Agriculture Workgroup (AgWG)

June 28 – June 29, 2017

Meeting Summary

Meeting materials: http://www.chesapeakebay.net/calendar/event/24799/

Actions & Decisions:

DECISION/ACTION: The AgWG approved the formation of an EPEG for a mortality management BMP panel and will seek nominations for EPEG members. Nominations for members should be submitted to Lindsey Gordon and Loretta Collins.

ACTION: All input and comments on the draft report should be submitted to Olivia Devereux (olivia@devereuxconsulting.com) by July 12th.

DECISION/ACTION: The AgWG will establish a new EPEG to explore preliminary questions in establishing an expert panel that would examine crediting options for agricultural stormwater and tailwater management practices. Nominations for members should be submitted to Lindsey Gordon and Loretta Collins.

ACTION: Agriculture Workgroup members should submit additional comments on the Phase 6 model to Matt Johnston, CC'ing Gary Shenk as soon as possible.

ACTION: The AgWG agreed to hold an open meeting to continue discussions of the review of the Phase 6 model. This meeting was tentatively scheduled for Thursday, August 3rd from 1:00 – 4:00 PM at the CBP Offices in Annapolis, MD.

June 28th 11:00AM-2:00PM

Welcome, introductions, roll-call, review meeting minutes Workgroup Chairs

- Minutes from the May 31st meeting were approved.

Agriculture Workgroup Coordinator Mark Dubin

Mark Dubin, UMD, introduced the new Agricultural Technical Workgroup Coordinator, a new UMD Faculty Assistant position that will be assuming the duties of coordinating the workgroup and its associated BMP panels. Loretta Collins' contact information is available on the Chesapeake Bay Program website.

BMP Expert Panel Updates Clint Gill, Tim Sexton

Chairs and coordinators of on-going AgWG BMP Expert Panels provided updates on their work. Clint Gill, DDA, provided an update on the Agricultural Ditch Management Panel, and Tim Sexton, VA DCR, provided an update on the Cropland Irrigation Panel.

Discussion:
Agricultural Ditch Management Panel-

- Jason Keppler: Water control structures are an interim BMP – where are those in the panel review process?
    - Clint Gill: I have not finished that section of the literature review yet, but we will be looking at it.
- Ed Kee: This panel has had a difficult time of finding available literature, so I would encourage AgWG members to provide Clint with any information they have.
    - Paul Bredwell noted that there was a discovery farm doing research in Minnesota with a denitrifying bioreactor.
- Jason Keppler: I know these won't be ready for progress reporting, but will they be available for our Phase III WIP planning process?
    - Mark Dubin: That's the plan, and we'll be able to use them to update our interim BMP values.

Cropland Irrigation Panel-

- Matt Johnston: With the modeling exercise, is the assumption going to be the same application but the content in the crop changes? Anecdotally, I understand that often times you get a higher yield with application so your application goes up.
    - Tim Sexton: ~~w~~What Wade Thomason has found is that on irrigated land, the amount of crude protein removed in grain production exceeds what goes down. So if we're removing that N in the protein, then it's not available for leaching. There's also a lot of N left in the stalk and leaves, but there's little research on silage.
- Ed Kee: Coming from DE, there's roughly 150,000 acres of center pivot irrigation. So, I think your crop acreage estimates are accurate. We as a workgroup might have to be willing to accept something more substantial than anecdotal evidence, but may not be peer-reviewed publications.
    - Tim Sexton: Wade's research is beneficial, and we have that to present in the report. His data also has data for dry years and wet years over the 30-year time period, and we'd average that out in the final number.
- Ken Staver: Historically, farmers have always opted to irrigate their land. And in DelMarVa, if you don't irrigate certain portions of land, then you have no yield. So you have to be careful about soil type, and be mindful of the fact that it changes the crop rotations. I would also be very leery of not having any~~d~~ leachate data and trying to draw N use efficiency values from that.
- Ken Staver: Are you considering recycling of N in groundwater? If you want to have a positive value, then you have to do that.
    - Tim Sexton: The research isn't going to support that.

Future AgWG BMP Panels Mark Dubin

Mark Dubin, UMD, discussed the potential for additional BMP expert panels under the AgWG. Included will be a proposal to form an expert panel establishment group (EPEG) for a mortality management BMP panel.

Discussion:
Agricultural Stormwater Management:

- Jill Whitcomb: Can you explain the overall benefit of agricultural stormwater management? Stormwater management for dealing with impervious surfaces in agriculture – wouldn't that be captured elsewhere?

    - Mark Dubin: We currently do not have an agricultural stormwater management BMP in the modeling tools. We do have stormwater management for urban and construction acres.
- Kelly Shenk: How does it relate to barnyard runoff controls? Aren't we already factoring that component of stormwater management?
    - Mark Dubin: That would be similar to a dairy operation with barnyard area controls; this is outside of that production area – it could be involved with feed storage areas, other impervious areas, etc.
- Ed Kee: Who requested this panel be formed?
    - Mark Dubin: It was requested in Phase II WIPs, and MD had requested this for their stormwater regulatory systems.
- Jason Keppler: My concern is that we have several ponds that are just farm ponds for fishing or livestock watering, and I think the expert panel would need to provide guidance on how to report those appropriately so we're not getting credit for these old structures.
- Jill Whitcomb: I want a clear delineation of what this is, and post-construction stormwater practices on ag land.
    - Mark Dubin: My thought is any stormwater practice on a post-operational agriculture structure would be considered for this BMP.
- Kelly Shenk: How does this relate to vegetative swales?
    - Mark Dubin: My thought is that it needs to be part of these stormwater systems – there may be some crosswalks between the practices for the urban stormwater sector and the BMPs of that workgroup.
- Ed Kee suggested the group table this decision until tomorrow, after which point the group will have visited a prototype site that would potentially be eligible to be credited for this practice.
- Frank Schneider: Is there any opportunity to put a PA representative on this panel or EPEG?
    - Mark Dubin: The EPEG that formed the report is closed, but the panel membership would certainly have PA representation.

Agricultural Mortality Management:

- Jeremy Hanson: The panel, in addition to looking at these BMPs, would be trying to better define the nutrients in carcasses available to be reduced by the BMPs.
    - Matt Johnston: In the Phase 6 model, we put off adding a source of dead animal nutrients until this panel did their job. So one of the things the EPEG has to discuss is whether it will be a Phase 6 or Phase 7 BMP.
- Kelly Shenk: From folks that manage their mortality, even if they're doing a composter, eventually those nutrients are going back into the litter. When you take a litter sample, you're getting nutrients from the litter and any mortality as well. So we are factoring in the full amount of nutrients in the model.
- Paul Bredwell: But some farms are incinerating, and other farms may be taking it to a freezer, etc.
- Ken Staver: If you put a high number on mortality, how big would the impact be?
- Motion from Tim Sexton, seconded by Jason Keppler, to form an EPEG to investigate a mortality management BMP.

DECISION/ACTION: The AgWG approved the formation of an EPEG for a mortality management BMP panel and will seek nominations for EPEG members. Nominations for members should be submitted to Lindsey Gordon and Loretta Collins.

Roadside Ditch Management Tom Schueler/Mark Dubin

Tom Schueler, Urban Stormwater Workgroup Coordinator, and Mark Dubin, UMD, presented a draft briefing paper on a proposal to define and credit roadside ditch management practices for the reduction of nutrients and sediment. The draft paper is the product of a special exploratory panel which was formed following a STAC sponsored workshop in 2016. The AgWG was asked to provide input on the draft document so that the exploratory panel may receive comments in preparation for developing a final report for partnership review and decision.

Discussion:

- Kelly Shenk: I just want to say thank you for all of this work you've done, and I especially like the idea of combining the future needs with an existing BMP panel.

BMP Quick Reference Guide Jeremy Hanson

Jeremy Hanson, VT, will present an update on the development of a BMP guidance and information document intended for general audiences.

Exploring Land-based Strategies to Address Conowingo Infill Phosphorus and Sediment Increases
Bruce Michael

Bruce Michael, MD-DNR, briefed the workgroup on the first of a three-phase approach that will explore opportunities for land-based practices to reduce phosphorus and sediment as a result of the Conowingo Reservoir being at full capacity. This work is being performed through the Modeling Workgroup and the CBPO Modeling Team. The results from a preliminary scenario analysis are now available for partnership review and input on the BMP implementation levels represented in the scenario.

Discussion:

- Ken Staver: This is the cost above current WIP cost?
    - Bruce Michael: Correct.

ACTION: All input and comments on the draft report should be submitted to Olivia Devereux (olivia@devereuxconsulting.com) by July 12th.

- Frank Schneider: How do the first two scenarios help those 3 segments meet their goals?
    - Bruce Michael: By reducing overall P loads to the bay, and algal blooms would be reduced to improve DO levels.

June 29th 9:00AM-3:00PM

Welcome, introductions, roll-call, review meeting minutes Workgroup Chairs

Phase 6 E3 and No Action Scenarios J. Sweeney and Mark Dubin

Jeff Sweeney, EPA, and Mark Dubin, UMD, presented to the workgroup recommendations on a revised draft of the Phase 6 No Action and E3 scenarios for agriculture. The AgWG will be asked to review revisions to the draft Phase 6 No Action and E3 scenarios and contribute suggestions at the meeting and over the summer.

Discussion:

- Mark Dubin suggested looking at the relative change in loads between agriculture and urban land uses on a per acre basis.
- Bill Angstadt: Land retirement to open space – PA Farm Bureau had asked about all farm land going out of production to reach the TMDL. I looked into this, and the 7% of land retirement doesn't sound like much, but for PA that's almost 200,000 acres of conversion of cropland to ag open space. Because the conversion of cropland to these open spaces of forest represents about 40 lbs of load per acre, this E3 alone creates about 20 million pounds (load reduction?) in PA of an assumption of an E3. So I would suggest PA review this and make sure it sounds reasonable.
    - Jill Whitcomb: I agree, but we'll have to look into that further.
    - Bill Angstadt: These are controllable loads, and the difference between No Action and E3 is what PA can theoretically manage.
    - Matt Johnston: This does not set the WIP, but it only sets the total achievable, from which we march back from. In Phase 5, it was about 70% of the total E3 that was achievable.
    - Jeff Sweeney: It's important to know that levels of implementation here have nothing to do with levels of implementation in a state WIP. But you are right in that some states will use that E3 reference point in developing their implementation plan. Not necessarily that 3% is going to be taken out of production, but they can use that as a reference point.
- Mark Dubin: Jill – what's the percent land retirement in Phase I and II WiPs for PA?
    - Jill Whitcomb: It's pretty high, but we're looking at Phase III WIP and determining that a lot of what was in the Phase II IWP was not realistic.
    - Mark Dubin: So the 7% is a long way down of what was in your WIPs.
    - ~~Jill Whitcomb: But it's all relative, and we need to pay attention to perception and messaging – what does this really mean to everyone?~~
- Chris Brosch: What's the current logic on the manure transport BMP?
    - Jeff Sweeney: This is a way of getting at reductions that would be needed for application rates.
    - Chris Brosch: So you're optimizing manure transport in areas that have a modeled excess.
    - Jeff Sweeney: Yes – and it would all just go out of the watershed.
- Chris Brosch: On slide 18 – if you compare the orange and blue lines, at least in the Phase 6 model – when No Action and E3 are compared, they are setting the bookends. But agriculture is going from a 72% burden of load to 74% load burden. Every sector gets cut both ways, but agriculture is getting deeper cuts both ways.
    - Jeff Sweeney: For planning targets then, regions that are more ag dominated would see more of the needed reduction in calculating planning targets. All of this has to do with the BMPs that have been added since the TMDL, and some greater efficiencies.
- Ted Tesler: There's a whole bunch of 100% implementation in this scenario. Let's say there's some overlap on these BMPs, and that some of these are exclusive BMPs. Is it really practical to set a bookend if you have an overlap scenario?

    - Jeff Sweeney: You could be right, so if you could point out those overlaps/exclusivities to us, that would be very helpful.
- Mark Dubin: On manure injection, that was relegated to row crop production, not pasture or hay. So we need to put some explanations in there with more than just 100%.
    - Jeff Sweeney: The rule is that you apply it to the greatest composite of land uses that the model accepts.
- Matt Johnston: One suggestion for the group to consider is that crop irrigation management we can't yet do in a progress run, so at this point I'm a little concerned about throwing that in there. I don't remember the interim efficiency, but it could be higher than what the panel comes up with.
- Ken Staver: When you showed the calibration runs for 5.3.2, it looked like a good fit. And now it's fit to the RIM data. So why did the Phase 6 1985 loads exceed the 5.3.2 loads for 1985?
    - Jeff Sweeney: These are scenarios – which includes RIM stations and coastal plain estimated loads. We've also made changes in simulation for coastal plain, and we have 10 more years of monitoring data at the RIM stations compared to the measure we had 10 years ago.
    - Matt Johnston: I'd have to look into the coastal plain, but I know we have a tighter fit on the Potomac, and before we weren't estimating all of that large flow and nutrients coming through the Potomac.
- Ken Staver: So on atmospheric, that's done at the national level – so does No Action include the change in atmospheric deposition rates?
    - Jeff Sweeney: It does not.
- Tim Sexton: I think to say we must achieve any one BMP when we look at the E3, is not the right way to go about this.
- Jason Keppler: Bill – regarding the 100,000 acres in MD. Our conservation reserve program has that same goal. Looking at land retirement and ag open space, includes grass buffers which are consistent with our strategy. But also to the overlap of BMPs – there's a lot of grass buffers on the eastern shore that will never be converted to forest buffers. So we have to be thoughtful for the number we use for forest buffers because 100% of those acres will never be converted.
- Mark Dubin reminded the group that the cropland irrigation panel recommendations will only apply to corn in the coastal plain, so the implementation will be limited.
- Jill Whitcomb: To see 100% really has a different impact in everyone's mind – it's 100% of what? Not everything. And another point is that it's confusing to see Phase 5 information mixed with Phase 6 information.

Proposed Agricultural Stormwater BMP Panel Follow-Up All

The AgWG ~~will~~ continue<u>d</u> its discussions of implementing the draft EPEG report to form a BMP panel for agricultural stormwater management practices.

Discussion:

- Matt Johnston: I think the idea here is that you can report your roof runoff structures but also your stormwater pond footprints that reduce nutrients.
- Ken Staver: We don't have strong information on what the runoff is from poultry operations. The base load is high, but we don't have information to say that it is really high.
    - Matt Johnston: Well we have the animal waste storage systems expert panel recommendations.

- Matt Johnston: And we went from about 15% controllable residual loads on poultry operations to about 1% in Phase 6.
- Frank Schneider: I don't know if the juice is worth the squeeze here.
- Ken Staver: I would want to see relative numbers to make decisions here. If it's 20% of 1,000, 100, or something else.
- Jill Whitcomb: In looking at this report and after going on the field tour, I actually have more questions than I have answers. I considered what we say as post-construction stormwater management practices, which PA requires in the NPDES construction permit, and MD requires in their CAFO permit. So I do not believe an actual panel is required for this, and I liked Tom Scheuler's presentation yesterday because I see that as the method we take to credit for ag land practices. We have the groundwork from the USWG, and then maybe we could put together a team to see how we can fit this practice underneath one of theirs, and assign it to an ag land use as opposed to an urban land use.
- Jeremy Hanson: Jill is pointing out that the panel could have a relatively easy task as far as stormwater practices done on ag lands, but I was under the impression that there's more nursery specific practices included in this that would certainly need a panel. I think we can do both at the same time, if the panel looks at the stormwater side and sees no problem with translating it – that's a pretty easy lift.
- Jason Keppler: I agree with Jeremy on this – it allows us to have the integrity of the BMP protocol process with the expert panel.
- Tim Sexton: To get this done in a timely fashion, what if we take your chair of the EPEG and connect him with Dave Sample and let them figure out how it would be applied in an agricultural setting.
- Motion from Tim Sexton to establish an expert panel to explore nutrient and sediment crediting options for agricultural stormwater and tailwater management practices. Seconded by Jason Keppler.
    - Frank Schneider: I want to know what the impact of this is before we convene this panel.
    - Ed Kee: To Tim's motion, maybe we set up a panel that looks at agriculture stormwater, extracts data from the urban side, and puts together a report.
    - Peter Hughes: PA's been doing this since 2010, and it's tied to a construction permit. To tease out what's ag construction versus commercial production, it will be hard for us to tell you what the ag BMPs were associated with. So we might be double counting because we're utilizing that BMP within our urban sector.
    - Matt Johnston: This practice would be about a 3.5 million pound N reduction in E3. That's about 2% of the total E3 delivered to the Bay.
    - Jeremy Hanson: These practices are already being implemented anyway.
    - Jill Whitcomb: I understand but there has to be a more efficient way to tackling this.
    - Ken Staver: To simply say we would apply the urban efficiency of a practice that isn't even designed to control nutrients – that won't pass the straight face test.
    - Ken Staver: I just want to note that the nursery people are very different from the agriculture people – so potentially consider that those two groups of people shouldn't be lumped together.
    - Frank Schneider objected, and suggested forming an ad hoc group to answer some of the preliminary questions and then report back to the AgWG. Chris Brosch agreed.
- Revised Motion: The AgWG will establish a new EPEG to explore preliminary questions in establishing an expert panel that would examine crediting options for agricultural stormwater

and tailwater management practices. Nominations for members should be submitted to Lindsey Gordon and Loretta Collins.

DECISION/ACTION: The AgWG will establish a new EPEG to explore preliminary questions in establishing an expert panel that would examine crediting options for agricultural stormwater and tailwater management practices. Nominations for members should be submitted to Lindsey Gordon and Loretta Collins.

Agriculture Modeling Subcommittee Update Curt Dell, Matt Johnston

Curt Dell, USDA, and Matt Johnston, UMD, will update the workgroup on the work of the AMS in regards to the Phase 6 model fatal flaw review and the review of model inputs.

Discussion:

- Chris Brosch: The area that needs to be excluded – that's calculated based on stream reaches rather than animals – right?
    - Matt Johnston: So there's no footprint – it's credited through a buffer plus excluding direct deposition.
- Jill Whitcomb: When you talk about relocating manure to pasture and hay, and the expert panel report had no penalty on pasture and hay with or without nutrient management – how does that play into this relocation?
    - Matt Johnston: we start at 15 lbs as a goal for pasture, understanding some might be applying more or less. Pasture loads would increase a little bit, but row crops would decrease a lot.
- Chris Brosch: For all of the pasture and hay land uses, the baseline condition is somewhat of an average. So it's fair to consider that in essence you're moving acres of those land uses to more intensive regimes.
- Paul Bredwell: I thought I heard that MD requires producers to report manure transport. I'm curious how many other states have that?
    - Delaware does, and Virginia has it as a statutory requirement but doesn't track it. Pennsylvania has it for larger operations, but doesn't necessarily track it.

ACTION: Agriculture Workgroup members should submit additional comments on the Phase 6 model to Matt Johnston, CC'ing Gary Shenk as soon as possible.

~~10:20 **Phase 6 Scenario Builder Documentation** Matt Johnston~~

~~As a follow-up the Phase 6 Model Inputs Webinar held on May 25, 2017, Matt Johnston, UMD, will lead a question/answer session with the workgroup on the Phase 6 model inputs documentation.~~

Phase 6 Fatal Flaw Discussion All

The workgroup will hold an open discussion on the Phase 6 model fatal flaw review, and will identify and resolve issues as needed. This discussion will include:

1. Review of process for submitting comments.
2. Summary of comments received.
3. Round Robin - each signatory will be asked to provide their input on the model review.

4. General membership discussion on the model review.

Discussion:
State Round-Robin

- Delaware:
  - Review is in process.
- Virginia:
  - Review is in progress.
- West Virginia:
  - Working with Dave Montali to conduct review. Still in progress.
- Maryland:
  - Review is in progress.
  - Inputs look good, but there are some outlier counties that will need follow-up.
  - Regarding loading rates – inputs may not be creating as much variability as some of the land to water and transport mechanisms.
  - Encourages states to look at all components of the model, and not just input data.
- Pennsylvania:
  - Concern about ag census, and the variability in reporting. Reiterated importance of getting input data as accurate as possible.
- Matt Johnston: I want to remind everyone that there was an animal reporting spreadsheet distributed to the workgroup.
- Mark Dubin: I want to remind the group that we collected population data as part of last year's work, and we're in the process of developing reports that will be coming to the AgWG soon.
- Bill Angstadt: I think Alisha's point is that because of the sensitivities that have been done, we're ending up with fertilizer and manure having 0 sensitivity.
  - Matt Johnston: If you were to remove 100% of the manure from Somerset, you would change the inputs. There's a significant sensitivity for manure N and P.
  - Bill Angstadt: So the average load becomes the crucial number here.

Discussion of comment raised by Bill Angstadt:

- Bill Angstadt: In this calibration, it seems they overwrote manure transport. We no longer have a mass balance simulation, we instead have a stream loading simulation.
  - Matt Johnston: I think that's a good point to bring up to Gary. I do know that all of the other factors that apply to EOF loads – those are constant. In all CAST scenarios. So using this as a management model, we're keeping everything constant but only change BMPs and future fertilizer/manure.
  - Tim Sexton: I can't look at CAST and make a decision on this, and I don't think we can make a decision on this today.
  - Ken Staver: Everything at EOF is always simulated, but the model has to work in a way that adds up to the measured number. So in terms of changing the numbers, then how does the model get the load in the end? They aren't messing with the delivered load to the Bay.
  - Matt Johnston: The Modeling WG through the Partnership had an approval process for everything you see here. So let's make sure that it's the Partnership that plugged in the methods, and not the modelers.
  - Tim Sexton: We decided in each state how we would reach these numbers.

    - Bill Angstadt: Right – we've gone through Partnership decisions on all these silos – the absolute purpose of this review is now that we have all of these silos in front of us – how do they interconnect? Is this workgroup happy and comfortable with the simulation having this big gap with calibration. What's being proposed is that an agriculture controllable source should be responsible for this rather than some other explanation.
    - Matt Johnston: I don't understand this gap.
    - Chris Brosch: Between the gap that Bill is identifying, which is in the documentation but without sufficient clarity, I think that combined with observable data points which contribute to soil test P – the bottom line of that particular dataset is that it's just not enough evidence to drive this tool. And that's the conclusion that DE is trying to capture in its comments when they are drafted.
    - Alisha Mulkey: I think Bill is bringing up some valid points – in terms of the process itself starting with the global loads, where everything starts from cropland, and then all of the other land uses get ratio-ed off of that. I would like more understanding when Jeff's presentation still shows significantly less absolute pounds of fertilizer and manure. The loading data still suggests cropland is loading comparable to the previous model. The sensitivities that Bill pointed to – he's correct; there are outliers, but there's still low variability in targets.
    - Jill Whitcomb: This is a general point – along the way, we have made decisions as to which direction we wanted to go, without really knowing what the full picture is going to look like. Now that we know what it looks like, there's potentially holes and gaps. I don't think it should be surprising that there are concerns being raised.
- Ed Kee: Here's a strategy to address what was discussed: to register your comments and concerns as soon as possible. But beyond that, I propose we have a face to face meeting at the end of July/beginning of August with the CBP Modeling Team. Is there consensus to set up that meeting?

ACTION: The AgWG agreed to hold an open meeting to continue discussions of the review of the Phase 6 model. This meeting was tentatively scheduled for Thursday, August 3rd from 1:00 – 4:00 PM at the CBP Offices in Annapolis, MD.

- Bill Angstadt presented on concerns from jurisdictions regarding sensitivities for manure and fertilizer and P loading rates.
- Bill Angstadt: We could ask for Andrew Sommerlot to do sensitivities based on inputs from Phase 6 instead of the soil P history sensitivity being based on those 10 years.
- Matt Johnston: I can't speak to the targets and averages, but the purpose of the model is for management scenarios. It's telling that we created a new model with different numbers, and surprisingly enough the difference between these scenarios is the same. The percent lift is the same.
- Ken Staver: I think one thing to remember is that everything is held to calibration data, that's a measured delivered load.
- Bill Angstadt: The loads are what they are, but the source of those loads is very political. Is the premise that agriculture still has a 70-75% responsibility, based on these targets, acceptable?
- Tim Sexton: When we say 70% is agriculture, that's us saying that 70% of the burden should be on agriculture to reach our target loads.
- Bill Angstadt: If the policy decision is to keep the pressure on agriculture and not pressure the urban sector, then that's OK.

- Jill Whitcomb: What I'm getting out of this is that I'm not sure the level of transparency on these numbers might be lacking. So it seems there's a lot of things happening in the background that we may or may not have been told about, and I think we just need some more clarity on that.
- Matt Johnston: I would just say in defense of the Partnership, it's more than the AgWG, to say that there's not transparency in those numbers simply because the numbers didn't come in front of this group, which is charged with the inputs – the Modeling Workgroup is in charge of the rest of this area. They have reviewed these changes, and all of the states have a seat at that group.
- Bill Angstadt: This is only about interconnecting the decisions made by all of the groups over all of these years – and it's certainly not about questioning the integrity of the model.
- Bill Angstadt: But again, we're back to asking if we have logical results, and data that we can manage to.
- Mark Dubin: The AgWG developed and approve land use loading ratios, not hard numbers. By recommending ratios, and not exact values, it left the opportunities for those numbers you showed changing, to change.
- Ed Kee: To summarize my understanding of this process, the WQGIT has two meetings in August. We have an AgWG meeting on July 20th, hopefully another one in early August to discuss fatal flaws, and then an August meeting on 8/17. At the August 17th meeting, we need to form our final recommendations on the Phase 6 model review. It strikes me that folks need additional time to continue digging into the data.
- Bill Angstadt: This correlation between observed and simulated may not have to match – we've introduced into this model N lag time for example. ~~So if a simulation and the observed has a big gap on N.~~
- Bill Angstadt: We have no intent to blow up the model or want to make personal attacks – but there's a gap between simulation and observed.
- Jeremy Hanson: I'd be curious to explore more what options you would suggest for addressing these concerns.
- Ken Staver: P reductions were handed out like candy in the first 10 years, and that was because it was tied primarily to erosion and annual inputs of P – not soil P. So, I think the frustration is that some things just turn out to be really hard to do. If you've got erosion under control, and you're still losing more P than you like.
- Peter Hughes: I think the information that was discussed today needs to be discussed with the CBP Modeling Team beforehand.
- Jill Whitcomb: We're talking about this as a management tool, and lag times and long-term planning – but is there any consideration for a longer time-frame that we can build up our reporting? Because being measured on an annual basis for a long-term management tool doesn't jive.

Announcements

Participants Day 1:

Name	**Affiliation**
Ed Kee	DDA Retired
Mark Dubin	UMD
Loretta Collins	UMD
Lindsey Gordon	CRC
Clint Gill	DDA

Alisha Mulkey	MDA
Jason Keppler	MDA
Greg Sandi	MDE
Robin Pellicano	MDE
Emily Dekar	USC
Frank Schneider	PA SCC
Jill Whitcomb	PA DEP
Ted Tesler	PA DEP
Bill Brown	PA DEP
Matt Monroe	WV DEP
Tim Sexton	VA DCR
Bobby Long	VA DCR
Kelly Shenk	EPA
Joel Blanco	EPA
Marel King	CBC
Jeff Hill	LCCD
Chris Thompson	LCCD
Bill Angstadt	Angstadt Consulting
Matt Johnston	UMD
Greg Krasnoff	UMD
Julia Abolafia	UMD
Ken Staver	UMD
Peter Hughes	Red Barn Consulting Inc.
Kim Snell-Zarcone	Choose Clean Water Coalition
Jim Cropper	Northeast Pasture Consortium
Elaine Hinrichs	CRC STAC
Victor Clark	
Tom Scheuler	CSN
Olivia Devereux	Devereux Consulting
Bruce Michael	MD DNR
Jeremy Hanson	VT

Participants Day 2:

Name	**Affiliation**
Ed Kee	DDA Retired
Lindsay Thompson	DE/MD Agribusiness Assoc.
Mark Dubin	UMD
Loretta Collins	UMD
Lindsey Gordon	CRC
Chris Brosch	DDA
Clint Gill	DDA
Tim Sexton	VA DCR
Bobby Long	VA DCR
Jill Whitcomb	PA DEP
Ted Tesler	PA DEP
Frank Schneider	PA SCC

Matt Monroe	WV DEP
Jason Keppler	MDA
Alisha Mulkey	MDA
Robin Pellicano	MDE
Jeff Sweeney	EPA
Kelly Shenk	EPA
Peter Hughes	Red Barn Consulting Inc.
Paul Bredwell	US Poultry & Egg Assoc.
Jeff Hill	LCCD
Ken Staver	UMD
Bill Angstadt	Angstadt Consulting
Jeremy Hanson	VT
Matt Johnston	UMD
Curt Dell	USDA
Jim Cropper	Northeast Pasture Consortium
Steve Levitsky	Perdue Farms
Kim Snell-Zarcone	Choose Clean Water Coalition