

Agriculture Workgroup (AgWG)

November 21st, 2016

10:00 AM – 3:30 PM

Face-to-Face Meeting Summary

Meeting materials: <http://www.chesapeakebay.net/calendar/event/23305/>

Actions and Decisions:

Decision: The AgWG approved the AMS draft responses to comments on the STAC Review of Nutrient Inputs to Phase 6 Scenario Builder.

Decision: The AgWG approved AMS recommended changes to Scenario Builder, including: the proposed ammonium/nitrate split for fertilizer, the proposed weighting factors for forecasting, and the delivery of nutrients from riparian pasture. The AgWG also requested the AMS examine the sources informing the values for delivery of nutrients from riparian pasture.

Action: The AMS will hold a conference call in early December to review the Phase 6 model input data hosted on the Mid-Point Assessment Tableau site. Participation from interested parties and jurisdictions is encouraged. Contact Lindsey Gordon (Gordon.lindsey@epa.gov) if you would like to participate.

Decision: The AgWG approved the BMP verification methodology used in Delaware and Pennsylvania's Cover Crop Transect Survey Pilot Projects for Cover Crop BMP annual progress reporting.

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- 10:00 **Welcome, introductions, roll-call, review meeting minutes** Workgroup Chairs
- Frank Schenider and Jill Whitcomb were confirmed as the new PA representatives, with Workgroup consensus.
 - Lindsay Thompson noted that the AgWG should begin considering nominations for at-large one-year membership. Lindsey Gordon will distribute an email announcement opening a formal call-for-nominations.
- 10:05 **Update on Phase 6 Input Deadlines** Workgroup Chairs, M. Dubin
- During their October face-to-face meeting, the WQGIT agreed to extend the deadline for submission of all Phase 6 model inputs to December 31, 2016 including the jurisdictions' submission of historical BMP data and the source sector workgroups' submission of final BMP expert panel reports which directly impact Phase 6 model calibration. The workgroup chairs and Mark Dubin noted that the AgWG and WQGIT will have to finalize all Phase 6 model-related decisions by December 19th.
- 10:15 **Turkey Characterization Pilot Project Draft Report** J. Ogejo, T. Sexton
- Dr. Jactone Ogejo, VT, and Tim Sexton, VADCR provided a presentation on the VT Turkey Characterization Pilot Project's [draft report](#) which has been released for Partnership review and comment. All comments should be submitted to Mark Dubin and Lindsey Gordon by December

5th. The AgWG will be asked to approve the final project report during the December 15th face-to-face meeting.

Discussion:

- Sexton: Since we've finished the report, we've gotten additional information to Jactone regarding the 'tbd' values. So the final version will include more information than what's presented here.
- Chris Brosch: If the point of looking at other states is to find variation and you have demonstrated lots of variation here, then what is the point of repeating this process?
 - Sexton: I think the purpose of this is to get standard deviations as low as possible by increasing the sample size. I don't think we would learn any new significant information.
- Matt Johnston: Are we looking at TN and TP as per dry ton? That's very important to us. And I also want to ask everyone to consider that the current population numbers we have is just turkeys. So unless all states can come to us with a breakdown of toms and hens, we would need to use an average for the 12/31 deadline. Going forward, maybe that's a breakdown we can do.
 - Sexton: These numbers have not been converted to dry-ton. They are as-sampled. In regard to your second point, we have total population data for VA, but I haven't compared it to NASS or the ag census, so we may find that the ag census is incorrect for VA. But how it would relate to the other states, I don't know.
- Frank Coale: Do you think what you've sampled is widely different in various parts of the watershed? I ask because I'm curious if you will increase or decrease your sampling error if you move to other parts of the watershed.
 - Sexton: I would hope we decrease our sampling variability, because most of this has to do with differences in in-house management.
- Jill Whitcomb: Can you explain how you derived the precision in your numbers?
 - Sexton: These are averaged numbers, incorporating data from Clemson that had values reaching out to the hundredths place.
 - Bobby Long: That decimal point becomes especially important when you are start multiplying these values by millions of birds.
- Paul Bredwell: Can you explain the variation in the litter generated per bird numbers?
 - Ogejo: The last 3 values, with the large variation, are derived from the 41 pound bird data. We don't know if it's the management style, but if we could get more information then we might be able to parse out why we see this.
 - Bredwell: So would it be possible to correlate management techniques with the data we see here?
 - Sexton: We had a range in our Clemson results, and anything outside of that range was examined more closely. Instances with higher ammonium levels hadn't done a cleanout in the last 5 years. So going forward, we might be able to do that.
- Dubin: I'd also like to recognize Paul Bredwell and the poultry industry for their help on this effort.

10:40 **Swine Characterization Pilot Project Draft Report** M. Estienne, R. Meinen, T. Sexton
Dr. Mark Estienne, VT, Robb Meinen, PSU, and Tim Sexton, VADCR provided a presentation on the joint PSU/VT Swine Characterization Pilot Project's [draft report](#) which has been released for Partnership review and comment. All comments should be submitted to Mark Dubin and Lindsey Gordon by December 5th. The AgWG will be asked to approve the final project report during the December 15th face-to-face meeting.

Discussion:

- Johnston: There seems to be a lot of confidence in the turkey data. Do you have the same level of confidence in this project?
 - Sexton: We only have 1 integrator in VA, and they keep a tight rein on in-house management, but we've found there's not a lot of variability in that.
 - Meinen: When you look at the industry and the weights at the packing plant – the producers are paid on a system that would reward them for having hog weights or meat product that's very consistent. Genetics might vary, but the feed often will come from the same mill. So we don't expect any major shifts to happen.

11:05 **Manure Incorporation/Injection Panel Draft Report**

C. Dell

Curt Dell, USDA panel chair, presented the Phase 6 Manure Incorporation/Injection Panel's [draft report and recommendations](#), which was released for Partnership review and comment on November 4th. All comments should be submitted to Mark Dubin and Lindsey Gordon by December 5th. The AgWG will be asked to approve the Panel's final report during the December 15th face-to-face meeting.

Discussion:

- Greg Albrecht: Can you describe the high-disturbance incorporation P credit for uplands? We find that farms might be committed to high disturbance tillage, but they've shifted manure application from fall to spring.
 - Dell: We saw in the literature that when you do full-width tillage, the particulate P loss with sediments ended up increasing and counteracting any benefit. So the panel discussed and agreed that they just couldn't give credit, unless it was on a flatter coastal plain.
 - Albrecht: The current approach penalizes them for tillage, and has nothing to do with management of manure. So there's this important timing element that is being overlooked.
 - Dell: There should be credit given through nutrient management.
 - Frank Coale: There is a substantial credit for P timing improvement in the NMP Report that would come into play if you moved your fall manure application.
 - Amanda Barber: I think New York's point is that we should be considering timing of manure application, not just tillage practice. Exposure from a spring application is less than an application with tillage left exposed for 6 months through the winter. We agree with the NM credit and the same theory should support some credit here.

11:35 **Conservation Tillage Panel Draft Report**

W. Thomason

Wade Thomason, VT panel chair, presented the Phase 6 Conservation Tillage Panel's [draft report and recommendations](#), which was released for Partnership review and comment on November 3rd. All comments should be submitted to Mark Dubin and Lindsey Gordon by December 2nd. The AgWG will be asked to approve the Panel's final report during the December 15th face-to-face meeting.

Discussion:

- Kelly Shenk: Based on latest science, we're starting to see situations where you're broadcasting P on top of no-till systems and you get an increase in the dissolved P. How is that factored in?

- Thomason: These loss reductions are based on total P (both sediment-bound and soluble). What we consistently found was that even though soluble-P levels went up in these no-till systems, on well-drained soils we still saw less total P loss because the proportion of that water-soluble P was relatively small.
- Frank Schneider: For your different tillages, the sediment loss is the same as upland v costal, whereas N and P have different percentages. Why is sediment loss considered the same?
 - Thomason: You're right in that the absolute loss is certainly different between landscape conditions. However, we had a number of studies that all showed the proportion all stayed about the same. So the proportional reduction seems to be consistent regardless of landscape.

12:00 **Break for Lunch**

12:45 **Cover Crops Panel Draft Report**

K. Staver

Ken Staver, UMD panel chair, presented the Phase 6 Cover Crop Panel's [draft report and recommendations](#), which was released for Partnership review and comment on November 18. All comments should be submitted to Mark Dubin and Lindsey Gordon by December 16. The AgWG will be asked to approve the Panel's final report during a meeting to be convened on the morning of Monday, December 19th.

Discussion:

- Johnston: Do you think that now is the time, in Phase 6, to take us from 95 reportable cover crops BMPS out of a total of 200 BMPs in the model. Is this the time not to expand, but to condense (based on the findings you've found) the BMPs on the menu?
 - Keppler: I would be amenable to that.
- Brosch: Did the panel consider default values?
 - Staver: When you don't report a specific cover crop, it goes to the lower species.
 - Brosch: Some of these planting methods aren't common and they have low efficiencies. So it could be useful for the WTWG to consider some default values.
 - Sexton: If we reported the majority of our cover crops acres we could use that as a default. I don't plan to report the 3,000 different varieties of cover crops.
 - Staver: And we try to be open to suggestions for things that people would like to be eligible for. So we were just trying to accommodate the suggestions that we heard.
- Kelly Shenk: A big change to how we're looking at cover crops is to credit manured cover crops. The big question is how beneficial are they, and how does the N reduction efficiency relate to non-manured. Can you speak to how those efficiencies compare to a non-manured cover crop?
 - Staver: The reduction won't be as high from a pure efficiency standpoint, but the loss potential will be very high. So it could turn out to be a very important practice, and in terms of pounds of load reduction, it could be very high.

01:15 **Animal Waste Management Systems Panel Update**

J. Hanson

Jeremy Hanson, VT Panel Coordinator, provided an update on the status of the Phase 6 Animal Waste Management Systems Panel's draft report, and the timeline for Partnership review.

Discussion:

- The panel hopes to release the draft report for Partnership review next week. The AgWG will have an abbreviated review period in order to accommodate decision-making deadlines, and the workgroup will be asked to approve the report during their December 15 call.

- The Wetlands Expert Panel draft report is scheduled to be released on November 22. There will be a public webinar on December 2, following distribution.

01:25 **Agricultural Modeling Subcommittee Update**

C. Dell, M. Johnston

Curt Dell and Matt Johnston presented the AMS's [drafted responses](#) to the STAC Review of Nutrient Inputs to Phase 6 Scenario Builder, and [additional recommendations](#) from the AMS on proposed changes to Scenario Builder.

Discussion:

- Lindsay Thompson: Can you provide more information on the weighting factors and forecasting? If I think back to the Poultry Litter Subcommittee, we realized how the forecasting overestimated the population so we got better data.
 - Johnston: Now we have new data for broilers over the 30-year period. So to forecast, we have both long-term and short-term trends over those 30 years, and we combine them by using weighting techniques to give us a percent change going into the future.
- Greg Albrecht: Is it worth pointing out that there is a set of corn silage that doesn't receive manure? And there are also continuous corn silage acres that do receive manure.
 - Dubin: The amount of manured acres on corn silage is dictated by rainfall for that year to some degree.
- Frank Coale: Logistically, what different does it make whether that land use is in there or not? If there's angst about taking it out, I would recommend we leave it in.
 - Thompson: I think it was for simplifying all of these ag land uses, but I'm hearing that there may be some merit to leaving it there.
 - Johnston: Truthfully it doesn't matter at all.
- Sexton: On the riparian pasture issue, the 33% delivered – perhaps we should try and find additional research on what that number should be. We looked prior, and there isn't anything that we could find. But it's worth a shot.
 - Johnston: I've asked one of our interns to work on that, but I don't know what she'll bring back.
- Ted Tesler: On establishing riparian pasture – is that domain established from the Conservancy land use data?
 - Johnston: There is no domain; it's all about a stocking rate on pasture.
- Thompson: And just to clarify the delivery of nutrients factors, we would be decreasing our direct load from 100% to 70%.

Decision: The AgWG approved the AMS draft responses to comments on the STAC Review of Nutrient Inputs to Phase 6 Scenario Builder.

Decision: The AgWG approved AMS recommended changes to Scenario Builder, including: the proposed ammonium/nitrate split for fertilizer, the proposed weighting factors for forecasting, and the delivery of nutrients from riparian pasture. The AgWG also requested the AMS examine the sources informing the values for delivery of nutrients from riparian pasture.

Action: The AMS will hold a conference call in early December to review the Phase 6 model input data hosted on the Mid-Point Assessment Tableau site. Participation from interested parties and jurisdictions is encouraged. Contact Lindsey Gordon (Gordon.lindsey@epa.gov) if you would like to participate.

02:00 **Delaware and Pennsylvania Pilot Cover Crop Transect Surveys**

Marcia Fox, Tyler Monteith, B. Coverdale, Susan Richards

The crop residue management transect survey programs established in Delaware and Pennsylvania for tracking and reporting county scale cropland tillage and residue management implemented a new cover crop transect survey pilot project in late 2014. Marcia Fox and Tyler Monteith with DNREC, Ben Coverdale with the DDA, and Susan Richards with the Capital Area RC&D Council representing both programs, [presented the latest findings](#) of their respective pilot cover crop projects over the past year, the methodology used in conducting the surveys, and how the information is being proposed to track and report annual cover crop implementation for the two jurisdictions.

Discussion:

- Mark Dubin: This was presented to the AgWG a year ago, and the workgroup gave approval of using this method for the last year. They've had an opportunity to address any questions from the AgWG last year, and they would like this method and these acres to be accepted under the BMP verification requirements for cover crops.
- Jason Keppler: How does PA extrapolate out to the state?
 - Tesler: In tillage, we'd have a breakout based on percentage residue in the same CTIC categories. We would report for that county the percentages applied to the appropriate crop. Because it's scientifically based study, we can readily extrapolate.
 - Fox: We haven't worked with CTIC on this. We take the NASS data and look at harvested cropland, and we extrapolate the percentage and multiply it out based on that NASS cropland.
- Thompson: I thought the AgWG protocols were 100% verification of annual BMPs moving into 2019.
 - Dubin: The protocol allows the use of transect surveys.
 - Thompson: So if the AgWG approved this, then it would be an indefinite approval.
- Motion from Jason Keppler to approve the PA and DE cover crop transect survey methodology for reporting. Kelly Shenk seconded.

Decision: The AgWG approved the BMP verification methodology used in Delaware and Pennsylvania's Cover Crop Transect Survey Pilot Projects for Cover Crop BMP annual progress reporting.

02:30 **Pennsylvania Farm Conservation Practice Inventory Project** M. Royer, S. Dressing, J. Harcum

Matt Royer, PSU, provided a presentation on the [BMP verification methodology and findings](#) of the completed Pennsylvania Farm Conservation Practice Inventory Project conducted across the Bay watershed in the Commonwealth. Steve Dressing and John Harcum with Tetra Tech presented a report on their [independent evaluation](#) of the project's statistical analysis and BMP verification methodology.

Discussion:

- Chris Brosch: It seems like stream bank fencing numbers doubled – can you speak to why?
 - Royer: It's hard to tell. We didn't dig into the data, and I think that's what you would have to do here.
- Tim Sexton: I understand Tetra Tech had some comments that needed to be addressed. Is that correct?

- Royer: Yes, there was a comment regarding county-by-county variability, and we plan to address that on short order. We also plan to provide details on how we did these adjustments for under- and over-reporting. We will also provide our data in tabular form.
- Sexton: Could you get that to us before 12/15?
- Royer: We can get something to you at least by 12/1.
- Jason Keppler: I'd still like to get a better idea of what practices PA intends to report. Some practices have RI standards, and there are some with RI practices and some without.
 - Tesler: We'd like to report the previously unidentified practices to the fullest extent.
 - Royer: The crosswalk we developed was for every BMP that we asked about in the survey.
- Matt Johnston: This workgroup went through a long process of approving the RI report for MD, and we said that any other state is welcome to do RIs, but come forward to this group with all your information. So I think everyone wants to get practices in, but what's the protocol this group has for allowing practices in from any state?
 - Keppler: Exactly – are we using this survey to set the bar for reporting? These are things to consider.
 - Whitcomb: For the RI practices, we used the checklist to approve it. For annual practices, our practices that are non-cost shared don't get reported through any other means so we were looking to report those. It was our understanding that we would provide this information and get it into the verification guidance document as a method by which any jurisdiction could use for initial verification.
- Thompson: In July we gave approval for this project to move forward, but approval for use in Phase 6 was contingent on the verification and the Tetra Tech report. I think the questions coming up are related to how PA plans to extrapolate this data.
 - Tesler: We're not looking to extrapolate past the responses we received.
- James Davis-Martin: How do you distribute this through time, assuming it gets approved? These BMPs weren't all implemented in the past year.
 - Thompson: They're all going to be considered new since they haven't been reported before. But what about structural practices?
 - Dubin: They asked for dates in the verification.
 - Johnston: That would be an expectation from the WTWG and Partnership as well – that structural practices come with implementation date.
- Sexton: Is this going to be a yearly effort?
 - Whitcomb: It was in our guidance to get a handle on non-cost share BMPs, but we don't have a long-term commitment.

03:10 Update on Phase 6 Nutrient Management BMP Panel Final Report

M. Dubin

Mark Dubin provided an update on the decision made by the WQGIT in regards to the Phase 6 Nutrient Management BMP Expert Panel's final report.

Discussion:

- Mark Dubin noted that the AgWG approved an amended version of the Phase 6 NMP report on 10/20. The WQGIT was unable to reach consensus, and the Management Board requested the decision be placed back in front of the AgWG. The WQGIT will be considering this again on 11/28 and the 12/8 Management Board meeting following that.
- Coale: The panel will not revisit the report, so what we're discussing are policy addendums.

- 03:25 **Wrap-Up/Review of Action and Decision Items/Announcements** Workgroup Chairs, M. Dubin, L. Gordon
 Lindsey will review the actions and decisions from the meeting.
- Lindsay Thompson requested the AgWG place a hold on their calendars for the morning of 12/19 to approve the Cover Crops Panel Report.

03:30 **Adjourn**

Next meeting: Thursday, December 15th 10:00 – 3:00 Face-to-Face @ CBPO Offices in Annapolis, MD

Participants:

Lindsay Thompson	DE-MD Agribusiness Assoc.
Mark Dubin	UMD
Lindsey Gordon	CRC
Chris Brosch	DDA
Clint Gill	DDA
Ben Coverdale	DDA
Tyler Monteith	DNREC
Marcia Fox	DNREC
Jason Keppler	MDA
Alisha Mulkey	MDA
Robin Pellicano	MDE
Greg Albrecht	NYS
Amanda Barber	Cortland Co. SWCD District
Emily Dekar	USC
Frank Schneider	PA State Conservation Commission
Jill Whitcomb	PA DEP
Kristen Wolf	PA DEP
Robb Meinen	Penn State
Ron Ohrel	Mid-Atlantic Dairy Assoc.
Chris Thompson	Lancaster Co. Conservation District
Susan Richards	Capital Area RC&D Council
Tim Sexton	VA DCR
Bobby Long	VA DCR
Kelly Shenk	EPA
Jeff Sweeney	EPA
Jactone Ogejo	VT
Wade Thomason	VT
Bill Angstadt	Angstadt Consulting
Frank Coale	UMD
Ken Staver	UMD
Matt Johnston	UMD
Marilyn Hershey	Ar Joy Farms
Paul Bredwell	U.S. Poultry and Egg Assoc.
Tim Garcia	USDA NRCS

Dennis DeWeese	USDA NRCS
Curt Dell	USDA
Joe Montenegro	PA Farm Bureau
Kelly O'Neill	CBF
Don Meals	Tetra Tech
Steve Dressing	Tetra Tech
Jon Harcum	Tetra Tech
Marel King	CBC
Jennifer Reed-Harry	PennAg Industries
Bill Chain	CBF
Kim Snell-Zarcone	Choose Clean Water Coalition
Jim Cropper	Northeast Pasture Consortium
Jeremy Hanson	VT

DRAFT