

# Agriculture Workgroup (AgWG)

## Meeting Minutes

July 20, 2023

10:00 AM – 12:00 PM

### Meeting Materials

## Summary of Actions and Decisions

**Decision:** The AgWG approved the [minutes](#) from the June meeting.

**Decision:** The AgWG approved the recommendation from the BMP Verification Ad-Hoc Action Team and Forestry Workgroup to extend the credit duration of RI-9: Forest Nutrient Exclusion Area and RI-10: Forest Buffer on Watercourse from 10 years to 15 years. See post-meeting note from EPA and [summary of votes](#).

**Decision:** The AgWG approved the Fertilizer Expert Group (FEG) recommendations to address fertilizer concerns in response to PSC Decision #2. Concerns with the recommendations are noted in the [summary of votes](#).

**Action:** Please reach out to Scott Heidel ([scheidel@pa.gov](mailto:scheidel@pa.gov)) and Joshua Glace ([jglace@larsondesigngroup.com](mailto:jglace@larsondesigngroup.com)) if you have any questions or concerns about the [Pennsylvania Verification Pilot Project](#) methodology. We will be asking for approval from the AgWG at the August meeting.

**Action:** Please reach out to Stuart Blankenship ([stuart.blankenship@dcr.virginia.gov](mailto:stuart.blankenship@dcr.virginia.gov)) and James Martin ([james.e.martin@dcr.virginia.gov](mailto:james.e.martin@dcr.virginia.gov)) if you have any questions or concerns about the [Virginia Verification Tillage Survey](#) methodology and [approach](#). We will be asking for approval from the AgWG at the August meeting.

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## Meeting Minutes

10:00 **Welcome, introductions, roll-call, review meeting minutes** – Jeremy Daubert, 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 requested:** Approval of [minutes](#) from the June AgWG call.

## Accounting & Reporting

10:05 **Forestry Resource Improvement Practices: Extension of Select Credit Durations (20 min)** – Jackie Pickford, CRC.

Jackie presented the data requested by EPA from the Forestry Workgroup. Members discussed concerns over extending the [credit duration](#) on Resource Improvement Practices 9: Forest Nutrient Exclusion Area on Watercourse and 10: Forest Buffer on Watercourse. For additional background see below:

The EPA has requested that *the forestry workgroup, provide empirical data which compares the survivability of forest buffers privately implemented as Resource*

*Improvement (RI) BMPs 9 or 10, to forest buffer BMPs implemented under public agency standards with financial and/or technical assistance.*

## **Discussion**

**Jeff Sweeney (in chat):** Slide 4: For the three jurisdictions submitting RI 9 and RI 10 for credit in the model (PA, MD, and VA) , please provide to the CBPO 1) your Visual Indicator Checklist and 2) USDA standards and specifications in agreements for establishing riparian forest buffers.

Slide 5: Changing the credit duration of RI 9,10 to 15 years can affect the definitions of RI practices and the ability to report these practices. There would essentially be no difference between the proposed RI version of the practices (installed voluntarily) and those under USDA agreements. We would have two versions of the same modeled BMP – which can complicate reporting.

**Frank Schneider (in chat):** Jeff - Shouldn't the request for more info from the state come before today's meeting. We have been working on this for months and the Forestry workgroup is good with it. If the RI and USDA are so close, then why not just have 1 reportable item, why keep 2 and make things more complicated.

**Jeff Sweeney (in chat):** Slide 8: MD: "After establishment, the survival rate levels off. Planting plans account for this." Do most buffers installed voluntarily by an operator have MD Forest Service planting plans? How is a survivability of less than 40% after 16 years accounted for in the planting plans – and please relate this to what is reported to the CBP office for Progress assessments.

Slide 10: MD: "If the RI visits document a surviving forest buffer after several years or over 7 ft in height, I would expect it to continue to mature into a sheltering forest for the next 6-7 decades at least." Please provide to CBPO comprehensive data from "the RI visits document(ing) surviv(al) rates of forest buffer(s) after several years (identifying time durations) or over 7 ft in height". Please eliminate information that identifies locations and operator/owner names.

Slide 20: Regarding "They had the same credit duration as NRCS practices from the start." I'm not sure about the accuracy of the statement. Prior to CAST19 and the Expert Panel, RI 9 and 10 practices were originally represented at a 50% credit-year reduction from the separately recommended 10-year credit duration for standard BMPs – not the 10-year as now.

**Elizabeth Hoffman (in chat):** The Visual Indicator Checklist is a CBPO approved document. That request is unclear to me. We use the document approved by CBPO for reporting these, as referenced in our state QAPP.

**Jeff Sweeney (in chat):** Frank, I had not seen this presentation until very recently.

**Olivia Devereux:** When you submit these BMPs to NEIEN, you can indicate whether or not it's an RI practice or a regular practice, but you don't indicate the funding source. You can report that elsewhere though. Just wanted to clarify that.

**Elizabeth Hoffman:** To Jeff's request to MD about slide 10 - that information was already provided from DNR and the FWG. If you could clarify what additional information is needed that would be helpful.

**Jeff Sweeney:** I saw on one slide that there is no data for RI practices, and yet you do have the checklists. So I'm asking for information from those checklists.

**Elizabeth Hoffman:** We just don't collect the survivability of these practices from the checklists. But you should already have the information from those checklists and what we are required to report from those was partnership and EPA approved. If you need survivability data collected in those checklists then that should have been a previous request of how we report things via the QAPP.

**Jeff Sweeney:** So you don't have information from the checklists?

**Elizabeth Hoffman:** No, we have information from the checklists. We just don't have survivability data from those checklists - but we do have other information included in the checklist that is available to you.

**Jeff Sweeney:** No, I understand that it's hard to get survivability data on that. But it would be helpful to have a comparison of what is required of RI practices and what is required in contract with USDA. I'd like to see data from the checklist if you composite the information without landowner or locations.

**Elizabeth Hoffman:** We can provide that but I'm confused how that would be clarifying to you.

**Jeff Sweeney:** We just need to understand what the product of these checklists are.

**Jackie Pickford:** Every practice that is reported would meet all of the requirements in the checklist.

**Jeff Sweeney:** How many inspections do not meet the requirements? That would be helpful to know.

**Elizabeth Hoffman:** If they don't meet the requirements, then they are not reported and they fall out of the model.

**Jeff Sweeney:** So can you tell me how many fall out of the model?

**Elizabeth Hoffman:** Sure, but I don't think that helps clarify the question right now about the practices in place that exist far beyond the current credit duration, as all the technical experts have stated. The form and reporting requirements seem like a separate issue.

**Jeff Sweeney:** Since we only got 27 records out of the entire watershed on the survivability from PA, that's not much to work off. We're asking you to provide how many RI practices passed and didn't pass versus how many NRCS practices passed and didn't pass inspection.

**Elizabeth:** If you have additional requests for how we submit progress data, then that seems separate to the issue of this one practice credit duration.

**Leon Tillman (in chat):** Jeff - Why is the information being requested for submission. This report is showing that the documentation exists and there has been evaluation to address the initial EPA request.

**Frank Schneider (in chat):** Jeff, EPA must demonstrate a willingness to revisit and revise decisions that are not working (adaptive management) and we need to consider the input and professional judgment of others on the original RI panel and from the source sector workgroup, the FWG.

**Jeff Sweeney (in chat):** Slide 11: PA: "DNR and DEP pulled information from PracticeKeeper, one of Pennsylvania's primary databases. Based on this subsample, the RI 9s and RI 10s averaged greater than 18 years upon inspection." Please provide to CBPO the data for the 27 records that have been reinspected/reverified that supports this statement, eliminating information that identifies locations and operator/owner names but identifying the state/local program source of the original implementation date.

**James Martin (in chat):** What does this have to do with the question on the table???

**James Martin (in chat):** Would an Ag WG member please call the question!

**Olivia Devereux (in chat):** Maybe there is confusion about the difference between verification and approval of a BMP credit duration to be available for submission.

**Frank Schneider:** I agree with Elizabeth. I'm not sure why that reporting information is needed. I think we need to be adaptive in how we make decisions about these things. Don't understand why EPA is a hold.

**Jeff Sweeney:** Because there is a big difference between what is required in a USDA contract and the list of questions on the checklist.

**Frank Schneider:** Do the RI practices get less credit than the NRCS practices?

**Jeff Sweeney:** No, the proposal is to make them exactly the same.

**Jackie Pickford (in chat):** Currently, they have the same credit durations. They also have the same reduction efficiencies.

**Leon Tillman:** The practice standard as it currently stands is written for different types of buffers as well. It's planned that there will be some loss of trees. So I don't understand why there is an additional request to compare the RI practice to the NRCS practice standards. The practice standard has variability in it.

**Jeff:** Just asking what would typically be in an NRCS contract.

**Leon Tillman:** Those are going to differ based on the customers objectives and site conditions. So I don't see how you can compare the two because it won't even be the same within a specific state.

**Jeff Sweeney:** But in general what does that look like?

**Leon Tillman:** A 35 ft buffer. You're looking to compare a voluntary practice where the producer plans it on their own to NRCS standards, which is also based on what the producer's objectives are. If you look at the practice standard you're going to find we have different species that allow for natural regeneration - the trees will regenerate if there aren't noxious weeds and things to overtake those trees. So I'm having a hard time understanding the request because even from a practice standard, there are diverse ways to implement these buffers that could closely align with RI practices.

**Jeff Sweeney:** We can go on USDA's website and find what we're looking for.

**Jeremy Hanson:** When the partnership approved the visual indicators in the checklist we agreed that was the information that we want and confirms the presence of key elements that must be present to achieve water quality benefits. They are not the exact same, but they have those key elements from a water quality perspective.

**Tom Butler:** For the checklist and the standards for RI practices is it examining if they have 50% tree cover?

**Jackie Pickford:** Yes, they have to meet all of the standards on the checklist to be included in the model, including over 50% canopy cover.

**James Martin (in chat):** Would this change, if approved, go into CAST23?

**Jackie Pickford (in chat):** If approved, yes.

**Elizabeth Hoffman (in chat):** The support for keeping the credit duration equal between RI-9 and RI-10 and 391 is due to FWG extending credit duration of 391 to 15 years and they support bringing the currently equal credit duration for the RI up to 15 at the same time. They are the forested practice experts so I feel like we can trust their support of the decision.

**Frank Schneider (in chat):** So, if I have this correct, we are "fighting" over 5 years or credit, for a buffer that lasts a lifetime!!! Is the model to be this specific?

**Elizabeth Hoffman (in chat):** Exactly, matching the credit duration does not undo that validity of following the approved reporting method of Visual Indicator Checklist.

**Olivia Devereux (in chat):** @Frank, that is a correct understanding. The model requires that an inspection occur when the credit duration expires. The argument is over whether RI practices need more frequent inspections or not.

**James Martin, VA DCR (in chat):** Does the land use differentiate between a forest buffer established with cost share and one established without cost share?

**Olivia Devereux (in chat):** @ James, no.

**Jill Whitcomb, PA DEP (in chat):** PA provided information to Jeff Sweeney related to what we found in our data system for RI-9 and RI-10 - an average of 18 years upon inspection / verification. We provided the information that we had available. There is no further information to provide.

**Kristen Wolf (in chat):** I agree with James.

**Elizabeth Hoffman (in chat):** Agree with James and Jill.

**Jeremy Hanson (in chat):** I think that "27 records" refers to the number of instances from all jurisdictions' progress that was verified (slide 12).

**Jackie Pickford (in chat):** The 27 records are in an excel spreadsheet on the calendar page. Also in my reference slides.

**Elizabeth Hoffman (in chat):** I'd also add that MD did provide survivability data per slide 8? From DNR and CREP.

**James Martin:** If the intent is to get this into CAST23, I don't think there is enough time to go back and fill EPA's request. If everyone is supportive except one entity, then the onus is on that entity to propose an alternative. There shouldn't be one hold vote to prevent this from moving forward.

**Jeff Sweeney:** There is still time for CAST23. I feel strongly we can resolve this prior to that release.

**Jill Whitcomb:** I agree with James. There needs to be an alternative proposal provided. We already provided all the information that we have available.

**Olivia Devereux:** Jeff, what are you asking for that's different from what was asked at the last meeting?

**Jeff Sweeney:** I'll reach out to the states with that. Need to see the details of the 27 records.

**Jill Whitcomb:** Are you saying that what we provided you in the aggregate form is not valid?

**Jeremy Daubert:** Seems like the verification is about 30%, which is probably higher than most practices.

**Ken Staver:** When you have an NRCS contract, it's 100% verification. Not saying this isn't as valid, just saying we need to check it more frequently.

**Ruth Cassilly (in chat):** For Reference: Guidance for the documentation and verification of RI practices- Appendix H of the BMP Verification Guidance: In the process of working with a farmer, RI practices may be mentioned by the farmer or discovered by the technical specialist during a farm visit. Jurisdictions may use any approved AgWG verification method (See Appendix B) to determine if the practice will meet the RI definitions and VI's. In order for a RI practice to be considered reportable the technical specialist will look at the RI practice Visual Indicators and see if they are present. All Visual Indicators must either have a Y or NA marked. If a N is marked on the checklist, the technical specialist may not report the RI practice, but they may use the opportunity to discuss the deficiency with the farmer.

**Olivia Devereux (in chat):** @Ruth, if the practice meets the standard for the BMP, not the RI definition, can a state report as the standard, non-RI version?

BTW, I was asked the number of RI-9 & RI-10 practices reported currently.

MD = 59

PA = 1  
VA = 21

That is for the period 1950 to 2022.

Jill Whitcomb, PA DEP (in chat): @olivia Is that reported or accepted?

Olivia Devereux (in chat): @Jill, that is accepted. It does include those practices that exceed credit duration. It is the amount reported. I can share the spreadsheet with you if you like.

Jackie Pickford (in chat): The spreadsheet is posted on the calendar page, Jill. 2022 Progress for RI 9 and 10 practices

Jill Whitcomb, PA DEP (in chat): Thanks, Jackie! We pulled records up to date, so what we presented to Jeff would have included projects that would have been reported through 2023.

### Post-meeting note:

After further discussion and examination, the EPA has decided to change its vote on RI practices to a “stand aside” with the following note: With regard to the extension of credit durations of Resource Improvement Practices 9 and 10, the EPA has to date been a hold. This has been due to concerns related to the equivalency of NRCS and RI forest buffers within the Chesapeake Assessment Scenario Tool (CAST). EPA has decided to move to a stand aside on the decision to equate the credit durations of the RI version of forest buffers and those under a public agency contract following NRCS practice standards, until such time that the technology is available to use mapping tools that may more accurately portray land use changes and determine riparian forest buffers gains and losses in the Bay watershed.

**Decision:** The AgWG approved the recommendation from the BMP Verification Ad-Hoc Action Team and Forestry Workgroup to extend the credit duration of RI-9: Forest Nutrient Exclusion Area and RI-10: Forest Buffer on Watercourse from 10 years to 15 years. See post-meeting note from EPA and [summary of votes](#).

### 10:25 Pennsylvania Verification Pilot Project (30 min) - Scott Heidel, PA DEP, and Joshua Glace, Larson Design Group (LDG)

The Non-Intrusive BMP Verification methodology and associated SOP was presented to the group. The AgWG will be asked to approve the methodology at the August meeting so that BMPs verified using this method can be applied to 2023 Progress.

### Discussion

Ruth Cassilly: Usually the farmer at some point in the verification process has some sort of communication to confirm if the practice was installed voluntarily and when it was implemented. How are you eliminating the possibility that these could be NRCS practices since that database is aggregated and some of the other state databases like DCNR that install buffers?

Joshua Glace: We’re not talking to the farmer. We need release of records from NRCS and we don’t have that. Our review of those documents and what was being done, some of that would be captured in the plan reviews from the farmers which would state whether or not it’s an NRCS practice. I don’t know of many practices that DCNR are installing on ag lands. We would assume that the NRCS practices would be filtered out at a higher level because we don’t have that information from NRCS.

Ruth Cassilly: Regarding the plan reviews - some of these practices would be a reverification of practices that you found in plans that hadn’t been reverified previously and you use this method to reverify?

Joshua Glace: Right. The reverification was primarily from programs that the conservation district and DEP had and they had more information on.

Ruth Cassilly: But for practices identified solely using the imagery, you wouldn’t have the ability to look at those previous records?

**Joshua Glace:** No, those are the ones that they would be voluntarily put in.

**Ruth Cassilly:** The date of implementation for practices that you don't have a record existing, the new practices. You either use the imagery to determine the date of implementation or you use the date you visit the practice?

**Joshua Glace:** Yes, most we can identify from the imagery. But if we can't visually say when it was we are saying when we are visiting is the date of implementation. In our truthing of this, we found that the voluntary practices are harder to get accurate dates of implementation. More accurate dates from imagery than landowner interviews.

**Jeff Sweeney (in chat):** How many years of imagery data do you have and what is the first year?

**Joshua Glace (in chat):** Jeff, I would have to check the program but the earliest image was in the early 90's and the imagery years varies because we would pull imagery for a specific area if we did not have coverage for a specific year.

**Olivia Devereux (in chat):** For the model, we have impervious and land cover mapped for 1984, 1992, 2001, 2006, 2011, at 30m resolution. Of course we have the 2013 and 2017 data mapped at 1m and 10m resolution.

**Kristen Wolf (in chat):** Jeff, Do Josh and Olivia's responses answer your question re: how many years of imagery data they have? If not, can you please be more specific on what you are seeking with your question?

**Kristen Wolf:** Please reach out with questions before the August meeting because we are taking a vote.

**Action:** Please reach out to Scott Heidel ([scheidel@pa.gov](mailto:scheidel@pa.gov)) and Joshua Glace ([jglace@larsondesigngroup.com](mailto:jglace@larsondesigngroup.com)) if you have any questions or concerns about the [Pennsylvania Verification Pilot Project](#) methodology. We will be asking for approval from the AgWG at the August meeting.

#### 10:55 **Virginia Tillage Survey Verification (30 min)** – Stuart Blankenship, and James Martin, VA DCR

Virginia completed a tillage survey of the cropland in the Chesapeake Bay Watershed during the Spring of 2022. Mobile data collection technology was used to collect the data which resulted in 13,600 point locations of observations along with approximately 3,000 photos of the residue on the fields. A random sample of the photos was then used to complete the required 10% verification of the residue observations. This presentation described the collection and verification methodology for the survey in more detail with the goal of obtaining a decision from the Workgroup that will allow Virginia to submit the results of this survey for use in the Chesapeake Bay Model.

#### **Discussion**

**Leon Tillman:** I would think about how to scale that. We do measure over a long distance because residue can vary even within a small area in a field.

**Stu Blankenship:** We weren't requiring that something in the picture to give you scale, so definitely something we want to keep in mind in the future. And we mention that in the guidance for what people are instructed to do - to try and find a spot on the field that is as representative as possible.

**James Martin:** And that's if you're entering the field if you have landowner permission. If you don't have permission then you shouldn't be in the field. So ideally, yes, but in practice, often the best we can do is stand by the roadside and look into the field.

**Leon Tillman:** Right, virtual ruler should be used for scale and not to measure residue.

**Stu Blankenship:** Correct.

**Dave Montali:** The instruction is for the tech's to capture the average condition of what you see and then take a photo, but it seems like if you trust the process and the techs, then you don't even really need the picture.

**Stu Blankenship:** I agree. To me, the photos are more of a gut check to make sure that they are making the correct estimates on this.

**James Martin:** Yeah, I agree Dave. You're taking a survey essentially, but then taking another survey with the photos. Relying on the training of the observer.

**Dave Montali:** Do you have anecdotal information about mismatches?

**Stu Blankenship:** Yeah, I want to say it was about 94% matched or within one category. 5% was mismatched but only a couple categories off.

**Olivia Devereux (in chat):** Elizabeth, how does subsampling the sample compare with MD's approach? I thought that was what MDA did.

**Elizabeth Hoffman (in chat):** For tillage, we utilize data captured via our AIR reporting as well as NASS tillage survey work that has been done in the state. If that doesn't answer, let me know. May have missed something, had to step away real quick.

**Ken Staver (in chat):** Given the last presentation, isn't the future of this remote sensing?

**Dave Montali:** So you'll do this at the county scale and then assuming you have enough points for each county, then you'll get X percent in each of the 4 categories, and then apply that to all crop acres in the county?

**Stu Blankenship:** Basically, yes. We did the sample size to make sure we had enough points.

**Action:** Please reach out to Stuart Blankenship ([stuart.blankenship@dcr.virginia.gov](mailto:stuart.blankenship@dcr.virginia.gov)) and James Martin ([james.e.martin@dcr.virginia.gov](mailto:james.e.martin@dcr.virginia.gov)) if you have any questions or concerns about the [Virginia Verification Tillage Survey](#) methodology and [approach](#). We will be asking for approval from the AgWG at the August meeting.

## **Data & Modeling**

11:25 **Agricultural Data Inputs (20 min)** - Tom Butler, EPA.

Tom provided an update on the Phase 7 Agricultural Modeling Team (AMT) and their [July](#) meeting. He also discussed the progress of recommendations that has been made in dealing with agricultural fertilizer in CAST Phase 6. The group voted on the approval of the Fertilizer Expert Group (FEG) recommendations.

### **Discussion**

**Frank Schneider:** I think this is a great product, thank you.

**Clint Gill (in chat):** Agree with Frank, lots of work here.

**Elizabeth Hoffman:** MD has some concerns about the Phase 6 recommendations. First, alternative datasets were not explored in depth in the FEG due to timing constraints. A lot of really good conversation in the FEG and AMT that have revealed other concerns with data inputs that need to be addressed, such as the timing nutrient application component, that will be addressed in Phase 7. Our question is why would we put in updated data to fix a portion of the problem now in Phase 6 instead of waiting to evaluate everything holistically in Phase 7? We're not going to stand in the way but wanted to document our concerns. Lastly, the updated fertilizer sales data shows a significant increase in volume and that isn't substantiated by other production information, at least in MD. It is also difficult to communicate a change such as this to stakeholders.

**Dave Montali:** What are your thoughts about adding another year of AAPFCO data?

**Elizabeth Hoffman:** We're fine with that. We'd propose the other elements would wait, though.

**Leon Tillman:** When this does come for a vote, are we going to vote on this in parts?

**Tom Butler:** The idea is to vote on the recommendations together, as a package.

**Ken Staver:** Let's just say AAPFCO wasn't dragging behind so far. It was up to date and the information that the states reported already then we'd be using AAPFCO data up to 2021. Right?

**Tom Butler:** Yes, correct.

**Ken Staver:** Also, was there a comparison done in the FEG on the extrapolation method being used or proposed?

**Jeremy Daubert:** I think it's higher over time, not higher versus the data that we have.

**Tom Butler:** Yeah that's correct. N increases over time from 2016 to 2020 from what the states have shown from their data.

**Elizabeth Hoffman:** Just to clarify, our concern is why we would fix this one issue in Phase 6 instead of waiting to fix everything in Phase 7. Hard to communicate that to stakeholders.

**Tom Butler:** The PSC charged us with fixing this issue in Phase 6, so that is why the FEG formed to address short term solutions. The AMT will deal with longer term solutions in Phase 7.

**Elizabeth Hoffman:** I know they were intended to be separate, but they aren't, which is why we have these concerns.

**Olivia Devereux (in chat):** Same methods are used for AAPFCO and the state data. The state provided data is the same data provided to AAPFCO.

**Clint Gill (in chat):** Lots of noise in the office right now so I'll write my comments. Delaware is a stand aside on this issue. We're comfortable moving forward with the phase 6 decision, but like MD we want to register a comment in support of looking really hard at alternative data sources for fertilizer in phase 7.

**James Martin (in chat):** Same horse...different rider. The state data is the same data that states submit to AAPFCO.

**Decision:** The AgWG approved the Fertilizer Expert Group (FEG) recommendations to address fertilizer concerns in response to PSC Decision #2. Concerns raised with the recommendations are noted in the [summary of votes](#).

## Wrap up

### 11:45 **New Business & Announcements (5 min)**

- **Cover crop BMP verification hybrid method**
  - Present AgWG approved [cover crop survey hybrid method](#) to WQGIT for update to verification protocols (August).
- **Other Announcements?** - send to Jackie Pickford (Pickford.Jacqueline@epa.gov) for inclusion in "Recap" email.

### 11:50 **Review of Action and Decision Items (10 min)**

### 12:00 **Adjourn**

## Next Meeting:

Thursday, August 17: 10AM-12PM, Call-in Zoom

## Participants

Jackie Pickford, CRC

Tom Butler, EPA-CBPO

Jeremy Daubert, VT

Kathy Braiser, PSU

Olivia Devereux, Devereux Consulting

Mark Dubin, UMD-CBPO

Stu Blankenship, VA

Cindy Shreve, WVA

Jon Harcum

RO Britt, Smithfield Foods

Joshua Glace, LDG

Dave Graybill, Farm Bureau

Seth Mullins, VA

Jeff Sweeney, EPA

Scott Heidel, PA DEP

Tyler Groh, PSU

M Ramper

Frank Schneider, PA SCC

Dave Montali, Tetra Tech WV

Cassie Davis, NYSDEC

Tyler Trostle, PA DEP

Clint Gill, DE

Natahnee Miller

Erin Penzelik, PA DEP



Kristen Wolf, PA DEP  
Elizabeth Hoffman, MDA  
Leon Tillman, NRCS  
Kate Beats  
Lucinda Power, EPA  
James Martin, VA DCR  
Auston Smith, EPA-CBPO  
Jenna Schueler, CBF  
Marel King, CBC  
Jeremy Hanson, CRC  
Hunter Landis, VA  
Jim Riddell, VA Cattleman Association  
Suzanne Trevena, EPA

Ruth Cassilly, UMD  
Ken Staver, UMD  
Carlington Wallace  
Jill Whitcomb, PA DEP  
Timothy Rosen, ShoreRivers  
Greg Sandi, MDE  
Kate Bresaw, PA DEP  
Patrick Thompson  
Karl Blankenship, Bay Journal  
Paul Bredwell, US Poultry & Egg  
Lee McDonnell, EPA  
Jess Rigelman, J7 LLC  
Kristen Saacke Blunk, NFWF Liaison

**\*\*Common Acronyms**

AgWG- [Agriculture Workgroup](#)  
AMT- [Agricultural Modeling Team](#) (Phase 7)  
BMP- Best Management Practice  
BMPVAHAT- [BMP Verification Ad Hoc Action Team](#)  
CAST- [Chesapeake Assessment Scenario Tool](#) (user interface for the CBP Watershed Model)  
CBP- [Chesapeake Bay Program](#)  
CBPO- Chesapeake Bay Program Office (houses EPA, federal partners, and various contractors and grantees working towards CBP goals)  
CBW- Chesapeake Bay Watershed  
CRC- [Chesapeake Research Consortium](#)  
DPF – Dairy Precision Feeding  
EPA- [United States] Environmental Protection Agency  
EPEG – Expert Panel Exploratory Group  
FWS – [United States] Fish and Wildlife Service  
MUN – Milk Urea Nitrogen  
NEIEN- National Environmental Information Exchange Network  
NFWF- [National Fish and Wildlife Foundation](#)  
PA DEP- Pennsylvania Department of Environmental Protection  
PSC – [Principals’ Advisory Committee](#) (CBP)  
PSU- Penn State University  
STAC- [Scientific & Technical Advisory Committee](#)  
SWG – Small Watershed Grants Program  
TMDL- Total Maximum Daily Load  
WILD - Chesapeake Watershed Investments for Landscape Defense Grants Program  
WQGIT- [Water Quality Goal Implementation Team](#)  
WTWG- [Watershed Technical Workgroup](#)  
UMD- University of Maryland  
USDA-ARS- United States Department of Agriculture-*Agricultural Research Service*  
USDA-NASS- United States Department of Agriculture-*National Agricultural Statistics Service* USDA-NRCS- United States Department of Agriculture-*Natural Resources Conservation Service*