Agriculture Workgroup (AgWG)
Conference Call Summary Draft
August 24, 2015
10:00 AM to 12:00 PM
Calendar Page: http://www.chesapeakebay.net/calendar/event/22597/

ACTIONS & DECISIONS

DECISION: AgWG members were asked to approve the revised report. Tiers 2 and 3 recommendations for Nitrogen were approved. Tier 2 recommendations for Phosphorous did not reach consensus approval.
ACTION: Kristen Saacke Blunk, John Rhoderick, to write a memo detailing areas of consensus and non-consensus on NM Phase 5.3.2 report, and providing a plan to move forward with gathering additional necessary information. Memo to be posted by Friday, August 28th.
ACTION: AgWG will convene a sub-team to work with states on questions relating to interpretation of Tier definitions, compliance rates, and reporting information.

MINUTES

10:00 **Welcome, Introductions, Review Meeting Minutes** **Chairs**

10:05 **Announcements (Mark)**

- The Phase 6.0 expert panels are in various stages of development. Stakeholder meetings have already been held for the Conservation Tillage, Manure Injection, and Cover Crop panels, and are moving forward with developing their preliminary charges. Next month, the new Phase 6.0 Nutrient Management Panel will be holding their first stakeholder meeting. The two other panels are finalizing membership and will be getting approval from the AgWG during the September quarterly meeting.

10:15 **September Quarterly Meeting** **Dubin/Chairs/Hanson**

- The AWMS panel is close to formalizing membership, and only needs the commitment of one other person before it can be brought to the AgWG during the September quarterly meeting.
- The Wetlands Expert Panel is recommending wetland land uses, which will be brought to the AgWG as well.
- The Manure Technology panel should have draft chapters by the end of this month, with an update tentatively scheduled for the quarterly meeting.

- The quarterly meeting is scheduled for September 16-17 at the UMD Western MD and Research Education Center, located just south of Hagerstown, MD. The agenda is still being drafted.

10:30 Nutrient Management Panel Report Brosch/Chairs

- Kristen Saacke Blunk discussed the status of the Nutrient Management Expert panel, and reviewed August 20th's open webinar.
- Chris Brosch reported on and reviewed Tiers 1, 2, and 3 Non-Visual Assessment plans, row crop efficiencies, hay land efficiencies, applicable land uses by tier, and overarching questions and concerns covered in last week's seminar. Noted that there was a mathematical error in the report that had since been corrected.

Question and Answer period:

- Rhoderick: Panel was given specific charge and scope based on comments received. The panel went through all of those, and in the report has answered and responded to all of them, right?
    - Brosch: Correct. This information is in Appendix F, and has been corrected of a mathematical mistake regarding the Tier 2 N value. The Tier 2N, 2P, and 3N are up for approval today.
- Kelly Shenk: Question about the Tier 2 P levels. I had raised a point about how the existence of a P index doesn't necessarily mean reduced P loads. What I'm wondering is whether there's a way to look at how states in the watershed are applying their P indices, and what percentage of acres with low-medium P are resulting in a reduction of P application. Has the panel already considered real world data from the state programs, or is there an opportunity to have this information to cross-check with SWAT model runs to make sure we aren't over-crediting?
    - Brosch: One thing we've tried to emphasize is that the SWAT model simulation is calculating a difference between a change in the P index status. Water quality concerns are able to be abated by using simple adjustments like changing the application rate, and applying an incorporation of manure. We summarize the sub-surface and surface benefits of manure incorporation as being worthy of at least 90% of the credit we chose to use as the P index in this case.
- Beth McGee: One of the things that's concerned us is the fact that this reduction is really just based on model information and expected model change, and not on any actual studies.

- Brosch: The P site index is not simply a rate adjustment. There is an effort to reduce the amount of P being lost from fields, and it's going to take time to draw down levels of soil P, but by tilling that surface portion of the soil and mixing in P-laden particles, you're going to get an immediate benefit to surface water quality in the form of reduced runoff.

- McGee: But if that's the case, then where is the data showing that?

- Brosch: The data we've provided for the manure incorporation component in Tier 2, related to what mixing manure off the surface is worth, we calculated conservatively that the efficiency was 5.5%, compared to an efficiency of 6.6% that we'd recommended for the Tier 2 P related to P Site Index.

- McGee: But considering the fact that the P Site Index is what's driving this number, and some of the manure incorporation numbers didn't look at sub-surface losses, makes relying on this data questionable.

- Brosch: We used a complimentary study to the surface runoff study, where the results of that study showed roughly 50% of the water volume moving subsurface versus surface. Using that conservative breakpoint, assuming 50% of the P flow is subsurface, that's how we reduced the benefit from the literature values on manure incorporation to get 5.5%.

- Jack Meisinger: We appreciate Beth and Kelly's comments. This panel has found a significant lack of data monitoring surface runoff and P runoff on an annual basis. So we're facing a situation where there's a major lack of data, and we need to put together a watershed wide program where states collaborate on what the P index is doing. Without doing this, we'll keep having this discussion. I also want to point out that this is model data, and the panel was not happy using model data. Secondly, this modeling study was published by well-respected scientists in a respectable, peer-reviewed journal. And lastly, the goal of the P-indices are to put P in a situation where it's less likely to be lost. So there's a heavy bent on incorporation to achieve this.

- Rhoderick: As I understand it, the p-site index is used in the P calculations, but the issue at hand is more the incorporation of other components used in determining this. Is this a correct interpretation?
    - Brosch: We struggled to find any scientific papers related to the value of a P-index, so we were looking at other components that benefited P loss. We honed in on manure incorporation, citing some of the benefits they've seen in reducing P in the Great Lakes. We were then able to find papers that summarized the surface runoff benefits, adapting that to account for subsurface loss, and then following our other adjustment procedures, where we reached 5.5%. When we reached this level, we discovered this SWAT paper, and put the manure incorporation aside, and decided to use a P index study so we have all the benefits and components of a P index, because they're all working together to reduce the water quality index of high P soil.
- Jim Cropper: In some instances you've got a difference in states and how they develop their P Site Index because of soil type differences and other physiographic factors, and how that influences P rates.
    - Bill Keeling: There are also differences in the coastal plains. The western coastal plain is low in soil P, so you can't just assume DelMarVa is all coastal plain.
- Beth McGee: Does it make sense that now P has a bigger reduction benefit than N?
    - Meisinger: These are not hard and fast numbers. We didn't attempt to put any uncertainty down, but if we did those values would be pretty much the same, given the lack of data regarding P.
    - McGee: Although public interpretation won't assume that they're the same.
    - Brosch: From a baseline condition, where you can consider poultry litter being applied on the lower eastern shore, there's going to be a much greater benefit to the reductions in P loss by coming in line with LGU recommendations for N. When that soil becomes laden with P, it's going to leak it more frequently, and that accounts for another reduction in

application rates. But when you compare the over-application of P at disposal rate to the over-application at N rate, that's the biggest potential benefit in terms of loss.

    - Shenk: I would think that for those high P soils, the existence or application of a P index is not going to result in a P reduction. What I asked initially was whether states could define the acreage where there's high P soils versus the low-medium P soils, where the use of an index could result in a reduction.

    - Meisinger: Although, the number of strategies for remediating high-P soils are few, and it's something that occurs on a long time scale. I think there should be more research into this.

- Ann Swanson: If the drawdown for P takes so many years, then why rush to credit the P in tier 2 prior to 6.0 expert panel? Given the geographic variability that exists, did the panel consider crediting reductions for various geographic ranges, given this variability?

    - Bill Keeling: Ever since EPA decided nutrient mgmt. had no benefit on commercial fertilizers, the states have been looking for due credit for their efforts.

- Swanson: Is just the tier 2 science, even by admission of some of panel experts, less than adequate?

    - Brosch: Because mixing of the soil is an immediate benefit to surface runoff and water quality, so there is a small amount of credit due to farmers using a P index and immediately dropping their status. It doesn't have to only come from drawdown. Considering geographic ranges is something the panel did, there is a table showing components differing across geographic regions. It wasn't the choice of panel to have geographically specific credit, because the P index had a report testing multiple geographies. There wasn't enough evidence that it worked differently in diff locations. There were also components of the second tier that were not geographically specific. To include geographic components would be to ignore the study that crosses geography.

    - Meisinger: Regarding decade-long drawdown time: this is encountered in several places with nutrient mgmt. The new P6 model is attempting to incorporate lag times.

- Marel King: Has compliance with programs factored into these efficiencies at all, or is it just assuming full compliance?
    - Brosch: Management variability factors account for variables in real world. In terms of compliance, there isn't any data to apply specific mgmt. variability adjustments, but we tried to incorporate some tacit knowledge from working with these producers. Ability to comply has been more closely worked into the model than actual compliance.

- Meisinger: Will the Tier 1 efficiencies pass on to the Phase 6 model?
    - Rhoderick: The P6 model and panel will start completely from scratch, so Tier 1 efficiencies as they currently stand will not pass on to the P6 model.

- King: I think we need to stay focused on attaining more, and better data for use in the Phase 6 panel.
    - Saacke Blunk: The question of acquiring better data needs to be on the agenda of the September AgWG quarterly meeting.

- A letter was received from interested parties, detailing concerns on the Tier 2 Phosphorous recommendations. This letter has been posted on the calendar event page.

DECISION: AgWG members were be asked to approve the revised report. Tiers 2 and 3 recommendations for Nitrogen were approved. Tier 2 recommendations for Phosphorous did not reach consensus approval.

- King: The concern is moving forward with the lack of information described by the panel. There is also an issue of compliance and how these definitions are applied. We would like something more formal as far as documentation from the states on how those definitions are going to be applied to how there will be reporting. Also would like commitment on verification that this practice is going to be a priority.
    - Saacke Blunk: The concerns here are the panel recommendations based on limited information, and a concern that there needs to be more data. The second piece is not related to the efficiency recommendations specifically, but related to concern about

needing to know how states are going to apply for Tier 2 credit for Phosphorous and needing to understand that there is a formal review of the states' eligibility of the Tier 2 Phosphorous credit.

- Swanson: We read all of the comments and explanations, and just didn't have the same comfort level with the Tier 2 P as we did with the others. And with the close proximity of what's happening with 6.0 expert panel, we just felt that it really was prudent to perhaps not go forward or go forward at a discounted rate with the Tier 2 P while we are under this reconsideration. And then, it seems like in the application of the expert panel recommendations, you could 1) have each of the sates submit a matrix that shows how their programs fit into each definition, and also a column of the efforts underway to improve the subscription of farmers in each Tier. And given the verification plans, the AgWG could come forward and ask if the NM planning could be a priority practice since the states can't do all verification simultaneously.
- Rhoderick: We were focused on the technical merit of this report. Kristen and I feel that putting together a subgroup to specifically address and put out those guidelines or matrix would be something that we want to pursue. Regarding the technical merits of the report and your discomfort due to lack of science, you gave two options: 1) Eliminate it. 2) Discount it further. Could you explain that more?
  - Swanson: Not moving forward was at least where our staff came to that conclusion. We don't want to put any jurisdictions or program at risk in going forward, where later on there can be a claim where it wasn't based on science. I'm realizing there was limited science and best judgment was used, but it doesn't seem as concrete. And so ideally, we would like the AgWG to consider not moving forward with Tier 2 P. The alternative is to discuss if there's an in between.

- Saacke Blunk: One option given the non-consensus, is to have the AgWG accept areas of consensus around Tier 2 Nitrogen. Can we go ahead and accept consensus on Tier 2 and 3 for N only, that there is not consensus for Tier 2 P, and we will communicate that to those who have to hear our recommendations, and now move into a time the AgWG can use for more substantive work of the state program and their interpretation of compliance.

- Kristen: The motion on the table is to move forward with consensus on tier 2 and 3 N, to indicate that we were not able to reach consensus on Tier 2 P, and that the third part of it was the AgWG would move forward in dialoguing with the states on the interpretation of the recs and plans that the states passed for credits under the new efficiencies and also to explore the noncompliance questions.

ACTION: Kristen Saacke Blunk, John Rhoderick, to write a memo detailing areas of consensus and non-consensus on NM Phase 5.3.2 report, and providing a plan to move forward with gathering additional necessary information. Memo to be posted by Friday, August 28th.

ACTION: AgWG will convene a sub-team to work with states on questions relating to interpretation of Tier definitions, compliance rates, and reporting information.

11:55 Review of AgWG Recommendations Chairs

12:00 Adjourn

Next Meeting: Wednesday, September 16th and Thursday, September 17th

Meeting Materials:
All materials from today's meeting will be posted on the event page:
http://www.chesapeakebay.net/S=0/calendar/event/22597/

Agenda Schedule:
The meeting agenda is reflective of known information at the time of publication and may be subject to change due to other circumstances.

Members present:
Ted Tesler, PA DEP
Kristen Wolf, PA DEP
Steve Taglang, PA DEP
Jenn Volk, UD
Lauren Torres, DDA
Fred Samadani, Environmental Water and Resources Counseling
Jack Meisinger, USDA ARS
Lindsay Thompson, MD Association of Soil Conservation Districts
Robin Pellicano, MDE
Glenn Carpenter, NRCS
Bill Keeling, VA DEQ
Chris Brosch, VT
Jim Cropper, Northeast Pasture Consortium
Mark Dubin, UMD
Ann Swanson, CBC
Kristen Saacke Blunk, Headwaters LLC
Jason Keppler, MDA
Kim Snell Zarcone, Conservation PA
Bill Angstadt, Delaware Maryland Agribusiness Association
Ridge Hall, Chesapeake Legal Alliance
Kelly Shenk, EPA Region 3
Jeremy Hanson, VT
John Rhoderick, MDA
Lindsey Gordon, CRC Staff
Beth McGee, CBF
Chris Thompson, LCCD
Gary Flory, VA DEQ
Dawn Stolzfus, MD Clean Agriculture Coalition
Karl Blankenship, Bay Journal
Marel King, CBC
Paula Hose, CBC
Sally Szydlowski, Water Stewardship
Seung Ah Byun, Brandywine Conservancy