for Farm Bill and technical assistance programs
- Translation factor between NTT and Chesapeake Bay Watershed Model creates compatibility

- Modified to state program
- Calculates co-benefits

Ms. Jennings asked Ms. Selman to explain the translation factor.

Ms. Selman said that was done with a validation process by evaluating the soils and weighting the percentage of nutrients. She said that on average the NTT value compares to the Bay model.

Mr. Wagner asked if this addressed the Southern Rivers as well.

Ms. Selman said that currently this was just for the Bay area.

Ms. Walker gave a demonstration of the model from the Maryland site. She said that this was similar to how the multi-state tool would look.

Calculation Considerations

- Input data for full rotation
- NTT runs for 42 years, over full weather profile
- Structural BMP efficiencies applied to NTT results
- Calibration factor applied for baseline comparison
- Chesapeake Bay Delivery factor applied for credit calculation
- Calculations performed for current and planned conditions

Mr. Baxter asked how the harvest date was projected.

Ms. Selman said that the average was taken from 42 years of weather data.

Mr. Maroon asked if, at the end of a five year cycle, the farmer could start again with the same process.

Ms. Selman said that there would be an assumption that there were changes in five years and the model would need to be run again.

Mr. Baxter said there would likely be a need for recertification.

Mr. Beisch asked about the schedule for rolling out the model.

Ms. Selman said that the multi-state model should be ready by summer. She said that, depending on the process, the Virginia model may take longer.

Water Stewardship Calculation Tool

Mr. Simpson gave the following presentation.

Quantitative Nutrient Reduction Estimates and Watershed Stewardship Inc.'s (WSI) Nutrient Load Estimator

The WSI Assessment, Verification and Continuous Improvement Process

- Farm recruitment
- Information gathering
- On-site assessment*
- BMP verification*
- Continuous Improvement Plan (CIP) development*
- CIP delivery
- Biennial review*

* use NLE

What is NLE?

- Nutrient Load Estimator (NLE) is a web-based software tool
- Developed by Water Stewardship, Inc. (WSI) in 2009
- Provides quantitative estimates of nutrient and sediment reduction activities
- Estimates are for agricultural or urban tracts at a local land-river segment level (community level)
- Results similar to results from the Chesapeake Bay Program Watershed Model (CBP WSM)
- Users provided user id and password for designated period

How does NLE work?

- NLE is a post-processor, not a simulation model
- Methodology adapted from Phase 5.3 of the CBP WSM
- Uses “No BMP” land use roads and WIP level land use loads generated by the CBP WSM
- Applies BMPs to land uses using application protocols adapted from CBP or developed by WSI to estimate farm level target and BMP effects on farm level loads
- Sequencing and interactions of BMPs incorporated and critical

Landuse Loads

- Loads in NLE represent the average loads for each land use in a specific land-river segment
- Uses land use loads from the CBP WSM calibration and No Action scenarios to represent NO BMP loads
- Land use loads available for total nitrogen, total phosphorus, and sediment
- Loads vary by land river segment and land use type

- Estimates the local edge of stream load and the load delivered to tidal waters

BMPs

- NLE uses CBP WSM BMP efficiencies and application protocols adapted for the farm/parcel level and adapts CBP efficiencies for a few new “interim” BMPs
- BMPs are applied to land use acres or animal populations
- BMPs agricultural and urban structural, management, and land conversion practices

Adaptation Challenges

Challenges that arose when developing NLE included:

- #1 Moving from land use methodology that were developed at the land-river segment level (smallest unit in CBP WSM) to a farm/tract level
- #2 Determining how to represent practices/situations that are present in the real world but do not currently fit into the CBP WSM

Challenge 1: Moving to Tract Level

- Broad assumptions are often necessary when modeling at the land-river segment level
- When working at a farm-level, we actually see what is on the ground and how different areas interact
- Must adapt assumptions to be more farm-specific
- Example: Upland Buffer Benefit
 - CBP WSM – Upland benefit from a forest buffer is proportioned out among all land uses
 - NLE – Upland benefit is assigned to the land use that the forest buffer is converted from

Challenge 2: New Practices

- Must determine how to best represent BMPs/situations that are not in the CBP WSM
- Can add new BMPs approved by states/CBP
- For other BMPs, discuss with CBP and try to gain approval over time
- For now, placeholders are needed in NLE to enable us to complete our farm assessments
- Example: Backgrounding Cattle/Denuded Feeding Areas
 - Cattle receiving supplemental feed in an unenclosed area with no manure collection
 - Does not fit into existing pasture or confinement area land use
 - Load for new NLE land use based on manure deposited in denuded feeding area
 - BMP reductions adapted from existing confinement area BMPs

Example Farm: Background Info

Location: Rockingham County

- Pre-BMP acres
 - 1 acre specialty crops
 - 133 acres row crops
 - 18 acres hay
 - 3 acres pasture
 - 0.2 acres degraded stream corridor
- Animal numbers and time in confinement
 - 75 Dairy Cows: 70% confinement, 30% denuded pasture
 - 65 Dairy Heifers: 50% confined, 50% denuded pasture

Example Farm: Scenario Info

- Existing Scenario BMPs
 - Conservation Tillage
 - Stream Fencing
 - Grass Buffers
 - Mortality Management
- Continuous Improvement Program (CIP) Scenario BMPs
 - All existing BMPs
 - Nutrient Management
 - Continuous No-Till
 - Covered Feeding Area
 - Pasture Management

Mr. Simpson reviewed a comparison of the examples. A full copy of his presentation is available on DCR's website at https://www.dcr.virginia.gov/laws_and_regulations/lr6.shtml.

Conclusions and Observations

- NLE provides similar results to Watershed Model but at a farm level
- Farmers and other users have accepted Land Records System (LRS) land use loads for their fields and other land uses better than we expected
- Applicable anywhere in Chesapeake Bay watershed
- Must have good farm data so site visit usually required
- Currently focused on Chesapeake Bay
- If "No BMP" loads and locally relevant BMPs are provided, can be used "anywhere"
- Has been used successfully on – 250 farms in -60 National Fish and Wildlife Foundation proposal submissions plus voluntary ecosystem credit estimation

Ms. Snead said that the presentations viewed that morning were not intended to be a comparison of the models, but a beginning point for the conversation.

At this time the committee recessed for lunch.

Ms. Jennings said that she would still like to see a presentation of the RMP (Resource Management Plan) program.

Ms. Snead said that the RMPs were tied to the stormwater regulations. She noted that the RMP regulations had not yet been finalized.

Mr. Herzog said that the Maryland program helped with the understanding of additionality.

The issue of sediment was brought up and placed on the parking lot for future discussion.

Mr. Fults cautioned that the RAP shouldn't spend a great deal of time focusing on certification.

Ms. Snead said that conversation would happen as the regulations were being written.

March Regulation Draft Discussion: Programmatic Processes
Part IV – Compliance and Enforcement (Inspections, Enforcement, Penalties)

Ms. Harris led a discussion of the working draft beginning with Part IV.

4VAC50-80-130. Inspections and information to be furnished.

Ms. Jennings expressed concern that this section was critical to the interests of the Chesapeake Bay Foundation.

On line 8 a member asked if the term "authorized contractor" needed to be defined. It was noted that there was no indication or concept for certifying third party inspectors.

Staff said that the inspections would be performed by the agency (DCR, then DEQ).

It was suggested that there be a required check list for inspections.

Mr. Goodman asked where records would be kept.

Ms. Harris said that they would most likely be kept at the nutrient credit generating facility.

It was noted that Maryland requires annual inspections.

Ms. Snead said that the matter of inspections would be covered in Section III.

Mr. Abraham questioned whether it was appropriate to put the frequency of inspections in the regulations.

It was noted that on lines 34 and 35 additional details were needed concerning circumstances, revocation and recertification.

Ms. Snead said that much of that would be covered in Part III which had not yet been drafted.

4VAC50-80-140 Recordkeeping, monitoring, and reporting.

Ms. Harris noted that this section covered what records needed to be retained and for how long as well as reporting requirements. The section also includes the details of what must be included in an annual report.

Mr. Beisch asked about the addition of the three year period as well as the five year period. He suggested making the period five years beyond the date of sale.

Ms. Harris said that the requirement is that once a credit is sold, the documentation must be maintained for five years.

On line 83, a member questioned the specific date of July 1st of each year. The member said that this would not necessarily apply in all contexts.

Mr. Frye asked about the term “planned” on line 66 and asked what “unplanned” would be.

Mr. Baxter noted on lines 129-130 that an unplanned condition could be “a change in any condition that results in a temporary, a permanent, or an elimination of activities controlled by the nutrient credit certification.”

In subsection D a member asked if the purpose of the report was to verify management practices and impact. It was suggested that the expectations be outlined in detail.

Ms. Jennings said that the purpose of verification was to provide public assurance. She said that she did not believe Section III was sufficient as written.

Mr. Baxter said that the detail was included in the procedures.

Ms. Jennings asked if the records would be readily available to the public.

Ms. Harris said that anything submitted to the DCR/DEQ would be subject to the Freedom of Information Act (FOIA) under the Administrative Process Act.

Mr. Baxter said that some of that information would also be included on the on-line registry.

It was noted that the information would be recorded in an electronic database that would be available to the public.

Mr. Beisch asked if item 6 could be modified to say that the use of credits would be recorded.

Mr. Baxter said that the registry would record where the credit had been used.

Mr. Fults said that with regard to the annual report and monitoring that he was concerned that those requirements were not being required for all BMPs.

Ms. Snead said that was being reviewed with the Virginia Technology Assessment Protocol (VTAP) process.

Mr. Wagner asked to what degree the farm information would be open to the public.

Mr. Baxter said that the program was voluntary. He said would be noted up front.

Ms. Jennings said that at some point the farmers would have to accept that the RMP and the trading information would be public information.

Staff noted that it was a matter of how the original information was submitted to the agency.

Mr. Beisch said that care would have to be taken with regard to sensitive facilities, such as federal properties.

4VAC50-80-150. Enforcement and penalties.

Ms. Harris noted that this section referenced the statute.

Ms. Jennings asked why the reference for the Board to enforce the statute said “may” and not “shall.”

Ms. Harris said that was standard language.

4VAC50-80-160. Termination of certification.

On line 103, Mr. Varner noted that this did not provide notice to the owner. He said that should be part of due process.

Mr. Herzog asked if it was appropriate to suspend utilization if the state was considering terminating the credit.

Ms. Selman said that it should be flagged on the registry for suspension, but not cancelled.

Mr. Baxter noted that what is not controlled by the government is the contractual relationship between the buyer and the seller.

Mr. Baxter noted that on line 108 there was an opportunity for a hearing. He noted that the credit could not be terminated without a hearing.

At this time the committee recessed for a break.

Following the break, Ms. Harris continued with a discussion of Part III: Administrative and Technical Criteria.

4VAC50-80-60. Procedure for application for certification of nutrient credits.

Ms. Rovner asked if a person was registering as an aggregator if the land owner was required to be a co-applicant.

Ms. Harris said yes because the agency would need access to the land.

Mr. Maroon noted that some states allow existing BMPs. He asked if an applicant must submit the information regarding what they received in cost share funding.

On line 67, Mr. Varner noted that the added language in subsection 14 was redundant.

On section B. for Signature Requirements a member said that this covered too much information and should be included elsewhere in a more general section.

Ms. Jennings asked if the department did not respond in 30 days if the “shall” tied the agency hands.

Staff said that no, the application would be incomplete by default.

Ms. Jennings said that the Chesapeake Bay Foundation would like to include 30 days for public comment and the agency response. She said that would be a critical issue for the CBF.

Mr. Baxter noted that the 30 day requirement was not in the law.

Mr. Varner said that in subsection D the public notification should be clarified.

Ms. Snead said that DCR would review that section and note the concerns.

On line 116, Mr. Maroon suggested changing “may be visited” to “shall be visited.”

Staff noted that site visits are often appropriate but questioned whether they should be required for everything.

There was continued discussion regarding the site inspections. It was suggested that members submit specific edits via email.

4VAC50-80-70. Nutrient credit release and registration.

Ms. Harris noted that requirements for retirement were added to this section.

Mr. Varner asked about the appropriate stem count. He said he was not sure why the requirement was stated in that context.

Mr. Brockenbrough said that this also allowed for the land to go fallow. He said that a phased release did not necessarily work in converting the land from agricultural to forest.

Ms. Beyer said that the stem count depends on the management goal. She said that there should be a consideration to accept what comes up naturally.

Under Section B1, Ms. Jennings asked by there was an option for department verification.

Mr. Goodman asked if there was a staged release why there was a need for financial assurances.

Mr. Fults said that he was concerned about the science.

Ms. Beyer said that she would work with the Department of Forestry regarding language and documentation of the stem count.

At this time the discussion was concluded for the day.

Ms. Weaver said that any comments or suggested language changes should be sent to Ms. Snead and Ms. Harris.

The next meeting was set for Monday, April 15 at 10:00 a.m. at the DEQ Main Street office in Richmond.

The meeting was adjourned.