

Agriculture Workgroup (AgWG)

February 17th-18th, 2016

Quarterly Face-to-Face Meeting Summary

Meeting materials: <http://www.chesapeakebay.net/calendar/event/23291/>

Actions and Decisions:

DECISION: The AgWG approved the final crosswalk report of the Phase 5.3.2 Nutrient Management Task Force.

ACTION: The AgWG will hold a webinar on March 10th, on the incorporation and implementation of Phosphorous management and land use loading ratios into the Phase 6.0 beta model. More information can be found on the calendar event page: <http://www.chesapeakebay.net/calendar/event/23624/>

ACTION: States are encouraged to download and review the Scenario Builder documentation that is hosted under the Projects & Resources Tab on the Agriculture Workgroup page (http://www.chesapeakebay.net/groups/group/agriculture_workgroup), and provide comments to Matt Johnston (mjohnston@chesapeakebay.net) and Curt Dell (Curtis.dell@ars.usda.gov) by March 1st.

DECISION: The AgWG approved a revised proposed scope of work to establish a Phase 6 Drainage Ditch Management BMP Panel, on the condition that the expert panel will follow the CBP BMP protocol, and the AgWG will have the opportunity to review the proposed panel membership during their March 2016 conference call.

DECISION: The AgWG motioned to support the interim animal mortalities facilities freezers BMP efficiency proposal, and will recommend this proposal to the CBP Modeling Workgroup for final approval.

ACTION: The AgWG motioned to request that a Gantt chart be developed to track panel deadlines and schedules, and pieces of shared information that require coordination; and that the Gantt chart be provided every month to the AgWG as a means for tracking progress on critical deadlines and information for these panels. This Gantt chart will be presented at the AgWG March conference call.

DECISION: The AgWG will be asked to endorse the proposed membership for establishing the Agriculture Stillwater and Cropland Irrigation BMP Panels during the March conference call.

ACTION: The AgWG requests that Mark Dubin provide the scope of work and plans for the poultry data collection effort, and provide a person of contact for each of the projects to the AgWG.

ACTION: The AgWG should send any comments on part 2 of the toxics report, (http://www.chesapeakebay.net/channel_files/23291/scheuler_utc_report2.pdf), to Tom Scheuler (watershedguy@hotmail.com) before the end of the February 2016.

DECISION: The AgWG approved the selection of Secretary Ed Kee, DDA, as the new workgroup chair and Lindsay Thompson, DE-MD Agri-business Association as the workgroup vice-chair, pending final approval from the WQGIT.

February 17th, 11:00-3:30 PM

- 11:00 **Welcome, introductions, review meeting minutes** Workgroup Co-Chairs
- Meeting minutes from the January conference call were approved.
- 11:05 **The Role of Crediting Practices in the Chesapeake Bay Restoration** Shawn Garvin
- Regional Administrator Shawn Garvin, U.S. EPA Region 3 gave remarks on the role of crediting practices for nutrient and sediment reductions in the partnership's Chesapeake Bay restoration efforts.
 - John Rhoderick: It's a fine balance of how you structure resources in regards to WIP goals and how much time you spend on verification to provide that transparency.
 - Garvin: There's a finite amount of resources for everything. And at the end of the day, we need to strike that balance. I think this goes back to showing your math. It's being able to put the work in on how you justify what you did.
 - Chris Thompson: Does PA's survey to capture self-funded BMPs meet the EPA's standards to be included in the model?
 - Garvin: Right now, no. There is some more work that needs to be done to plug that in. My understanding was they're trying to get a sense of what's out there, and how much folks are looking to play in that survey. We still need to make that connection between the tools we have in place, and that survey.
 - Robin Pellicano: Will you be speaking to the other sector workgroups?
 - Garvin: I would love to. This workgroup is just an offshoot of the conversations on verification that we were having. The most critical thing for me is implementation.
 - Lindsay Thompson: My comment would be that as we're crafting these verification plans, and as you're talking about other sectors, if EPA could just stand behind those verification plans, that would be really supportive. To the extent that EPA could be an advocate for the fact that agriculture is getting these practices implemented, and also hold agriculture to the same standard as the other sectors, that would be much appreciated.
 - Garvin: I believe that there's always room for constant improvement. I try to reiterate that all sectors are stepping up and doing what needs to be done. There's always bad actors, which is where we usually end up spending our time. There's also a lot of pointing between sectors, and it's understandable. What I found, is, if someone thinks they're doing more in an area and they want others to do more in that area, somebody said that we all need to be singing from the same song sheet. Which we absolutely are, but we might be playing different instruments.
 - Ron Ohrel: Seems like the agricultural community has been encouraging farmers in PA to complete this voluntary survey. What I hear you say suggested that the data might not be used to the degree the farmers are hoping that it will be. What I also fear, is that

if we keep going back to them for more information, or because the data wasn't good enough, there will be a backlash. How do you suggest that I sell this to our farmers?

- Garvin: We are working with the commonwealth to make sure that we have something that can be plugged in, and we're trying to figure what it is as quickly as possible so we don't have to keep going back to the commonwealth for more information. There are some areas that we still need to fix. From the standpoint of working with your members, my expectation that there are foundations in what the survey's asking for now that will be built off of what has to get applied to get credit for it. I think it's not a wasted effort for them to go through that.
- Ohrel: The survey is due in April.
- Garvin: We're looking for a chance to have a conversation with the secretaries, to find that gap and identify what we need to fix.
- Rhoderick: This AgWG worked on a very definitive package of how non-state or federal funded, farmer installed, NGO installed practices could be credited in the model. The protocol was approved by the AgWG.
- Garvin: I think that's where what's being asked and that methodology haven't quite connected.
- Jason Keppler: We're in a strong position in implementing our BMPs. Having the technical assistance is great. Ag will continue to do more, and obviously a lot of focus will be on implementation and BMPs. Our primary goal is to make sure we have folks out in the field. Under this new verification system, we need to balance that with implementation. In MD, we have 3rd-party verification to do that. That comes at a cost, though, so it's important to keep that in mind as we develop these plans – resources should be made available to help states accomplish those goals.
 - Garvin: The more we can figure out how to leverage those resources and activities, the better off we'll be. But there's other pieces, which aren't just verification, but education as well.
- Thompson: You've mentioned that we may not be seeing the impacts of what's happening on the landscape with regard to the water. This is an old conversation, but until we have some kind of representation of legacy in the model, it's not going to match up. So, I think maybe that's a communication issue, and maybe this is a conversation that needs to happen – specifically in regards to lag times.
 - Garvin: 2025 is not when water quality will be improved; it's when we'll have practices on the ground to ultimately see water quality. And that's one of our big challenges, but we can't use lag time to justify not doing anything until a later date, which only compounds the lag-time issue.
- Chris Brosch: Regarding the lag-time issue, the NMP was stuck in a position where a lot of environmental folks said NM is worth something, but not what the panel said it was worth. And they pointed to data that wasn't responding to measured soil P. I think we need to respect the soil side of things, and allow some leeway with the expert panels to have that type of expertise captured, and have EPA help defend it.
 - Garvin: I appreciate that, and I don't disagree with you. I want to ensure against potentially over-crediting something or double-counting, and so as we're looking at soils and P, how we calculate that in our NM plans, and how we calculate in a larger picture, I just want to make sure that with a straight face, we're not saying we'll fix it in 2 years, and come in with a higher number until there's better data. My preference is we're more conservative until all the experts have confidence that a certain value is dead-on.

- AgWG IPs should send further questions for Shawn to Kelly Shenk.

11:25 Nutrient Management Task Force Update

Workgroup Co-Chairs

- The Nutrient Management Task Force updated the AgWG on the final version of the crosswalk report, which includes additional information on compliance acreage based on the three NM tiers.
- Brosch: Regarding PA's compliance, 100% refers to the compliance of those plans that have been written.
 - Tim Sexton: PA only reports acres under their permitted program.
 - Doug Goodlander: The acres that we reported under Tier 2 are verified acres that are being implemented that we inspect on an annual basis. If there's any non-compliance, we have that fixed right away, and there is no crop-year that goes through them without non-compliance.
 - Kelly Shenk: From MD's perspective, your annual report is based on that one snapshot in time of one large inspection, and not what you did the rest of the year, which would include how you worked with those farms to correct that non-compliance.
 - Keppler: The question becomes how, or when, you define compliance.
 - Shenk: This compliance is with the definition of the BMP.
- Beth McGee: We're still concerned that the Tier 2 P acres will be credited across the board. We argued that the existence of a Tier 2 P number doesn't mean you automatically get reductions. We recognize that the response is that it was factored into the efficiency itself, but I don't think it's that clear in the document that that's what the expert panel had envisioned. Shawn mentioned the need to show your work, and I don't think this passes that test. That 35% number was based on one study, and in our mind, that has low reliability. So we will remain opposed to the application of the Tier 2 P on all of the Tier 2 manured acres.
 - Sexton: I object to that concept because it only applies to a small % of the acres.
 - Rhoderick: A lot of states don't have the ability to selectively pull out the Tier 2 P information from their compliance reports. So you're talking about a whole new protocol that couldn't be instituted this year, or next year. It's something that we talked about within the task force, which is a good suggestion for the Phase 6 panel, but again – we're working with the current model.
 - McGee: Doesn't MD have that information? Or at least some sense of how many acres have soil P levels that would trigger the use of the PMT and result in a reduction of manure application.
 - Keppler: As part of the PMT, and the regulations that manage that, our NM consultants were required to submit results of all soil analyses that were done on MD farms. We're still in the process of compiling that information; further, that's information that was made available from our consultants, and it isn't easily verifiable. We don't have specific locations for fields, but this was more or less to develop a trend over time to track P levels and engage that moving forward with the implementation of PMT.
 - Goodlander: Also, soil test P level isn't the only indicator to identify where the P index is restricting manure applications.
- Lindsay Thompson moved for consensus to approve crosswalk report. Second from Tim Sexton.

DECISION: The AgWG approved the final crosswalk report of the Phase 5.3.2 Nutrient Management Task Force.

11:50 **EPA's Response to the Nutrient Management Task Force Report and Next Steps** Kelly Shenk

- Bill Angstadt: I'm supportive of the work the panel and states have done together. My question for the workgroup is, with all these months of working on these tiers and this discovery process, do we intent, or what the opinions on, building on these three tiers and all this hard work for Phase 6, versus what some voices have said in the past is that we should discard 5.3.2 and start over again.
 - Rhoderick: Frank will be here to talk about NM 6.0, and the question will be answered at that time.
- Kelly Shenk discussed the utility of the Task Force's report in confirming the nutrient management acres reported for credit by each state. In the event where compliance documentation and data are limited, EPA discussed its plans for evaluating additional information to either bolster the state submissions or to inform any necessary adjustments.
- Saacke Blunk: Could you clarify what a timely and effective remedying of a problem looks like?
 - Shenk: I would point to VA and MD's programs, and how they're set up. What is their time frame for remedying issues of non-compliance?
 - Rhoderick: They have protocols in place to set up follow-up inspections, etc.
 - Shenk: We're talking weeks or months, versus years. There were cases in our animal ag assessment where significant water quality issues were evident, and 3 years later the problems were still there. It'll vary by state, but it can be unresolved after multiple visits.
- Keppler: Are we to expect a call from you guys for another NEIEN submission to handle this? Or how are you guys going to do this progress run for March?
 - Shenk: I'm not expecting another NEIEN submission. I thought the final submission had already been asked for. If we still feel like there's inadequate information and an adjustment needs to be made, then that's something we need to work individually with the states.
- Shenk: If we haven't been able to resolve individual issues with the states, then those NEIEN submissions may need to be changed.
- Keppler: So there've been 5 version of progress that have been run. The past 2 – do they include all of the recommendations from the Task Force and Tier 2 P into that as well?
 - Shenk: I don't think they've included this in the runs.
 - Marcia Fox: DE has included all of the information into the NEIEN submission.
 - Dubin: The acres that were reported in NEIEN will be what's used for the progress runs. For many states, it's the same number.
 - Keppler: So those progress runs are based off of the expert panel recommendations?
 - Dubin: Yes.
 - Keppler: So this is more or less just an approval exercise for the Task Force recommendations?
 - Dubin: The crosswalk report is purely informational, and doesn't directly change the numbers provided.

- Keppler: So we should expect to see a change in our progress runs for the final March run. Our data is already submitted and credited. We've already seen the results of those runs, so we shouldn't expect to see any differences in NM?
 - Dubin: There shouldn't be any differences, correct.
- Shenk: Tim, do you have a sense of where NRCS is on this request?
 - Garcia: I reached out, but haven't received a response yet. I think their team lead is talking about. There is some concern that they don't want this information to be used as regulatory compliance information, and the watershed scale, as you said earlier, wouldn't be state valid. It would be watershed-wide valid.
- Saacke Blunk: Do you have some sense that we have programs that would fall below a possible lower bound, which the CEAP report would provide? This lower bound would be establishing a range of whether the data we've received from the states falls into that range.
 - Shenk: If you have a state-reported compliance level without much information, you might first look to the states that did a good job and what their compliance level was for similar programs. By that, you could justify that states without the good reporting would reasonably not have compliance levels much higher than their exemplary counterparts. But how much lower should they be? CEAP gives a watershed average, and this could potentially set the lower bounds, so the state is in a range.
 - Garcia: I think the threshold is pretty high, at least for corn.
- Rhoderick: Would you come back at some point with your findings and final outcomes?
 - Shenk: Yes. We're trying to be as transparent as possible. I think it's important to set the whole context, which we recognize the states are working very hard, so what you do in the 1st, versus 2nd and 3rd year is complicated. I don't know what we're going to do yet.
- Sexton: This is a work in progress. We're all ramping up. Secondly, we should remember that if you look at 590 standards, there are things in there that don't have anything to do with NM. I'm running NM programs in VA. The 590 plans have requirements, but there's things in there that aren't standard, and I'm not working with. But I am looking at their numbers of compliance with the 590. Our verification was taken from their verification form, so there's a couple of questions we don't ask as a part of NM. So you could still be implementing NM as part of the state requirements, but not fulfill all of the 590 requirements.

1:00 **Break for lunch**

1:30 **Animal Waste Phase 6 Panel**

Jeremy Hanson

- Jeremy Hanson updated the AgWG on the progress of the Animal Waste Phase 6 BMP Panel. The chair and panel membership have been approved, and they are preparing for their first meeting and open stakeholder session.
- Rhoderick: Can the panel meet the deadline from the CBPO modelers?
 - Hanson: The panel is already working, even before their first official meeting. We still want to get input from the partnership, but they're already up and running, reviewing a wealth of background information. We are working with the modelers on the timing of panel recommendations.

- Saacke Blunk: What practices will be reviewed by panel?
 - Hanson: Anything that was in Phase 5, and potentially some new practices as well.

1:45 **Manure Technology Phase 6 Panel**

Jeremy Hanson

- Jeremy Hanson updated the AgWG on the progress of the Manure Technology Phase 6 BMP Panel.
- Jeremy noted that panel is finishing report for release in March for workgroup review.
- Saacke Blunk: Our next F2F meeting is in May. Would we receive the presentations at an online meeting or at a F2F?
 - Dubin: We'd like to introduce it in advance of the next workgroup meeting, and that will open up a comment period.
 - Hanson: I'll touch base with Mark and AgWG chairs to plan that out.
- Saacke Blunk: I do think that the web-based meetings, for the panel chair to present the findings and do it in a way that walks folks through the panel recommendations, would be a worthwhile process. Could we have a webinar of some sort on this?
 - Dubin: That would allow us for other partners to participate. We've done it occasionally in the past.
 - Keppler: I think that would be valuable. Within MD, there's been a lot of different types of practices that have been proposed to the state that have the silver bullet technology, and we've been holding them back, realizing a number of those technologies are being reviewed by the panel. So I would like to invite them to listen in on the expert panel recommendations.
- Hanson: The wetlands panel report is coming out soon, and we will notify the workgroup of when that is released.

2:00 **Workgroup Phase 6.0 Beta Review of the Watershed Model**

Mark Dubin

- Mark Dubin updated the AgWG on an upcoming webinar to initiate a workgroup review of the implementation and incorporation of Phosphorous management and the land use loading ratios into the Phase 6.0 beta version of the Watershed Model.
- Bill Angstadt: We talked about having a WQGIT webinar, concerning the sections of the 6.0 documentation, which is target loads, sediment loads to water, among others. Is this the same webinar, or is this different?
 - Dubin: This is a different webinar. It's been specifically requested by the AgWG, and our primary audience will be the AgWG. It will be open to anyone who wants to participate.
 - Montali: We are following up on the WQGIT webinar this Friday. We'll be talking about how to accommodate webinars for those issues as well.

ACTION: The AgWG will hold a webinar on March 10th, on the incorporation and implementation of Phosphorous management and land use loading ratios into the Phase 6.0 beta model. More information can be found on the calendar event page: <http://www.chesapeakebay.net/calendar/event/23624/>

1:50 **DDA Secretary Ed Kee provided some remarks to the AgWG on Delaware's agricultural industry.**

2:15 **Agricultural Modeling Subcommittee Update**

Matt Johnston, Curtis Dell

- Matt Johnston and Curt Dell updated the AgWG on the progress made by the Agricultural Modeling Subcommittee, and the outcomes of their face-to-face meeting on January 28th.
- Discussion on manure transport data and MD AIR data.
 - Rhodes: There's one poultry company that's not part of our manure transport program, so for that company you won't have data.
 - Jack Meisinger: In your beta run, you were taking transport off after the distribution. When you thought it should've been taken off before the distribution.
 - Johnston: That impacts fertilizer numbers. In future runs, we'll be running all of Scenario builder, before scenario builder calculates the leftover crop application goal. And that will tell scenario builder how much fertilizer should go in each county. That'll be an improvement in a future run.
 - Paul Bredwell: Could any of that differential between manure be explained through the processing facility that Purdue operates?
 - Johnston: I don't think so, because that data we actually get pretty regularly.
 - Dubin: We talked about the Purdue agro-recycle facility, and Alisha went back to check, and MDA had transport data from them, which was included in their numbers.
 - Brosch: There's a lot of moving pieces within pounds of manure N and P that have not been discussed here today. I don't think we should read this and compare numbers.
 - Alisha Mulkey: We were also looking at this on regional approaches. There's a difference if we're talking about total N versus plant available. There's a lot of pieces that we're continuing to do analysis on a pounds per acre rate. I wouldn't get too hung up on any one percentage at the moment. We've looked at it at both county and regional scales.
 - Meisinger: This table is all based on total nutrients going into a county, so it's total county data compared. But I think we need to get down to a pounds per acre basis. We hope to get this worked out.
 - Jim Cropper: When the stuff is transported off the farm, there isn't a tracking mechanism there. So that seems like a big hole in the data, at least for some states.
 - Mulkey: It's being tracked in the sense that it's included in MD's nutrient management plans.
- Meisinger: One item we discussed during the F2F is that the CBP is using sales data to estimate fertilizer application rates. There was concern expressed about the usefulness of that database; we're continuing to further evaluate that whole database.
 - Johnston: The AgWG approved the use of our fertilizer sales data based on our smoothing technique that we use. If we scrap that idea, we would have to come up with something else, and right now we don't have anything else. I imagine you'll continue to see fertilizer sales in the April version.
 - Meisinger: We also talked about the need to get SB, which is currently running on an N-based management only, but the need is to get P-based management algorithms written.
 - Dell: I think it's one of those things where the procedure isn't too hard, but getting the supporting data is.

- Johnston: The tough job for the AMS is to build a model for all panels to work with. We're trying to give them the P-based algorithms so that the NMP can come back in and potentially credit P-based nutrient management.
- Tim Sexton: The AgWG agreed to have fertilizer sales used unless nothing else at all was available. The reason is that only the brokers are reporting sales. The box stores don't report.
 - Rhoderick: You wanted to evaluate or look at it as Jack mentioned, and then you came back with a smoothing methodology. But I don't think it was definitive that fertilizer sales would be used.
 - Dell: We use a 50/50 balance of what's reported by AFCO sales reports and NASS data.
 - Johnston: I fully encourage the states to look at the documentation, especially related to this. We fully lay out how we use the sales data.
- Dell: We really need official input from each of the states. And that's an enormous amount of numbers that we generated, but if you could designate someone to pull out a few counties from each state and let us know your thoughts on those.
- Bill Angstadt: When do we bring this to closure? It's disturbing to hear people saying they're going to re-hash a lot of issues.
 - Johnston: We have a July deadline, so we're really trying our best to get everything done by May or so.
 - Angstadt: The WQGIT was told there won't be any substantial changes in the April run. But if July is what the AMS is aiming for, then we could do the run and look at the outputs to see if it makes sense – that would be acceptable.
 - Dell: At the last AgWG call, we said we probably wouldn't have anything ready for April, but what we're working on now will get into the July run.
 - Angstadt: I know you guys want comments, but it's very hard to do that when you look at the outputs and so much doesn't make any sense at this point.
 - Brosch: Whatever the GIT or MB heard about the next iteration of the model, I think everything we've outlined to do in the near future are major changes. To that extent, I don't think that's a reasonable thing to assume anymore – that they will be similar.
 - Johnston: The plan for each iteration is that the documentation will be updated, and I will give the AgWG updates on what changes were made.
- Bredwell: The states are going to make comments by this March 1st deadline. Are the states as concerned as Jack and I that there's no mechanism to work a P-based NMP into the Scenario Builder? Does everyone intend to submit those comments?
 - Sexton: I think we voiced that amongst ourselves yesterday.
 - Brosch: We have had an algorithm for P – the problem was the requirements weren't very good. I think the AMS is confident that we can work something out. The unfortunate part is that the NMP is equally confident they can work something out, but there isn't a lot of overlap there.
- Sexton: Regarding crop uptake and removal, I had an evaluation of that done in 2012. So as a result of that, we evaluated the crop uptake and removal tables for VA, MD, and other states, and there was no difference. I don't know what happens when you go north, but we feel comfortable with the tables we have on crop uptake and crop removal in the eastern seaboard.
- Kepler: Has consideration been given to dryland vs. irrigated lands on that?

- Dell: It is blended in the application rates, because it's blended in the average yield. But what you'll see on the eastern shore is that yields are going up significantly compared to the rest of the watershed.

ACTION: States are encouraged to download and review the Scenario Builder documentation that is hosted under the Projects & Resources Tab on the Agriculture Workgroup page (http://www.chesapeakebay.net/groups/group/agriculture_workgroup), and provide comments to Matt Johnston (mjohnston@chesapeakebay.net) and Curt Dell (Curtis.dell@ars.usda.gov) by March 1st.

2:45 **State Round-Robin Discussion on Analysis of Scenario Builder Documentation** John Rhoderick

- John led an informal round-robin with the state representatives to discuss their analysis and initial comments on the Scenario Builder documentation and data that has been hosted and distributed by the Agricultural Modeling Subcommittee.
- MD: (Alisha Mulkey) Counties with manure is not being distributed to AIR's – could alternate manure distribution method. The AMS will give us a chance to re-think what was conceptual and how it's not playing out – so we can revisit what is making sense.
 - Rhoderick: So where you have counties with high manure, you should be looking at crop loadings to make sure they mesh with what you know?
 - Mulkey: I'm looking at applications to crop goal itself, but I've been focusing on N more than P at this point because of the conversations in the AMS – how P is being simulated in this particular version. There are some things that are not adding up, but Matt and I are working to find a resolution.
- DE (Brosch): Clint has been doing most of the deconstruction of the beta data. We went to MDA last week and talked to Alisha about how to best synthesize this information that was made available to us. Alisha's been involved with MDE, but these idiosyncrasies only generate questions, so I think it's more appropriate to talk about for states who haven't begun the process, what MD and DE have done to start this process. We took a look at records, and it seemed like it was useful to compare the nutrient sources and sinks, because this latest version attempts to be a mass balanced model. And we wanted to look where we expect to see changes occurring. We settled on 1992, and we used 200 as a mid-point. And then we talked about the modern era, and the issues we're having with the most recent years in the beta roll-out, so we dumped 2014 information, and we took 2010-2013 and averaged it into one annual output so we could get an idea of what's happening more recently, understanding that there were different efforts across states to improve AFCD data. We're looking at the whole Delmarva, so we hope to have some information to present at the AMS. But I'd like to offer these methods to other states that are going through this procedure to help carry them through to the deadline.
- NY (Greg Albrecht): At first glance, the results strike me as expected. But I would love to take Chris up on his offer to help us out with delving into the documentation.
- WV (Dave Montali): I'm trying to get done what I can by March 1st, but not losing track of May 31st. I don't know what's important to the AgWG – I've looked at BMP base conditions, animals, and came up with what to do about partial counties? There seems to be a disconnect between AFO/CAFO counties that might need to be revised.
 - Dubin: You've also been looking at the TRP question as well, right?
 - Montali: I'm going to look at that to see if it makes sense, and I'm in touch with what's going on – trying to revise access fractions and see how that will affect things. I did come up with a problem with BMPs that I'm not sure how it's going to affect. In Phase 5, we went through a lot of effort to capture AWMS BMPs

and report them in animal units that are based on flock or house size. In Phase 6, we need to turn those around into animals per year numbers somehow. Big picture, that's an improvement that needs to be made. Big picture, looking at AFTA goal, I think in a lot of our counties, our AFTA goals are one or less. Right now – I've started looking at what's going on with the different crops.

- Bill Angstadt: Two comments: 1) I think what Chris and Alisha are talking about comparing MD and DE makes a lot of sense. There's a lot of inconsistencies across the border. 2) Pennsylvania total N application for grains with manure (GWM) and grains without manure (GOM) don't make any sense. So there's just not enough N being applied in manure and fertilizer to go to the crops in PA.

3:00 **Phase 6 Drainage Ditch Management BMP Proposal**

Chris Brosch, Clint Gill

- Chris Brosch and Clint Gill presented the revised version of a proposed scope of work to establish a Phase 6 Drainage Ditch Management BMP Panel. Proposed membership of the panel was also discussed.
- Kristen Saacke Blunk: I just want to re-state that I understand that this AgWG is being asked to approve moving forward with establishing an expert panel based on this proposed scope of work and expertise, but that we would still, by our next meeting, have the opportunity to approve the experts proposed for this panel.
- Chris Brosch and Clint Gill will seek and present C.V.s of the proposed membership at the next AgWG meeting in March.
- Dubin: We still need to have a broader discussion with STAC and other relevant groups, but the AgWG could take action on the proposed scope of work.
- Keppler: So on the BMPs to review – I see it states that it's not a comprehensive list, so there is the opportunity to add another BMP if it is so deemed by the expert panel.
 - Brosch: As long as the expertise exists in the panel, I don't see why the scope of the BMPs shouldn't be lengthened.
- Saacke Blunk: I also want to make sure that we're working to build a panel that is also as lean as possible – number-wise.
 - Gill: These were only our suggestions, but I do not foresee all of the people on our proposed list serving on the panel.
- Concerns from the AgWG on the heavy representation of experts from Delaware.

DECISION: The AgWG approved a revised proposed scope of work to establish a Phase 6 Drainage Ditch Management BMP Panel, on the condition that the expert panel will follow the CBP BMP protocol, and the AgWG will have the opportunity to review the proposed panel membership during their March 2016 conference call.

3:25 **Animal Mortalities Facility Freezers Interim BMP Proposal**

Chris Brosch

- Chris updated the workgroup on a recent request to the Chesapeake Bay Program Office for establishing an interim definition and efficiency for poultry mortality freezer systems. Approved interim BMPs can only be used for planning purposes associated with Milestones and WIPs.
- Dubin: There is a protocol for interim BMPs, and it's the CBP that does it, not the workgroups. I would suggest the AgWG make a recommendation, but this should not be a decisional item for the AgWG.

- Thompson: Are we talking about interim credit, or interim reporting for planning purposes?
 - Dubin: Interim reporting can be done with interim credit. You can use it for WIPs, but there's no annual reporting requirements. However, a state can submit data if they wish to.
 - Brosch: The modeling team has told us NEIEN collects all information, whether it's in the model or not. NEIEN is turned on to collect this data, but it just has a different name for this BMP. The SB team at the CBP is ready to turn on this interim credit.
 - Johnston: I don't know the BMP protocol by heart. I will say that I don't want the CBP office to be making decisions on interim and non-interim. So when Chris contacted me, I told him we have a mechanism to do this, and suggested he get sign-off from the AgWG. Maybe that's not codified in the protocol, but I would ask you to consider doing that in the future.
 - Shenk: I think the AgWG should be much more involved in making decisions about what's incorporated into the model.
 - Saacke Blunk: I would suggest that this be a part of our priority practices – mortality in general.
 - Dubin: We were looking at a panel that would consider mortality as a total package.

DECISION: The AgWG motioned to support the interim animal mortalities facilities freezers BMP efficiency proposal, and will recommend this proposal to the CBP Modeling Workgroup for final approval.

3:30 **Adjourn Day 1**

Participants 2/17/16:

Lindsey Gordon, CRC	Steve Taglang, PA DEP
Mark Dubin, UMD	Dave Montali, WV DEP
Rachel Rhodes, MDA	Karl Brown, PA DEP
Jason Keppler, MDA	Doug Goodlander, PA DEP
Tim Sexton, VA DCR	Robin Pellicano, MDE
Marel King, CBC	Fred Samadani, NGO
Clint Gill, DDA	Beth McGee, CBF
Chris Brosch, DDA	Glenn Carpenter, NRCS
Chuck Hegberg, Center for Watershed Protection	Ron Korcak, USDA ARS
Ed Kee, DDA	Jim Glancey, UD
Kelly Shenk, EPA	Lauren Torres, DDA
Jim Cropper, Northeast Pasture Consortium	Peter Hughes, Red Barn Trading Company
Ron Ohrel, Mid-Atlantic Dairy Association	Jeremy Hanson, VT
John Rhoderick, MDA	Bill Chain, CBF
Kristen Saacke-Blunk, Headwaters LLC	Lindsay Thompson, DE-MD Agribusiness Assoc.
Greg Albrecht, NY	Bobby Long, VA DCR
Chris Thompson, LCCD	Shawn Garvin, EPA
Bill Angstadt, Angstadt Consulting	Paul Bredwell, US Poultry and Ag Assoc.
Kim Snell-Zarcone, Conservation PA	Laura Gill, DE Nutrient Management Commission
Ted Tesler, PA DEP	Bob Palmer, DE DNREC

Marcia Fox, DE DNREC
Jenn Nelson, Resource Smart LLC
Jeff Hill, Lancaster County Conservation District
Jack Meisinger, USDA

Curt Dell, USDA ARS
Tim Garcia, NRCS
Seung Ah Byun, Brandywine Conservancy
Matt Johnston, UMD

February 18th: 9:00-2:30 PM

9:00 **Welcome and Introductions** Workgroup Co-Chairs

9:05 **Cover Crop Phase 6 Panel** Ken Staver

- Ken Staver briefed the AgWG on the status of developing a recommendation report by the Phase 6 Cover Crops BMP Panel.
- Rhoderick: How do you marry heat units with programs that are based on dates?
 - Staver: Good question – we’re going to stick with dates, but we’re anticipating new studies and data coming in, and a useful way for normalizing the data is to work with heat units. So that’s more of a behind the scenes issue, but it’s not that difficult to translate them to dates in terms of programs.
- Karl Brown: Is the workgroup going to deal with this modeling issue (erosion issue), or will that be pushed to another group?
 - Staver: NRCS pitched in on getting a modeling position, but the reason we’re saying modeling is the only option is because in the short term, the available literature is very thin.
 - Brown: If we fail to deal with this erosion issue again, that will be a significant shortcoming.
 - Staver: Agreed. We’ll have to take that into consideration, and I like the idea of really making progress on this. But we tried something that didn’t work on the 5.3.2 panel, so we’ve got to do better this time around.
 - Dubin: Also consider that we have the Conservation Tillage panel that’s looking at revising the residue covers for cropland acres, so there’s some shared responsibilities with that panel on the erosion issue.
- Bill Angstadt: 1) From Phase 5.3.2 to Phase 6.0, we have dramatic land use changes. Are you going to address issues like efficiency differences between ag land uses as far as what the efficiency of capturing N and P is based on a previous land use?
 - Staver: We’ve tangled with this in the past, mostly with manure. The way we came down on it before, is that the efficiency is going to stay the same, but because we now have actual loads, we’ll have different loads for different land uses, so the load reduction will change because the baseline load was higher.
 - Angstadt: Yesterday, we talked about at what point we can stabilize the SB mass balance. The answer was by the July run. But then Ken is waiting for this Phase 6 N application data or outputs to be stabilized to be able to do his efficiencies. So I think

the AgWG needs to revise its timeline to streamline the work that's coming down the line. So we need a timeline of where all these pieces fit together.

- Saacke Blunk: That's a great point, and I think it will cross all of the BMP panel updates this morning. We'll have a conversation about how we'll address this, because we knew this was going to be the case.
- Sexton: Part of his question doesn't have anything to do with the CCP anyway. Part of what he's asking is how Phase 6 NMP is going to treat fall application on manure, but the purpose of the CCP is to look at how to reduce leakage past the root zone, as an efficiency. I think Ken is looking at how to address that – if you're going to put a starter on it, then it's not a cover crop; it's a commodity cover crop. The way a cover crop is looked at, is how we reduce that leakage past the root zone, period.
- Dubin: One comment was to start looking at a silage system with early removal and planting date for a fall cover crop. One of the panel charges is to develop a summer cover crop definition and values. As you know, we have early standard and late planting time period circled around a frost date, so the summer is a little past that. So it's something the panel's talked about.
- Staver: We weren't explicitly cutting the pie so we dealt with the manure issue, but we can certainly deal with efficiencies of manure cover crops. We'll have to wrestle with this, and it's a big issue for a lot of the watershed. We'll need some more cross-panel communication. This is where the heat units come in – what someone in the northern watershed might think is early isn't that different from what we already define as an appropriate planting date. So maybe we can add one more category – we'll look at it, but I don't know if it'll happen. But maybe.

9:30 **Nutrient Management Phase 6 Panel**

Frank Coale

- Frank Coale briefed the AgWG on the status of developing a recommendation report by the Phase 6 Nutrient Management BMP Panel.
- Rhoderick: When you say it's a neutral efficiency, is it neutral at this point in time. In other words, how do you go back in time with this adjusted value? At what point do you call it neutral – does it start this year, or some other year?
 - Coale: There's still some question if this format will remain the same, but if the panel thinks the phase 6 model plan sufficiently adjusts the baseline by year – if we can't be convinced of that, then we may need to adjust this plan.
- Thompson: Assuming credit for core nutrient management is built into Phase 6, I would like to express a certain level of discomfort with that having seen the outputs from the beta runs and the application rates we're getting in certain counties based on the inputs for Phase 6.
 - Coale: That's a good observation. Speaking for myself, I kind of agree. So we'll have to wait and see.
- Thompson: I'm trying to figure out conceptually how this would work in the model. But if we're looking at a negative performance efficiency, I understand the model assumes the amount of available nutrients and spreads that out over the counties. So if we're giving them a negative efficiency, would that be adding to the nutrient loading for those acres above what is already assumed to be applied?
 - Coale: I don't think it would change the application rate – I can't speak for the modelers, but the thought is that those acres that were reported as not meeting the NM standard would on a per acre basis deliver a higher load from that same application rate.

- Brosch: The purpose of applying a negative efficiency was to earmark those acres as being non-compliant with NM as a base condition. But Lindsay's right – when you assign the fertilizer manure and biosolids to a county, and you spread it across evenly across acres based on need, the leakiness of that system will increase universally for every acre. So every acre is in essence charged for the bad actors. Therefore, applying a negative efficiency to a certain extent, could be double counting. But in terms of the balance sheets and loss of nutrients, you can adjust that negative efficiency down from the literature value to make sure it's matching the true leakiness of the non-NM acres. So when you apply a certain baseline, all the acres are functioning the same. In the real world, some are better and some are worse. The ones that are worse aren't being charged as much for their bad actions, but the ones that are doing better don't get the full credit. So you could in effect generate a value of load that's a real world value.
- Rhoderick: We have in the new model very specific land uses in ag, so by default some of those have higher loading rates. How do you say I have acres in a county that don't meet that definition of NM. How does that get assigned to which crop types?
- Dubin: I would say at this point, the states are typically reporting at mass acres for NM. We're getting into, with the phase 5 new BMPS, breaks between some of the major land groups. If a state is able to report specific acres of NM, that door would be open to do that, because we have a land use you can apply it to. The model would otherwise distribute it across available acres in the county.
- King: So if the purpose of the negative efficiency is to balance out the extra positive efficiency that's assigned to other acres, and those efficiencies positive and negative can be adjusted so they balance out, what's the purpose of even doing that? Isn't the net in the end the same?
 - Coale: The idea is that any acre that does not meet the minimum standards for NM cannot take credit for any positive efficiency credit.
 - Sexton: In other words, CC research was based upon the fact that NM is being implemented. If you're not implementing NM, then we have no research as to what the CC might be doing. So if you're not doing NM, the efficiencies for other BMPs would go away.
 - Shenk: Is that true for all supplemental NM practices?
 - Coale: Basically, the supplemental NM practices – if you don't meet that baseline threshold neutral condition with minimum standards for NM in place, you don't have to worry about the supplemental practices, because you can't take credit for them.
- Dubin: We have our panel members representing various areas around the watershed, when you look at that composite number it's reflective of the entire group. So items with a low ranking might have high importance in certain areas of the watershed.
- Greg Albrecht: I would suggest grouping some of these practices into related groups.
 - Coale: That's actually what we're doing currently, and will be working on this next week.
- Tesler: I just want to mention a general concern about the negative efficiency on nutrient management. The primary concern is that we don't violate the mass of nutrients in a given segment, or even county. So that's really the idea of this negative efficiency component that we don't create more nutrients in a designated area than we would otherwise know exists.
 - Angstadt: If we're looking at 2.8 million acres eligible for NM in PA, and PA reports 800,000 as core, is that assuming that there's 2 million acres that have a negative credit.
 - Coale: Yes, is the simple answer.
 - Tesler: So why aren't we looking at this in terms of nutrient input – what you're saying is that crops are demanding more than the agronomic need.

- Dubin: Under the existing model system, going back to 1985, the acres that PA hasn't reported under NM plans – have you not received a higher application rate and therefore a higher loading rate in the model?
- Tesler: Yes, but that's going to change. And I think it's easier to address it on that input side rather than create the concept of negative crediting, which I think complicate this unnecessarily.
- Coale: The panel will be discussing this next week, and we've heard similar comments from other sectors. Conceptually, even if we change it the results will be the same thing.
- Dubin: And part of that answer lies with SB, and how it's representing those nutrient inputs and applications. So the ability to change an application rate versus the ability to change the delivery are two different methods, and so the panel may not have all the options at the table is SB is unable to change the application rates.
- Brosch: I just want to remind people that the timelines wasn't expressed. The concept of baselines and efficiencies going up and down was provided last fall, which was before decisions were made in the AMS. A lot of these questions have already been raised in the panel because the experts are just being brought up to speed on what we spent most of yesterday discussing.
- Shenk: Can you explain how the baseline neutral NM standard relates to tier 1 and tier 2?
 - Coale: My sincere answer is that we haven't paid any attention to the tiers in the panel thus far, so I can't say.
 - Brosch: Last fall, we discussed this and the discussion was that since that answer changes through time, there were the best marks we could point to that were consistent, and that's what we need for modeling purposes is a consistent definition through time.
- Angstadt: Regarding supplemental NM BMPs – farmers are doing a systems approach. No farmer is just doing one of those – they're bundled together based on a lot of factors, so I question how hard it's going to be to create an efficiency for each one of those by land use and then expect the states are going to track and report individual supplemental NM BMPs.
 - Coale: That's kind of how we started discussing the categorization of the supplemental practices, creating real-world production groupings.
 - Angstadt: We're also going to need an initial report from this panel for the July run. There are other panels that are dependent on this, and so we need closure on this. Will this workgroup be ready to have something on this BMP in the July scenario builder run?
 - Meisinger: I appreciate the workgroup's concerns – being a member on the panel, I don't want to rebuild this whole thing again. I'd like to carry things from 5.3.2 forward that we think are good, and fix the things that need fixing. But this panel met and we have no idea what would come out in phase 6, and the bucket approach was a surprise, and it's advanced pretty far and the intention of the modelers is to take the application rates and have that already handled in the model. Removing application rates from out NM BMP toolbox is a big concern to me. So there's a lot of discussion that has to be done to get things moving, and you guys will just have to patient with us.
 - Coale: The panel's worked really hard, and it's getting weary. We're on the verge of an almost panel collapse. We will deliver some product when we can, but there's a distinct possibility that we won't have exactly what the workgroup

wants to see by the time they want to see it. We'll do our best, and it's been a tough process thus far.

- Brosch: My personal opinion is that a tiered approach hasn't worked well in the past, but consistent updates from the panel could serve a good purpose, to share our thoughts on recommendations as the tools also adapt.
- Angstadt: The crosswalk report was a great success. I would hate to see us throw that away and try to start over. I don't think it's realistic to get through a whole new version of nutrient management for 6.0 and to get it through all of the organizational bodies. We'll have to build off of what we've got in 5.3.2, maybe redefine some tiers and tweak it, focus on efficiencies, to get it more accurate. Otherwise, what are our options? We do a beta run in July and we still have no NM?
- Saacke Blunk: I would like to say that when we empaneled the new 6.0 NMP, we were explicit in their instruction that they were in no way hampered or tied to the 5.3.2 panel findings. That we wanted them to start with a fresh slate, and to recognize that in the new model, they were to take the things that were really tough, and to start where this particular group of experts thought was appropriate to start. We know that a lot of the experts on that panel have come from the work in 5.3.2, but I hear the cautionary concern about the timeline, but I would be very concerned about us asking the phase 6 panel to revisit the 5.3.2 outcome, without giving them the chance to fully do what Frank's put on the table.
- Angstadt: So then we'll run the July SB with no NM credit?
- Rhoderick: When we met with the WQGIT, we would like to have a report from NMP in July so we can get it approved in August by the WQGIT. The timeline they gave us was September. I recall that it wouldn't be in the July scenario, but the October one. That was in deference to the fact that this panel has so much work to do, but they'll have to hold it to the end.
- Dubin: I think that after discussions on the 24th, we'll have a better idea from panel members as to where we are. We're looking at the beta version and how that's working, so I think it would be good to take note of what you're saying, and have the panel come back to the AgWG after February to have that discussion with the workgroup again about where they are and what the challenges are.

10:00 **Conservation Tillage Phase 6 Panel**

Mark Dubin

- Mark Dubin, on behalf of the Panel Chair Wade Thomason, briefed the AgWG on the status of developing a recommendation report by the Phase 6 Conservation Tillage BMP Panel.
- Rhoderick: Are you saying that corn stubble in a field would be an example of low residue?
 - Dubin: Yes. It's basically no-till. If you're below 30% of planting, you're conventional till.
- Sexton: Is there sufficient research to look at what we would do for a cover between 15-30%?
- Meisinger: What is the baseline for the conventional till panel and the other panels as well? What are you using for baseline? I ask because of the NMP baseline still being fuzzy.
 - Dubin: This is a little different, because we're moving from a land use to a BMP system. So we have to convert the land use into a BMP. So the baseline would be the conventional till. We'll be defining that as the 0-15% range versus the 0-30% range as in the 5.3.2 model.

- Meisinger: So you're keeping the same baseline as 5.3.2 as if it had been a BMP there.
- Dubin: One of the panel charges was to develop a relationship between RUSLE2 factors and visual factors, so we're in the process of developing that so the partnership can use either system to provide a reportable assessment on the management unit. So we are creating that 'relationship matrix' to compare the two together.
- Meisinger: Somewhere along the lines there'll be questions on what is soil disturbance. You ought to get that straight pretty much up-front.
- Sexton: What about a difference in the roughness coefficient on a conventional till land versus corn stubble that was no till no residue.
 - Dubin: I would see that as being part of the relationship with NRCS. Some of it will be brought out by the research. Most of the research doesn't provide the data based on the RUSLE2 factors. So we're trying to create that relationship. But when you look at the research papers, they don't talk about that stuff.

10:35 **Manure Injection/Incorporation Phase 6 Panel**

Curtis Dell

- Curt Dell briefed the AgWG on the status of developing a recommendation report by the Phase 6 Manure Injection/Incorporation BMP Panel.
- Rhoderick: Since you're dealing with ammonia, which is an airshed model component, who are you dealing with at that level at the CBP?
 - Dell: Jeff Sweeney is the modeling team representative on the panel. And when we laid out how the efficiencies would work, he said to include that but I think we'll leave it up to Jeff to let us know how that works.
 - Dubin: Jeff will have to work with Lew Linker and the watershed modeling tool. There's been discussion about creating a better linkage between SB with the airshed model.
 - Dell: Part of it is just implicit that if you're reducing ammonia losses, we're cutting back on application rates. So that's a big part of the factor is just a credit for the farmers capturing the better recovery of available nitrogen.
- Rhoderick: Timeline?
 - Dell: Once we get this additional help on the literature summary, the requirement will be that they have to be available soon. And we've got up to 100 hours of time through the VT agreement; I don't think we'll need all that time. We had a good start with that Tetra Tech put together and I have additional citations to give to them.

11:00 **AgWG Discussion on timelines for BMP panels and cross-panel coordination**

- Mark Dubin discussed the status of BMP panel completing, and updated the AgWG on the additional resources and staffing support made available to the panels by a cooperative agreement with Virginia Tech.
- Rhoderick suggested the AgWG have a Gantt chart to look at in order to better organize the schedule.
 - Jason Kepler echoed this concern and requested that it be updated monthly.

ACTION: The AgWG motioned to request that a Gantt chart be developed to track panel deadlines and schedules, and pieces of shared information that require coordination; and that the Gantt chart be provided every month to the AgWG as a means for tracking progress on critical deadlines and information for these panels. This Gantt chart will be presented at the AgWG March conference call.

11:00 **Agriculture Stillwater & Cropland Irrigation BMP Panel Membership**

Mark Dubin

- Mark Dubin presented the previously approved panel charges and proposed membership for establishing the Agriculture Stillwater and Cropland Irrigation BMP Panels.
- Kee: We are just in the process of finishing stormwater regulations for poultry houses.
- Kee: Elaine Webb from DNREC has a degree in agricultural engineering, is married to a poultry farmer, as was the leader in writing these regulations. She has a great engineering background, and I could ask her to participate.
- Saacke Blunk: What about representation from USDA NRCS?
 - There was discussion in the AgWG, but uncertainty on whether a representative from NRCS would be able to participate.
- Rhoderick: Ann Baldwin, an engineer from NRCS who previously worked for MD and now is in DE could be a useful person to ask.
- The AgWG recommended the name of the panel be changed to stormwater as opposed to Stillwater.
- The AgWG recommended Dave Sample to provide urban expertise on the subject.
- The AgWG had questions regarding the charge of the stormwater panel. Sediments ponds in crop fields are only counted in conservation plans, but have a large trapping capacity that could provide additional benefit for sediment trapping.
- The AgWG suggested alternative names for the Cropland Irrigation panel.
- Secretary Kee recommended James Adkins, engineer, to participate on the panel.
- Jack Meisinger suggested Bill Ritter to serve as a replacement panel member for Jenn Volk. Bill has good quality irrigation data, and a good handle on the problems and opportunities with irrigation. Problems associated with leaching would be something he could help address. He was formerly with UD as an agricultural engineer, and is currently retired.
- Jason Keppler suggested Greg McCarty, who has experience in transeaporation.
- The AgWG agreed that the panel membership recommendations for both panels would be brought back to them during the March conference call.
 - Chris Brosch noted that the AgWG needs to be able to review all of the names that were submitted, with a confirmation of whether or not they are willing to serve on the panel.

DECISION: The AgWG will be asked to endorse the proposed membership for establishing the Agriculture Stillwater and Cropland Irrigation BMP Panels during the March conference call.

11:30 Break for lunch

12:00 Poultry Data Collection Efforts

Mark Dubin

- Mark Dubin updated the AgWG on the ongoing efforts to continue collection of poultry production data across the Bay region with the assistance of program partners and the industry.
- The AgWG noted that all states should be able to utilize the process for representing their own data.
- The AgWG discussed PA's turkey production.
 - Paul Bredwell noted that their producers are committed to providing this information. They wanted to go to NASS first to make sure that it is not captured under a FOIA request.

- Rhodes: Looking down the road, DE information was attacked because it was supplied by the industry. Now we're looking at Penn State and VA data. Is it going to be attacked for the same reason? Universities are providing unbiased research, but if we sink our teeth into this data, and someone down the line questions it – will we be in trouble?
 - Questions as to whether the university supplying the data would do a QA/QC.
- Brosch: Can we release the vacuum on this? Can we create data and hand it off?
- Dubin: We've discussed this directly with Secretary Kee- we're looking at each state moving forward, and we will still have to go out there and collect information.
- Brosch: I'd like to see who is involved in this project, as opposed to getting the information and having to respond.
- Shenk: Back to Rachel's point – when we first started this, we saw a lot of value in NASS serving as the go-between, the aggregator of information, and in sync with the ag census data. We thought it would be a no brainer, but because NASS didn't work, now we're going to use the university/land grant data and industry data to get this done. They feel like it will be more rigorous than NASS data. We wanted to use the integrator data, and have a history for using land grant information. We think we're doing all we can to prevent this from blowing up, unless we see a need to have a formal statement, we think we're on a good track.
- Kee: The only uncertainty is when people say that universities can be FOIA-ed. If we go down this path, we need to make sure that can't happen.
- Sexton: VT said that when research is being done, that it's highly protective.
- Sexton: There is a precedent. They do have in writing as to this is our policy to protect ourselves for research. Don't follow FOIA requests because they won't release it.
- Bredwell: I appreciate that concern. We're in the process of developing an acceptance letter, and it will be clearly stated within that.
- Dubin: It's a pilot, and we'll see how it unfolds and we can use it moving forward.
- Glancey: Sounds like there's funded projects to tackle data gaps. But how will that process work for maintaining existing databases – how does that mechanism work in your view?
 - Dubin: We originally had put together a budget for the NASS project that covered all 6 states. When that didn't work, we had to reshuffle the deck, but the intent moving forward is that we would identify a mechanism with each state of how they wanted to do their collection. Some states may team up, and to incorporate that as part of their scope of work with the CBP grant requests.

ACTION: The AgWG requests that Mark Dubin provide the scope of work and plans for the poultry data collection effort, and provide a person of contact for each of the projects to the AgWG.

12:15 Toxics Report

Tom Scheuler

- Tom presented two reports that were developed as part of an FY14 GIT funding project to review the existing literature on the potential toxic reduction benefits from traditional nutrient and sediment BMPs. The first report examines the urban sector, while the second report addresses the agricultural and wastewater sectors.
- Rhoderick: So you're specifically excluding certain other types of toxins that are waterborne?
 - Scheuler: Correct. We wanted to classify the urban toxic contaminants. The goal was to correlate their expected removal rate based on the sediment removal properties of our BMPs.

- Saacke Blunk: I'm concerned about the more recent pesticide use – that they didn't exceed aquatic life standards. We're seeing a lot of unusual occurrences in the Susquehanna basin, and glyphosate may not be exceeding aquatic life criteria, but we're seeing a lot of response in the water. Talking to Vicky Blazer, USGS, we are understanding that there could be a linkage with agricultural pesticide use. With this study, when we're talking about water quality risk, how might we better handle the risks that may not be acute, but are chronic toxicity?
 - Scheuler: A bit outside our scope, but in the case of the insecticides and atrazine, it's just an area where it's hard to be definitive in the risk. For many of these new insecticides, where the scientific community is still trying to establish aquatic life thresholds for acute and chronic. My take on it, is simply that it's something we really need to keep in mind going forward that we're introducing a lot of compounds into the environment which are potentially dangerous to aquatic life, and we really don't know the precise thresholds at which they're occurring.
 - Saacke Blunk: You've invited to have the AgWG weigh in on this, where else would you like for some of the ag scientists involved in the AgWG to weigh in on this?
 - Scheuler: Specifically then, in the last 5-6 years, has the use of atrazine begun to plummet, and are we routinely detecting high concentrations of atrazine in our streams and rivers? I would be more than happy to accept comments on part 2 of the report by the end of this month, and if anyone has any information on this issue, then they are welcome to share it with me.
 - Sexton: Glyphosate is used to control weeds, and we also use diquat, which has been around forever. From what I recall, if you're going to find it in the surface water, it'll be low in the water column. I don't know that there's still relatives of this being used in agriculture.
 - Cropper: On the use of herbicides in conservation tillage – the only thing that's changed is what's being used in the way of herbicides. Clean agriculture used just as much herbicide on a lb to lb basis compared to conservation tillage land. You have a number of herbicides now that are lb/acre basis, and it's a whole new ball game depending on what you're looking at. Atrazine isn't used all that much anymore, maybe in the dual-mixture formulations. In conservation tillage, it seems they're using more.
 - Thompson: As part of the TCWG, one of our goals is to assess new and emerging toxics of concern. So the TCWG had been focusing on PCBs and mercury in the urban landscape, and so the point of this study was to evaluate the scope of emerging toxics and contaminants of concern. I encourage you all to look at the report with those eyes on, and comment back to Tom. Also looking at nutrient control BMPs and how there may be a nexus there with whether or not they may be exacerbating the issues with toxics, or nutrient BMPs that could be used to control for toxics too.
 - Dubin: If you look in the IPM research area, you may find some information that could help you as well.
 - Scheuler: We looked at IPM, but there's not a lot of BMP research associated with that category.
- Bredwell: Is there implication that AFO/CAFOs are the leading cause of biogenic hormones?

- Scheuler: The point I wanted to make is that the BMPs that are applied and the wastewater treatment upgrades are effective at reducing them. However, further research is needed in this area.
- Bredwell: But this is primarily just livestock AFO/CAFOs, and not just animal, since poultry is being excluded here.
- Dubin: What's your timeline on this?
 - Scheuler: We're accepting fatal flaw comments by the end of February, and we can maybe send it out during the first week of March. But the contract we developed is already expired, however you are welcome to send comments to me.

ACTION: The AgWG should send any comments on part 2 of the toxics report, (http://www.chesapeakebay.net/channel_files/23291/scheuler_utc_report2.pdf), to Tom Scheuler (watershedguy@hotmail.com) before the end of the February 2016.

12:45 **Election of new AgWG Chair and Vice-Chair**

The Agriculture Workgroup will be asked to select and approve of a new workgroup chair and vice-chair based on nominated candidates. The recommendations of the workgroup will be submitted to the WQGIT for final partnership approval as per the governance protocols.

DECISION: The AgWG approved the selection of Secretary Ed Kee, DDA, as the new workgroup chair and Lindsay Thompson, DE-MD Agri-business Association as the workgroup vice-chair, pending final approval from the WQGIT.

2:00 **Discussion of Pennsylvania BMP Survey**

Steve Taglang

- Steve Taglang discussed the collaborative effort within Pennsylvania to develop an agricultural BMP survey.
- Rhoderick: The AgWG spent 2 years on this very issue – how to document voluntary BMPs to go into the model. There's two levels of voluntary BMPs – those that meet NRCS, and those that don't. And there's two levels of verification, so this idea of destroying the data would go against the protocol that the AgWG developed.
 - Taglang: Again – which one? The response that Mr. Garvin gave was not necessarily one that people above my pay grade thought was appropriate.
 - Rhoderick: To be clear, both components are part of that approved protocol.
 - Dubin: The RI BMP Panel Report incorporated the inspections and verification process within the recommendations, so they're part and parcel of verification because they are part of the BMP report.
 - Taglang: Regarding on-site verification, that's where the RI tool comes in most useful. When asking the question and getting the answer that EPA provided, that's where – this is the first step in that process. We don't know what's out there or where it is, so we're just trying to collect that and verify it.
- Kelly Shenk: We fully agree that farmers deserve and need the credit for the practices they have on the ground. We are very supportive of surveys, and when you talk about setting yourself up for success, PA has done a great job. You're saying that you hope to be able to report stuff for the 2016 progress run. When Shawn spoke to your question, we can't certainly say that everything that's reported will be included in the model.
 - Taglang: That's correct, and that's the concern with this. We're not sure what all of this can be included, and we know some of this – there are better ways to do it. However, we understand that EPA has concerns and that EPA and CBP has a

program and protocol in place for putting stuff into the model. And we are working that through right now. This is one of many different moving parts. This is a farmer, self-certified, inventory survey.

- Angstadt: It's unfortunate that this BMP survey has been termed in a yes or no fashion, can it be credited to the bay model. Even Shawn's comment about plugging in this survey into SB, is a misunderstanding of how this all works. So, I think we as an AgWG have some knowns and there's some unknowns. Is there assistance that the AgWG could provide to help DEP walk through the knowns and the unknowns so we could better communicate that this is not just a yes or no question of 'does this survey get credited in the bay model?'
 - Taglang: I think it might be too early at this point in time to ask for the assistance of the AgWG.

2:30 Adjourn Day 2 (2/18/16)

Participants:

Lindsey Gordon, CRC

Mark Dubin, UMB

Rachel Rhodes, MDA

Tim Sexton, VA DCR

Bobby Long, VA DCR

Ed Kee, DDA

Chris Brosch, DDA

Gary Flory, VA

Clint Gill, DDA

Kelly Shenk, EPA

Paul Bredwell, US Poultry and Egg Assoc.

John Rhoderick, MDA

Curt Dell, USDA ARS

Ron Ohrel, Mid-Atlantic Dairy Assoc.

Kristen Saacke Blunk, Headwaters LLC

Marel King, CBC

Greg Albrecht, NY DALWR

Robin Pellicano, MDE

Ron Korcak, USDA ARS

Jason Keppler, MDA

Bill Angstadt, Angstadt Consulting

Karl Brown, State Conservation Commission

Glenn Carpenter, USDA NRCS

Jim Cropper, Northeast Pasture Consortium

Ken Staver, UMD

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Frank Coale, UMD

Marilyn Hershey, PA

Lindsay Thompson, DE-MD Agribusiness Assoc.

Tim Garcia, NRCS

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Chris Tompson, LCCD

Jim Glancey, UD

Buddy Hance, MDA

Jim Baird, American Farmland Trust