Agriculture Workgroup (AgWG) Meeting Minutes January 16th, 2025 10:00 AM – 12:00 PM <u>Meeting Materials</u>

Summary of Actions and Decisions

Decision: The AgWG approved the minutes from the December AgWG meeting.

Action: AgWG members who have not yet designated an "alternate" representative should email Caroline (<u>kleis.caroline@epa.gov</u>) with the name and contact information of their alternate.

Decision: The AgWG voted to approve the list of nominees for at-large members for the 2025-2026 term. At-Large Members will be confirmed at the February meeting.

Action: Caroline and Eric followed up offline to get the approval of the 2025-2026 AgWG nominees from signatory and mid-term at-large members not present on the call.

Action: A live poll was opened during the call to determine interest in a Bay 101/AgWG informational session. Given member interest, Caroline and Eric will work to create an introductory presentation designed for AgWG members.

Action: Email Ashley Hullinger (<u>ahullinger@pa.gov</u>) and Tom Howard (<u>thoward@resolvehydro.com</u>) with any additional feedback on the model acceptance criteria and recent work on the PA DEP Remote Sensing BMP Verification Pilot Project.

Action: Please fill out this <u>Google Poll</u> indicating your availability for virtual or in person attendance at the AgWG's February in-person meeting.

Intro & Announcements

10:00 Welcome, roll call, review meeting minutes – 5 minutes Kathy Brasier, AgWG Chair

- Roll call of the governance body
- Roll call of the meeting participants *Please enter name and affiliation under "Participants"* or in "Chat" box
- Decision: The AgWG approved the minutes from the December AgWG meeting.

10:05 2025-26 At-Large Membership – 15 minutes

Eric Hughes, AgWG Coordinator

Eric reviewed the list of nominees for the open at-large member positions, and nominees had the opportunity to introduce themselves to the group. Since the number of nominees did not exceed the number of open spaces, the nominees were approved by a live vote.

Discussion

Eric Hughes: We have six nominees for six positions, and these are the six folks who served with us over the previous two year term. So, all renominations and names that have already been approved. We were originally going to go through the polling process, but not so necessary now. I want to take the opportunity though to open the floor if anybody on this list is here and you'd like to say a few words and let us know why you're interested in participating or anything you are looking forward to in the year to come. Any takers?

Nick Hepfl: I'd really like to stay on. I've thoroughly enjoyed the last two years, and it's been great to be a part of this workgroup. I really like the direction that we're going, and I am really excited for where we're headed with some of the soil health initiatives. I would really enjoy being part of it. So, thanks for the opportunity. Really appreciate it.

Eric Hughes: Thank you so much, Nick. I remember I had the opportunity to talk with you right around the time that I started. I remember you talking about the importance of soil health to you. It's like a hobby. It's work, but it's also a passion. I think taking advantage of the passions of our members and really leveraging interests and the knowledge of our at large members is going to be a priority in the coming two years. Really looking forward to tapping into everything that you know and using that to our advantage, helping us become that much better and more effective as a group. Anyone else?

Paul Bredwell: Thanks, Eric. I just want to amplify what Nick said. I'd love to stay on. I've been involved with the workgroup since it's inception back in 2010 or 2012, and poultry's got a big footprint in the watershed. We certainly want to make sure that we help get to where we want the watershed to be in a healthy and great state. So, I'd love to say on. I'd love to represent the poultry and egg industry and do it in a constructive way. I always appreciate the professionalism and the collaboration that this group has brought since I've been involved with it.

Eric Hughes: Yeah, Paul, really appreciate that. We've had the privilege of working together in a few different instances just in my last year. I think what makes the AgWG unique is that ag voice. We are the group that has the representatives of industry here and who serve as at large members. I think we should take advantage of that. You represent a unique piece of this puzzle and I think, to the extent that we can, we take your interest and your priorities and use it to advance the work that we do. I think we should absolutely do that. So, really looking forward to working with you and others from the industry in the coming years. Anyone else?

Matt Royer: Thanks for the opportunity. I really appreciate the support and would be interested in staying on if confirmed by the group. As you mentioned, Eric, in your introductory remarks, we are kind of at one of those touch points or turning points coming into the next couple of years. So, I think it's a real important time to be engaged and see where the vision of this workgroup is headed into the future, even the very near future, and look forward to thinking about also how we all can collaborate moving into 2025 with the new Ag Advisory Committee and the greater voice that agriculture will have in the Chesapeake Bay Program, which I think is an exciting opportunity for all of us.

Eric Hughes: Thank you so much, Matt. Really agree on all fronts. Well, if we don't hear anything from anyone else, we'll go to the next slide and talk about process a bit. Originally we had seven nominees. One individual very respectfully retracted their nomination and was interested in supporting us in a non member capacity and wanted to give the opportunity to folks that have been around to stick on. So, we have six nominees for six positions. Certainly if you want to go through the formal process, we would go through a ranking process. But, ranking six people for six positions isn't going to really do all that much. So, we figure we can take a vote on this call. Nominee information has been posted on our web page and has been up for review. But, there folks were all confirmed before. So, unless there are any objections, I think we can just take a minute and call for a vote.

Kathy Brasier: Unless there are objections, we can do it by voice today if we are ok with that. If not, we could do a roll call or we could do an online poll as originally intended. Firs, are there any objections to doing a voice vote on today's call? We see no hands, so no objections raised. My only question is, Eric, do we have a quorum? Do we need a quorum to do this vote? Greg Albrecht (in chat): I'm inclined to vote today. Voice works.

Eric Hughes: Good question. I think what we are going to do is take a voice vote on the call and then we'll send out a follow up message to the entire membership and we'll solicit feedback that way from members who aren't able to attend.

Kathy Brasier: If everybody could turn on your camera and raise your hand if you approve the slate of nominees, that might be the easiest. If you have no camera, raise your hand through the raise hand tool. All in favor, raise your hand one way or the other. Any opposed? Elizabeth Hoffman (in chat): Teams does not work well on our state computers. MD votes to approve.

Kathy Brasier: That is approved. Thank you to all of the nominees and members for putting names forward and for your passion and care on this particular set of topics and issues. I'm thoroughly impressed and excited about all of our members. As several of you said, we are at a crossroads, and at our meeting next month we're going to talk about how we are going to take the reins and move forward as a group. So, I'm really excited about that conversation.

Eric Hughes: One thing I want to highlight now is the need for alternate members. Particularly as we look to the future where engagement is going to be especially important, I really want to see who is getting formal representation at our meetings. Because there is so much going on for all of us, it doesn't make sense to lean on just one person for that. So, your alternate is certainly not responsible for coming to every meeting, but if one of our members tells us they aren't going to be present, this helps me know who to look out for if I'm seeking input from a specific entity. So, just go ahead and shoot us a message in the next couple of weeks with someone who might be a good fit to fill that alternate spot. Jeff, I've already been in touch with Lee and we're working on getting you a #2 here in short order, so you don't have to worry about that.

Greg Albrecht: If a jurisdiction is good with their primary and alternate, are we set? Or do you still want some verification?

Matt Kowalski (in chat): Jenna Schueler- I'm happy to remain your alternate rep Eric Hughes: Absolutely. Nothing more for you to do. I see Amanda comes on from time to time, so you guys have dual representation. I really appreciate the participation. We're going through the nomination process this year, and we're naturally thinking about bringing more people into the fold. So, I am trying to start thinking about how we can take somebody that's new to all of this and get them to the point where they could really be an engaged member. I think a good place to start is maybe with an introduction to the Bay Program, like a Bay 101, and a closer look at the AgWG. So, we put together this presentation. I would give it each Spring, ideally at a time when we'd have brand new members, so like March or April. This would be a special session outside of our regular meeting time, and this wouldn't be for just members, it would be something that hopefully the public would want to take advantage of as well. I'd like to make something that even some of our longest tenured members would be interested in, which probably sounds crazy to those of you where that would apply. But, if there is anything that you feel like you could use a refresher on or if the information isn't readily available to you, that would be something to include. I am going to try a Teams poll today.

	Ighes (in chat): Hughes, Eric via Polls 1/16 10:25 AM			
	LIVE Poll: Names not recorded ; Results shared			
	If you gave a Bay-101/AgWG informational special session, I would:			
	 Attend! Not attend Submit Vote 			
			Edited	
			Attend!	100% (15)
	Not attend	0% (0)		
	15 responses			

Eric Hughes: It looks like everybody is on board, so I am going to take that as a good sign and say that trend is probably going to continue. So, we will move forward with that.

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Innovation/Data & Modeling

10:20 PA DEP Remote Sensing BMP Verification Pilot Project Updates - 25 minutes (presentation and discussion)

Ashley Hullinger & Scott Heidel, PA DEP; Tom Howard, Resolve Hydro

Ashley and Tom provided an update on DEP's remote sensing pilot project, focusing on model acceptance criteria and timeline for review. There were no decisions associated with this item for the January meeting; however, AgWG members and participants were encouraged to ask questions and provide feedback.

Discussion

Ken Staver: Just a point of clarification. So, we are just talking about this approach for residue cover? Is this more general, or is it just about doing residue cover?

Tom Howard: That's a great question. This approach is designed just for crop residue cover, but the methods are pretty general. So, theoretically, the same type of approach could be used for other reporting. But, as written in the methodology, it's just for crop residue cover for the BMP verification of tillage BMPs.

Ken Staver: Right. Then my second question is, is there a sense of what the variability is if two different people do it? How much variability is there in the roadside transect part of it?

Tom Howard: That goes back to the 50% accuracy. As is currently allowed in Chesapeake Bay Program procedure, the accuracy of that method if you have somebody come back and revisit, needs to be greater than 50%. At the same time, it has these confidence intervals associated with it. So, what that means is, if you repeat this procedure 100 times, at least 90% of the time your answer will be within the error tolerance of the true estimate given by this method. There is uncertainty associated with this method, though. So, that might be kind of getting at your question of is human observation using the driving transect survey acceptable, or do we need to be in the field? Is that where you are going with that, Ken?

Ken Staver: Every time you try to estimate any technique, there is some error. Then you start comparing two methods and you have the errors of the two methods. I was just trying to overall get a sense of how all of this would work with what's being done now. It seems like this would be way more repeatable than what you get by different people driving by and making estimates, I would think.

Tom Howard: Most definitely. If you run the classification three separate times using the same model, it should result with the exact same answers. Sending someone into the field three sides to the exact same field, they might come up with three separate answers themselves.

Fred Irani (in chat): It seems to me that the field survey is actually a subjective observation and the satellite data is a set of individual objective observations. Moreover, the roadside observation is from a low view angle with much of the ground obscured from view. Also differences in the date and time of day may play as factors in this evaluation/comparison.

Tom Howard: I completely agree. I think that the roadside observation is limited to the ocular calibration and field of view of the human observer. There is that additional repeatability and objectivity you get from satellite observation. There are still issues and uncertainty with every method. But, the satellite measurements get at that more holistic classification. In terms of the time differences, within the methodology right now, there's a recommendation that the satellite measurements be restricted in time to the periods between March-June. At a more technical level for the model, what we are planning on doing is using measurements at which a metric known as the NDTI, which is a tillage index, reaches an inflection point. So, before this inflection point, it can be assumed that tillage hasn't occurred and after it is assumed that the crop field is growing and starting to reduce the signal from the tillage. I believe Dean Hively, who is on this call, might be the person who first came up with that method. So, shout out to Dean for doing that.

Scott Heidel (in chat): Excellent presentation Ashley and Tom! I have to hop back over to management board. Thanks all

Eric Hughes: Thank you, all, and stay tuned for the initial report.

Action: Email Ashley Hullinger (<u>ahullinger@pa.gov</u>) and Tom Howard (<u>thoward@resolvehydro.com</u>) with any additional feedback on the model acceptance criteria and recent work on the PA DEP Remote Sensing BMP Verification Pilot Project.

AgWG Planning

10:45 Advisory Committee Overview – 20 minutes (presentation and discussion) Eric Hughes, AgWG Coordinator

Advisory Committees are a critical part of the Chesapeake Bay Program Partnership. As the Agricultural Advisory Committee is in the process of being established, the AgWG should understand the form and function of the three existing Advisory Committees. Eric provided a high level review of the Scientific and Technical, Stakeholders', and Local Government Advisory Committees, touching on past connections between these groups and the agriculture sector/AgWG.

Discussion

Mark Dubin: We have worked very closely with STAC in the past and that's taken a couple of different forms. We had some priority research goals for the AgWG, and we took those to STAC and worked with them to develop some targeted STAC workshops to address those, similar to an expert panel process. So, those have been helpful. We also collaborated with STAC on workshops that had some element of agricultural production and conservation as well with those. So, we weren't necessarily the sponsor of the workshop, we were a participant in it. So, there's definitely a number of formats there. A third one would be if we have something we'd like for STAC to review internally. That's always another opportunity. Tapping into folks that are on STAC that have an agricultural background and interest. In order to do those types of projects, you need to have somebody within the STAC membership that's willing to be a sponsor of the workshop or the review. It's nice that we have a couple of folks that we have direct relations with that might be helpful for that. I think it's important, especially as we move forward with the new pathway that the workgroup wants to go in. Having a diversity of support sources, either financially or tactically is extremely important. We've been lucky in the past to have some sources that help with these efforts that are currently available. Whether they will be available in the future, we don't know, but STAC is a reliable source and has been providing support for these for years.

Ruth Cassilly: I was just going to give one more example of the way we participated with STAC previously. In 2021, Loretta Collins collaborated on a STAC workshop called "Overcoming the Hurdle, Addressing Implementation of Agricultural BMPs Through a Social Science Lense". It was all about targeting what about social science can help us be more effective with the agricultural community in targeting and being successful with BMP implementation. So, that's another recent one. Also, not only participating with STAC, but maybe picking up some of those prior workshops that have already happened and taking a look at what they recommended and seeing what about those recommendations we may be able to pick up and run with within the AgWG. Eric Hughes: I really like that idea, Ruth, and I think we want to take advantage of all the work that has already been done. It helps us avoid reinventing the wheel, and with some of the work that has already been done and hasn't gone anywhere quite yet, I do think there's a lot of

opportunity there. So, certainly making note of that. I think it would be valuable to bring together all those resources into one place and have those easily accessible to participants of this group. Certainly will work on that and appreciate you flagging that for everybody. Kathy Boomer (in chat): Linking Soil and Watershed Health to In-Field and Edge-of-Field Water Management STAC report highlights importance of soil health and opportunity to elevate infield and edge-of-field water mng't as critical set of strategies for advancing Bay Program goals. https://www.chesapeake.org/stac/wpcontent/uploads/2021/07/FINAL STAC-Workshop-Report-Soil-Health 7.8.2021.pdf Eric Hughes: To the extent that you are willing to share, do the people on this call also participate in the advisory committees? Is this brand new to you or do we have some connections that exist already? I know we have Kathy and others who are tied into, for example, STAC. Do these connections exist elsewhere? Is anybody willing to indicate that you participate in committees as well? Not as a member, necessarily, even just an interested party. Kathy Boomer: I will respond and say how excited I am for the Ag Advisory Committee. Since I am kind of in the sunset of my membership on STAC, I'll share this perspective. I think STAC provides excellent support and the idea and intent is very genuine. The members who participate are very genuine and authentic in their efforts to advance restoration efforts. I worry that we are not always as sensitive or aware of the information gaps and information needs on the ground. This is especially true, of course, in the agriculture space, given that producers are expected to reduce 80% of the nutrient and sediment loads. So, one, just needing more representation in the STAC conversations and representation that carries weight in the conversations. I think having the status of an advisory committee could be a valuable strategy toward that end. The workshops are a great opportunity to provide co-learning experiences, if you will. I deeply value workshops as a mechanism to bring diverse stakeholders together to share perspectives and ideas and explore uncertainty and to try and think about how we can work together to address those uncertainties and improve our capacity to manage the systems more effectively. However, workshops aren't necessarily the end-all to the science. In some cases, it can shut down the conversation and it gets shelved, or it leaves out a portion of the community. I think the agriculture community has at times been left out of the conversation as a result of the workshop outcomes. They are excellent opportunities, but keeping a realistic expectation and thinking creatively about how we can get more out of these workshop opportunities would be really valuable.

Eric Hughes: I really appreciate the fact that we have you on here and that you participate in our meetings as well. Having those areas of overlap is really important. Your point about the community being left out of the conversation is something we hear all the time. Obviously, the Ag Advisory Committee being established is a step in that direction. They're going to be working together, and I think that will address a lot of the concerns. At our level, I don't think there's anything that stops us from getting involved, too. So, we come in and say we want to participate, we want to be at the table, how can we collaborate? We come in and we say we want to participate, we want to be at the table, how can we collaborate? So, we extend the invitation from our end, and we see where that goes. I'm hoping on all fronts that we can maybe provide that to them, and it seems like we can get some benefit out of it as well. We'll certainly be tapping you for suggestions and strategies as we go.

Kathy Boomer: Happy to help, and I think where we could really push is to try and bring more nuance to the conversation. It's not cover crops, yes or no? It's being a little bit more creative and detailed about what cover crops work best given farmers constraints and concerns, for example.

Eric Hughes: Excellent. Thank you for your insights. As far as folks' take on engaging with the advisory committees, I just want to take some time to see if anything stands out as something that we really want to explore further or this looks like a good opportunity for us to jump on. Anything from the group?

Ken Staver: A lot of what Kathy said I agree with. I think, overall, these advisory committees are pretty high altitude. This group is in the trenches. I look at our membership and what we have to do, and we're trying to get this done on the ground. We're dealing with it hands on. One place, and it worked pretty well was on our phosphorous report, was If you have a topic that you think is not being handled well, in that case it was about how the watershed model was dealing with phosphorous, if you can get into STAC and get somebody to support a workshop and a report, you get leverage on the topic. It's hard for the AgWG to get leverage. We're pretty far down on the food chain. We're down here having trouble with something and it may not get as much attention as we'd like. But, if you can get it up to STAC and somebody says we should look at this, then it gets some traction, then you can get someplace with it where it will have an impact. You really have to look at what you're dealing with and if you have a topic that's giving us a hard time and we really need some changes to be made or some help, that would be where I would try and get it up to the STAC level. But, you have to find somebody who is going to advocate for you at the STAC level. Things that sound good at that level get traction but, for us, they really have to be something that works on the ground. I'm looking at this new Ag Advisory Committee, and I think we ought to be aggressive going out of the chute and be saying what we need from them, because we're the ones that are trying to get this job done. At the end of the day, what we are trying to do is to meet the nutrient reduction goals for Ag to achieve the TMDL. Restore the Chesapeake Bay, but the numerical part is the TMDL. If the Bay got better, whether it met the TMDL or not, people may be less concerned about the TMDL: 'The Bay is better, so we don't even need to worry about it.' But, that didn't happen, so now we have these numerical goals. That's really our big task, and we hear again and again that ag has come up short. We missed another deadline. So, we're in the crosshairs of this restoration effort. So, I think we need to look at these and say if it's data needs, we need to kick it up to them and say this is what we need to do our job. We spend all this time on counting animals and getting land uses right. If that group can bring pressure to get the information we need to do a better job, then I think that's how we ought to look at this group. If the people who form the group just try to tell us what we need to do, that is unlikely to help us. So, I think if we were strategic, and we're ready for this advisory group to say this is what we need to do a better job, we might be able to do alright on that. Elizabeth Hoffman (in chat): Agree with Ken, the value here seems like it would be a direct connection to a group higher in the conversation that topics would not become diluted within so Ag Advisory Committee being able to share with their laterals in STAC.

Kathy Boomer: I just wanted to underscore Ken's comments and thank Chris and Leon. I think there were three or four of us who tried to carry the banner for science needs around agriculture, and sometimes it was fighting against the tide, to Ken's closing point. I think there's so much opportunity for agriculture to help advance the Bay Program goals and for us, at the same time, to support agriculture as an important part of a healthy watershed. It's going to take work, and there's going to be pushback, like Ken stated. So, yes, power through and take advantage of this opportunity.

Mark Dubin: I just wanted to piggyback on Ken's thoughts there as well. It's kind of hard to say about the Ag Advisory group, because they haven't formed yet. But, at least on the STAC side, my experience in working with them over the years and working on STAC workshops that we either promoted or participated in, I think the value there is really more of the policy level and where we have limitations and implementation that are beyond specific programs that our folks within agriculture normally manage. It's above that, and I think that's where the real opportunity is. Especially where it involves multiple states and policy and information sharing and guidance. I always saw that as kind of out of the reach of what the AgWG could really be effective at promoting. These groups do have the ear of folks that do have that decision making capability. I think that's a great place to enable us to do a better job in what we're doing in the trenches, or maybe out of reach from what we can directly influence ourselves.

Eric Hughes: Great perspective. Even though we don't have a Menti for this, if you are thinking about this and you heard something you liked or didn't like, please jump on now or email us. We want to consider all of this as we move into February.

Ken Staver: I was thinking about the local government, and I think one thing that will be useful for us as a group is to look at the practices and the load reductions we are getting and who are the players that put those things on the ground. For example, if it's federal folks like in riparian buffers, a lot of it's the CRP program, so it's federal dollars. So, what are the practices that are doing the big reductions? What are the practices that we would like to do big reductions, but we are not getting done? How do they happen? Is it federal employees? Extension? State dollars? Federal dollars? So, look at that whole infrastructure of how we're getting stuff done and then say well, here's where our gaps are. So, if we need funding, that's sort of where we have to talk about what our potential funding sources are and where our human and technical resources are. So, each practice sort of has a supply chain with how it happens. There are rare practices out there where it makes money for the farmer, so they take care of themselves. Other than that, it's a lot of technical support and subsidies or regulations. Somehow there's a supply chain to get stuff on the ground, and we ought to take a look at that because that would sort of tell us where our pressure points may be.

11:05 **Preview of the February In-Person AgWG Meeting – 35 minutes (presentation and discussion)** *Kathy Brasier, AgWG Chair; Eric Hughes, AgWG Coordinator*

Next month, the AgWG will hold an in-person meeting (with virtual participation option) for the first time in 5 years. Kathy and Eric went over what to expect at the February meeting. This will include an overview of the draft planning document capturing feedback from workgroup participants on the high-level, planning-focused presentations given to the AgWG between October and January. The February meeting will focus on the development of a "roadmap" for the workgroup through 2026.

Discussion

Kathy Boomer: Do you envision any presentations, or do you envision this being entirely discussion based? I do have a lot of opportunity to work with ag communities outside the Chesapeake Bay

watershed and it's been really interesting to see how the ag community is represented or engages with policy makers and thinking it would be really invaluable to bring some of those perspectives to our discussions to kind of help seed ideas of how we might work in the future.

Eric Hughes: If it were to be purely discussion for 5-6 hours, I think it would get really old really quick, and I would not expect a lot of buy-in for that. We want a lot of time for discussion, but we also want to have targeted presentations as well in that vein for the reasons you've identified. We are just figuring out what that is. So, I'll follow up with you.

Kathy Brasier: Thanks for that, Kathy. I'll just add that I think we want a variety of ways to both learn from each other and talk to each other. So, interested in having that kind of conversation. We have talked about a panel or some way that we can stimulate our conversation to be most effective. So, if you have ideas like what Kathy is suggesting, please reach out to Eric or me and we'll definitely try to build those in.

Action: Please fill out this <u>Google Poll</u> indicating your availability for virtual or in person attendance at the AgWG's February in-person meeting.

Wrap-up

11:40 New Business, Announcements & Updates

- Agricultural Modeling Team
 - \circ $\;$ There were no AMT updates shared at this month's meeting.
- Open Engagement
 - Additional time (participation optional) to share questions, comments, or concerns about:
 - I Topics covered in previous meetings
 - Proposed planning process
 - In-person meeting
- Other Announcements?
 - Send to Caroline Kleis (<u>Kleis.Caroline@epa.gov</u>) for inclusion in "Recap" email.

12:00 Review of Action and Decision Items; Adjourn

<u>Next Meeting</u>: Thursday, February 20th, 9:00AM-3:00PM: <u>UMD – Western Maryland Research &</u> Education Center (18330 Keedysville Rd, Keedysville, MD 21756)

- Optional dinner/social Wednesday, February 19th, 6:30PM: <u>Foster's on the Point</u> (1437 Salem Ave, Hagerstown, MD 21740)

Participants

Eric Hughes, EPA Kathy Brasier, PSU Caitlin Grady, GWU Matt Kowalski, CBF Greg Albrecht, NY Dept of Ag & Markets Cindy Shreve, WVCA Tyler Trostle, PA DEP Hunter Landis, VA DCR Nick Hepfl, Herbert Rowland & Grubic, Inc. Brady Seeley, PA SCC Ashley Hullinger, PA DEP Tyler Groh, PSU

- Hannah Sanders, EPA Rosita Musgrove, DOEE Jeff Sweeney, EPA Paul Bredwell, US Poultry and Egg Association Matt Monroe, WV Dept of Agriculture Nick Moody, VA DCR Marel King, CBC Helen Golimowski, Devereux Consulting/CBPO Jenna Schueler, CBF Scott Heidel, PA DEP Bailey Robertory, MD DNR Elizabeth Hoffman, MDA Tom Howard, Resolve Hydro Kate Bresaw, PA DEP Seth Mullins, VA DCR Alex Echols, Campbell Foundation
- Matt Royer, PSU Tim Rosen, ShoreRivers Mark Dubin, UMD/CBPO Caroline Harper, Campbell Foundation Ruth Cassilly, UMD/CBPO Arianna Johns, VA DEQ Ken Staver, UMD Jackie Pickford, USGS Fred Irani, USGS Amanda Barber, NY Cortland County SWCD Dean Hively, USGS Karl Blankenship, Bay Journal Kathy Boomer, Foundation for Food and Agriculture Research Emily Heller, EPA Patrick Thompson, EnergyWorks

Acronym List

AgWG- Agriculture Workgroup AMT- Agricultural Modeling Team (Phase 7) **BMP** – Best Management Practice CAST- Chesapeake Assessment Scenario Tool (user interface for the CBP Watershed Model) CBP- Chesapeake Bay Program **CBPO-** Chesapeake Bay Program Office **CBW-Chesapeake Bay Watershed** CTIC – Conservation Technology Information Center CVN - Conservation Validation Network EPA - [United States] Environmental Protection Agency FSA – Farm Service Agency MLRI – Modeled Load Reduction Indicator NRCS – Natural Resources Conservation Service NFWF - National Fish and Wildlife Foundation ORISE - Oak Ridge Institute for Science and Education PADEP – Pennsylvania Department of Environmental Protection PSC – Principals' Advisory Committee (CBP) **PSU- Penn State University** SWCD – Soil and Water Conservation Districts WQGIT- Water Quality Goal Implementation Team UMD - University of Maryland USDA – United States Department of Agriculture USGS – United States Geological Survey USFS – United States Forestry Service