Agriculture Workgroup Meeting Minutes

June 18, 2026
10:00AM-12:00PM
Visit the meeting webpage for meeting materials and additional information.

Purpose: To learn more about the Workforce Workgroup and Workforce Outcome, to continue discussions on the Ag E3 Scenario development, and to provide the Workgroup with relevant partnership updates related to the Clean Water Goal Team and Partnership governance and structure.

Summary of Actions & Decisions

Decision: The AgWG approved the May 2026 meeting minutes.
Action: AgWG members are encouraged to reach out to Bart Merrick (bart.merrick@noaa.gov) if you are interested in providing additional information in regards to workforce needs in the agricultural sector and/or if you would like to participate in the Workforce Workgroup as a member/presenter or as management strategy development is ongoing.
Action: Marel King, CBC, will reach out to Bart Merrick with the CBC report *Boots on the Ground: Improving Technical Assistance for Farmers*. AgWG members interested in reading this report can access it here.
Action: Eric Hughes, AgWG Coordinator, will follow-up with the Ag E3 Small Group and AgWG members to request feedback on the E3 Scenario spreadsheet. The Ag E3 Small Group will continue to meet, with the goal of developing a draft E3 Scenario for discussion/decision at the July AgWG meeting. Please reach out to Eric Hughes (Hughes.Eric@epa.gov) and Caroline Kleis (Kleis.Caroline@epa.gov) with any questions, concerns, or feedback as the Ag E3 Scenario develops.
Action: The AgWG will continue to be informed of any updates relevant to membership, management strategies, and workplan development as additional information and guidance is available from the Clean Water Goal Team and/or Policy Steering Committee (Formerly Principals' Staff Committee).

Meeting Minutes

I. Welcome, Roll Call, Review Meeting Minutes

Lead: Jenn Fetter, AgWG Vice Chair

Jenn opened the meeting and requested participants share their name and affiliation using the meeting "Chat" function. Jenn then asked workgroup members to approve the May AgWG meeting minutes.

Decisions:
1. The AgWG approved the May 2026 meeting minutes.

II. Cross-Partnership Collaboration: Workforce Workgroup

Lead: Bart Merrick, NOAA/ Workforce Workgroup Vice Chair

Under the 2025 Chesapeake Bay Watershed Agreement, the Chesapeake Bay Program partnership established a Workforce outcome to "Increase the ability of all job seekers in the watershed to understand, participate and succeed in career pathways that positively support the Chesapeake Bay watershed". Bart Merrick, Vice Chair of the Workforce Workgroup, provided an overview of this outcome and its targets, as well as the Workforce Workgroup's perspective on cross-partnership collaboration. The purpose of this session was to initiate communication and collaboration between the Agriculture and Workforce Workgroups and serve as a platform for preliminary discussions about ag conservation workforce challenges identified by AgWG members. This was also a core theme of the Bay in the Balance conference held in March. Jenn Fetter, AgWG Vice Chair and Pennsylvania signatory member of the Engaged Communities Goal Team, facilitated workgroup discussion.

Actions:

1. AgWG members are encouraged to reach out to Bart Merrick (bart.merrick@noaa.gov) if you are interested in providing additional information in regards to workforce needs in the agricultural sector and/or if you would like to participate in the Workforce Workgroup as a member/presenter or as management strategy development is ongoing.
2. Marel King, CBC, will reach out to Bart Merrick with the CBC report *Boots on the Ground: Improving Technical Assistance for Farmers*. AgWG members interested in reading this report can access it here.

Discussion Notes:

Kate Bresaw (in chat): Indiana County Conservation District
Jenn Fetter (in chat): Indiana County is leading this apprenticeship effort with the PA State Conservation Commission
Alex Echols (in chat): To what extent are you looking beyond your agency's needs? There are lots of other needs outside of this group
Jenn Fetter: Thanks, Bart. That's really great, and it's definitely an outcome that has great crossover with our own work group outcomes. I see Kristen has her hand up. Also, there was a question in the chat from Alex about to what extent we're looking beyond our agency needs. I think your landscape analysis was not just to NOAA's needs, right? It was the full Bay Program across all states, right?
Bart Merrick: Yes, that was the intent. That landscape analysis looks at and did their best to kind of try and identify training programs in all watershed states. It is not associated with NOAA mission-oriented stuff. It was definitely Bay Program focused. I can share that database with Eric and Caroline who can pass it around.
Alex Echols (in chat): Did it include private sector and USDA? So not Bay Program focused.
Jenn Fetter: Alex asked a follow-up question about whether that included private sector training programs or federal programs that maybe go outside the bay but could be beneficial to the bay.
Bart Merrick: I'll have to look at it again, but my recollection is that most of the training providers that were identified were local training providers that had some alignment with program outcomes, like the conservation landscaping professionals. So, for example, that was a local training in Maryland and was one of the training providers that was identified. So, that kind of scale is what we looked at. We did not look at overall broader funding for setting up training providers and things along those lines too. I'm not sure the list is fully complete, so there's still work to do there, of course. But that was kind of the scale that we were looking at for that list/database.
Kristen Saacke Blunk: I wanted to make sure that your group has the data from both the Chesapeake Bay Commission and also from National Fish and Wildlife Foundation that did an

assessment right before COVID of what some of the technical assistance workforce needs were along the landscape. There's a bi-state breakdown, and it could be data that would be useful to you. I just wanted to make sure it was on your radar screen.
Bart Merrick: So, I'm not sure it is. It's not ringing any bells for me. I don't want to speak for Julie on that. But if anybody has access to that, I'd love it. Maybe that'll ring a bell and maybe we have seen it, but that's not ringing a bell for me right now.
Kristen Saacke Blunk: I know if Marel King is on the call, she could give you further details from the Commission standpoint, and then I can follow up with you to get the data we have from NFWF.
Marel King (in chat): I will forward that information to Bart. Thanks, Kristen.
Bart Merrick: That would be awesome. Thank you!
Jenn Fetter: Kristen, you did an excellent job of teeing up what I was going to suggest, which is thinking about what this group's role is in this partnership and what we really bring to the table. I heard Bart saying, being able to contribute what our needs are and what our existing recognized credentials are. Do we know what our needs are? I know that Kristen just referenced a study that happened more than six years ago now. I think it's a great starting point, but do we need a more current gap analysis of where gaps still exist in the ag workforce space when it comes to meeting Bay goals? Is that something that this group and your group might be interested in pursuing together?
Bart Merrick: Is that a question for me? I would say yes!
Jenn Fetter: Bart says yes, and I think it's a question for this whole group. Is that something we'd want to potentially pursue as an action in this group? I think part of that gap analysis could also be an analysis of recognized credentials needed to fill those gaps, once we identify them. What existing industry recognized credentials exist for those gaps? Or do folks feel like that that is knowledge we already know thoroughly and scientifically. Or do we just have our anecdotal experiences of what we're tripping over?
Bart Merrick: I just wanted to offer one thing about IRCs and that there's over 3 million industry recognized credentials across the country. We have partners at this organization called Advanced CTE that are looking pretty closely at this to say what are these credentials of value? What are the ones that actually are needed by the industry and can lead to higher income related results for the worker? So, it's just important to look across that and make sure that the IRCs are really needed in this space and what those things are. So, I just want to offer that. There's a lot of them out there. So, there's probably some IRCs that are directly raised.
Jenn Fetter: Short of looking at a list of 3 million, I think I'd start with talking amongst our group and, once we've identified the gaps, talk about what the credentials are that are directly related to those gaps.
Nick Hepfl: I'm going to talk from a Pennsylvania specific seat here, thinking about our Act 38 nutrient management and our conservation district incoming workforce, which seems to be the one that experiences a lot of high turnover and the ones that require a lot of on-the-job training once they get here. If I remember right, weren't there some basic starting courses at Penn State University in the ag curriculum related to getting them started on the Act 38 knowledge trend?
Jenn Fetter: I think [Robb Meinen] has some classes that actually help facilitate that. He might be able to comment on it better than I can. But, to the best of my knowledge, and this is part of the workforce problem, there has been very low participation in seeking out that certificate.
Nick Hepfl: That's what I understood about it too, looking at it from the outside. One of the biggest things that I know I experience with workforce and people coming in is that some of these students that are going into colleges don't really understand where they're headed. They are being equipped with knowledge that's extremely important to our work, but not really drawing those connection gaps, right? Like that they know whenever they come out that there's an opportunity within Chesapeake Bay technical space. Also, [that they have] the specific items that are critically important in their education to understand in order to come out and be extremely effective in this

space and in our roles within our states and our different agencies. So, one of the things not related to the 3 million certifications is the connection- drawing those connections between a real workforce opportunity where we need people and the critical classes, skills, certifications, etc. that you need to actually focus on to come out and be effective/ ready for on-the-job training whenever you get here. I think that's a huge thing right there. I know I was one of those college kids too, coming out not knowing, but then I started the conversation when I came out of college and thought, wow, this was a perfect fit for me. I just never knew until I got here and just got hit with it. So, that's just some food for thought, I guess. That's all.
Robb Meinen: The certificate is separate from the nutrient management program. Charlie White and I co-instruct the nutrient management class at Penn State. We have approval with the State Conservation Commission of Pennsylvania to have that class qualify as certification components for the plan writing certification at state level. However, no one's ever really taken advantage of it because we've had a number of students that graduate and go on and work in the plan writing arena, and they always come back to the official certification as a refresher or just to make sure that they're up to speed. So it's interesting that it's approved, but it seems like all the all the people that seek that professionally want to do it again.
Jenn Fetter: Thanks, Robb, I appreciate that.
Ken Staver: This is going to be sort of anecdotal, but I deal with the local NRCS office a lot, and there's probably somebody from NRCS on the call who can speak to this more than I can. I've dealt with a lot of the CRP, the conservation reserve programs, and anything that has engineering involved seems to be a problem in terms of staff. There always seems to be a shortage of engineering capability. So, if you want to do a grass buffer or things that don't have engineering in terms of the practices, the response is fast. If you're working on a wetland where there's engineering design, it really is slow. Everybody says it's shortage of engineers. But what people say is if somebody young comes out and they're trained in engineering skills for doing soil and water type things, the urban stormwater market is much more lucrative for those young folks. So, it's hard to get them into the ag side and NRCS because there's so much with the stormwater requirements and in new development. So, there's so much demand for those folks. So, I don't know what the answer to that is. You get back to the STEM and a harder curriculum for kids, and I don't know what the answer is. Again, somebody from NRCS might chime in here and say, well, that's just anecdotal and that's just Queen Anne's County, Maryland. That's nowhere else. But I think I've heard that around. So, anyway, that's just an observation.
Amanda Barber (in chat): What about the agricultural workforce? Since our farmers are a primary workforce that is expected to directly contribute to water quality improvements in the Bay, what are plans to increase/improve ag education and promote agricultural jobs? How are we educating our future agricultural producers as it relates to water quality improvement? Also how are we ensuring that being a "farmer" is a "good job" since we need those stewards of the land and we all need to eat too!
Marel King (in chat): Also, careers related to implementation, such as excavation, construction, concrete, plant nursery, etc.
Elizabeth Hoffman (in chat): Building on Amanda's point - something mentioned at BITB was not only early educational tracts but the idea of how to connect a workforce that increasingly does not have on-farm experience coming into the job to farmers willing to provide that and in return - support farmers at an operational level. Also provides a pathway for future producers, exploring barriers such as access to land, etc.
Marel King (in chat): To Amanda's point: support for first-generation farmers. They bring new energy and ways of looking at things, and we need to build and strengthen pathways for more of them to enter the industry.
Jenn Fetter: I saw Amanda's comment in the chat about the actual ag workforce, the implementers themselves who are producing, who we want to have knowledge and education around conservation, best management practices, stewardship. What kinds of workforce development are

we doing to help grow them as engaged community members? So, part of the gap perhaps is what exists for farmers themselves to be knowledgeable. Marel reminded us in the chat also about the implementers, the excavators, construction contractors, those folks who are a part of the workforce for implementing best management practices. Did either of you want to say anything more about that? Amanda and Marel? Then I see Elizabeth had some follow-up as well to Amanda's point. If not, I'll revisit the question then based on how this conversation evolved. Is this a gap analysis and conversation that we want to pursue as a partnership in this work group as an action? Thanks, Kristen. I see a thumbs up reaction there.
Eric Hughes: I saw Kristen's thumbs up, but just to build on that, Jenn, I wanted to tie this into a conversation that we're going to have later, and then next Monday/Tuesday at the Clean Water Goal Team meeting. I think the expectations that I've heard from the Clean Water Goal Team co-chairs is that they really want to see the work that groups produce, right? So, what is our added value? What are you doing to support the overall progress of the Partnership? So, to your point, is a gap analysis a place where the folks on this group are uniquely positioned to put pieces in place to complete the puzzle where there is missing information? It seems like some sort of product and assessment, or an overview/gap analysis would be exactly what the Clean Water Goal Team would be looking for. We can say we want to talk about workforce, but where's that talking lead us? What can we actually do with that? It seems like that's something that we could do.
Amanda Barber (in chat): I know the Ag Advisory Committee is hoping to engage more on this topic too
Jenn Fetter: Thanks, Eric, and Amanda has a comment there that the advisory committee is also hoping to engage more on the workforce development topic. So, maybe it's a three-way partnership when it comes to that gap analysis and we still have plenty to contribute. Do we need an official action item, Eric, or anything along those lines to close this conversation?
Eric Hughes: We'll see a little bit about this when we talk about the submission that we made to the Clean Water Goal team later. In terms of ideas for actions that we could take and gaps and challenges that we face with our portion of the RENPS outcome, this is something that was submitted as an idea and certainly as a topic of consideration to the Clean Water Goal Team. So, if the opportunity presents itself next week to discuss, I know Caitlin will be at that meeting and I will be there as well. So, we can absolutely weigh in that we had this conversation. There was at least no opposition to exploring this path further and collaborating more closely with the Workforce Workgroup. Bart, I really appreciate your time. This was fantastic, and we're looking forward to working with you.
Kate Bresaw (in chat): I will be there as well if you need support, Eric.

III. Ag E3 Scenario Update and Work Session

Lead: Eric Hughes, AgWG Coordinator

Eric shared with the group the latest developments in the Phase 7 Ag E3 Scenario, including work done to date by the Ag E3 Small Group. The majority of this time was spent setting assumptions for specific efficiency BMPs.

Actions:

1. Eric Hughes, AgWG Coordinator, will follow-up with the Ag E3 Small Group and AgWG members to request feedback on the E3 Scenario spreadsheet. The Ag E3 Small Group will continue to meet, with the goal of developing a draft E3 Scenario for discussion/decision at the July AgWG meeting. Please reach out to Eric Hughes (Hughes.Eric@epa.gov) and Caroline Kleis (Kleis.Caroline@epa.gov) with any questions, concerns, or feedback as the Ag E3 Scenario develops.

Discussion Notes (Summarized by BMP):

Buffers

Dave Montali: I thought if you were to pick a width, you would go with either 100 or 35 feet. What's the basis for 20 meters?

Eric Hughes: I think Alisha is on, and that was a suggestion from MDA. So, Alisha, I will turn to you to answer that one.

Alisha Mulkey: That was a conversation that we carried over from AMT when we looked at some of the data regarding buffer widths that the states had available to them. 20 meters matched up with what states were finding on the ground and getting credited for, rather than the narrower 35 feet. So, we said we would apply that same width in this space.

Dave Montali: I couldn't really hear, but I think I heard that that's what the states had available to them. Is that what I heard?

Jess Rigelman: I think the justification is that closely matched up with the default width for the exclusion fencing buffers. Therefore, it's in line with that 66.7 feet that we changed to for Phase 7.

Bill Keeling (in chat): Not theoretically possible is where the small group on these.

Bill Keeling: That's where I was headed. It's based on the AMT. My comment earlier is, I believe the small group was saying some of these things were not even theoretically possible. I mean, that's why we suggested some of the things we did.

Elizabeth Hoffman (in chat): It was based on AMT decisions related to exclusion fencing and looking at the average width vs more conservative width of buffer in how those now get credited.

Alisha Mulkey (in chat): Yes to Jess' explanation. New default based on state data.

Mark Dubin: Yes, it was based on the fact that the reporting of the BMPs are by length of stream, and there's not a width provided. That's typically what you would see with USDA reporting. So that's where that number comes from is the average width value that's applied. So that's why Alisha and MDA were recommending it because that's the data they're getting back from USDA.

Dave Montali: I listened in on the Forestry Workgroup last month and basically heard that their tree planting was not consistent with what the AgWG said for tree planting. I just wonder if I could get some clarification because your previous slide said 1% of crop, and that was the same as done in Phase 6. I think I heard Forestry Workgroup saying ag tree planting on things like 5% of crop and 5% of pasture. Not that I necessarily agree with that, but I was just wondering if you could explain the disagreement between the two groups.

Eric Hughes: It's a good question, Dave. I think Forestry Workgroup had proposed E3 assumptions for ag BMPs and urban sector BMPs that are connected to their work. What they settle on and what we settle on may be different. That will be a conversation that we'll need to have with them. Ultimately, if those do remain different, it'll be for the Clean Water Goal team to decide. But I think ultimately, [the Clean Water Goal Team] would likely defer to Ag for Ag BMPs. I think the Forestry Workgroup is interested in being as ambitious as possible for all forestry related BMPs, but our group will put forward, from the ag perspective, what [ag BMP assumptions] should be.

Bill Keeling: I was just going to throw in there, Dave, that the Ag Workgroup was also wanting to have at least the concept of viable agricultural production. If you look at Phase 6, the total ag converted was around 15%. Some of the earlier efforts and the reason they ended up back at 15% was greater than 15% was proposed in some of their earlier E3 through Phase 6. When people got to see how much acreage that really involved losing in terms of whatever land use you're talking about, in this case, ag, that that was unacceptable. So, they ended up at the 15%. So, I believe we're still at 15% of ag being converted or taken out of production in the current proposed E3 for Phase 7.

Dave Montali: Thanks, Bill. For what it's worth, the taking ag out of production for buffers, it passes the giggle test. Taking ag out of production for general tree planting may not. Maybe you say, okay, that's not E3 because we need food, and the ideas of higher percentages of crop and

pasture being directed for ag tree planting doesn't seem right. Maybe ag tree planting could be prescribed on open space as a way to get around that. But, that was just a personal thought. When I heard what they said, I hadn't yet heard what you guys had said. But, it seems like if there's future disagreement, maybe we focus on that concept of prescribing just general ag tree planting, not in terms of taking away crop and taking away pasture, but putting it on open space so it doesn't affect food production.
Eric Hughes: Appreciate that that point, Dave. Thank you. This is certainly not done by any means. So, further conversation will occur. We've already spoken with Katie. But thank you for flagging that.
Mark Dubin (in chat): Different recommendations on forested ag buffers between the workgroups has occurred in previous model E3 versions, so this is not unique to P7.

Nutrient Management

Eric Hughes: For nutrient management, folks generally accepted that it was 100% in Phase 6, so 100% is appropriate for Phase 7. However, there are two ag land uses that folks flagged to discuss We need to set those specified percentages for hay high and pasture high. Now, we did not see a reason to set different percentages for those. So that wasn't something that Jess broke out. But, this could be the opportunity to hear from Virginia and Maryland who had raised this as something to discuss. So any input on what we should do differently here or does it generally seem acceptable for hay high and pasture high to be lumped in with the other applicable ag land uses?
Dave Montali: My gut is, no, it shouldn't be distinguished. At least the work that West Virginia did and maybe other states did was trying to identify those hay high and pasture high by the amount of reported core nutrient management that is prescribed on pasture and hay. So, to me, I don't see any problem with saying 100% on those.
Eric Hughes: Thank you, Dave.
Ken Staver: Wasn't part of that creation of those new land uses that they had nutrient management on them?
Bill Keeling: They would be eligible for nutrient management and to produce a reduction. My only concern is that we don't turn 100% of all hay into high hay and therefore apply nutrient management to it. If it's the proportions that we laid out or will be in the model, that's one thing. I don't want us saying that 100% of pasture is now high pasture and eligible for nutrient management. That would be beyond theoretically possible.
Jess Rigelman (in chat): It uses the states reported acres for high
Eric Hughes: Jess had in the chat that it uses state's reported acres for high. So, Jess, with Bill's concern there, if this is left at 100%, would that be the case?
Jess Rigelman: I believe this addresses his concern. I do not change the amount of high acres. I use what is used there and just apply 100% to the state reported acres. So I'm not taking 100% of hay and making it 100% high. I am just applying 100% nutrient management to the hay high acres that Virginia reported.
Eric Hughes: Ok. Bill, does that address your concern?
Bill Keeling: Yes.
Amanda Barber (in chat): Is it really possible to get to 100%
Jim Riddell: What does that actually mean? When you say that, what does it actually mean and what does it not mean when you say that it is 100%?
Eric Hughes: Amanda asked the question, is it really possible to get to 100%? Which I think is probably in a similar vein to what you're asking here, Jim. So, the E3 scenario introduction presentation that we had several months ago notes that it is everything, everywhere, by everyone when we're looking at implementation. So, in this hypothetical scenario, if we did everything we possibly could to address our water quality concerns, what would that entail? What would that

encompass? So hypothetically, across land uses that are available for nutrient management, nutrient management would be applied. Whether or not that's really possible is, to some extent, outside of the scope of E3. So, I know Auston is on. Auston, do you want to take this opportunity to speak to the theoretical versus realistic again?
Auston Smith: I appreciated Bill's comment about how this 80% mark represents what could be theoretically possible, and the 100% is really beyond that. We are trying to be beyond what is realistic. So, 80% I think seems like a good compromise where we're not reaching 100% full implementation, but it really does represent a pie in the sky estimate, not realistic. So theoretically possible is kind of what we are going for. Above and beyond "pie in the sky"- not realistic. So, my ears perk up every time I hear someone saying "realistic". Eric, is that helpful?
Eric Hughes: Thank you, Auston. To the point about 100%, the argument could be made that we are never going to get to 100% implementation of any of these BMPs. Everything, Everywhere by Everyone is probably not ever going to happen, right? So, we aren't shooting for realistic here. Without any constraints on time, money, manpower, workforce, what can we implement? So, if the land exists for these practices, I think in a pure E3, the BMP would be applied to those acres or to the eligible unit.
Dave Montali: Ok, I am getting a little bit confused. I didn't think we were squabbling about 100% for core nutrient management?
Eric Hughes: We are not. I think Auston was referencing supplemental.
Auston Smith: I was trying to reference the supplemental. 80% could be a good compromise, not 100%. Sorry for that confusion.
Dave Montali: Okay. My mind is open about why 80% is only possible for supplemental, and that's fine. I just wanted to help on Jim's question. I don't know whether he realized the AMT work, but high hay and high pasture are really supposed to be pasture acres and hay acres that receive additional nutrients. With hay, it actually gets nutrients applied to it and therefore can have nutrient management. For pasture, it gets nutrients in addition to deposition.
Eric Hughes: Does that help, Jim?
Jim Riddell: If we are talking about pasture/hay high, again I think the 80% is more accurate. The 100% is not.
Bill Keeling (in chat): There is theoretically possible things and then things that are beyond that.
Auston Smith (in chat): Appreciated Bill's comment about the 100% on supplemental being beyond **theoretically possible** and 80% being a good compromise under 100% to represent that. We are not seeking realistic here.
Amanda Barber (in chat): Aspirational without regard to resources is one level, but you cannot control an owner's decision or resources which would prevent 100% from ever happening.
Eric Hughes: On that point of the 80%, I think that was previously set at 100% for Phase 6. So, I believe that was an MDA point as well. Alisha, the settling on the 80%, do you want to speak to that?
Alisha Mulkey: I don't know that any of us were sold on 80%. I think, to some of Bill's points and the idea of both application and available technologies, there are some constraints there. So, 100% didn't seem realistic to retain that for Phase 7. So, we brought it down to 80%.
Eric Hughes: Ok. So, is there a desire to increase, further decrease, or are we okay with seeing where the 80% gets us?
Ken Staver: Is this across all the different load sources like the soybeans, the corn, the acres with manure? Is it applied evenly across all those?
Eric Hughes: Yes. For all eligible land uses.
Ken Staver: It's really hard to do on the manure acres. So that's going to be the 20%. But with the 80% on the animal operations with liquid storage, they're going to apply in the fall. So I don't know how we do the timing. 80% with the timing of supplemental seems even beyond theoretically possible, unless we're going to do 365 days of storage. Nobody's proposing building storage systems that have 365 days of storage. So, you can always say theoretically we can make

all the storage units bigger and, therefore, we won't be doing fall applications. But it's a big number for manure acres. For regular stuff, it seems possible. But, with manure acres, I don't see it. I guess it just depends on what kind of exercise this is. If you just say, well, is it possible? At some level, yes, it's possible. So, I don't know what level of theoretical aspiration we're operating at here.
Mark Dubin: I thought it was worth noting that with the supplemental nutrient management, it doesn't have to be everything. So, we credit each of those actions separately whether it's a placement or rate and timing. So, if you're basically doing split applications, if you're doing PS&T, side dressing, or any of those kind of things, even on manure acres, those are all going to kick you into that category. So, I just wanted to clarify that it's not all or none. It's anything gets you in that category.
Ken Staver: Well, that makes it a lot easier. If you check one box and then you're in, then I guess that's different then. I was thinking of the whole package. So, maybe not so bad.
Amanda Barber (in chat): 80% is better than 100%, but I too am struggling with the level of theoretical.
Bill Keeling (in chat): I took it as 80% for each supplemental NM BMP.

Tillage
Eric Hughes: This was previously 100% across the board. It was proposed that it be reduced. There was no number suggested for that reduction. So, we landed at 99%. But of course, that is something that can be debated as well. What that looks like, again, is up for discussion. So, you want to start with the percentage. Alisha, I might be coming right back to you. I don't have it in here, but there was a request for it to not be 100%, if I'm not mistaken. So, Bill or Alisha, I may turn to you to see what your take is on that.
Bill Keeling: What I put in writing was there are certain crops in our list that we have in "Model world" where the culture to grow them is full with tillage and is likely to remain so. Or, at harvest, there's so little residue that it would be hard to meet even the low residue portion of conservation tillage. So, what we're saying is it's not even theoretically possible to have 100% of all cropland in conservation tillage of one form or another because there are certain crops or harvesting techniques that will render a certain percentage of the acres having to be in full with tillage or without enough residue to qualify for even the low tillage BMP. So, what I offered to do is sit down with the ag experts in Virginia and go through the list of "Model world" crops and say these are the ones and then you all could calculate a percentage, whatever that is. I don't expect it to be a whole lot. These are mostly specialty types of crops. Though I would say with corn silage post-harvest, I find it hard to believe we'll have 9% or greater residue. So that's the kind of thing I was thinking we could do. It's not even theoretically possible to change some of these crops. If we're going to grow them and have them in the Model, then we need to face that it's not even theoretically possible to grow them under some form of conservation tillage.
Eric Hughes: Bill, with high input specialty being maintained in one of the three classes, without individuals being excluded, could you achieve what you're requesting through a reduction in the overall percentage across the classes?
Bill Keeling: I believe that's what Jess is trying to do here. I believe she's leaving 1% untreated. I believe that's what I'm seeing. That was one question I was confused by seeing three sets of 99%. I'm taking it as 99% of the specific crops that make up especially higher soybeans.
Eric Hughes: Yeah, it can't be everything. So that was the alternative to the breakdown of the 47, whatever that number is, crops within "specialty high". Because that's going to vary by state, there's a lot more to that. So, for the purposes of this exercise, we can say maybe it's only 95% across the board. We have in here zero to low residue, which we maintained, even though that isn't a BMP. But, to your point, some of it's going to be zero to low residue. So, if there is a piece of this that's excluded from all the classes, that 1% from each is going to be zero to low residue.

No tillage is going to be applied to those acres at all. So, if we settle on a percentage, would that get to what you're asking?
Bill Keeling: Yes, I believe so. I personally believe some of the crops listed that are under 99% high residue, there needs to be maybe a split between that and conservation tillage, the two higher ends of the spectrum. I don't believe you're going to get 99% of specific crops to fall in those silos the way it is. But for a "what if scenario" for Jess to run something, that seems like a reasonable compromise for where things were left, since no percentage was given to you, to leave in the zero to low residue.
Eric Hughes: Ok, so barring any sort of concerns, that would be what persists. If there's more that we need to discuss, maybe this is something that we discuss at the next small group meeting. So, Jess, my understanding is that we wouldn't be able to split the same load source between practices, right? So, for grain without manure, have 50% map to high-res, 50% to conservation. That isn't possible, correct?
Jess Rigelman: No, that's possible. I just need to understand the justification for it so I can develop the correct percentages and then whether or not that is a global percentage for all states or whether or not it needs to be done state specific. I think we have better justification for global numbers here, but that can be done. But, these are assigned to load sources, not crops. Therefore, based on what I heard from Eric and the comments that I've seen from you guys, this is the assumption I made. We can further refine that if needed. I just need a little bit more of the specifics. I'm happy to talk more with you about that, Bill, if that's something you want to explore.
Bill Keeling: Like I said, for a "what if" scenario, you needed to do something, and this leaves a small percentage untreated in terms of this. That's getting at my point that not 100% of the total cropland is going to be in observation. There's going to be some small percentage. I don't know if this is the right small percentage, but it does fix the complaint.
Eric Hughes: Okay, excellent. Well, I'm glad we were able to address that.
Mark Dubin: I just wanted to make a note there to Bill on the silage. Bill, the crop residue is a function of how high you cut the stalk. So, the higher you cut it, the more residue you get. So, I just want to make a note about that. It's not just one value. The other thing is there's an increasing number of producers doing interseeding. So, that's where you could have a residue coming on that corn crop as well. So, there are a couple of functions in that. I just didn't want everybody to think that it's 9% across the board and there's no opportunity.
Bill Keeling: Mark, my experience on corn silage is they're cutting it as close to the ground as they can stay out of rocks. Now, grain production is a much different thing. They leave a lot of residue after grain cutting.
Mark Dubin: Yeah, I don't disagree with you on that, but we do have some producers who are cutting higher than what you might think, especially in the dry year, when you worry about nitrate poisoning. So, that is going on out there. You may not see it where you are, but it is going on other places in the watershed.
Auston Smith: For all of the E3 assumptions, we really are trying to target a watershed-wide assumption and trying to steer away from anything state or jurisdictionally specific.
Ken Staver: I'm just curious on the grain with manure and the tillage management/high residue. How are we doing with incorporating manure? I mean, one of the things we've kind of pushed over the years is that the unincorporated manure is a water quality liability in a lot of settings. We've tried to do some sort of BMP for not doing that. It's hard to incorporate and have 100% high residue, but it seems like we're 200% on something, I don't know.
Eric Hughes: Ken, coming down to manure injection/manure incorporation. So, specialty high silage, manure, soybean, this would be conservation and low res. So, for low disturbance, map to manure incorporation low, and then double crops. So, anything in high res maps to manure injection.
Ken Staver: So, it's all going to be injected?

Eric Hughes: At the same percentage they are connected. I think, Bill, that addresses a comment that you had made. Virginia had left the comment “combined with low residue tillage and conservation tillage, not high residue tillage” and then “combined with high residue tillage management”. So, that aligns with the 99%.
Bill Keeling: I was trying to also point out that we have all the cover crops being early planted in mostly just one seed rye. I question whether we have enough equipment to cover all the ground and if we have enough seed. That would also apply to the injection and incorporation equipment to do everything in the window that would be required to meet this. To me, that is beyond theoretically possible. So, that was where I was kind of saying that with some of these numbers, you're never going to see 100% injected. It's just impractical. Most of the guys are going to surface apply. That means they're going to have to till it in if it needs to be incorporated. I just don't see injection going fast enough, and if you do it really fast or have the larger equipment like TerraGators, you leave a pretty big mess. You leave distinct rows behind. So, it's sort of like plowing. I know there's newer equipment. They do it better. There's a certain volume of stuff and hog waste for example is usually spread with slow rate spray irrigation, not incorporated. They're set up a certain way; I just don't theoretically see them changing.
Eric Hughes: I appreciate your points, Bill. First and foremost, on the not even theoretically possible comment. I know we're going to disagree on this, but money, equipment constraints, rye seed production, are not the physical constraints that are being considered as limiting what is and is not possible for the E3 scenario. If everybody has as much money as they need, all the equipment that they need to implement, would it be done? Maybe the answer is still no – I don't think we're going to hit 100% for this. So, it's going to be some degree less, but I hear what you're saying and understand where you're coming from. For the purposes of E3, a little bit of suspension of that reality is going to be necessary. Then on the point of highlighting specific manure sources, my understanding is the way manure is applied in Model world, not in reality, is it's all essentially a slurry of all of the different sources coming together into one. So extracting swine from that, I don't think is something that we would do. Jess, you have your hand up. You can correct me there.
Jess Rigelman: You're correct. I just wanted to take it up a level and basically say that these BMPs of incorporation/injection are reported in the model in terms of acres. I did my best to interpret Model world versus real world. I realize that the type of manure matters but, as you know in the Model world, we just apply manure. We don't target swine manure towards certain crops or certain application types like injection. So, I grasped on to the combined with high tillage management, since that's in terms of acres, and just used that. Again, the percentage could be reduced, and land uses could be adjusted, especially if you were to adjust high tillage management which might or might not be done in the future. That’s my justification for why I did it this way. I realize that Model world and real world don't match up, but that was my way of trying to bring them together so we could at least have something and then continue the conversation.
Ken Staver: Eric, do you have an elevator speech for why we're doing this exercise again?
Auston Smith: Good question, Ken. So, the E3 scenario represents the upper bound of implementation, the highest amount of reductions, that sets the bound on what the partnership calls the “controllable loads”. That is a band of reductions between the E3 Scenario, versus the No Action scenario, where it's kind of business as usual. So, that creates this realm of controllable loads. These inform the production of the planning targets and allocations in the next couple of years. I know that seems very far away, but the timeline for the Model to be produced, then reviewed, and then have the planning target conversation concluded, I believe is maybe end of 2028. So, the E3 scenario is something that all of the sector work groups are reviewing now and putting their assumptions together, justifications for changes, and whatnot for the Clean Water Goal Team's August meeting. By September, that Goal Team needs to make a decision on all of these assumptions being finalized so that the scenario can be produced.

Eric Hughes: Does that satisfy your request for an elevator pitch, Ken?
Ken Staver: Yeah, thanks. That's sort of what I remember. So basically, the bigger we make the E3 reduction we can achieve, the more we're going to get asked to do, I guess. Is that the bottom line on all this?
Auston Smith: It is not necessarily the message the partnership wants to send for the E3 Scenario to have a level of reductions that does not meet applicable water quality standards in a lot of the Bay segments. My understanding is maybe CB4 and another segment maybe still were not attained last time around when we were using the E3 scenario. It was with the All Forest scenario. So, that's why deep channel is kind of a big focus. Dave, I know you were around, and I see a hand up. Maybe you have extra clarity to provide there or corrections.
Dave Montali: It's hard to keep straight in your head, but the easy answer is that it is used to define controllable load. If we had an E3 scenario, the load reduction that we need is predicted. If it's 50 million pounds of N we need, if that goes beyond E3, then it sets up a scenario where the water quality standards folks can say we need a variance here because it's not possible. So, that's the upper limit. If we prescribe load reductions that go beyond E3, then it can't be done. Then with regard to the difference between E3 and No Action, then that whole hockey stick approach for selecting planning targets comes up with different percentages that need to be achieved in order to meet the load reduction that we prescribe. So that's the way I look at it. If we go too low on E3, there will be arguments that we can't do this when really we could. If we go above it, then that kind of kicks us into a variance, which Auston kind of mentioned. If E3 doesn't get deep channel criteria in CB4, then that may be the reason why there's a 6%, or whatever it is, variance to water quality standards there.
Cassie Davis (in chat): E3 is helpful in scenario development because if a scenario is above E3 we know it is not feasible
Bill Keeling (in chat): Is E3 feasible?
Ken Staver: Well, I thought the 2010 TMDL that we did the WIP III for was driven by what we needed to meet the water quality goals. We had the WIP IIIs and, if we did them, we're supposed to do it. So, we believed back then it was doable with the WIP IIIs, but the WIP IIIs didn't totally get done.
Dave Montali: Considering the variances, I think you are accurate.
Bill Keeling: WIP I was what was designed to shepherd in TMDL using Phase 5.3.0. There were debates about the quality of that model which resulted in the redo of WIP II and 5.3.2. WIP III was because we developed Phase 6 and had to re do the WIP plan in the new Model world. The WIP III was designed to meet the target allocations given to us by EPA using Phase 6 CAST 2017d, which has now been changed to CAST 2023.
Auston Smith: Thanks, Bill. Just one extra point, that was back in 2017 after the midpoint assessment, correct.
Bill Keeling: Right.
Eric Hughes: Ok, I hate to end good discussion, but we are going to call it there. What I will say, though, to sort of put a bow on that is we will be following up with the Ag E3 small group. Today, the members will also get a note just saying that you have two weeks to give us your input on what was presented today. You'll have the whole spreadsheet, which is posted. Then we'll plan to meet here with the small group in the next couple of weeks where we can continue having these discussions. So, I appreciate everybody's input. As I've said before, we cannot do it without you.

IV. Partnership Updates

Lead: Eric Hughes, AgWG Coordinator

Eric provided the group with updates relating to the upcoming June Clean Water Goal Team meeting, Management Strategy and workplan development, and Governance and Management Framework.

Actions:

1. The AgWG will continue to be informed of any updates relevant to membership, management strategies, and workplan development as additional information is available from the Clean Water Goal Team and/or Policy Steering Committee (Formerly Principals' Staff Committee).

Discussion Notes:

Clean Water Goal Team Meeting

Caroline Kleis (in chat): All materials and the agenda are or will be posted here. If you plan to attend but did not RSVP, please reach out to me so we can add you to breakout groups in advance. Clean Water Goal Team Meeting - June 2026

Ken Staver: Eric, what's the date on that again? What are the dates on the [June Clean Water Goal Team] meeting?

Eric Hughes: Next Monday and Tuesday – the 22nd and the 23rd. So short turnaround on this announcement, but they've been talking about it for a little while.

Caroline Kleis (in chat): The CWGT meeting will take place Monday, June 22 from 10:00am - Tuesday, June 23 from 3:00pm

Management Strategies

Caroline Kleis (in chat): Compiled Management Strategy Worksheet Responses: https://www.chesapeakebay.net/files/documents/Day-2.8-Management-Strategy-Worksheet-Responses_Combi…

Eric Hughes: Sarah. Do you want to weigh in on what specifically we're looking at for management approaches?

Sarah Brzezinski: So just to give a little context for all these documents, the way that I think about it is the Chesapeake Bay Watershed Agreement tells us what it is that we're going to do. It outlines the goals, the outcomes, the targets: the "what". The strategic plan and the management approaches tell us how we're going to do it. It's what we're going to collaborate on over the next six years. The strategic plan will be accompanied by a series of work plans, which have specific short term, one to three year projects, and the associated deliverables that are going to help us make progress. So, each of the documents nest together and it gets a little bit more specific. But, the management approach is just like you're saying. It is the things we need to implement. What approaches do we need to take to make progress towards outcome attainment?

Eric Hughes: Fantastic. Always very helpful. Thank you for chiming in on that.

Governance and Management Framework (GMF)

Caroline Kleis (in chat): https://www.chesapeakebay.net/files/documents/GMFCombined6.15.26.pdf

V. Wrap-Up

Lead: Eric Hughes, EPA

VI. Adjourn

Next Meeting: July 16, 2026 from 10:00AM-12:00PM

Attendees:

Jenn Fetter, PSU
Eric Hughes, EPA
Caroline Kleis, CRC
Mark Dubin, VA Cooperative Extension
Jenna Talbot, DNREC
Tyler Groh, PSU
Kristen Saacke Blunk, Headwaters LLC
Brooke Walls, DDA
Arianna Johns, VA DEQ
Jim Riddell, VA Cattlemen's Association
Erin Sonnenburg, CRC
Tom Butler, EPA
Bill Keeling, VA DEQ
Dave Montali, Tetra Tech
Jennifer Bratthauar, Team Ag
Matt Monroe, WVDA
Auston Smith, EPA
Paul Bredwell, U.S. Poultry & Egg Association
Krista Crone, PA DEP
Nick Hepfl, HRG
Caroline Harper, Campbell Foundation
Cassie Davis, NYS DEC
Cass Klingaman, NYS DEC
Seth Mullins, VA DCR
Emily Dekar, USC
Ashley Hullinger, PA DEP
Jen Nelson, AAC Coordinator
Robb Meinen, PSU
Jess Rigelman, J7 LLC/ CBPO Contractor
Clint Gill, DDA
Carlington Wallace, ICPRB
Elizabeth Hoffman, MDA
Daniel Koval, CRC
Christina Lyerly, MDE
Bart Merrick, NOAA
Natasha Rathlev, Sustainable Chesapeake
Suzanne Trevena, EPA
Sarah Brzezinski, EPA
Tim Rosen, ShoreRivers
Alex Echols, Campbell Foundation
Kate Bresaw, PA DEP
Marel King, CBC
Doug Bell, EPA
Rachel Owrutsky, DNREC
Ken Staver, UMD Wye
Alisha Mulkey, MDA
Amanda Barber, NY Cortland County SWCD
Grant Gulibon, PA Farm Bureau
Brady Seeley, PA SCC
Jenna Schueler, CBF