Agricultural Modeling Team (AMT) Meeting

September 12th

09:00 AM – 11:00 AM

Meeting Materials

Summary of Actions and Decisions

Decision: The AMT approved the August minutes.

Decision: The AMT agreed to adopt the following land use loading ratios: Pasture High =1.26 and Hay High = 1.30.

Decision: The AMT approved altering the names of the managed pasture and managed hay land uses to pasture high and hay high, respectively.

Decision: At this time, the AMT does not feel comfortable changing the default conversion of animal units excluded per 1,000 linear feet of fencing. This is largely due to data and time constraints. As such, this value will remain the Phase 6 value (17.6 animal units excluded), with the idea that this value can be revisited by a relevant workgroup in the future, once additional data is available.

Action: The AMT developed a preliminary recommendation to send to the Watershed Technical Workgroup. This language will be sent to AMT members for their review and modifications, prior to being sent to the WTWG for their discussion and approval.

> **Post Meeting Note:** The AMT workshopped the recommendation offline and agreed on the following recommendation to be sent to the Watershed Technical Workgroup for their consideration: "Exclusion fencing is credited in acres, but reportable in linear feet or acres, with buffer width or animal units (AU) excluded being optional. However, because of differences in data availability among the various jurisdictions, credit for exclusion fencing can sometimes only be obtained by reporting buffer acres. When buffer acreage is reported without a buffer width, the default width of 10 ft or 35 ft for narrow or regular, respectively, is used to calculate the associated linear feet of exclusion fencing. This is then used to further calculate the associated AU (based on the default value of 17.6 AU excluded/ 1000 LF fencing). The AMT recognizes that average buffer widths of exclusion fencing are typically larger than the current default values used for calculating linear feet. Given this **the AMT is recommending a change in the default buffer widths for calculations to 22.5 ft and 67.5 ft for narrow and regular buffers."** (**It was noted that 22.5 is the average of 10-35, not 27.5)

Meeting Minutes

Statement of purpose:

To decide on land use loading rate ratios and discuss items related to the exclusion fencing Best Management Practice

Decision items:

1. Approve the August minutes
2. Approve new Land Use Loading Rate Ratios
3. Approve default information for Exclusion Fencing

4. Approve recommendation on exclusion fencing widths to be presented to the WTWG

Announcements:

- September 2025 AgWG meeting

Introduction/Recap: 09:00-09:15 [15 min (Zach Easton, Virginia Tech)]

Zach recapped our August meeting and set the stage for discussions.

Decision: The AMT approved the August minutes.

New Land Use Loading Rate Ratios 09:15- 10:00 [45 min (20 min presentation 25 min discussion) (Tom Butler, EPA)]

Tom provided a recap of subgroup discussions regarding new literature and state supplied data. This new information was used to create new Land Use Loading Rate Ratios for the two new classes of hay and pasture in CAST for Phase 7. These new ratios were proposed for a consensus decision. Decisional.

Discussion:

Bill Keeling (in chat): Why would you remove the Ridge and Valley of western NC? There is lots of that HGMR in the CBWS?

Tom Butler: Bill, the answer to your question about removing that one was because it fell outside of a standard error from the mean. We had a small sample size, but this was following the same protocol for outlier removal of calculating them and then removing them, and it fell outside of 1 standard deviation from the mean for all data points.

Hunter Landis: Tom, can you share that slide with your loading rates and ratios? This one might be hard to answer, but it sounds like these loading rates would change in Phase 7. Do they all change in relationship to each other, or are there just a lot of unknowns in that change?

Tom Butler: The relationship will be held constant by the ratio itself. So, you will see that the rates will be different. Joseph can speak to that better than I can about the variability surrounding those. That ratio binds them in terms of being related in the same fashion they are in Phase 6. Whatever that rate is, I could not speak to.

Joseph Delesantro: That's right. These loading rate ratios are being set by this workgroup, and then as we run through the calibration process in 2026, that will adjust the loading rate for the agricultural sector, and then these ratios will then be applied to split that out to get the individual loading rates. But these loading rate ratios will not be changed or subject to any Modeling Workgroup or calibration process.

Tom Butler: I am going to put up the decision slide here. For this, it's that we would adopt the following loading rate ratios. These are based on that 80%. I showed a demonstration of what would happen if we had 80 or 85 or 90%. I have put what is currently proposed, that 80%, and the others were kind of for information purposes. Based on that, I am going to have us go through this vote table. Since our last meeting, we redid a whole lot of stuff, so we're going to kind of take this one from scratch with the new ratios involved here.

Dave Montali: We're doing this for both nitrogen and phosphorous?

Tom Butler: Just nitrogen.

Scott Heidel (in chat): Can you describe the BMP

Tom Butler: Scott, are you referencing the impact of BMPs on the MANAGE database? Or is there a specific one you want me to talk to?
Scott Heidel: I think my concern is seeing that these drop so significantly from the 1.5 that was originally proposed. If we apply a BMP on top of it, it's going to potentially maybe even load less. I just want to get your take on that.
Tom Butler: I am always reluctant to talk loads. We don't know what everything will be until Phase 7 has got a calibrated model. There's a whole application strategy and everything that's associated with these and what that will be. That's going to play a role. With these new land uses, you are going to have, essentially, higher applications that allow you to have a nutrient management BMP placed on them. That would then allow that to essentially be credited. The current land use, essentially pasture, has it baked in now. So, if you report a BMP on it for nutrient management, it's not going to necessarily give you the result you'd expect. When we recalibrate, you are then going to reallocate part of the load to the new land uses, not the overall load having any change in the ag sector, just reshuffling it. With the ratio, we are, again, trying to look at the relationship of an application state that is more in line with the land grant university. I'm speculating, and I'll put that in there. It would all be speculation. I can't speak inherently to the effect of the load of any of these in the future. It will allow the BMP to be reported and credited in a different manner than we currently have. That's essentially the most accurate of an answer I can give you at this point. I'm sorry I don't have more. Maybe others are willing to talk to that. I just don't feel comfortable talking more about the loads.
Bill Keeling (in chat): The BMPs allowed would be all pasture eligible plus Ag NM
Dave Montali: The way I think, and I don't know if this is right or not, but if we populate these land use classes and it's a state decision to do that, we will populate them with the acres we have on nutrient management. So, does this loading rate have nutrient management baked into it?
Tom Butler: No. The answer is no, and that's a great point you are making. As you said, any state can report these in any fashion that they want. So, you don't have to have nutrient management in order to report it. So, the land use is not defined, and the ratio is not defined as the actual BMP being placed on it. We can't do that. So, what we do have for this is people can choose to report the acres based on their nutrient management acres, or they can say this is what we know have the land grant applications but, perhaps, everyone isn't following a nutrient management plan on them. Some people might be doing it without their nutrient management plan being in place or for whatever reason. So, you can certainly report these and say you have X acres, but only a portion of them receive the BMP itself. Dave, am I confusing that?
Dave Montali: The old way of nutrient management was if you don't have nutrient management, then you get a higher load. So, is it 1.2? The nutrient management on this would be the load divided by 1.2?
Tom Butler: No. So, it follows the same trajectory where it was 1 and then 1.2 if you didn't have the BMP. So, it's another land use that has the one. So, it's assumed to have the nutrient management unless you don't report it, then it gets a 1.2.
Dave Montali: Maybe I didn't say it right, but that's kind of the way I was thinking. If you think that way, then the answer to Scott's question is no. The BMP is already there. They'll always load 1.2 times higher than your unmanaged hay.
Tom Butler: Unless you were to not report the BMP on it, then it would get that 1.2. So, if you didn't, it would be 1.2. So, when you first have them, if you don't report it, you say all of your

acres are this, they are going to have that 1.2 factor. But, if you apply the nutrient management to it, then it goes down to 1.

Ken Staver: I'm not sure about that. All nutrient management does is adjust how much N gets applied. It just adjusts how much N fertilizer gets applied to that land use, and then the model does all the machinery of what difference that makes in the load. These ratios are a fixed thing. They don't get adjusted by the nutrient management BMP. Maybe that's not what you were saying. Where this makes a difference when you put nutrient management on it, is it affects how much N is applied. Now if we have the state buckets, there are a lot of moving parts here. We have a state bucket so what that means is it pulls N from other land uses. So, that's a secondary effect here. So, your corn acres are going to get less N if you start putting more of your fertilizer bucket on your hay and pasture land uses.

Olivia Devereux: These are the ratios of one land use to another. The way they're changed during calibration is based on the monitoring data at each station, and then it's allocated out to the source sectors and land uses, based on what's flowing through the monitoring station. So, that's what keeps this kind of true to real life is the monitoring data. I just think we sometimes forget that because we get so stuck in the model processes, but I did want to remind everybody of that, and these are relative loading rates. It's so easy to look at these and think ag open space loads at 43 pounds per acre, which is totally note true. It's the loading rate ratio, but everything will shift together either up or down, depending on the monitoring data at the station for the load that flows through there. Tom and Joseph said it, but I just wanted to remind everybody that that's what's going to shift the amount. The BMPs are considered during all of this, but that's because they're not every BMP everywhere, because that's not how human beings behave. That is something that is a little bit separate but is part of the calibration to be true to the monitoring data. I hope that helps explain a little bit more to put it in a broader context.

Bill Keeling: The reason we are here is because, throughout the history of all the other models, we were able to report nutrient management on hay and pasture. But that changed with the assumptions that went into Phase 6. The whole point of the request of these land uses is to allow a mechanism for us to get credit on the BMPs we are doing, because one of the purposes of the model is for us to be able to simulate our management actions. There are regulatory programs that require nutrient management, such as the biosolids program, which does spread on pasture and hay. When we don't have a mechanism to get credit in the bay model, unfortunately, it undercuts the credibility of a BMP. So, we have regulatory requirements on a BMP that people say has no benefit, which is not the case. There are big benefits to the proper management of organic sources on any land use. So, we're just trying to create a mechanism that we can account for that and recognize that a monolithic pasture is 15 pounds of input does not actually represent the universe of pasture world. So, this is trying to bring more reality to the model and allow us credit for the management actions. So, as I understand it, if we report these acres through the calibration, but do not report nutrient management, yes, the loads from those acres would be higher. They would be treated if we report nutrient management on them or the fraction that we do report. So, as I understand it, what Virginia is actually thinking is proposing slightly more acres than we have reported because we recognize we probably are not reporting and tracking all the acres that are managed in these ways. This is, again, just trying to get us back to where we can report a management action that, historically, we have and given credit to in the model.

Tom Butler: Thanks, Bil, I think that's really helpful to inform this discussion. Scott, that's a couple of people that have taken a crack at this. Do you have follow-ups? Does this help with your perspective?
Scott Heidel: Sort of. I'm just concerned that dropping these from 1.5 to 1.2 and then applying, what I'm assuming you had gone over at office hours, a 20% reduction on top of that, makes it as though there's not additional nutrients being applied to this. I'm just curious. It's starting to look a little bit circular to me, and I want to be sure that if they are receiving regular applications of nutrients, that that actually is factored into the ratio.
Tom Butler: That's a good point. To that, we need to separate application from ratio, because the application on those managed land uses the states have indicated is going to be 60 pounds for pasture and 120 pounds for hay, versus like 15. So, that is, I think, a different conversation, and that's states supplied, and I think that's there. The ratio is literally how they're going to load from that application, and it has kind of a different connotation to how it's being dealt with. So, I understand the thinking that it is, perhaps, circular in nature. I do think that there will be implications across the watershed as this shakes out. You know, pulling nitrogen, as Ken said, from a lot of your row crops, your corns, and putting it on your hays and pastures that are managed. So, I think that's going to have implications. I think that, obviously, how it's reported by states versus credited versus what they have that's applicable for the BMP is going to have implications. So, I don't think it's inherently that it's baked in and that it's going to reduce it and make it so that it's almost indistinguishable. I would rely on others to kind of weigh in with their perspectives as well.
Ken Staver: I feel like I have to keep making this comment that I made in the subgroup meeting the other day. We all kind of have a sense of what this is going to do. What Bill says makes absolute sense. This is getting closer to reality. But the result of this is what we are really interested in. How is this going to affect the loads from all the land uses, not just these? It's hard to know until we sort of pick something, and then run it through the machine, and see what comes out the other side. That was kind of what I was saying the other day about voting. I think we have to view this as, ok, at this point based on this work that's been done and discussions, this is kind of what we want to try. But we still have to see how this shakes out. If it does something really that we aren't expecting that seems out of line, then we have to be able to have another vote. I don't know how you can make a final decision on this without seeing how it affects the loads. I wouldn't be comfortable saying, yeah, this is great. We're going with this, and we haven't seen how it affects loads yet.
Bill Keeling (in chat): The AMT can always approve the 1.56 ratios as previously proposed if there is a concern these are too low.
Tom Butler: I did want to talk to that point quickly, Ken. We will have a period where we review. The model will be calibrated, it will be run, there will be outputs, and we can see what's happened. That will take place in the coming year to two years. I don't know the exact timeframe for every beta version that would be released. But we will have, as a group, the ability to look at these and say that wasn't good or that didn't do what we wanted, and to see what the result is. Not necessarily put something new and completely overhaul everything, but for what we've looked at, understanding the implications will be more apparent there. I think that will kind of speak a little bit to what you're talking about.
Dave Montali: I'm going back to Scott's original question, and I can't imagine a scenario where a managed hay versus a regular hay or a managed pasture versus a regular pasture, in a particular

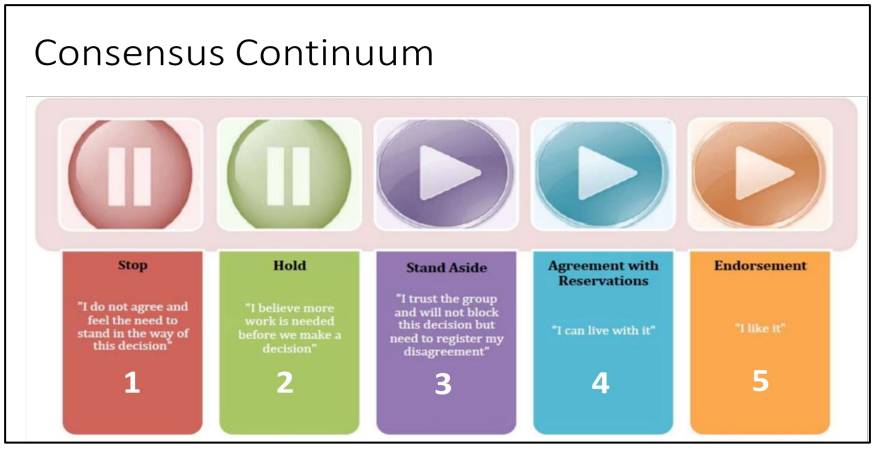
place and time, where the managed part gets less application of nutrients than the unmanaged version. We've already kind of prescribed the 60 and 120 for pasture and hay for nitrogen.
Tom Butler: That's what we tested. They are similar to what they provided.
Dave Montali: As compared to 15 or 30 or whatever? Much lower numbers for the unmanaged part. So, I think you're going to always have your application on these managed pastures being much higher. If the application is that much higher, independent of what the sensitivities are, it's not going to create a situation where the exported load from your unmanaged is going to be higher than your managed. I can't see it. Am I wrong on that?
Bill Keeling (in chat): There will be fatal flaw review so if the Ag loads make no sense adjustments will be made.
Bill Keeling (in chat): 60 for Pasture and 120 for hay. Not 120 on both.
Tom Butler: I think from the perspective of what people are providing, the question really goes to what you've asked, Dave. Is this a better representation than what we currently have? I think you've spoken, at least in part to this, that this is probably more realistic. I think that other people likely agree with that. I won't say that for everyone, so people could certainly weigh in. I'll give Auston a chance here.
Auston Smith: Thanks, Tom. Really, I'm just echoing what Bill just put in the chat. During the year of review, which I think we're generally targeting around 2027, the fatal flaw review is kind of this chance for us to look at how all of these inputs are being processed in the model. So, as you said, it's not reopening all the work that you all have done, but it is ensuring that it is reflected in a generally accurate manner. So, just echoing what bill said about that.
Tamie Veith (in chat): Scott, it sounds like you are agreeing with the proposed -- managed loading higher than unmanaged (reference). Am I understanding you correctly?
Tom Butler: Thanks, Auston and, Dave, thank you for that perspective as well. I think we also have a comment in the chat from Tamie. Scott, it sounds like, perhaps, you are agreeing with the proposed managed being higher than the reference. I just want to make sure we are on the same page because it looks like Bill's put in a comment that we could go to the initial ratios that we proposed, if these were deemed too low.
Ken Staver: Say they are going to be roughly 120 pounds per acre. If it doesn't have nutrient management on it, and Virginia was saying some percentage is going to be in this land use that doesn't have nutrient management, that leaves more work for later. It seems reasonable that you wouldn't have 100% covered by nutrient management. The N application rate on those acres will be 20% higher, right? So, it will be 144. That's how the model deals with nutrient management. The 120, that's not nutrient management, that's the recommendation. If you have land use, you have acres reported that don't have nutrient management, it's going to be a higher N application. It doesn't change the loading rate ratio, but it will bump up the actual edge of field load.
Bill Keeling (in chat): Ag NM also influences the timing of applications not just the rate.
Tom Butler: You are right in saying that. It's the difference between your local application versus the watershed wide application. So, that'll be the big difference. The watershed wide application for these land uses might be 130, and maybe it's 140 in one place, but 120 in another. It's going to be the difference between the average in your local area. But what you said is not, I think, wrong.

Ken Staver: Yeah. It goes up from here. It doesn't go down from here. It goes up without nutrient management, but what we are talking about is according to a nutrient management plan.
Bill Keeling (in chat): It might increase EOF loads a lot will depend on the total pasture BMPs applied not just NM.
Tom Butler: And those are also state supplied. The 120 for hay and the 60 for pasture, I think New York's were a little lower from what they provided us. So, those can be changed to what people think they should be, as long as there is a justification. The feedback we got was pretty much use those, except for New York, but that can be changed.
Scott Heidel: There was another comment from Bill further up.
Tom Butler: I think the relevant one perhaps, Scott, for you and everyone else here, is to go back to what we had last month where they were 1.52 and 1.56. Is that where everyone's head is at? Go back to what they were last month?
Hunter Landis: If we go back there, I recognize most agreed to that at that time. But, at this point, looking backwards, we though that that process was not acceptable. So, it seems like we'd be going back to a process we deemed as not acceptable for maybe a reason or justification that doesn't seem clear at this point. Specifically looking at that process, this came up in the subcommittee, that data contained a New Zealand study. It's international, but they were using rates at 200 and 400 pounds per acre. Which, to me, I appreciate why that was kind of pulled out. So, I for one don't want to keep delaying this process, but I am hesitant or maybe even unclear on the definitive justification of going back, acknowledging that we have agreed to it at one point already.
Tamie Veith (in chat): Not interested in going back. I agree with Hunter in not reverting back.
Candiss Williams (in chat): Don't agree with going back
Dave Montali (in chat): same
Tamie Veith (in chat): Can we vote on this proposal posted?
Tom Butler: Hunter, it looks like Tamie is in agreement with you and Lisa as well. We are having a request to go through on the proposal as it's currently proposed with the 1.26 for pasture and the 1.3 for hay. Given that there's a desire to look through that, I think we will push on this one right now and then see if we can't get somewhere on it. Having said that, I'm going to start here at the top of the vote tracker.
Clint Gill (in chat): I'm a 3
Alex Soroka (in chat): 3
Elizabeth Hoffman (in chat): MD is a 3
Tom Butler: Do we have Cassie from New York?
Cassie Davis: I am here. I am going to say 4- agree with reservation.
Tom Butler: Scott?
Scott Heidel: I am going to go with a three. I think that bumping this up by 0.26 and then reducing it by 0.2 seems like we're not really making an impact with this.
Tom Butler: I will run this by you later, Scott, to make sure I have that comment right. But there is a concern noted there. Nicholas?
Nicholas Moody: We are a 5 at the rates of 1.26 and 1.3. We feel like the group has done all our due diligence right now.
Dave Montali: I'm a four.
Auston Smith: EPA is a three here.

Ken Staver: I am a 4. I think this is less imperfect than what we have, with the caveat that we can sort of see the impact when we run it through the model.
Auston Smith: Well said, Ken, that's right.
Alex Soroka (in chat): 3, comment is that I am surprised that we didn't find more literature and wish there was more time
Tamie Veith (in chat): 4 please
Candiss Williams (in chat): NRCS- 4
Zach Easton: I am a 4 as well.
Tom Butler: Ok, I've got Alex's comment about the literature and time. So, with that, we have the ratios, and that's good. There was another element to this that people had brought up as a discussion point, and I wanted to really quickly run through that. That was a naming convention that was confusing. Since we did vote to say managed hay and managed pasture, I wanted to see if people wanted to change these to stay more consistent with our existing applications. So, I wanted to know if people were receptive to a name change for managed pasture to pasture high and managed hay to hay high.
Tamie Veith (in chat): yes
Tamie Veith (in chat): I agree to change
Candiss Williams (in chat): Please change.
Tom Butler: I will ask if anybody has heartburn with that change or an additional suggestion. If not, we can accept there with the clarification that we are following land grant university recommendations.

Decision: The AMT agreed to adopt the following land use loading ratios: Pasture High =1.26 and Hay High = 1.30.

9/12/2025
To what extent do you agree with the following: **We should adopt the following Land Use Loading Rate Ratios:**
Managed Pasture (High Application) = 1.26
Managed Hay (High Application) =1.30



Role	Name	Affiliation	Vote	Notes
Signatory	Clint Gill	DE	3	
	Elizabeth Hoffman	MD	3	
	Cassie Davis	NY	4	
	Scott Heidel	PA	3	There is a concern that this change will not make the desired impact due to a double counting of credit for core nutirent management and its impact on application rates.
	Nicholas Moody	VA	5	
	Dave Montali	WV	4	
	Auston Smith	EPA	3	
At-Large	Ken Staver	UMD	4	This is an improvement over the P6 methodology. We will want to see the impact when P7 runs are conducted.
	Tamie Veith	USDA-ARS	4	
	Candiss Williams	USDA-NRCS	4	
	Alex Soroka	USGS	3	I am surprised that we didn't find more literature and wish there was more time
	Zach Easton	VT	4	

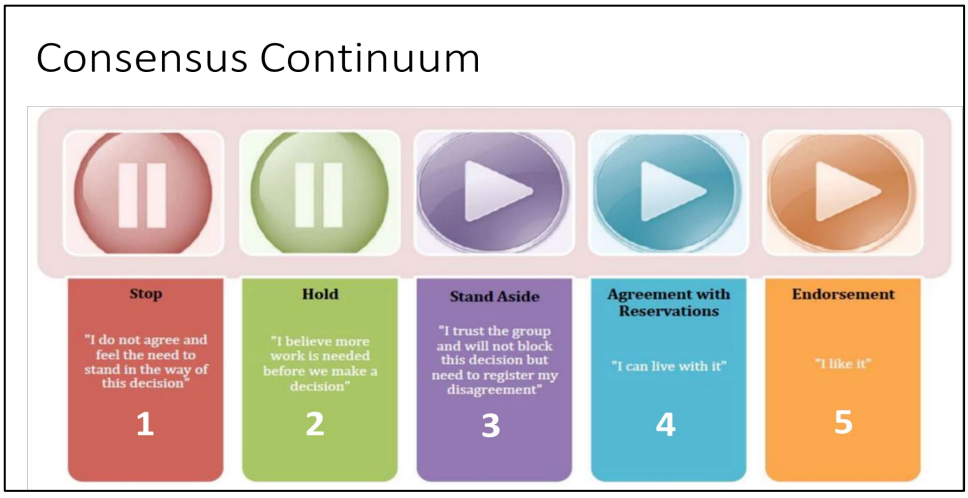
Decision: The AMT approved altering the names of the managed pasture and managed hay land uses to pasture high and hay high, respectively.

9/12/2025

To what extent do you agree with the following: **We should alter the names of the following Land Uses as follows:**

Managed Pasture => Pasture High

Managed Hay => Hay High



Role	Name	Affiliation	Vote
Signatory	Clint Gill	DE	4
	Elizabeth Hoffman	MD	4
	Cassie Davis	NY	4
	Scott Heidel	PA	4
	Nicholas Moody	VA	4
	Dave Montali	WV	4
	Auston Smith	EPA	4
At-Large	Ken Staver	UMD	4
	Tamie Veith	USDA-ARS	4
	Candiss Williams	USDA-NRCS	4
	Alex Soroka	USGS	4
	Zach Easton	VT	4

Exclusion fencing Best Management Practice 10:00-10:55 [55 min (20 min presentation 35 min discussion) (Tom Butler, EPA)]

The AMT discussed two items relating to Exclusion Fencing:

1) Whether there should be an update to the conversion of Animal Units excluded per 1000 Linear Feet of exclusion fencing reported. Decisional.
2) If there should be a recommended change to the default widths associated with exclusion fencing BMPs. Recommendation.

Discussion:

Elizabeth Hoffman (in chat): Tom, early flag -- can you specify the type when talking about these buffers? Grass or Forested.

Dave Montali: Animal units at what time? Is it animal units we have today? Animal units we have in 2000?

Tom Butler: This was in 2013/2014, so it is not today. It is literally based on that 2013/2014 time period. It's because that is the only time we have the buffer eligible acres. There was a separate request to look at, at least for a planning perspective, the universe of eligible acres for buffers with new information. That is something that we want to pursue. That is going to take a lot more discussion offline between members here and the Land Data Team to try and figure out if that 100 feet is good, if they want to do increments of it, how they're differentiating forest versus grass, etc. So, that will require a lot of different discussion. That is, I think, a different product, and that's not something we have time for right now.

Dave Montali: And that's all at the state scale?

Tom Butler: It would be by land river segment that then you translate to county and then to the state.

Elizabeth Hoffman (in chat): that's for future planning, though, not to inform this decision

Seth Mullins (in chat): Tom, where does the buffer eligible acres number come from?

Tom Butler: Great question. The product that was looked at here was to actually take a GIS layer, draw a 100-foot width out from the stream, take the pasture areas that intersected there, and

take the portion within 100 feet from the stream bank, and take that to be the area. So, it is smaller than the overall pasture area.
Seth Mullins (in chat): Thank you Tom
Tamie Veith (in chat): The reality is that animal number doesn't matter if the animals have any access to stream. If they do NOT have any access to stream, then the issue reverts to a pasture that is either low or high loaded. Whether or not the buffer works, and its width is a BMP issue.
Dave Montali: I assume you are talking about animal units of livestock, not poultry?
Tom Butler: So, it's whatever would have access. I need to look exactly at which ones were in there. I don't think any poultry.
Olivia Devereux: We don't have any free range poultry. It's only cattle. There are some dairy cows that have some time in pasture, but it's primarily beef. There may be sheep and goats in there, but I'd have to double check. No poultry. The word livestock in Bay Program parlance means no poultry, no birds, no avians.
Elizabeth Hoffman (in chat): our AU #s on Jess' chart were close to all livestock AU, poultry excluded
Bill Keeling (in chat): These are defaults applied if a state does not report AU excluded. If we report AU's excluded that should be used even if it results in excess.
Olivia Devereux: Tom, do you see Bill Keeling's comment? I think it's really important that people understand the defaults. I was in the Bay Program Office last week, and I was trying to get water. The default is cold water. If you want hot water, you have to push the hot water button. It doesn't mean I can't get hot water. It just means I have to push one more button. That's essentially what Bill's comment is about. These are defaults. But you can certainly put in any other number you want, and sometimes people get stuck thinking that a default is what they have to do. It's not telling, it's we are trying to make it easier for you, so you don't have to type in a number if you don't know. You can go with the default, but certainly you never have to use the default if you don't want to.
Elizabeth Hoffman (in chat): buffer eligible in this case means pastures that would be stream adjacent? Va all pasture?
Tom Butler: Great points, Olivia and Bill. It looks like Elizabeth is asking if buffer eligible in this case means pasture that would be stream adjacent versus all pasture. So, yes, Elizabeth, that's pasture that's within 100 feet of a stream bank. From this, these would basically be new proposed defaults that we would have for each jurisdiction. I want to pause here to see if there are any more questions. I'd like to be able to put this one up for a vote.
Dave Montali: I have problems in two counties, not necessarily other counties. So, where I have the excess problem, I say it's wrong, but there are a lot of counties where I don't have the county, and this is saying this is a problem universally for the state, and we need to cut the credit by two thirds or three fourths. Could we do this by county, or is that asking too much?
Tom Butler: If we did it by county, that's pretty specific. What do other people think? What would you like to see? I know some of you have a lot of counties. I'd like to get some feedback from others on that concept.
Elizabeth Hoffman: I think that would be interesting to see it at the county level. I also don't know if we fully endorse the math here, if I am honest. I feel like there's something getting lost in equating the bufferable area to the animal unit per fence. That's my biggest issue with this practice. You are trying to do too much with a singular reportable unit. County level would be great, but I still think the actual equation being applied might also need to be adjusted.

Bill Keeling (in chat): Is there a stocking rate or numbers assumed to be grazing by county?
Dave Montali: I have a question for Bill. Back in that original study, the 17.6 was really determined that that was the stocking rate in those TMDL studies on bufferable pasture?
Bill Keeling: Virginia Ag Cost Share data is quite exceptional. It goes back to 1983. In their current format, they support it to '98. But, at any rate, they collect a lot of information that I don't believe NRCS or most of the organizations do. I get the animal units, and the type of the animal excluded. I get the average buffer width, the length of the stream bank excluded, and that's not the length of the fence, but the length of the stream bank excluded. I also get an estimate of upland acres that are associated with that BMP that's being installed. So, from that I've done some analysis. I know in Rockingham and Shenandoah Counties we're averaging over 20 upland acres per acre of buffer that we've excluded. I think that's kind of getting at some of the questions. The bufferable area is not necessarily a divining number when it comes to excluding livestock, because you can have a large area upland of a buffer, and all of the livestock in that field have access. So, it's not just the bufferable area. So, that is a weakness in this calculation. In any rate, that study was from the actual cost share data for the installations done up to that point. I point it out to Tom. I think it's somewhat biased because early in the late 90s and the early 2000's, the focus in Virginia and local TMDLs was on bacteria, and exclusion fencing was one of the primary BMPs to address that. So, we may have biased the data towards the larger operators, which would increase the default and not necessarily be reflective of all pastures everywhere in Virginia. So, I can see lowering the current rate but, as Dave says, I don't know going from 17 to 5 is necessarily justified. But, obviously, the current 17 is producing excess and should probably be downgraded to some number. I just don't know what that number should be.
Elizabeth Hoffman (in chat): Yes! part of the issue with the math is that reporting the 1 side of the fence that has buffer is not the total LF of fencing to enclose and exclude the AU
Tom Butler: Thanks, Bill and Dave, for those. Did we have anyone else who wanted to weigh in on this one? I think, obviously, Dave, you had done a really good analysis on how many counties this impacted. I understand Elizabeth has some concerns as well about the math. I think the math, in general, is called into question, and I understand that a large part of this is because we do not exclude upland, as I think it's been described, pasture and animals that would have access to streams, and that may be an issue. So, I didn't know if people might have solutions or anything to speak to about that.
Dave Montali: I don't know. This is a tough one. Like Bill, I agree it should go down, but what's the number? It seems like even looking at this, if we would do that, Virginia's credit would go almost in half, and they're the one that had the study. Average beef numbers over total pasture by county is a vaguer answer, but it might be more muted than this. The difference between 5 and 31, that's just too extreme to use in this process.
Tom Butler: The question I have is if we use total pasture, we would end up with results that I suspect would be significantly smaller, because it opens up a far larger area of pasture. The bufferable acres, I think they're all under like 20% of the total pasture acres.
Dave Montali: So, it would be the same analysis then.
Tom Butler: The number would be much smaller because you have 80% more pasture. So, these would be I think 1 and .5.
Bill Keeling (in chat): The average of this list is 13.22.

Dave Montali: Basically, what you are saying is the variability is like this at the state level, but the counties might be very different. For instance, if I've got a county where I am getting 80% of the BMP cut off, then that reduction from 17 to 5 might be appropriate. But, that reduction in a place where I'm not getting any cutoff, or it looks like some more reasonable output is happening, I just don't think you can do this at the state level. Just like Bill said, his work was done in specific areas of Virginia, and he recognized that might not apply to the scenario we have all across Virginia.
Tom Butler: I definitely recognize the variability of this and understand that it is certainly at the county as well as the state scale. What I am looking for and asking from you guys is kind of a path forward because this is the last month we are able to make decisions on this in this group, so we have to kind of start to pass it. That's the deadline they've given me, so that's the deadline I think we are working with.
Tamie Veith (in chat): Is DE defining something differently (one vs 2 sides of stream)? sorry if I missed it.
Tom Butler: Tamie, Delaware is not. They have very little pasture, which I think effects this.
Hunter Landis: Can a state set their own defaults, or is that not fitted to the system?
Olivia Devereux: Technically, that is definitely possible.
Hunter Landis: Mayber confirming Bill's comment that if a state has certain data, they use their data versus the default. Correct?
Tom Butler: Yeah, if the state has information, they can report, and then they don't have to use the default. Yes. So, I think Virginia reports animal units, fencing, widths. I understand it to be fairly comprehensive. That's not the case everywhere, because they don't have all that information.
Bill Keeling (in chat): Looking at the Scenario Jess put together with Raj and one I created from the 2024 looking at reporting at county scale instead of HU on this and AWMS excess.
Elizabeth Hoffman (in chat): States can just report AU
Bill Keeling (in chat): Not every record we report has AU data, but the vast majority of VACS does. Nothing from USDA on AU's excluded.

2024 Progress as Reported	Submitted	Excess	% Excess
AWMS AU's	2,284,284	1,061,750	46.48%
Riparian Fence Direct Deposit	299,631	23,511	7.85%

2024 Prog Reported County	Submitted	Excess	% Excess
AWMS AU's	2,259,147	829,718	36.73%
Riparian Fence Direct Deposit	299,575	16,098	5.37%

Reduction in Percent Excess	
AWMS AU's	9.75%
Riparian Fence Direct Deposit	2.47%

Hunter Landis: Did I hear Olivia say, yes, it is possible to do that at the county level? Or state only?

Olivia Devereux: I think that's going to be a burden, and I'll defer to Bill Keeling and the other people who submit the data. They can pick the default for their state or, if we had one for every county, that's a huge burden on the people like Bill in each state. Technically anything is possible. We are all used to dealing with large data now, but that's a lot for reporting.
Bill Keeling: I can't speak for other states. Virginia is set up to collect that information from one of our major data sources. For us, it's do we include that field of data in our reporting or exclude a field of data? If it's something we can get credit for, we think improves the data, then we pass it on. So, in this case, where we have animal units excluded, we report them. Not every record in VACS has it. In that case, we do have a width and a length and an acreage, that kind of stuff, but we just don't have an AU. That would get the default, as I understand it. We have nothing on USDA in terms of animal units. Maybe that could be worked out, but I currently don't get that. I don't know if I answered your question. I can't speak for any other state. I don't know what their data sources are of how easy or hard it is to do things.
Elizabeth Hoffman (in chat): I think why this would matter is keeping states that only report AC in a more reasonable range compared to states that report their own AU. Avoiding excess. MD would move to reporting AU but we're not there yet for our data collection.
Tom Butler: The USDA data, that doesn't have anything that's relevant to this, right?
Bill Keeling: Right now, I have nothing to report that is exclusion or exclusion buffer. I proposed that we look at the study that Olivia did for 382 fence. But, right now, we don't have any idea if that's cross fencing or are you just fencing off land you don't want the cattle to have access to but is not riparian, versus riparian exclusion fencing. Unlike the VACS system where I get animal units, length and a width, and acreages. All I know is, for the most part, there was a length of fence installed in the county and, right now, that's a draft status BMP. I can't really even get credit for it. So, there's nothing to report really for exclusion from USDA. There is some information on animal waste management systems but, again, not near as much as what I get from VACS. I did run a scenario on my own as well as what Jess did remote related to reporting these type BMPs at the county scale instead of the HU. There was some moderate improvement in the resulting excess but, I think this default probably has more to do with excess in this particular BMP we're discussing than anything else. I'm assuming our reporting real world numbers of animal units excluded is not necessarily going to match what is in model world. We may end up just having a certain amount of excess because of the differences in reporting.
Tamie Veith (in chat): We are short on time and this seems like most of the states are similar here for this default value. I vote to accept and move forward.
Dave Montali: I'm just not seeing an easy path other than Bill's suggestion which is just taking the average of all these numbers and making it 13 instead of 17. That would be a step in the right direction, but I don't know if that's solid enough for us to move on, but it's ok by me. I'm not too particular about that. I think it's a step in the right direction. On average, the numbers appear to be high in a lot of places. It's just so complicated. The reasons are multi. My reasons are because I don't have any of that information, and all I've got across time is the area between the fence and the stream, and that hits me two ways, both by the width and by the default here. I wouldn't swear that 13 is a good number either but, maybe we are just stuck. We just dump it over and maybe get a little bit of movement on the width, because that's easier.
Elizabeth Hoffman (in chat): MD does not support accepting this changed ratio. We'd just keep current ratio until this number could be better explored.

Ken Staver: If you lower the number, then you make space for not having excess, but you reduce the credit for what you've already done. Is that how this works?
Dave Montali: That's it. When you get excess, then you are saying all the cows in that county are excluded, and that's not real.
Ken Staver: Right, so whatever we do, we don't want to reduce the motivation for doing more exclusion if there's more exclusion to be done. So, in terms of making a mistake, you want to make a mistake on the side that keeps everything moving forward. That's my only comment. You don't gain much if the credit for what you've done goes down and it gives you more space. Maybe that's the reality of how this has to work.
Elizabeth Hoffman (in chat): Agree, willing to look at adjusting width. That may help somewhat.
Elizabeth Hoffman (in chat): Part of the wide range of crediting and excess happening here is the wide range of reporting methodology. MD would not see this as a fix, because of those many layers and multiple translations across units.
Tom Butler: So, it sounds like, from some of the things in the chat and maybe some of what I am hearing in the verbal part of the meeting is that we should not accept these ratios. There's some conflicting stuff on that but, we could perhaps make a recommendation on what to send in in terms of average widths. If that's where we are, I don't want to chew up too much time. Perhaps we can talk more about how to do this, but it sounds like the path forward is that we leave the default where it is and try to work on the widths. Is that kind of where people are going? I'm just trying to get an idea before I formally got to vote. So, to that end, I will ask for a vote on this. In the event that it fails, the 17.6 default remains, and we then get to talk about what we would recommend to the Watershed Technical Workgroup. Knowing that, I will go to a vote here. Do we think the default conversions should be changed? Clint?
Clint Gill: We are fine with whatever the group decides. This is such a small percentage of our landmass that it really doesn't matter. So, three is appropriate, thanks.
Elizabeth Hoffman (in chat): MD is a 2.
Cassie Davis: A three.
Scott Heidel: Three, please.
Nicholas Moody: Still confirming with our group right now, possibly a three or a four.
Dave Montali: A 2 is like, no, we don't want to change, right?
Tom Butler: Technically probably a 1. I will make the comments clear that this will not be advanced and that it's not for lack of trying. The partnership did not want to do this. I will make this clear.
Alex Soroka (in chat): USGS-3
Zach Easton (in chat): 3
Auston Smith: EPA is a three.
Ken Staver: I have to be a three, too, I guess. I don't want to do anything that discourages states from working on this practice because they are getting hit with the excess. So, you always want good stuff to still be somehow credited. So, I don't understand it enough to know exactly what we are doing here. But, at the end of the day, that's what I am thinking.
Dave Montali: Tom, I agree with what Ken said. I'm a two because we don't have enough time or information to come up with a defensible number.
Candiss Williams (in chat): 3
Tamie Veith (in chat): 3

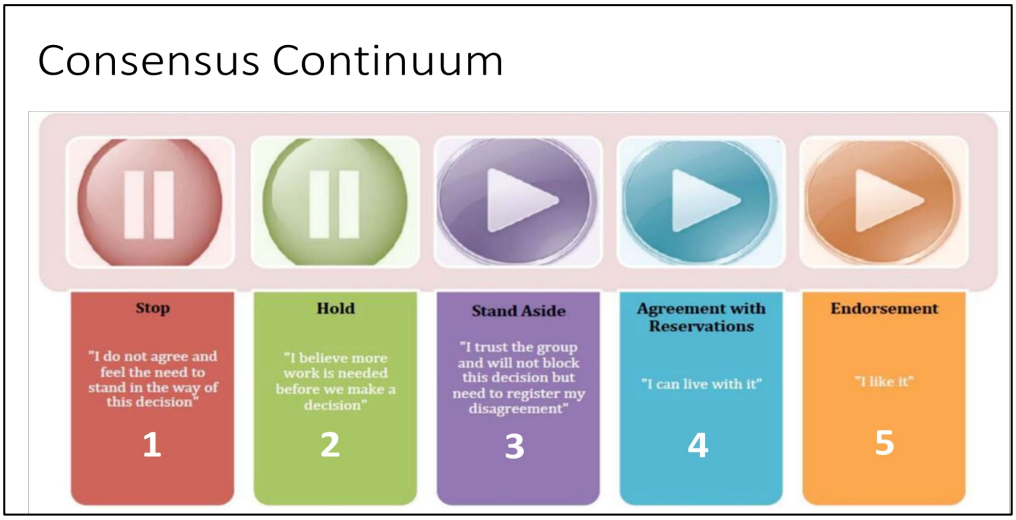
Tom Butler: So, I'll make the overall comment that the group did not feel comfortable changing this value at this time, and I will circulate this in the minutes.
Elizabeth Hoffman (in chat): MD comments would be - this doesn't solve the issue which could be possibly due to differences in reporting and trying to associate the multiple elements of this practice (AU excluded and land converted to buffer). In this case, excess may not be due to real world but due to translations across units in reporting.
Bill Keeling (in chat): Was not approved using the proposed methodology?
Bill Keeling: The thing that was just voted on, I just wanted to be clear that what was proposed was not approved. In other words, the methodology and the numbers proposed were not accepted?
Tom Butler: Correct.
Bill Keeling: And as I understand it, a two basically says we are reverting back to Phase 6. I thought that was what that hold meant.
Tom Butler: Correct.
Bill Keeling: A one or a two, as I understand it, kills it or keeps it the way it was in Phase 6.
Elizabeth Hoffman (in chat): Yes, our 2 meant that. (We thought)
Tom Butler: So, to wrap this one up, anything below a three means that we do not move forward. So, we stay with our default here on Phase 6. Since we have Maryland and West Virginia as a two, we are not going to accept the default conversions being changed for each of the jurisdictions to what we have. That means, for this, we are going to stick with the 17.6 that we have for Phase 6. I hope I made that clear. If not, that is what this means. I'll make sure that is clarified in the minutes and in the decisional log with other comments.
Bill Keeling: That is clear to me. At some point in the future, if we get different data, different methodology can be proposed that might be supportable or result in something that is supported. Not necessarily with this AMT, maybe another one at some future date.
Tom Butler: I don't want to throw work on other people, but maybe the Watershed Technical Workgroup or the Ag Workgroup wanted to touch on this in the future, or this group's successor, whenever that happens. But, yes, Bill that is a very good point. That does not mean that this is dead forever. It would just have to be brought forward at a relevant workgroup again.

Decision: At this time, the AMT does not feel comfortable changing the default conversion of animal units excluded per 1,000 linear feet of fencing. This is largely due to data and time constraints. As such, this value will remain the Phase 6 value (17.6 animal units excluded), with the idea that this value can be revisited by a relevant workgroup in the future, once additional data is available.

9/12/2025

To what extent do you agree with the following: **We should alter the default conversion of Animal Units excluded per 1000 linear feet of fencing to reflect the following values for each jurisdiction:**

Delaware	**30.9**
Maryland	**9.4**
New York	**11.1**
Pennsylvania	**12.5**
Virginia	**10.4**
West Virginia	**5.0**



Role	Name	Affiliation	Vote	Notes
Signatory	Clint Gill	DE	3	
	Elizabeth Hoffman	MD	2	this doesn't solve the issue which could be possibly due to differences in reporting and trying to associate the multiple elements of this practice (AU excluded and land converted to buffer). In this case, excess may not be due to real world but due to translations across units in reporting.
	Cassie Davis	NY	3	
	Scott Heidel	PA	3	
	nicholas moody	VA	3	
	Dave Montali	WV	2	We do not have the time or information to come up with a realistic and scientifically backed number
	Auston Smith	EPA	3	
At-Large	Ken Staver	UMD	3	We do not want to discourage states from making progress and this change could have a neagtive impact on their ability to facilitate participation
	Tamie Veith	USDA-ARS	3	
	candiss williams	USDA-NRCS	3	
	Alex Soroka	USGS	3	
	Zach Easton	VT	3	

Buffer Widths

Elizabeth Hoffman (in chat): Are these grass or forested?

Elizabeth Hoffman: Are these grass buffer or forested buffers, or both combined?

Tom Butler: I would have to rely on the states who provided them. I don't think they differentiated. I think it was just buffers. So, if I could hear from Nicholas or Kate.

Nicholas Moody: I believe we differentiate in our notes, but I believe it could be either one. I think it's just distance from stream, if I'm not mistaken. The fence exclusion distance from edge of stream.

Bill Keeling (in chat): VA has limited number of forested buffers

Dave Montali: Exclusion buffers only? CP22 exclusion buffers only? Or something else?

Cassie Davis: I believe ours were New York's exclusion fence with forest buffers, acres, and widths.

Bill Keeling: We have a limited number of forested buffer records, compared to the total. The vast majority are reported as grass or exclusion with grass. But we do have some information for

certain records that indicates a forested buffer, and we report it as such, and we report narrow versus standard. But, again, it depends on the data source and where we get the data. Some sources it's much more limited, and then we have the VACS data which is very detailed.
Emily Dekar (in chat): These are anything that has trees planted with fence, NRCS or not. We have exclusion grass buffers as well, and they are not included in these numbers that NY provided.
Elizabeth Hoffman: For Maryland, we did not have access to a really robust data set for this, but just from understanding and speaking to our SCD's, we're in agreement that often times these buffers are wider. I think an easy start for this is that the multiplier is the bottom end of the range and moving it to the average, so 27.5 for narrow and 67.5 for the wide. Then, I would propose, could we just add a third classification of 100ft-200ft and that would capture the 160-foot range, rather than just adjusting the 35 to 100, if that makes sense?
Tom Butler: So, you would recommend three categories of width, adjusting the first two, and making a third that was for things that were significantly larger?
Elizabeth Hoffman: Yeah, because the current classification for the wider is 35ft-100ft. So, if the average here is like 160, that's well outside that range. So, maybe we just created that third range. I would assume that would be an easier pill to swallow as a recommendation than just moving that 35-100 up, right?
Dave Montali: I like that approach better than what I am seeing there. 160 compared to 35 is four times, and I don't believe that the forested buffers that we do average 161 feet overall. There may be some of those, but, again, without any information about width in our history, I wouldn't necessarily be able to break it into two categories. If two were available, I would use the 35-100, i.e. the 67 defaults, which seems a step in the right direction and not too drastic. The narrow stuff came out exactly like I thought it might. You can't count it as a real one if it's less than 35. So, the minimum is 10, the average is probably right in the middle of those. I would think that the stuff that we do is the 35-100, so the midpoint would seem reasonable, but that's all anecdotal.
Elizabeth Hoffman (in chat): I think an easy fix for this to start is we should have always been making the multiplier the "average" of the range and not the default. 27.5' for the 10'-35', 67.5' for the 35'-100'. Then maybe adding a 3rd classification for 100'-200' and then using that average which is close to the state provided widths.
Tom Butler: So, based on this feedback, I am updating this recommendation that the AMT recommends the WTWG changes the default buffer widths for exclusion fencing practices to the average of the range, and not the minimum. 27.5 feet for the 10-35 (narrow) and 67.5 for the 35-100 (regular) and maybe adding a third classification for 100-200 feet and using the average, which is close to the state provided widths.
Bill Keeling (in chat): As a definition or just to calculate areas?
Elizabeth Hoffman (in chat): to calculate areas
Cassie Davis: Apologies if I missed this, but can we just revisit why this change was needed or requested?
Bill Keeling: I am confused as to what is actually being recommended. Is this just for a calculation purpose? In other words, to calculate the actual area of buffer? Or are we defining a new definition for what's considered narrow versus wide or standard? Right now, the main difference between narrow and wide is the narrow does not get any upland efficiency credit, it just gets a land use change. So, I'm a little leery of what's being asked here. As Virginia's WTWG

rep, you might as well answer this now, because I am confused as to what you are asking me from that perspective.
Elizabeth Hoffman (in chat): If you report AC for that classification, it will get you closer to a realistic extent of LF, right? Which then crosswalks to AU excluded, I thought.
Tom Butler: Let me back up first and say I think the rationale for doing this is that people are concerned that the widths were the minimum and that they should be wider. So, 10 feet and 35 feet were not representative of what was actually being reported. So, the idea was to look at whether they should be wider. Bill, to your point, I think the idea is to calculate areas.
Bill Keeling: I want to make sure it's not in a definitional way, because 35 was established via the expert panels as sort of a minimum for a traditional buffer. So, I would argue 35 and greater is currently one set of defined buffers, that's your standard buffer. I am not necessarily opposed to a third "wide" version, but we would have to define what that means, and the narrow is less than 35. So, again, please make it clear. Are you asking a different definition of what constitutes a buffer in model world, or if we do not provide a width in the reporting, what will be used to calculate things. There is a difference.
Tom Butler: My interpretation would be the latter, but there are a lot of hands.
Tamie Veith (in chat): Could we go with the NRCS standards?
Ken Staver: Quick question- the point of this would be that more pasture would be converted to the low land use. Is that what this is going to change? What is the impact going to be?
Joseph Delesantro (in chat): Proposed is a recommended change from the min to the mean, however if the mean is perceived to be too large, a median or quartile might alternatively be proposed.
Emily Dekar (in chat): Why not just require a width in the reporting instead of having a default?
Elizabeth Hoffman (in chat): Because some states do not have access to those widths but do know the range
Nicholas Moody (in chat): If states have data, they should report it. If states don't have the data, revert back to defaults
Dave Montali: This goes back to states like West Virginia where all we have is the area. The minimums are the minimums. We aren't changing the definitions of what counts as a regular exclusion buffer or a narrow buffer. The procedure is if you only provide area, then there is an assumed 35-foot width when, in reality, that is a minimum. The average width of those buffers is likely always higher than the minimum, given that streams meander. Sometimes there's very wide ones. So, when you say the area your provided with a 35-foot width, it gets a lot longer length associated with it. If you had an area that was representative of a buffer width that was 70 feet wide on average, then you'd get twice the exclusion credit when they assume it's with 35. So, all we are saying is make that more of an average width for the regular ones which have a minimum of 35 but can be much wider to say the midpoint between 35 and 100. For the narrows, which can't be regular if they're less than 35, we ought to pick the midpoint between 10 and 35. That's what I understand the proposed width. It's just, procedurally, how to deal with the default when the only information a state can provide is the area between the fence and the stream of a project.
Candiss Williams (in chat): NRCS = vegetative barrier (601) 3-5 ft wide; contour buffer (332) 15-30 ft wide; filter strip (393) 15 ft wide; field border (386) 30 ft wide; riparian buffer (391/390) herbaceous min 35 ft width and forest min 50 ft width.
Nicholas Moody (in chat): Default minimum width

Scott Heidel (in chat): This seems like something remote sensing should be used for
Tamie Veith (in chat): If states have data, they should report it. If states know the range and need to make an expert judgement call for reporting, they should be allowed to do that. This is different than AU part but related for some.
Elizabeth Hoffman (in chat): Agree with Dave. If the width is closer to 100' the area is being significantly lowered by using the minimum. Why wouldn't you use the mean of the range?
Ken Staver: So, doing this won't change the amount of land in certain land uses? If you make it wider, you just reduce the length of stream that is buffered? A follow up, back to the excess is the reason for the excess, I thought, was we ran out of animal units not length of stream. So, this has nothing to do with the excess, if we were running out animal units, which is what made the excess. But I might not understand it.
Olivia Devereux: I have a couple of comments that don't directly address any one question but just may provide some general explanation. We are talking about the default. If you know the length and the width or the total acres, you can submit that, and there's no problem. When you only know the length, then we assume that it is either 10 or 35 if you specify narrow versus full or regular. This is for those records that are submitted where there's not full information known. If there's not full information known, I'm not sure what we're basing this decision on, because people don't know. That's why we have a default for people who don't know, and the default is conservative, as is true with all of our defaults. So, I hear people saying it should be bigger, it should be wider, but the reality is if they knew that, then they would be reporting the data as wider. I guess I'm just not sure how people are saying it's wider when they aren't able to report that, because they currently can, and many do report the actual length and width. Alternatively, they calculate the acres and report the acres. If you don't know, we are just filling in a blank so you can get some credit, since you don't know.
Candiss Williams (in chat): Question. Is this a user input or do they select options that are provided.
Elizabeth Hoffman (in chat): But states are saying, within that range, those widths are often wider than the minimum. So, the "default" should be the mean.
Tamie Veith (in chat): If these are user inputs that the states can provide input on, then they need to do that. Their input is based on their best expertise and would be most knowledgeable for that state. All user inputs should be documented. Don't allow just widths. Require the states to determine the value. If they choose to report the minimum that is their decision.
Candiss Williams (in chat): From existing data, do you know what the average dimensions are for buffers?
Bill Keeling (in chat): The initial study I did was expressed as AU per 1000 feet of exclusion fencing or streambank excluded. I can see if I still have the data used and express that number as per acre reported which would incorporate the widths as reported.
Dave Montali: Olivia, a couple of things. It's not for when you only report the length. If you just report the length, then there is no issue. What we know is CP22 has to be a minimum of 35, and we know the area. So, I'm actually arguing for more conservative, because it is giving too much credit. It's kind of a weird situation to be in, but that's what is going on. It's providing that direct deposition credit to too much, because the actual widths, on average, are greater than 35, and we are setting that for the default setting at the minimum. Like I said, if you give me 35 ft width on an area that's actually 70 feet wide, I get twice the credit for that project than I should.

Olivia Devereux: Well, if you are reporting the acres, the acres are the acres, and the length and the width are not even considered. It's all converted to acres.
Elizabeth Hoffman (in chat): Yes, if you report AC and you're only dividing by the smallest width, you're telling the model you have MORE LF fencing than really and then MORE AU excluded.
Dave Montali: Well, that's for the other two components. But, for the direct deposition, there's a conversion to length, and when that conversion to length goes on, there's an assumed 35-foot width for whatever area I provided. It's messy. It's complicated. I wish I knew the widths. I can't get that. It's a step in the right direction if you say let's just assume the average width is something higher (i.e. they are all greater than 35), then it would take a bit against the over crediting that is occuring now.
Emily Dekar (in chat): Aren't all states required to do on farm verification of practices that are being reported? I guess I am a little bit confused as to how there are practices being reported that we don't know the length/width/acres of?
Alisha Mulkey (in chat): @emily. It's based on NRCS units.
Elizabeth Hoffman (in chat): We do and can move to reporting that. But why would we when reporting AC means we get more LF? Not saying we would, but this brings states closer to each other depending on the unit used to report.
Andrew Leight (in chat): Does acres really get converted to length? n the Phase 6 doc, I thought it said there is a different number of AU, 22.9?
Tom Butler: I am understanding that some places you just cannot get width. So, this is about the default minimum width and if a state doesn't have that, that's where this problem is coming up. Looking at this, if the defaults need to be adjusted or we should recommend that they be adjusted, then what do we want to do for that recommendation? I understand a lot of jurisdictions are already using what data they have. Some just don't have anything, and that's the case where this comes up, and that's why the default is the topic. As a group, do we feel that there's a recommendation we could make for the defaults being adjusted or not? If we can't agree on something to recommend, that's ok. It sounds like then it gets really out of our hands in terms of us having to go to the Watershed Technical. If we need to pass it there, we can outline that we have not been able to come to any conclusion on this, so I would need people to kind of help me with the wording on that. I initially thought we might have a default recommendation for the average of those two for a change. Is that not something we feel is appropriate?
Dave Montali: I like the recommendation to suggest that it should be widened. I concur with the modest move from the 10 and 35 to the 27 and 66. If I am in the minority, that's fine. This problem has been around for a while, and it's really our problem, because we don't have the information. So, if others aren't comfortable, that's fine.
Alisha Mulkey (in chat): MD agrees with Dave
Tamie Veith (in chat): It seems like the model needs to require a single input type, not allow either ac or ft.
Tom Butler: It sounds like there's agreement. So, if I just take the statement "the AMT recommends the WTWG changes the default buffer widths for exclusion fencing practices to the average of the range and not the minimum, that would be 27.5 feet for the narrow and 67.5 feet for the regular. Do people agree with this?

Bill Keeling: If you are saying for the calculation of this particular parameter, that's one thing. As long as you're not asking for us to change the definition of what the width of the buffers are in the reporting.
Tom Butler: This is in reference to the calculation.
Alisha Mulkey (in chat): Can Bill say it again?
Bill Keeling: This whole thing is based on a default that is based on 1,000 feet of fence. If you are reporting that, that's fine. It's kind of a direct relationship. Like Dave said, if all you have is an acreage, then they're going to have to use an assumed width to calculate a length, in order to use that factor since it was based on per 1,000 feet. So, they are trying to get at that length. So, the AMT is recommending that because, on average, buffers are actually wider than the 10 and 35, that for this calculation on the direct deposition animals excluded, they switch to the 27.5 and 67.5 for that calculation. This is not redefining what constitutes a buffer. We would still be, in terms of Bay parlance, saying if a buffer is less than 35 feet, it's narrow, if it's 35 foot or wider, it's at least a standard. If it's wider, that's great. We could institute a third, a "wide" buffer, and define what that is, but it would be some number larger than 35. So, all I am saying is let's make sure that what the AMT is asking or recommending is a technical number used in calculation, not trying to redefine what constitutes the width of the buffers fore reporting. Is that clear?
Dave Montali: Well said.
Auston Smith: Agreed
Ken Staver: Sometimes this is reported only as a length, so this helps you get to an area?
Dave Montali: Other way around.
Bill Keeling: I believe you are supposed to report a length and a width. You can also provide an acreage. If all you have is an acreage, you provide that. It really depends on what you have.
Scott Heidel (in chat): I have to hop off but do intend to investigate remote sensing to report buffers in the future
Alisha Mulkey (in chat): Thanks. Agree with Bill interpretation. MDA supports the proposed widths.
Ken Staver: So, it could be used for two different calculations then. One for the length if you only report length, and one for getting the area if you only report length.
Bill Keeling: Right, but in this case, the conversion is based on a length of fence. So, if you provide a length, the assumed default would be applied per 1,000 feet reported. The area doesn't matter. It only matters if you have an area, like Dave said, and then you don't know what the length is.
Tamie Veith (in chat): If states only have the acres, then maybe they can work with state NRCS offices to get an overall range or total width number of the documented cost-share projects. Then they can calculate and report a length. If the states have a length, then great.
Elizabeth Hoffman (in chat): That's not always as easy as it sounds, for data sharing.
Tamie Veith (in chat): I am sure it is not easy, but maybe that data sharing is something that can be looked at. I am not suggesting detailed info. Just an overall number for the state.
Tom Butler: It sounds like there's kind of an agreement around what Bill had suggested. So, we will take the wording from that, and we will put that in e-mail to make sure that if anyone has suggestions, we can modify that. We will then send that to the Watershed Technical Workgroup, and then they can debate what they would like to do with that. If we're in agreement on this, then I'm not going to hold anyone else here. If there are other comments, please e-mail me,

drop them in the chat if your equipment wasn't working, so we can get those registered and maybe you follow up offline.

Action: The AMT agreed on a preliminary recommendation to send to the Watershed Technical Workgroup. This language will be sent to AMT members for their review and modifications, prior to being sent to the WTWG for their discussion and approval.

Post Meeting Note: The AMT workshopped the recommendation offline and agreed on the following recommendation to be sent to the Watershed Technical Workgroup for their consideration: "Exclusion fencing is credited in acres, but reportable in linear feet or acres, with buffer width or animal units (AU) excluded being optional. However, because of differences in data availability among the various jurisdictions, credit for exclusion fencing can sometimes only be obtained by reporting buffer acres. When buffer acreage is reported without a buffer width, the default width of 10 ft or 35 ft for narrow or regular, respectively, is used to calculate the associated linear feet of exclusion fencing. This is then used to further calculate the associated AU (based on the default value of 17.6 AU excluded/ 1000 LF fencing). The AMT recognizes that average buffer widths of exclusion fencing are typically larger than the current default values used for calculating linear feet. Given this **the AMT is recommending a change in the default buffer widths for calculations to 22.5 ft and 67.5 ft for narrow and regular buffers."** (**It was noted that 22.5 is the average of 10-35, not 27.5)

Recap/Closing 10:55-11:00 [5 min (Zach Easton, VT)]

Action Items:

- Decision: Land Use Loading Rate Ratios, default information for Exclusion Fencing
- Discuss: Recommendation on buffer width.

Adjourn – 11:00

Up Next:

Office Hours: Friday, October 10th, 2025, from 8:00 - 9:00 am.

AMT Meeting: Friday, October 10th, 2025, from 09:00 - 11:00 am.

Participants:

Zach Easton, VT
Tom Butler, EPA
Caroline Kleis, CRC
Elizabeth Hoffman, MDA
Dave Montali, Tetra Tech
Andrew Leight, MDA
Nicholas Moody, VA DCR
Scott Heidel, PA DEP
Cassie Davis, NYSDEC
Jennifer Nelson, AAC Coordinator
Seth Mullins, VA DCR
Hunter Landis, VA DCR
Auston Smith, EPA
Helen Smith, Devereux Consulting
Natahnee Miller, PA DEP
Arianna Johns, VA DEQ
Joseph Delesantro, CBPO
Emily Dekar, USC

Bill Keeling, VA DEQ
John Lancaster, PA DEP
George Doumit, DNREC
Alex Soroka, USGS
Curtiss Dell, USDA ARS
Denise Uzupis, PDA
Alisha Mulkey, MDA
Clint Gill, DDA

Lisa Duriancik, USDA NRCS
Olivia Devereux, Devereux Consulting
Candiss Williams, USDA NRCS
Ken Staver, UMD Wye
Tamie Veith, USDA ARS
Clint Gill, DDA
Ashley Hullinger, PA DEP

**Common Acronyms

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 (houses EPA, federal partners, and various contractors and grantees working towards CBP goals)
CBW-Chesapeake Bay Watershed
CRC- Chesapeake Research Consortium
EPA- [United States] Environmental Protection Agency
PSC – Principals' Advisory Committee (CBP)
STAC- Scientific & Technical Advisory Committee
TMDL- Total Maximum Daily Load
WQGIT- Water Quality Goal Implementation Team