

Agriculture Workgroup (AgWG)

May 17, 2018

10:00 AM – 1:00 PM

Meeting Minutes

Meeting materials: https://www.chesapeakebay.net/who/group/agriculture_workgroup

Actions and Decisions

ACTION: The AgWG is asked to send comments and feedback to Scott Phillips (swphilli@usgs.gov) regarding the upcoming STAC Workshop “Contaminants of Concern in Agricultural settings.”

ACTION: The AgWG is asked to send nominations for the STAC Workshop Steering Committee to Loretta Collins (lcollins@chesapeakebay.net) and Allie Wagner (wagner.alexandra@epa.gov) by June 13th.

ACTION: The AgWG is asked to send suggestions and comments regarding proposed data collection and projects to Loretta Collins (lcollins@chesapeakebay.net) and Allie Wagner (wagner.alexandra@epa.gov) [cc: Mark Dubin (mdubin06@umd.edu)] by June 13th for consideration during the prioritization discussion at the June 20-21 Face-to-Face Meeting.

ACTION: The AgWG is asked to send any additional suggestions and comments for the upcoming prioritization discussion at the June 20-21 Face-to-Face Meeting to Loretta Collins (lcollins@chesapeakebay.net) and Allie Wagner (wagner.alexandra@epa.gov) by June 13th for consideration during the prioritization discussion.

Welcome, introductions, roll-call, review meeting minutes

Workgroup Chairs

- Meeting minutes from the April 19th Conference Call were approved.

STAC Workshop: Contaminants in Ag Settings

Scott Phillips

Scott Phillips, USGS, discussed the partnership-approved upcoming Scientific and Technical Advisory Committee (STAC) Workshop: Integrating Science and Developing Approaches to Inform Management for Contaminants of Concern in Agricultural Settings. The workshop is in the preliminary planning stages and will occur between Fall 2018 and early Spring 2019. Representation from the AgWG on the Workshop Steering Committee is suggested.

Discussion:

- Barry Frantz: Are you aware of any research that would indicate which practices may be best to focus on? NRCS, has a lot of practices for nutrients and sediment, but not many for reduced chemical transport. We have many practices that could help, but we don't have reduced chemical transport well represented in our database. I'm wondering if there are some other databases that would help with that.
 - Scott Phillips: The one that comes to mind is a GIT project carried out by Tetra Tech looking at the potential benefits or risks of all the water quality BMPs against the other outcomes in the Bay Program Agreement. They did do a crosswalk between toxic contaminants that was a qualitative type project. One of the goals of the workshop is bringing in expertise so we can all learn more about it. Or can we use our professional judgement to say it comes down to source control? Or trying to retain whatever has

moved to the sediment pathway or the water pathway? And with that, what are some of the best ways to get those co-benefits in those possibilities?

- Barry Frantz: We have something similar in our practices. For example, with cover cropping, you might have a 3 out of 5 for mitigating surface transport of pesticides. When we look at our cover crop standards, there is nothing that specifies the use of a certain mix may be more efficient than others. If there is information that the primary transport mechanism is surface sheet flow or adsorption to soil, we can then make inferences. At the workshop, it would be helpful to give people ideas about which BMPs to implement and how to use what we already know to create some designs. There are some things NRCS does that might be possible, but I think we would need help from a group like ARS to put more refined science to it.
- Kristen Saacke Blunk: I'm glad to see Vicki Blazer on the planning team. I'm curious if there is a desire to pull in some expertise from outside of the CBP on this issue? Or even as part of the planning process?
 - Scott Phillips: There is, yes. We can try to optimally get someone on the planning team. Or for a lot of these STAC Workshops there is funding to bring in someone from outside the watershed to participate in the workshop itself. We can explore any suggestions as well.
- Ken Staver: With the development of the GMO crops, is there going to be an inventory of chemical usage patterns created?
 - Scott Phillips: We are trying to get good ideas, like yours about an inventory of chemical usage from the workshop. That could be a recommendation that comes out of the workshop.
- Chris Brosch: We recently had a workshop about emerging contaminants in DE, and it did not at all focus on Agriculture. The context of the workshop was that most emerging contaminants are not connected to agriculture. With respect to that, the treatment for some of those contaminants was more universal and largely spearheaded by our sister agency, DNREC. Perhaps we could collaborate to figure out the best way we could contribute.
 - Scott Phillips: Yes, that would be welcomed.
- Frank Schnieder: I'd like to echo what Chris said, I know PA DEP has done work, maybe five years ago, and remembering the results, CAFOs and agriculture wasn't a big issue. Jill can provide some contact information about some research we have done here in PA.
 - Scott Phillips: That is the type of information we want to bring forward through this workshop. We are hoping some findings and recommendations will be made- if agriculture is a big concern or not based on what is brought forward.
- Kristen Saacke Bunk: This proposal is very well written, but there are a couple things missing. It does not explicitly say that there may not be co-benefits for certain practices, in fact there may be some tradeoffs. It's great to have co-benefits as an outcome, but you can't have that conversation without acknowledging that for some practices, they may be at odds and potentially increase other contaminants. We need someone focused on risk management, that can tell us how to better communicate the tradeoffs.
- Jason Keppler: We will put together a nomination list to join the steering committee (about 2-3 people) by our next meeting in June.

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Update: Wetlands Expert Panel

Jeremy Hanson

Jeremy Hanson, VT, provided a brief update on the Non-tidal Wetland Rehabilitation, Enhancement, and Creation BMP Expert Panel. An [open session](#) was held on February 28th, 2018.

Discussion:

- Jason Keppler: With those 3 additional practices they are looking at, is there any deadline as far as when the interim efficiency might be established that jurisdictions could use for development of WIP III plans?
 - Jeremy Hanson: There are already place holder values in the Phase 6 model for those practices. Those values are just variations of the old Phase 5 BMPs. For the creation practice, we used the old Phase 5 efficiency plus there is also the land use change component for the creation BMP. For the enhancement and rehabilitation BMP, we used the old Phase 5 efficiency. The caveat is those could likely change based on recommendations from this panel. For now, I believe they are approved- but, I will double check that. They are at least there for planning purposes, if not for progress. Also, for the creation BMP it's a 1:1 acres like in Phase 5, whereas with the restoration BMP in Phase 6 you will get more acres.

Broiler Industry Data Collection

Paul Bredwell

In an effort to have more accurate data inputs for the Phase 6.0 watershed model, Paul Bredwell, U.S Poultry & Egg Association, discussed the status and mechanics of a potential collaboration with the broiler industry to obtain the most current population and manure/litter concentration analyses available.

- Paul Bredwell noted that this data collection is not yet under way, it's currently in the planning process. Hopefully the AgWG will see the benefits of moving forward.

Discussion:

- Jason Keppler: Have you talked to industry? And do you have their support? I'm also curious to how this project might be funded- Mark Dubin had mentioned a potential through the Bay Program?
 - Paul Bredwell: Regarding the industries' willingness to support this, the answer is yes. We have discussed moving forward with this for quite some time. Our initial meeting was four or 5 years ago, and at that point in time, we didn't understand how big of an undertaking this project was going to be, so we scaled back. Once we saw we could accomplish this with the turkey project, we reached out to broiler companies as our next step. Back in February or March of this year, we sat down with representatives from broiler companies. After laying out the project proposal, they signaled that they are willing to participate. U.S Poultry is going to partially fund this, we are committed to it, which we shared with industry representatives as well. Everyone needs to understand that it will take quite a few man hours from poultry companies, that would be donation of time. It's no small task to collect that much information, but they are willing to do it.

- Mark Dubin: We have identified a number of potential sources for either financial or technical support. There's an opportunity to work with funding at VT with Dr. Brian Benham and the turkey project. We also have resources at UMD that we could apply to the project. Thirdly, we would be working with companies through financial support or time given.
 - Paul Bredwell: All the states are required to develop their WIPs, the whole goal here is to make sure that the most accurate set of data is available to the states and the modeling team so when those WIPs are developed, they can be effective.
- Ken Staver: My understanding is industry already knows historically where every bird is produced. So, if industry really wants to help, it strikes me that if they want the Bay model to have good data on bird production, provide the data where the birds are produced.
 - Paul Bredwell: I can't agree with you more and that's exactly what this is going to do.
 - Ken Staver: That's great. On the nutrient side, where the birds are produced is a proxy for nutrients applied to cropland. For phosphorus, with all the records industry has- it strikes me that you laid out this incredibly difficult and detailed effort to track down these nutrients in litter. But with what you know on ration formulation and production, you could get really close (probably closer than sampling at farms) looking at phosphorus entering in rations and leaving with the bird.
 - Paul Bredwell: We will know the phosphorus content of the litter. It's above my head if you could do an equation to find the amount of phosphorus that's going into the bird from the concentration of phosphorus in the rations.
 - Ken Staver: Certainly, you know what's coming in, and I would think the bird composition is not highly variable. That may be a more straight forward approach for phosphorus.
- Jeremy Hanson: I want to point out some clarification in Paul's slide regarding deadlines. My understanding is that schedule is still considered draft, so may change slightly. My understanding of that April 30, 2019 deadline is when data needs to be submitted so that the modelers can use it. Please remember the data needs to be considered by the AgWG prior to that deadline, so it's ready to go on April 30th.
- Chris Brosch: What Paul said about the age of the data is somewhat misleading. That poultry litter subcommittee report included revised estimates for both Phase 5 and Phase 6 with regards to both manure generation, litter volume, as well as nutrient concentration. That data is only 7 years old and is regionally specific. I think there is a lot to be gained in other sectors, some with 20 year old data based on national stats. I'm talking specifically about dairy as well as cattle that play a big role across the watershed. I agree with Ken in the sense that I'm not sure if the juice is worth the squeeze for the nutrient side of things. In terms of broiler production numbers, I think that is a worthwhile project. I have renewed concerns because my understanding is that no matter what the numbers say, the only thing that matters is the relationship between counties. There are no gains if we had more information through the Ag census. As we've seen over time, Ag census has overestimated the number of birds, and we will still be stuck with that. We just will reassign how much of the load is responsible from what county. It seems like splitting hairs. I think our resources at the AgWG are better spent on other projects.
 - Holly Porter: We have collected the numbers from our integrators in Delmarva every year since 1957. However, we have not broken it down by county or state for historical purposes until this year. We already have that data, and have for years, so hopefully that can be beneficial. We have compared our data to some of the NASS numbers. For example, in Delmarva our data shows 605 million birds produced, and their number is

594 million birds, only about a 2% difference. This may be helpful so you don't have to reach out and get that information again.

- Paul Bredwell: You do not have these numbers at a county level, correct?
- Holly Porter: Correct, we have Accomack County and the rest are by state.
- Paul Bredwell: So again, you'd have to distribute it according to the Ag census if you want to do it by county. Chris, if you think I meant to only focus on poultry and leave out beef and swine, that was not my intent. My hope is that other animal sectors will have these same discussions. I also did not mean that the main benefit of this is to dole it out to counties. My intention is to have the most accurate data in a way that also benefits the model.
- Loretta Collins noted that the values displayed on slide 20 are solely example values used to show how the numbers could be used.
- Mark Dubin: This is just an example of distribution, showing how the numbers could be used. If we're going by the last Ag census, this would be the distribution model to the counties that we've been using for many years. What is different is that we are starting to use data from NASS which is reported at a state level. So, we have to go back to the last Ag census to get the distribution down to a county scale. The other ongoing issue is when you only have a few operations in a county, the Ag Census does not report that at a county scale, instead it is only included in the state level data. So how do we distribute numbers down to counties from deleted data sets? We have an opportunity to get data from the industry so we can address deleted county data sets and have correct information between counties.
- Jason Keppler: Based on this work, there is an opportunity to better distribution of the population. For example, we may be able to move away from annual NASS data.
- Mark Dubin: We're tied into NASS data for Phase 6, but if we have a more accurate distribution on a county level, it can help us use the correct number in the model.
- Chris Brosch: If we cannot replace NASS with industry data, I don't think there is any urgency to this project. I would rather spend our resources on other animal sectors considering some have 20-year-old data.
- Bill Angstadt: I'd like to mention that more accurate data is important for WIP III process. For example, if looking at litter transport or other BMPs to have a more accurate distribution of population at a county level makes that more credible. When it comes to the calibrated model, the comparison between counties of loads is based on phosphorus sensitivity analysis. Manure is not an element in the analysis- it's such a slight sensitivity that it does not make a difference. Ratios between counties of phosphorus loads, it would seem like that is not going to change the calibration of the model or the load requirement for phosphorus from county to county based on more accurate data.
- Kelly Shenk: I was part of the poultry litter committee for many years and I remember it was a big decision we made to move away from the ASABE data and excreted manure approach to quantify nutrient generation based on poultry litter. Our argument was that that's how we manage manure nutrients in the broiler world- through litter, not excreted manure. With that decision, came the challenge of needing to know the nutrient concentration of litter and the volume of litter. Even with our University of Delaware data set, we recognized it would be helpful to have more data, but we still got approved and we saw some significant differences from the previous national approach. We knew we would have to regularly update this information, because we aren't relying on NASS, and we committed to that. I don't want to go back to the old way of doing

things. I don't agree with the argument that poultry litter concentration information will stay accurate for a decade. A lot of things are changing, that will ultimately effect nutrient generation in poultry. I am an advocate for updating this information and feel like it's timely to do that now.

Data Collection Update

Mark Dubin

Mark Dubin, UMD, provided a status update on data collection proposals, initially presented at the February AgWG Face-to-Face meeting, related to inputs in the Phase 6.0 Model.

Discussion:

- Bill Angstadt: These are big policy issues that we're talking about here. We've been given some direction from the Management Board concerning soil phosphorus. But, I don't think this has come to the WQGIT as an issue yet. Starting with soil phosphorus data- the big issue is county data relevant in WIP management strategies. Right now, the phosphorus soil data is only being used in the sensitivity analysis for phosphorus. The variance there is very slim. There is use of resources with little impact here. The science has been advancing rapidly, and we have a lot more tools for managing data layers of phosphorus than sampling individual county farms. Farmers are not managing by county level of phosphorus, they are managing at subfield levels. Geospatial data on what farmers are managing is much more appropriate data for WIP III planning than county averages. Better phosphorus data is not the policy issue here, it's much broader than that. For commercial fertilizer data- we have 2016 data from the state chemists that can be used. There has been a historical issue of data errors and gaps, and it comes back to policy, not data. I'll refer to Matt Johnston's recommendation in the last 30 days regarding PA: "states and the industry could significantly improve reporting of non-farm fertilizer sales to AAPFCO through state chemists to ensure most accurate representation of fertilizer sales possible." There is a lot of work to be done on improving the quality of data before we go out and create an entire new dataset.
- Jim Cropper: Have you checked with Farm Service Agency on what they would do about cover crops when it comes to whether it's going to be grown to maturity and harvested for grain? If Farm Service Agency makes a distinction between cover and commercial crops, that would be a good way to find out what will be harvested and what will be cover crop.
 - Mark Dubin: Part of our problem is that the information is protected. There have been issues getting access to information from FSA. In the past, we have seen variability of how information is collected and which questions are asked. This is something to keep looking at to have a larger discussion with USDA.
- Jill Whitcomb: With all of these proposed projects, it is important to see proposed budgets for each of them. It is great we are focusing on data gaps, but there is a lot of funding and resources needed to even put BMPs on the ground. It's important to see budgets for the group to identify prioritization of projects.
 - Mark Dubin: The budgets are always a consideration. Part of the discussion here is that it is difficult to develop a budget until you have a scope of work. To develop the budget, we need a sense of interest level as a first step before developing the rest.
- Chris Brosch: My comment is about commercial fertilizer data. In DE, our state chemists say the accuracy problem is mainly due to double counting. There is not a big penalty for states for accidentally double counting fertilizer resources. Perhaps as a step to precede some alternate data capture, it may be best to put together an ad hoc group of the AgWG level to produce a set of guidance for state chemists to best avoid double counting issues.

- Lindsay Thompson: I would concur with Bill and Jill's comments. Moving forward, let's give everyone time to digest these, and come up with any potential additions. I have some ideas, and I'm sure others do as well regarding prioritization moving forward. In that consideration I think cost and applicability across the entire watershed. I request time to look at these, and take any additional suggestions on data needs and projects. Then go through a similar process that we did for expert panels, where jurisdictions, at large members, and signatories, are given an opportunity to rank them and come back to make decisions at our June meeting.

ACTION: The AgWG is asked to send suggestions and comments regarding proposed data collection and projects to Loretta Collins (lcollins@chesapeakebay.net) and Allie Wagner (wagner.alexandra@epa.gov) [cc: Mark Dubin (mdubin06@umd.edu)] by June 13th for consideration during the prioritization discussion at the June 20-21 Face-to-Face Meeting.

Prioritization Discussion

Chairs, Coordinator

In order to foster AgWG productivity over the next two years, the AgWG leadership has requested a review of previous decisions and topics relevant to the Workgroup's [Scope and Purpose](#). The items presented today for broad discussion will be brought forth to the Workgroup again at the June 20-21 Face-to-Face Meeting in Lancaster, PA for a more in-depth discussion. The outcome of the June meeting will be a list of prioritized projects and topics on which to focus the Workgroups efforts in the near-term (2018-2019).

Discussion:

- Jeremy Hanson: The RFP is out for mortality with a June 18th deadline. The RFP is being circulated and please keep reaching out with suggestions for the expert panel.
- Barry Frantz: I know Loretta sent out an email about forest buffers as a possible topic, did you get any other responses on that topic?
 - Loretta Collins: Matt Keefer and the Department of Conservation of Natural Resources have offered to speak about PA issues.
 - Barry Frantz: NRCS would like to be a part of that discussion regarding riparian forest buffers as well.

ACTION: The AgWG is asked to send any additional suggestions and comments for the upcoming prioritization June 20-21 Face-to-Face Meeting discussion to Loretta Collins (lcollins@chesapeakebay.net) and Allie Wagner (wagner.alexandra@epa.gov) by June 13th for consideration during the prioritization discussion at the June 20-21 Face-to-Face Meeting.

June Meeting Details

Loretta Collins

Loretta Collins, UMD, discussed the schedule framework for the June 20-21 Face-to-Face Meeting in Lancaster County.

Next meeting: Wednesday-Thursday, June 20-21, 2018: Face-to-Face Meeting.

Location: Farm and Home Center, 1383 Arcadia Road, Lancaster, PA 17601

Meeting Participants:

Jason Keppler	MDA
Matt Monroe	WV DA
Loretta Collins	UMD
Allie Wagner	CRC
Chris Brosch	DDA
Clint Gill	DDA
Adam Lyon	MDA
Alisha Mulkey	MDA
Amanda Barber	Cortland Co. SWCD
Frank Schneider	PA SCC
Jill Whitcomb	PA DEP
Jerry Ours	WV DA
Tim Sexton	VA DCR
Bobby Long	VA DCR
Kelly Shenk	EPA
Peter Hughes	Red Barn Consulting
Bill Chain	CBF
Kelly O'Neill	CBF
Frank Coale	UMD
Gary Felton	UMD
Paul Bredwell	U.S. Poultry & Egg Assoc.
Jeff Hill	LCCD
Kristen Saacke-Blunk	Headwaters, LLC
Ken Staver	UMD
Jennifer Shuler	Bell & Evans Poultry
David Graybill	PA Farm Bureau
Barry Frantz	USDA NRCS
Denise Coleman	USDA NRCS
Greg Sandi	MDE
Carlington Wallace	ICPRB
Emily Dekar	USC
Bill Angstadt	Angstadt Consulting
Ron Ohrel	ADANE
Holly Porter	Delmarva Poultry Industry, Inc.
Scott Phillips	USGS
Mark Dubin	UMD
Bill Massey	Mountaire Farms
Jeremy Hanson	VT
Lindsay Thompson	MDAG
Jim Cropper	Northeast Pasture Consortium