Agriculture Workgroup Meeting Minutes

December 18, 2025
10:00am – 12:00pm

Visit the meeting webpage for meeting materials and additional information.

Purpose: To provide an overview to workgroup members and interested parties on critical developments related to the Chesapeake Bay Program that have occurred since the October AgWG meeting, share key proposals related to Phase 7 of the watershed model, and discuss future AgWG activities and initiatives.

Summary of Actions & Decisions

Decision: The AgWG approved the October 2025 meeting minutes.

Action: Please send any nominations for the open Vice Chair and at-large member positions for the March 2026 – February 2028 term to Caroline Kleis (Kleis.Caroline@epa.gov) and Eric Hughes (Hughes.Eric@epa.gov) by COB, December 30th, 2025.

Action: AgWG staff will follow up with Pennsylvania and Maryland offline with regards to the mapping of BMPs to load source groups and agricultural BMPs on solar land uses. The AgWG will seek to finalize a recommendation for the Watershed Technical Workgroup on this mapping at the January 2026 meeting.

Action: The AgWG generally indicated no concerns with the methodology proposed for the allocation of feed space acres for Phase 7. If there are additional concerns, AgWG members should coordinate with their respective Watershed Technical Workgroup (WTWG) member, prior to the WTWG vote to finalize this methodology.

Action: AgWG staff will work to provide a list of the currently credited BMPs along with the last date they were revisited for credit ahead of a subsequent meeting.

Action: The AgWG will work to compile a list of partner-requested ag BMPs to establish creditable BMPs in CAST or revisit/update existing practices ahead of a subsequent meeting.

Action: CBPO staff will continue to review options for remotely sensing agricultural BMPs. Recommendations for possible agricultural BMPs that can be remotely sensed will be shared with the AgWG at a subsequent meeting.

Minutes

I. Welcome, roll call, review meeting minutes

Speaker: Kathy Brasier, AgWG Chair

Kathy Brasier, AgWG chair, reviewed the agenda and asked for approval of the October meeting minutes.

Decisions:

1. The AgWG approved the October 2025 meeting minutes.

II. Program Updates

Speaker: Eric Hughes, AgWG Coordinator

Because the Workgroup last met on October 16th, the leadership team chose to shift program updates – normally presented at the end of AgWG meetings – to the top of the agenda. Eric highlighted relevant items for the group's awareness, and there was time to address questions. This will ensure workgroup members start 2026 with the same level of understanding of recent events and developments.

Eric provided updates on the following topics. Additional information on these updates is available in the Coordinator update slides.

- Timeline Changes
  - 2025 Progress
  - Bay in the Balance
- Personnel Changes
- Ag Group Updates
  - AMT
  - AAC
- Executive Council and Beyond 2025 Update
  - Revised Watershed Agreement
  - Structure and Governance
- AgWG Membership
  - 2 at-large member nominees needed

Actions:

1. Please send any nominations for the open Vice Chair and at-large member positions for the March 2026 – February 2028 term to Caroline Kleis (Kleis.Caroline@epa.gov) and Eric Hughes (Hughes.Eric@epa.gov) by COB, December 30th, 2025.

III. Phase 7 Load Sources: Preliminary Mapping to BMPs and Load Source Groups

Speaker: Jess Rigelman, J7 Consulting

Jess delivered a presentation on the mapping of Phase 7 load sources to BMPs and Load Source Groups. This presentation was first delivered at the November meeting of the Watershed Technical Workgroup (WTWG). Before voting on the proposal, the WTWG would like the topic to be shared with the AgWG for awareness and to give members the opportunity to provide comments or concerns.

Actions:

1. AgWG staff will follow up with Pennsylvania and Maryland offline with regards to the mapping of BMPs to load source groups and agricultural BMPs on solar land uses. The AgWG will seek to finalize a recommendation for the Watershed Technical Workgroup on this mapping at the January 2026 meeting.

Discussion Notes:

Elizabeth Hoffman: Maryland has a list of questions, notes, concerns that won't all get addressed in this meeting, but I want to document them. One thing is about the actual land use itself (the solar infrastructure and pervious) being solely developed. In Maryland, we often see these are being installed on previous agricultural lands. Those lands are often sometimes staying in ag. They're being maintained as a part of the farm operation, so how would we report a best management practice that is categorized as ag against a land use that is categorized as developed? So, we're curious to see if there's an intermediate option where these are what we would call solar ag/ ag developed. We are not quite sure what you would want to name it. That would allow us to report things like conservation cover between hedgerows around the arrays and things like that. I'm just going through our list, and then we can figure out which ones we want to talk about. We saw that there was an option where BMPs that were previously eligible on pervious land are now eligible on solar pervious, and some of those are things that all say urban. So, urban forest buffer, urban grass buffers, tree planting, canopy, things like that. So, maybe that's an option. One of our questions is if it's not crosswalked cleanly from a 327 concentration cover, which is NRCS, and maybe not, how are these things being coded? That prompts our other question of how are other states are tracking solar- the land use change, the practices around those installations, and things like that? We're just curious to hear more about those two big things. We would like to see a land use that is solar ag so we can report practices against it. Then the second big question is how are other jurisdictions tracking solar projects and practices around those solar projects?

Jess Rigelman: As far as adding new land uses, I think that's above this workgroup. I think the Phase 7 land uses were set by the Water Quality GIT a while ago, but if the door is not shut, the door is not shut. But, I will let Sarah talk about how the solar land uses were mapped in the first place before we get into that.

Sarah McDonald: I am Sarah McDonald, and I work for USGS as a part of the team that developed the land use and is currently working on translating that to the Phase 7 land use with Jess for the next round of the models. How we are mapping it is primarily from the aerial imagery. So, what we're able to see from the sky is solar panel arrays which is, in reality, what the solar infrastructure class is. We can see arrays on the landscape, and those arrays are specifically larger scale arrays on either ag lands or cleared forests. So, it's not a rooftop or anything like that. With that said, we are able to generally see if the solar arrays are being put on the lands that were previously mapped as ag or previously mapped as forested lands. But, what we aren't able to see is how they're being managed post installation. We can't see what's happening underneath of those solar arrays. So, we aren't necessarily able to infer from the maps if that land is still being used as active ag or is still being used for grazing lands, or if it has fully been converted. I believe this went through Urban Stormwater for these to be treated as the developed sector. I think that was decisional at the Urban Stormwater Workgroup, if I am correct. I believe they picked the loading rates as well associated with these new classes. So, I just wanted to give some context and some background on that. I definitely understand the potential issue here. It can be used for multiple things but, from the maps, we are not able to necessarily identify that. I could see that

being incorporated in the future if we were able to get state reported data. But, from imagery alone, we are not able to see what's going on beneath those panel arrays. Otherwise, we would say that every farm that was converted to panel arrays are still active farms. Maybe that's true. Is that reality? I'm not sure. So, that would be something that we would rely on the experts for as well. Or, if farmers are putting solar on their ag fields, are they still being used as ag after the solar is in place? I'll kind of leave it at that and be here to answer any questions that I am able to help with.

Ken Staver: On that last question, I think you are asking whether or not there was still farming where there were panels. Was that your question?

Sarah McDonald: Yes.

Ken Staver: There's some research at university levels on agrivoltaics where you spread the panels out to allow room to do some agriculture. I would say, other than grazing a few sheep and some beehives, on commercial scale, large scale systems, when they go in, that's the end of agriculture of any significance. So, I don't think they should stay in production if that's the question.

Elizabeth Hoffman: Ken is right. The agrivoltaics component is small. Maryland is tracking every single solar installation site. There is an effort to make sure that when some of these are installed, there's pollinator habitat, there are practices that are funded. How do we "credit" that? So, it's just more about that, I think. Then also allowing some space for some nuance in land use. We understand how this got decided through the Urban Stormwater Workgroup. So, I think our question is what are our options for allowing there to be an intermediate way to report BMPs against this or somehow inform that in the model moving forward? We don't need an answer right now. We just want to put that on the table, because I believe this is the first time this has come before the AgWG.

Elizabeth Hoffman (in chat): It was decided at USWG.

Clint Gill (in chat): Agree with Ken, I've only seen row crop and veggie ag under solar in studies.

Ken Staver: I guess the question is who is in charge of making these sites as positive or as least negative as possible? If it ends up being in NRCS' shop, even though it's kind of not an ag thing very much anymore, it might just end up being kind of a hybrid situation where it's not really agriculture, but we still have agricultural BMPs in play. So, it's going to be complicated. It's more of almost a question of how are you going to handle this? Who is trying to make them better? Is it going to be the urban sector? Or is it going to be the ag side? Who did deal with the land before it was converted? So, I could see some rationale for saying, yeah, let's keep it under the ag umbrella and look at it that way.

Elizabeth Hoffman (in chat): Agree - ag developed or something like that. Looking for the ability to report a tool (BMP) from one sector against the load of another sector.

Jim Riddell (in chat): Virginia defines solar arrays as impermeable surfaces. Va Tech did a recent study on ag,etc.

Kate Bresaw: I just want to support what Elizabeth is saying. In Pennsylvania, we are seeing the intersection between agriculture and solar quite a bit. I will also say you are probably right, Ken, that it is not full-scale commercial agriculture we're seeing. But, we are still seeing sediment loss, and we're still seeing nutrient issues from the animals that are on site, and I would advocate for being able to treat those issues and get credit for them. So, I support the conversation we are having here.

Eric Hughes: Jess, can you speak to options?

Jess Rigelman: There's nothing inherently complicated in the model in terms of applying ag BMPs to an urban land use. So, there's nothing really against this. It's just mainly a communication issue and the fact that an ag BMP is treating a land use that is classified as urban and communicating that. So, we can assign BMPs of any type to any load source. It's just how it is displayed on reports and user interfaces. But, they are ag BMPs on an urban land use, which I think confuses some people (general users of CAST), but it's not something that can't be done in any way. But, it's making the decision with your group and deciding what BMPs and consulting the urban sector to let them know what is happening. In some cases, it may be taking up spaces for their BMPs, but I think the general goal is obviously clean water quality in the Bay. So, it's just a matter of sorting out the details of how we communicate this.
Eric Hughes: So, what I am hearing is we need a list of BMPs to report and then we would need to work it out with Urban Stormwater Workgroup because they may not be entirely on board with our list because it takes up space?
Jim Riddell (in chat): Very little if any commercial ag (livestock, crop) current on utility solar in va.
Jess Rigelman: This has been raised to them, and they were asked to come here and provide input if they wanted to. In general, I haven't heard any concerns, but where the rubber meets the road is when we actually have that list, and we figure out how they are modeled together. So, I don't mean to imply that there would be bad feelings on either side. It's just a matter of getting that information.
Sarah McDonald: Elizabeth, you mentioned that Maryland is tracking these specific practices. Would these BMPs potentially be applicable to only a subset of what is mapped as solar? So, is this something that would have to come from the jurisdictions to say this is how much solar is being treated with ag BMPs? Or is this something where we're saying all solar can be treated with ag BMPs?
Matt Kowalski (in chat): Virginia is likely to see legislation introduced to define agrivoltaics in the upcoming general assembly session. So we are already recognizing the growing trend of PV panels AND Ag.
Jim Riddell (in chat): Agree on seeing legislation. PEC has a pilot on some small scale. Yes part of drafting. Thanks Matt.
Elizabeth Hoffman: We are tracking the sites, meaning the land conversion and installations, and then also sometimes we are able to know what practices are involved in those. To your question, though, I think that was also one of our questions. What is the breakout of this larger group between things like rooftop, true developed, versus where it would be solar and ag land? I didn't answer your question. I asked another one. But, I guess my answer, if I attempt, is I think we have the ability to report what we know, and we have a lot of data to back it up. If you're asking about if we would over report what is really eligible, we have a lot of verification behind it. So, I don't know if I understand the question.
Sarah McDonald: That was helpful. From our end for the mapping, we will be able to tag each solar field with a general year of development, plus or minus a year window, and we should be able to track if it was ag land or forested land prior to being converted to solar. So, that is supplemental information we could probably provide when we get down to these nitty gritty details of how many acres are eligible. But, I was just trying to figure out if this is something that me and my team need to start preparing for and, if we're going this route, we might need to start crunching some numbers. Or is this something that would be similar to harvested forest or construction where localities would report that information? It sounds like it might be a bit of a mix, which is fine. I just wanted to be prepared.

Elizabeth Hoffman: We will follow up with you offline. I am not the person at the agency that is the closest to this, and we will figure that out. But, I have another question. When does it register as solar? When the panel goes in, or when it is cleared? How does it work? Kind of like the question of when is a tree a tree?
Amanda Barber (in chat): Most solar projects we have reviewed (in Cortland County, NY) consider the post construction landuse to be meadow.
Sarah McDonald: For the way that we are mapping solar, we would say when the panel array is present. I'm not sure what the timeline is from something being active ag to clearing/compaction. Whatever that process is, I am not sure. But, we are able to see the difference between it being herbaceous and ag at some point to now a field covered in solar panels. I am not sure what part of that was in the Urban Stormwater Workgroup research. They might have some stats on that.
Elizabeth Hoffman: Perfect. Thank you so much.
Ken Staver: Has there been any kind of rough estimate made going from this land use to solar and what the shift in baseload is for nitrogen, phosphorous, and sediment? If we are going from forest to solar, I would think the numbers would go up. Going from ag to solar, they are probably going to go down once the construction phase is over. My experience is once they get through all the red tape, they are fast. It's not a very long time from once they roll in to when there are panels. So, it is amazingly fast. We have thousands of acres of them going into the Choptank. They are not there, and then they are there.
Sarah McDonald: The pervious portions of solar will be treated as turfgrass. So, yes, those rates will go down and the impervious portion (the solar array infrastructure), I believe, will be treated as impervious non roads. So, I believe that will go down as well.
Ken Staver: What was that last part again?
Sarah McDonald: I believe the Urban Stormwater decision was that solar arrays will be treated as impervious non roads in terms of loads. So, that will also be smaller of a reduction compared to when it was ag.
Ken Staver: It's odd because it's not like a roof where the soil surface is covered. It's underneath there. So, it seems like research on it is pretty sketchy.
Sarah McDonald: Yeah, there's a lot of active research on it now. But, with the timing, unfortunately those studies won't be complete.
Olivia Martin: In the model, does it go from agriculture to construction and then to solar, or do we skip the construction for this type of land use change?
Sarah McDonald: That's a great question that, off the top of my head, I do not know. I don't know if Jess or anybody else recalls if that was part of the Urban Stormwater decision if there is a transitional construction period for this.
Jess Rigelman: I don't know the answer to that. I don't know if it was ever discussed. Doesn't it depend on whether or not you are able to capture it?
Sarah McDonald: I think we are inferring, to a sense, when we have patches of non-development become developed. We use that change to say at some point in between these two time periods, there was construction, and we know it's at least this much because this is how much land we measured as change. So, it is possible to include it. Off the top of my head, I don't think it is currently being included that way, but I would have to look. That sounds like we might have to follow up with Watershed Technical and Urban Stormwater Workgroup.
Olivia Martin: I appreciate that. That's really helpful. Elizabeth said it, and I know in other states besides Maryland they do report the acres of construction, and they know exactly where these solar developments are and exactly how many acres. So, it sounds like the data is there either from state reported or remote sensing because you see the change even if you don't see the

construction in the remote sensing. So, it sounds like it's possible. I just don't know what the decision was for how it gets reflected in the model during that transitional period.
Alex Soroka (in chat): Identifying the timeline of solar development would be great to relate back to QW, especially at places like the Choptank where we have continuous turbidity sensors in multiple locations (Between different groups). Same for rest of the watershed
Eric Hughes: Thanks, Olivia, we will follow up on that.
Kate Bresaw: Just a question about when and if we would report ag BMPs. From what I am hearing with what has transitioned, the land use is turf. What we are seeing is a lot of pasture. So, if it is pasture, are we going to have to designate that in our reporting then, and what would that look like?
Jess Rigelman: If you are reporting them on pasture, you are reporting them on pasture. If you are reporting them on solar, then you would have to report them on solar. I don't think I am understanding the question.
Kate Bresaw: The loading rates would be more consistent with pasture in what we are seeing. Is that going to cause any issues that we need to be concerned about from a reporting perspective?
Jess Rigelman: I'm not sure I fully understand. There is a loading rate for pasture, and there is a loading rate for solar.
Kate Bresaw: When there are animals on site, that loading rate would be more consistent with pasture. Is that going to cause any issues going down this path?
Sarah McDonald: So, you are saying that in the cases where we have solar but it is being used for grazing, in reality, it will load more similarly to what we are saying as pasture, but the model is treating it as turf. And what issues could that potentially have downstream?
Kate Bresaw: Yes.
Sarah McDonald: I don't know the answer to that question, but I am following the train of thought here.
Eric Hughes: It sounds like we need to have a conversation about that. So maybe that's something that, Kate, right after the call we can make sure we are all on the same page and can address that. It sounds like this will inevitably come back and should come back in January. So, Caroline and I can start recording a list of items that we need to follow up on here and, in the interim, we can discuss offline.
Kate Bresaw: I actually need to hop off right now. I have a conflict. So, Scott is going to take my piece that we talked about earlier. So, if you want to follow up with some time, we can meet up whenever it is convenient for you.
Elizabeth Hoffman (in chat): I think she's saying because pasture loads differently than turfgrass.
Clint Gill (in chat): Alex, there is a massive solar array going in right where the USGS sensor is right above Greensboro. Don't know if this info helps
Alex Soroka (in chat): Sure does, just thought of a way we could ID the change. Can follow up offline
Amanda Barber (in chat): So if ag land is converted to solar, are you saying we should report a landuse conversion? I'm just trying to understand what this discussion is trying to communicate or achieve.
Elizabeth Hoffman (in chat): We're relying on imagery to identify that conversion, it's not being reported by jurisdictions. Is how I understand.
Dave Graybill (in chat): If you want to see a project in progress, stop by our place. Our landlords put this farm in commercial solar and we are watching a solar field in progress. It will take them at least another year to complete. There must be a very stringent set of construction rules for E&S during solar construction. Based on what some of the construction workers are telling me. It is very much overkill vs other commercial projects.

Eric Hughes: Ok. Any other hands? Otherwise, I think we have a few points to follow up on in terms of next steps. Auston, I don't know if you want to weigh in with the Watershed Technical Workgroup perspective on timeline, but it sounds like we're going to need another meeting to work through this. I'm trying to track the specific needs here, and it sounds like we want a list of ag BMPs that we are going to report on this land use.
Auston Smith: I think we would look for a general agreement of this understanding or recommendation, so maybe it could be put into a paragraph or two so that the Watershed Technical Workgroup can look over that, along with the Urban Stormwater Workgroup's input. I think because the AgWG's new January meeting time is in late January, maybe the Watershed Technical Workgroup can be ready to review via email before the February meeting to expedite this review timeline. That might be agreeable on our end.
Eric Hughes: So, it sounds like there will be offline work with Pennsylvania, certainly with Elizabeth and your team, and others here to make sure that we have this buttoned up. We will bring it back in January and make sure that everything is locked down, and then you guys can take care of it ahead of your February meeting. Any concerns there?
Elizabeth Hoffman (in chat): Please include Alisha Mulkey on that follow up email. Thanks!
Eric Hughes: We will absolutely include Alisha. Thank you.

IV. Allocation of Feed Space Acres for Phase 7

Speaker: Sarah McDonald, USGS-CBPO

Sarah delivered a presentation on the methodology that will be used to allocate feed space acres in Phase 7 of the watershed model, explaining how this differs from the methodology used in Phase 6. This presentation was first delivered at the December meeting of the Watershed Technical Workgroup (WTWG). Before the WTWG finalized their vote on the proposal on December 18th, the topic was shared with the AgWG for awareness and to give members the opportunity to provide comments or concerns.

Actions:

1. The AgWG generally indicated no concerns with the methodology proposed for the allocation of feed space acres for Phase 7. If there are additional concerns, AgWG members should coordinate with their respective Watershed Technical Workgroup (WTWG) member, prior to the WTWG vote to finalize this methodology.

Discussion Notes:

Olivia Martin: I have two or three questions on this. I am really glad you all are separating the pervious and impervious. That makes a lot of sense, and it is very logical to have that constraint. Do you or Jess anticipate that it will affect reporting at the county scale and the amount that gets credited if reporting remains at the county scale?

Sarah McDonald: My response to that is no. Jess, I will let you sound off and see if you agree with that.

Jess Rigelman: I agree.

Olivia Martin: I know you are going to use the remote sensing data for this for pervious and impervious feeding space. Would you use the BMP data on feeding pads or heavy use area pads to help inform where the impervious feeding space is?

Sarah McDonald: For doing the separation of impervious to pervious, we are pulling that from the same table in the Phase 6 documentation that says, per animal type, there is this much barnyard per animal and there is this much structure or building per animal. The combination of that is what is used to calculate the acres per animal. So, that's the distinction we're using- following those same numbers that were provided to compute acres of feed space per animal.

Olivia Martin: Those heavy use areas give us the exact location of where those are, but I know that is not a BMP that's accepted for poultry houses, at least, but it is accepted for the other ones. So, that was why I was asking. My third and last question on this topic is really for Jessica, I think. In the current version of the model, Bill Keeling in Virginia had asked you to develop a way to be able to have animals in the Virginia FIPs that are actually cities, and I don't remember the details of that, but I remember that you had to come up with a smart way of doing that. Is that going to continue into Phase 7 so that if there were animals in one of those FIPs in Virginia, they could get credit for BMPs?

Jess Rigelman: Yes. Crops and animals are staying the same. I haven't been asked to change that.

Olivia Martin: Ok. Virginia is the only state that has FIPs that are exclusively cities, so that's why it's just a Virginia issue. Thank you, I appreciate it.

Sarah McDonald: Thanks, Olivia. Are there other clarifying questions folks have at this point?

Ken Staver: When we look at CAST, we see stuff at the county level. So, when we look at county level stuff, this won't change any of that?

Sarah McDonald: Correct.

Ken Staver: My next question is what is the advantage of doing this in terms of the extra effort?

Sarah McDonald: The CAST model runs at a finer scale than the counties. So, this is a way to say where things happen on the landscape. When we are running at a finer scale, we are saying that this part of the county has loads coming from feed space, and that's where the distinction is. That information gets passed down to models down the line, like the Watershed Model. I think, Jess, you probably have a better understanding of it than I do.

Jess Rigelman: You have it right. It's just that a lot of ag inputs are at county scale, but we need to assign loads and even BMPs at land river segment scales. So, we need to proportion this out, and we are able to map the entire watershed, but we don't separate out feed space. But, we need feed space because it's very important and a high loading land use. So, we just developed this method to more accurately take it out of the landscape as opposed to before where it was coming out just based on error rates of land use classes. So, with Sarah's mapping, she was basically able to show us that this is more likely where the feed spaces areas are and, therefore, take them out of these land use classes appropriate at that smaller scale that is mapped.

Amanda Barber (in chat): Is this only for non-permitted feeding space?

Ken Staver: In terms of area, it is a tiny fraction of land but with super high loading rates, if I remember from long ago?

Jess Rigelman: Yes.

Sarah McDonald: That is my understanding as well- small area but high loaders.

Olivia Martin: That was my understanding too, Ken. As a follow-up to Ken's question about the segmentation, yes, CAST works at a much smaller area, but I think there are several inputs that are just at a county level, like the nutrients. Is that still true?

Jess Rigelman: As far as crop application stuff, yes. But feed space loads and nutrients have to go down to the land river segment because we have to split it into the permitted and non-permitted feeding space.

Olivia Martin: That probably gets at Amanda's question, too, then. But the animals come from the ag Census which is only at the county scale. That hasn't changed, right?
Jess Rigelman: No, that is the same.
Sarah McDonald: Are there any questions in the chat that I missed, Eric or Caroline?
Eric Hughes: Amanda Barber asked, "is this only for non-permitted feeding space"? Other than that, there is nothing.
Jess Rigelman: For all feeding space. The animals are the animals at county scale. The feed space is the feed space land use. But, the animals are separated into permitted and non-permitted based on information the states had provided us as far as the fraction that is CAFO versus non CAFO. So, those are used to split the animals which, therefore, are used to split the land use. That is the same as it was done in Phase 6.
Eric Hughes: How do you feel about that, Amanda? We can move on unless folks have other questions. Sarah, do you have other slides?
Amanda Barber (in chat): I'm thinking. No further comments.
Sarah McDonald: I do have detailed slides on how the math works on all of this that I am happy to go through if people want to see that.
Eric Hughes: In that case, unless we have a request from our members, I think that is probably sufficient. I'd like to open it up now. How are folks feeling about this? The thought was, like I said, that this was generally not controversial. Anything that you feel we need to do a deeper dive on, we can certainly take that time. I know Amanda said she was thinking, so maybe more to come. Are there any concerns related to this? The last thing we really want to do is rush. So, just let us know.
Ken Staver: Just to get to the baseline question in terms of dealing with loads, this will move loads around a little bit from one land river segment to another, but it's not going to change the overall load anyone is dealing with?
Sarah McDonald: Correct. Jurisdictionally, no changes.
Ken Staver: Ok. One question- for permitted, I would think when you get permitted information, if you know it is permitted, then don't you know where it is and how big it is? Or is that not part of permits?
Sarah McDonald: Jess? I don't think I am able to see any of that permitted data, but Jess is.
Jess Rigelman: I'm sure it is, but all we have is basically what the states have reported. Many states haven't reported for years, but we just use the older data since what has been provided is basically the fraction of those animals that are in CAFO versus not. So, yes, I am sure the states can see that information. We don't have that information. Even if we were to get it, this is the partnership agreed upon approach.
Ken Staver: Alright, thank you.
Amanda Barber (in chat): That was what I was contemplating Ken.
Eric Hughes: So, Ken, it sounds like you are all set. Amanda, you said that you are contemplating the same thing that Ken just raised. We will offer the floor again for any follow-up. The path forward as of now would be if nobody has any concerns about this, that would be relayed to Watershed Technical Membership, and then they would vote on this. If there are concerns about that, speak now or forever hold your peace.
Sarah McDonald: Thanks everyone. There are lots of maps, numbers, and links in the presentation if you are curious. If you have any questions on this, feel free to reach out to me if you need further clarification. I am around to answer questions and chat through stuff. Thank you for your time.
Eric Hughes: Thanks so much, Sarah.

V. Next Steps: BMP Efficiency Evaluation and Remote Sensing-based Verification

Speaker: Eric Hughes, AgWG Coordinator

Workgroup members and other meeting participants were asked to discuss priority BMPs for efficiency evaluation (i.e., which BMPs are "missing" from the Bay Program's suite of modeling tools, and which are currently credited but in need of an update) as well as candidate BMPs for remote sensing-based tracking and verification.

Actions:

1. AgWG staff will work to provide a list of the currently credited BMPs along with the last date they were revisited for credit ahead of a subsequent meeting.
2. The AgWG will work to compile a list of partner-requested ag BMPs to establish creditable BMPs in CAST or revisit/update existing practices ahead of a subsequent meeting.
3. CBPO staff will continue to review options for remotely sensing agricultural BMPs. Recommendations for possible agricultural BMPs that can be remotely sensed will be shared with the AgWG at a subsequent meeting.

Discussion Notes:

Nick Hepfl: I love the idea, and I love where this is headed. I think that one of my biggest challenges with filling out the response was understanding where we've been on a lot of these. What BMPs have been evaluated? Which ones have not? We all have a Rolodex of BMPs in our minds that we could evaluate. But, understanding some of the previous context might be helpful, too, before we hand over suggestions because we might have already been down this road, and I am just not aware of that. So, I am just wondering what exists out there other than the BMP list that we have? But, for the BMPs that aren't on there, is there a list that exists of an evaluation that was completed before and could help guide some direction in which ones we should target?

Eric Hughes: I love that suggestion, Nick. I think you are referring to what we have started to pursue but haven't followed through with yet. For what we have, I think it would be good to have a baseline understanding of when the last time was this was opened up, because do we really want to focus on something that was done in 2018? I wasn't around then, I know a lot of you were, so that's maybe not as useful. But, what hasn't been touched since 2008? That would be good to know, probably. To help you all, that is absolutely something we can build out. In terms of the paths that we've started to venture down and maybe it didn't come to fruition, or didn't ultimately result in something that went into CAST, that will be a fact-finding mission for us, but certainly one that is warranted. We talked about several months ago batting around this idea of projects that the AgWG has undertaken through time. With everything that has happened, it hasn't been as much of a priority for us, unfortunately. It's something we want to work on, and I think that maybe what we can do, Caroline, is target those items first. Let's make sure that we're capturing the panels. Let's make sure that we're capturing what has been done specific to this topic, put that out there to the group, and then that can help inform your decision. So, it sounds like that would be more helpful to you all than just asking cold. Nick, I really appreciate the feedback. Anything that you want to add to that?

Nick Hepfl: One final thought. I know that a lot of people in this workgroup are probably newer like me. I've been here for a term now- a full term and a little bit of another one- but a lot of us don't have that previous knowledge that came with it. So, identifying that or maybe some of the people that have been on the Workgroup a longer time could maybe provide a bit of context to help us understand where we've been, so we don't waste our time. That's the biggest thing.

Jim Riddell: I wanted to talk a little bit about a concern- not a missing one, but one that maybe needs an update. Before I say that, I want to preface that, here in Virginia, we have an outstanding cost share BMP program that's been led by quite a few folks that are involved with this group over the years, and we've had great results. We really have. We're at 84% nitrogen, 91% phosphorous, and 100% sediment. We are still working on it. We've got a way to go, but my concern, and I brought this up before, is looking at the top four BMPs that we have in Virginia especially for nitrogen reduction: nutrient management, animal waste, cover crop, and livestock stream exclusion. What we've seen from the results and seen from the data supplied by EPA and DCR in Virginia, is we're using some incorrect lifespan models, and that's affecting the results. What it's really done was, back in 2017, there were figures that would be used for certain reductions, and they were basically taken off the board just about completely. So, it's ended up with incorrect information being reported on some of the accomplishments that have been made. So, I just use one example, and that's stream exclusion, and cover crops have some issues, too. But, I would really encourage our group and the folks up the line to take a look at the lifespans we are using because some of them are incorrect. Fences just don't disappear. So, when we take them off at a certain time, and they don't continue to get credit, it affects what we are doing. I will stop there, but I think this has been discussed multiple times, and I think it's really time that the Bay Program looks at this and evaluates these issues at a much more serious and detailed level.
Matt Kowalski (in chat): Can CBP provide a list of the currently credited BMPs along with the last date they were revisited?
Auston Smith (in chat): You can find here a list of credited BMPS, as well as draft BMPs for Phase 7 below. To add to what Eric flagged.
https://cast.chesapeakebay.net/Home/TMDLTracking
Elizabeth Hoffman (in chat): From a data tracking and reporting perspective, curious how many of the "new" or "missing" practices are happening outside of NRCS coded practices? Examples of those?
Eric Hughes: Thank you, Jim. Credit duration is certainly something that would be considered in an opening of one of these existing panels. So, I hear you loud and clear and appreciate that. As far as the Bay Program taking a look, that's why we are here. So, if we come to the end of this, and the thought is, yeah, let's move forward on some of these, then that absolutely would get done. So, I appreciate your input. I think once we have everybody's feedback and we sort of know what the list of the priorities are, that will better position us to pick those high priority items and then move forward. So, thank you. I think we have a lot in the chat here.
Can CBP provide a list of the currently credited BMPs along with the last date they were revisited"? Matt, that is a great idea. I think with what we did a few months ago, we were working towards that sort of with the revised crosswalk we walked through. I think part of that could be, in addition to what is listed there already, saying here is the last time credit was set or updated. So, that's absolutely something, Caroline, we can add as an action item for us and put together that list of materials that would be helpful for our members as we move forward compiling this. So, great idea. To Elizabeth's question, that's a great question, and that's a place where I'd be relying on folks to weigh in. If you come to us and say there are a lot of these practices that aren't really picked up, we need to know what those are. I don't know that. So, certainly something that I hope would be raised through this process-getting people to send us their formal lists.
Elizabeth Hoffman (in chat): Yes, this was a question for jurisdictions.
Amanda Barber (in chat): Sorry I'm having trouble with audio/video controls. I would like to see each jurisdiction convene a/some meetings to review bmps and give the broader ag community an opportunity to identify potential new bmps or revisions to existing.

Eric Hughes: Amanda, I think that's a great idea, and obviously with your perspective as a member of the Ag Advisory Committee, I think that's a great suggestion as well.
Matt Kowalski (in chat): An official request with a set deadline sounds perfect.
Eric Hughes: Frankly, Matt, I need to set some deadlines for myself, too! So, that's a great suggestion.
Elizabeth Hoffman (in chat): To the lifespan note, was that not decided upon based on the requirement for verification? Not disagreeing that fences remain in place longer than the model credits them but is that a practice specific decision or larger conversation around verification support.
Eric Hughes: Elizabeth, do you want to elaborate on that?
Elizabeth Hoffman: This is a big question that you asked with a couple of layers to it. I guess I am just pointing out that I am not disagreeing. Through Maryland's verification effort, we have a lot of data to suggest that practices are present longer than a contractual obligation to have them on the ground. My point being, where we started with this question from you, I'm just wondering if that's a separate conversation around verification, because that's what the credit duration came from, right? That's all I am saying.
Eric Hughes: That is helpful. Before my time, there was an effort to go down the verification path. I guess my effort was to keep these largely separate, but that may be misguided. They may be sort of inextricably linked to the point that that will need to come up. So, interested in exploring that more and maybe talking that one out to see what we can and can't do. If we need to get into verification, then maybe that's the path we go down. But, if that's not necessary, then we may try to keep those two things separate. But, yes, in that case it sounds like maybe not. So, something we need to follow up on.
Amanda Barber (in chat): My experience on the Ag Advisory Committee is that because not everyone has the same level of background information, there is skepticism and/or just misunderstanding about what can or is already being credited.
Eric Hughes: I completely agree, and so much of this is, I think, a communication challenge in so much of the work that we do. So, yes, to the extent that we can, make sure that we're doing things right. We are really comfortable with what have here in house as a partnership and then making sure that confidence is relayed particularly to the ag community. I think that's helpful, but importantly bringing them in on the conversation, because I think that's the only way true confidence across the board will be had. So, I appreciate that very much. Basically, what I am thinking is I think we need some more information to get to you all to give you a better foundation before you go and talk amongst yourselves. I think Amanda had a good suggestion. It would be great to have specific calls internally and with some of your producers and others to get to the heart of this. So, I am not certainly saying that you need to get back to us in two weeks. That's not what we are getting at here. Obviously, it will take us some time to get you the resources that you need first and foremost but wanted you to know that this is kind of the direction we're hoping to head. I would love if we had the same sort of level of interest or homework done in this across all sectors. Obviously, we don't have control over that at all, but maybe something that the other sectors could hear and consider doing themselves. It's going to become a question of what resources do we have to address these needs? Where do we want to start? What does that look like? I think we will be in a really good position for the future.
Ken Staver: The second bullet, "for those we can't…cut them", do you mean cut them from the remote sensing protocol? Or are you just talking about cutting them period?
Eric Hughes: Sorry, that was poorly phrased. We'll post revised slides with changes to that wording in the color red. We are not cutting them, as in eliminating the BMPs from CAST. They would just be removed from our list that we have of BMPs we are considering for this particular

project. I don't mean to say that they are going away. That's not what we are getting at. We are looking at this as a way to increase efficiency or decrease the administrative and resource burden on our partners. So, not looking to delete these by any means.

Ken Staver: Right. This is not my wheelhouse. I'm primarily a research person, but when I read papers and studies, time and time again, a lot of stuff about producers doing things relates to communication and being involved with technical staff. So, you want to be careful about having people never go to farms and just flying over and counting stuff, because you might lose some of that. Again, I am not an expert on this, but I would be wary of having less communication. I know staff is limited and you can only do so much, but you still want to have people be connected to their conservation technical support people and agencies. So, that's just a comment about the last [bullet point].

Eric Hughes: I'm really happy you made that point, because I think that's something that's going to need to be a part of this audit. What is the cost? Frankly, from what we've seen so far, we would never get people off farms entirely. That's not the goal, certainly, to completely remove people from that space. If we can't do that, I don't know what the cost savings would necessarily be for the jurisdictions. For people who are making asks in this space, I think to have a complete understanding of the costs and the benefits from the ag perspective is going to be absolutely necessary. Folks expressed interest in this. We are pursuing it. I think clearly outlining the good and the bad is going to be really necessary.

Ken Staver: The verification burden can't be excessive. It can't be too much to do, but just making sure you don't go too far the other way and we're going to have a bunch of drones flying around out there and not have the human element. So, that's my only thought.

Eric Hughes: Thank you. Jim, I imagine you might have something to say in a similar vein.

Jim Riddell: I am reiterating what Ken said. We should do all we can for remote sensing verification where it is applicable and is successful. But you saw firsthand the results from Virginia the other day what we were able to gather when going directly to producers with staff versus when you are sending out an email or sending out marketing. So, Ken's remark is spot on, and we need to remember for certain things, you can't do it all electronically.

Eric Hughes: Great point, Jim. The human element of this is critical.

Paul Bredwell: Just to echo what Jim and Ken talked about, my only concern would be if you start "endorsing" this remote sensing that some of the states might just push everything away, not because they are lazy or because they don't want to do it, just because they don't have the manpower to go out and do on farm inspections. So, we need to be careful to how aggressive this remote sensing option or recommendation would be. There's always a very old caveat to say this is not going to be the end all be all to go out there and confirm BMPs on the ground. For instance, you might have a mortality composting bin in a poultry litter shed. Remote sensing is not going to pick that up. They might pick up the litter storage shed, but not the mortality composting aspect of it.

Elizabeth Hoffman (in chat): Not to discuss, but just to document in the notes, from Maryland: there are examples of some "easy" wins that are existing NRCS practices that could be assigned a more specific efficiency (rather than just map to SCWQP). Example: field borders re-enrolling to habitat management practices (first code counts, second doesn't). Other examples of BMPs that aren't necessarily outdated but we could track better - work with industry to capture poultry litter amendments and dairy precision feed management. Industry standards, could we "report" at a CBWS level from industry? This has been brought up before. Last example: BMPs that are more specific than an NRCS code allows and is modeled. Treatment Wetlands - not just a land conversion, could look a lot like ASM systems (treatment train of practices) but maybe function more like the BMP ADM (ag drainage management) in treating cropland. We have NGO partners doing that work.

Eric Hughes: That's a really important point, Paul. Thank you for weighing in there. I think what we are going to find is, and I shouldn't speculate, that the applicability of this is going to be limited to a relatively small number of practices. So, the question that's going to need to be asked is what are we really getting? I would just go back to that cost benefit point again. To be determined, and I think having these points made up front is really important, and we will make sure that's all registered when folks are the more senior decision-making levels are asking what we can do with this. These comments will be logged in there alongside what folks say the priorities are/what the possibilities are. I know we are at time. Kathy and Caitlin, I will defer to your judgement, but perhaps we forgo our final item, or we take just a few minutes and folks stick on. Elizabeth, I know you had your hand up and then you put it in the chat. Do you want to take a minute to walk through that?

Clint Gill (in chat): I agree Paul, most to all of our mortality management is under roof, and I can't tell if they've got bins, eco drum etc. from above.

Elizabeth Hoffman: My hand raised was actually for the whole verification component. So, I agree that there's a real value in having staff get face time, but to others' point, this would be selective. I think where Maryland would prioritize the use of that imagery is things like annual practices. Tillage management is a big one, and the idea of how to capture that every single year. We currently pay a lot of money to NASS to do a survey, and we supplement that with some other data. But, if that could help us, that would be great. Even with cover crops, if it makes staff have to go out to the field less often, they can focus on the delivery of other programs. So, I guess my point being if this is used strategically, it can compliment and actually free up staff time to do a lot more direct conversations with produces and cooperators to get them enrolled in other programming. So, there's a give and take.

Eric Hughes: Fantastic balancing comment there, Elizabeth. Next steps for this, I appreciate everyone weighing in on priority practices and what you think are viable. What we will probably do is taking that into consideration, a small team will work on the first blush attempt to get at the realm of possibility with our ag BMPs, that will be shared with the workgroups, we need to bring this back, and then we can go from there. But, want to take a first initial look at really what is absolutely not going to qualify and then consult people who actually have the expertise both on the ag side but then also on the tech side. What works, what doesn't? Then we can go from there. The ask, eventually, if you are amenable to the idea, based on our findings, start thinking about how you compile a resource list saying this is what you'd be saving us if there were to be some sort of watershed wide version. If that is not going to save us much of anything because we still need to have people out there or that's not how we report these, that's equally important for us to know. So, just to get the gears turning there. So, thank you all.

VI. Reflections from Chesapeake Ag Networking Forum

Speaker: Kathy Brasier, AgWG Chair

Several AgWG members and frequent participants attended the Chesapeake Ag Networking Forum in Hershey in November. This will be an opportunity to reflect on what was shared at the forum and how the topics discussed may inform the efforts of the AgWG in the coming year. During this time, the AgWG leadership team will solicit questions and directions related to the AgWG's top priorities (including but not limited to: tracking ag industry trends; leveraging technology to enhance BMP verification; evaluating credits for a broader array of BMPs; and assessing innovative BMP implementation programs) to achieve Bay Program goals. These questions may be addressed internally (CBP partnership) and/or shared externally (LGUs, USGS, etc.).

Please Note: Due to time limitations, the AgWG did not get to this agenda item at their December meeting.

VII. Wrap-Up and Adjourn

Lead: Eric Hughes, AgWG Coordinator

- Announcements:
  - **2026 AgWG Meeting Dates**
    - Our meeting schedule for 2026 will be released soon! The dates will be shared with AgWG Members and Interested Parties distribution lists.
  - **2025 Executive Council Meeting**
    - The Chesapeake Executive Council met on Tuesday, December 2, 2025, at the National Aquarium in Baltimore, Maryland. At this meeting, the
    - Executive Council approved and adopted the revised Watershed Agreement. Additionally, the Executive Council approved recommendations to streamline and simplify the partnership's structure and governance. The Chesapeake Bay Program will implement these revisions and regularly report progress to the Principals' Staff Committee for their final approval expected by July 1, 2026.
    - Also submitted to the Executive Council were recommendations from the Advisory Committees, including the Agriculture Advisory Committee. To view the Agricultural Advisory Committee recommendations, click here.
    - All materials, including the final revised Watershed Agreement are posted and available on the Executive Council calendar page. View the Bay Program press release here.
  - **Bay in the Balance 2026 Conference**
    - As the Chesapeake Bay restoration effort continues beyond 2025, revised outcomes of the watershed agreement and new efforts to facilitate greater engagement of the agricultural sector provide a unique opportunity for the agricultural community to come together to shape the future trajectory of agriculture in the Chesapeake Bay in meeting water quality goals. This conference will provide a collaborative forum where motivated leaders throughout the watershed's agricultural and conservation community can collectively identify new, innovative solutions that can help agriculture meet water quality goals for the Chesapeake Bay and its watershed.
    - This event has been rescheduled and will now take place March 2-4th, 2026, at the Wyndham Conference Center and Hotel in Gettysburg. For more information on the event and to register, please visit the following site.
  - **AgWG Call for Nominations**
    - The AgWG is now accepting nominations for a Vice Chair and 6 at-large members for the March 2026 – February 2028 term. Please send all nominations to Caroline Kleis (Kleis.Caroline@epa.gov) and Eric Hughes (Hughes.Eric@epa.gov) by COB, December 30th, 2025. All nominations should include the following: Contact information (name, affiliation, email), and a short C.V., resume, or bio (addressing the nominee's background).
  - **Pooled Monitoring Initiative's Restoration Research Award Program RFP**
    - The Pooled Monitoring Initiative's Restoration Research Award Program is now open, and applications are due January 29, 2026. The goal of this research program is to answer several key restoration questions that are a

barrier to watershed restoration project implementation. The Pooled Monitoring Initiative pools funding resources to answer these key restoration research questions, as outlined in the request for proposals (RFP). The RFP and application link are available at the following website.

- Two online information sessions will be held at the following dates and times:
  - Register for December 12, 2025, from 12 pm to 1 pm (EST) Info Session
  - Register for January 6, 2026, from 12 pm to 1 pm (EST) Info Session

- **American Farmland Trust- Grants for Virginia Farmers**
  - Grants opened on December 1, 2025, for two opportunities (Healthy Soils and Farm Vitality) under American Farmland Trust's Regenerate Virginia Initiative. To learn more, apply, and review FAQs, use the following link.
  - Q&A Office Hours sessions will be offered at the following dates and times:
    - Monday, Dec. 1st at 1 p.m.
    - Monday, Dec. 15th at 7 p.m.
- **National Directory of Agroforestry Nurseries**
  - The Agroforestry Coalition is launching a national directory to connect farmers, foresters, and land stewards with nurseries growing trees and plants for agroforestry. The directory will be open-source, transparent, and inclusive — highlighting nurseries of all scales, types and regions that are helping plant a more resilient future.
    - Nurseries that grow and share plant material for agroforestry are encouraged to add their nursery information by December 31, 2025.
    - The first public release will go live in January 2026.
      - To add your nursery, use the Agroforestry Nursery Entry Form
      - To refer others, use the Referral Form
  - For nurseries in Pennsylvania, PA DCNR hosts a webpage listing native plant nurseries, *Where to Buy Native Plants*. This page has been updated with a fresh survey of nurseries. The initial survey of PA native plant nurseries has closed, but nurseries are still able to opt into this list. If you would like to submit information to be added to this list, please reach out to Chris Firestone (cfirestone@pa.gov). The next update is planned for February 2026.

Next Meeting: January 29, 2026, 10:00 AM – 12:00 PM

Attendees:

Kathy Brasier, PSU
Caitlin Grady, GWU
Eric Hughes, EPA
Caroline Kleis, CRC
Mark Dubin, VT
Auston Smith, EPA
Alex Soroka, USGS
Cindy Shreve, WVCA
Jim Riddell, VA Cattlemen Association
Jeff Hill, YCCD
Denise Uzupis, PDA
Erin Sonnenburg, CRC
Tom Butler, EPA
Tyler Groh, PSU

Carlington Wallace, ICPRB
Karl Blankenship, Bay Journal
Christina Lyerly, MDE
Kate Bresaw, PA DEP
Emily Dekar, USC
Kristen Saacke Blunk, Headwaters LLC
Dave Graybill, PA Farm Bureau
Matt Kowalski, CBF
Amanda Barber, NY Cortland County SWCD
Arianna Johns, VA DEQ
Alex Echols, Campbell Foundation
Grant Gulibon, PA Farm Bureau
Nick Hepfl, HRG inc.
Matt Monroe, WVDA
Amanda Cather, Plow & Stars Farm/ AAC
Cassie Davis, NYSDEC
Paul Bredwell, US Poultry & Egg Association
Caroline Harper, Campbell Foundation
Elizabeth Hoffman, MDA
Natasha Rathlev, Sustainable Chesapeake
Clint Gill, DDA
Patrick Thompson, Energy Works
Bailey Robertory, MD DNR
Sarah McDonald, USGS
Hunter Landis, VA DCR
Doug Bell, EPA
Olivia Martin, Devereux Consulting
Samantha Cotten, DNREC
Scott Heidel, PA DEP
Jenna Schueler, CBF
Ken Staver, UMD Wye
Jenna Talbot, DNREC
Jess Rigelman, J7 LLC/ CBPO
RO Britt, Smithfield Foods
Dean Hively, USGS
Holly Walker, DNREC
Zach Evans, Mountaire
Krista Crone, PA DEP
Emily Heller, EPA
John Lancaster, PA DEP
Jackie Pickford, USGS
Marel King, CBC
Bo Williams, EPA
Alex Gunnerson, Koniag Government Services/ CBPO

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
DLLC- Delmarva Land and Litter Collaborative
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
PADEP – Pennsylvania Department of Environmental Protection
PSC – Principals' Advisory Committee (CBP)
PSU- Penn State University
SARE- Sustainable Agriculture Research and Education
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