

BMP Verification Ad-Hoc Action Team

Conference Call Meeting Minutes

Thursday, October 8<sup>th</sup>, 2020

9:30 AM – 11:30 AM

**Zoom Web Link:** <https://zoom.us/j/95625780296>

**Meeting ID:** 956 2578 0296

**Passcode:** 390576

**Dial In:** +1 929 205 6099 US (New York)

**Summary of Actions & Decisions**

- **DECISION:** The BMP Verification Ad Hoc Action Team approved Elliott Kellner as the Chair for the group.
- **DECISION:** The BMP Verification Ad Hoc Action Team members approved a Vice Chair Structure and approved Jason Keppler as the Vice Chair.
- **ACTION:** Interested parties are asked to please review Vanessa's slides and questions by **COB November 6<sup>th</sup>** and reach out with feedback and additional points that you would like considered in future meetings and presentations.

**9:30 AM**

**Welcome, Introductions, Roll Call,** *Vanessa Van Note (EPA), Coordinator*

- Welcome
- Roll Call of participants
- **Announcement** – Task Statement Approval, Vanessa Van Note
  - Task Statement approved by WQGIT
- **Announcement** – Aerial Imagery & Verification Presentation by Peter Claggett, Vanessa Van Note
  - Peter Claggett was unable to attend this meeting. Expect an email update with a presentation on the Aerial Imagery and Verification.
- **Announcement** – Back-Out and Cut-Off due to Land Use Update from WTWG, Jeff Sweeney
  - Back out and cut-off are two methods used in the modeling that have been used in several version of the model. These two methods were brought to the MB as a recommendation from the WQGIT
  - An email was sent to everyone in this group to listen-in on the conversation, meet every **first Thursday of the month from 10:00 – 12:00 pm**
  - Any decisions that the WTWG makes will be brought to the BMP Verification Ad Hoc Action Team
- **Announcement** – Forestry Workgroup Reevaluation of Credit Durations, Sally Claggett and Rebecca Hanmer
  - The FWG met yesterday and discussed the need to look at the credit lifespan and the practice lifespan. Our plan is to continue to think through this and pull together recommendations.

- Very deeply connected to the two methods you were just speaking to (back out and the aerial imagery and verification presentation that Peter Claggett will do)
- We will be watching those two things and come up with our recommendation
- The only confusing BMPs are the buffers and the FWG wants to continue to track those because of the upland benefits
- We hope to have a brief back to this group next month combining a literature review and professional judgement
- **Next Meeting: November 12, 9:30 – 11:30 am**

**9:50 AM**     **Introducing the New Chair & Discussion on Vice-Chair Structure,** *Vanessa Van Note (EPA), Coordinator*

- Elliott Kellner received the majority of the votes in the poll
- Members voted to approve Elliott Kellner as the incoming Chair for the BMP Verification Ad Hoc Action Team. Elliott will begin serving as Chair in November.

**DECISION:** The BMP Verification Ad Hoc Action Team members approved Elliott Kellner as the Chair for the group.

- Discussion about Vice Chair
  - BMP Verification Ad Hoc Action Team Members were asked to anonymously vote to determine if there is consensus on electing a Vice Chair for the group via a [Mentimeter poll](#).

**DECISION:** The BMP Verification Ad Hoc Action Team members approved a Vice Chair Structure and approved Jason Keppler as the Vice Chair.

**10:20 AM**     **Credit Duration and Partial Credit,** *Vanessa Van Note (EPA), Coordinator*

- Brief presentation on specific BMPs brought to light for reevaluation of credit duration and partial credit.
- Presentation addressed verification concerns not associated with credit duration or partial credit/not associated with the MB direction for the group.
- Open discussion to obtain clarity in the direction of the group and the “products” the group intends to recommend.

**Discussion/Questions:**

- **Vanessa Van Note:** Question for the group: What available science was not considered during the development of credit durations?
- **James Martin:** That is a difficult question to answer. I think it would be easier to ask what science was used to inform the credit duration decisions.
- **Vanessa Van Note:** Is there anyone in the group that wants to offer the science that was used in developing credit durations?
- **Loretta Collins:** The credit durations were approved by the Agriculture Modeling subcommittee and the AgWG in 2016. I think that question is super broad because it depends on what Ag BMP

it is there may be an NRCS standard to work with which would have engineering standards and design specifications associated with it and scientific background associated with it. It is a super broad question it depends on the BMP and what is available. If there is nothing else available, it comes down to best professional judgement. The professionals are the scientists and engineers who have designed and worked with those practices and understand how they function in the landscape and understand agricultural principals. I don't really understand why we need to talk about what science was used because I think that should be documented in the course of everything that occurred in the process of developing the Phase 6 model. There are some BMPs that were created and approved many years ago before Phase 6 in the early 2000's and those should possibly be revisited by an expert panel. The AgWG had to do an extensive prioritization process for Phase 6 to deal with capacity limitations. BMPs that states consider the most important to address had expert panels formed for those to address what would become the Phase 6 BMP Model. There are older BMPs like loafing lot management or dairy precision, that didn't get another look when we were working through the Phase 6 model but only because of capacity and potentially a lack of new research to get it done. We have a real challenge with having the time and resources to do these things which is why some of these BMPs should be revisited but just have not been at this point. But, at the very least I would propose that all of these BMPs have been informed by best professional judgement and those professionals are scientists, engineers, agronomists, etc. who work in the agricultural, scientific, land grant university, etc.

- **Vanessa Van Note:** I am going to send out these questions after this meeting and if you want to spend some time with them that is great. I am hoping to have discussion like this. My follow-up question to Loretta and James is that while best professional judgement is what we rely on, outside of professional judgement if we run into a situation where there is not published literature on a subject or on a BMP what should we do in those cases. Is best professional judgement not enough?
- **Loretta Collins:** I think from the standpoint of the approved BMP Effectiveness Protocol in 2015 it says that for lack of anything else, documented and formalized best professional judgement is what we lean on because it is the best thing we have. That is my understanding of what the partnership agreed to 5-years or so ago.
- **Rebecca Hanmer:** There is a missing concept. It might not apply to all the agriculture BMPs but it applies to some. Contract life is an administrative consideration that I think people took into account. Also, for any BMPs that were subject to NPDS requirements, the permit life or anything in it that would have talked about maintenance schedules. The desire of BMP verification is to fit into any existing contract or the permit related stages so that you were not having a double process. If a permit required a review at a certain point in time, then it would be natural to think that maybe you could incorporate that into BMP verification. That is what I mean by administrative convenience.
- **Vanessa Van Note:** Did anyone in the group want to offer insight into what data collection exercises would be beneficial for jurisdictions to consider?
- **James Martin:** I would suggest the most obvious one is the work that has been done to date in verifying practices. As we gather data doing these re-verification inspections it should shine significant light on the proved functional life of what we are seeing in the Bay Watershed in terms of BMPs and failure rates. To me, collecting all of that information and not using it to re-evaluate our framework would be unfortunate.
- **Loretta Collins:** I also think that is an awesome idea and I don't want to throw Jason Keppler and MD under the bus, I think that is really interesting. I don't know how you sort through the data or how it is collected. But I imagine MD probably has terrific insights out of the verification program because I think they have a boots on the group aspect for every farm in the state and have been

able to verify a really broad section of BMPs in the agricultural sector. If they have any insights on that I think it would be of massive value.

- **Jason Keppler:** We have looked at over 15,000 practices across the state and have quite extensive data to really investigate and help better inform the group in the process. Anecdotally, roughly  $\frac{3}{4}$  of the practices that we have looked at are still on the ground doing what they are supposed to be doing from the 1980's to present.
- **Loretta Collins:** That is across a variety of landscapes too. You have the coastal plain and all of the mountainous regions as well so you can see how the BMPs interact with the different landscapes and how they are still functioning.
- **Jason Keppler:** I will say that most of the BMPs that we have run into issues on is simply because the land has been taken out of production. Few have gone away because of maintenance issues.
- **James Martin:** I think that is a great point, the connection to land use change. If a BMP ceases to function because the land use it supported has changed, it is not a BMP failure. It is a BMP to remove from the model but not a failure. I don't think we would need an on the ground inspection but we could do that with land cover data as a basis for discounting BMPs. That may be an opportunity for us to ease our reinspection burden. It is an alternative approach to the reinspection of every practice.
- **Mark Dubin:** I appreciate Jason's comments on there. After spending a lot of years in the field doing BMP inspections and land use change is a major one. I don't believe that aerial imagery will be enough to address the issue though. In some cases, it was a matter that the operation was still in agricultural production but maybe they had ceased dairy production so in aerial imagery you would not be able to catch that.
- **Jason Keppler:** We (MD) are able to quantify that as well and will share that in our presentation.
- **Vanessa Van Note:** Are there any other jurisdictions that have data available that might be useful for this kind of exercise?
- **Ted Tessler:** Our (PA) ag inspection program has the ability to get ag inspection data. Getting back to James' point there are opportunity to see if there is a backout. It is a complex picture and largely a lot of the verification is an administrative issue. It comes to when an inspection is conducted or if there is a larger remote sensing operation. Those all are providing snapshots and it is difficult if you put the wrong practice in the wrong place there is going to be a failure rate. It is fundamentally an administrative exercise in conducting the verification.
- **Jeff Sweeney:** We have this information of what has been reported to date for 35 years and what has been re-inspected. In NEIN, where states report there BMP implementation, there are a lot of fields in there that states can report exactly what the condition of the BMP was so we can try to compile that. There is a big difference amongst the state to the degree for which that is being reported for the status of the BMPs but we do have that information. It doesn't tell you lat. Long. But it does tell you acres and animal units.
- **Ted Tessler:** We still have not solved the NRCS problem. It is such a difficult hurdle to not know where these things are.
- **Jeff Sweeney:** That is the variability amongst the states to do verification.
- **Brittany Sturgis:** We (DE) are in the middle of an administrative database change where we house our progress data and verification information. It has shown a lot of challenges with verifying practices because we have to link the two databases, so we are in the middle of an administrative challenge and need to figure out how to move forward. We have not been able to show some things.
- **Vanessa Van Note:** Thank you everyone!

## **Issue 1 Credit Duration Discussion, BMPs of Concern from the Stakeholders within the Forestry Workgroup (FWG):**

- **Vanessa Van Note:** I want to ask the FWG if outside of forest buffers – will the Forestry Workgroup at this time consider credit durations on any other forestry practices.
- **Sally Claggett:** I think we are okay with all of the other forestry BMPs. Just forest buffers, ag forest buffers, and urban forest buffers are our main focus. We will talk about the other ones and again it is really the other forestry BMPs like tree planting or tree canopy or forest planning will have to have a bigger discussion with the land use model people and see what we prepare for land use change.
- **Vanessa Van Note:** Thank you for the clarification.
- **Sally Claggett:** We do not really talk about grass buffers, I don't know if we should address that. The only way it really relates to us is that sometimes grass buffers grow up into forest buffers. If they are not a CRP grass buffer maybe they have been put in with EQIP which would mean a much shorter contract period. When I last checked there really weren't any buffers that have been put in with EQIP which is shorter timeline.
- **Vanessa Van Note:** I did want to add from the presentation I gave last month that grass buffers are far easier to convert back to farmland as well which does also differentiate them a bit from forest buffers as well which are much more likely following their credit duration and more likely to remain as a forest.
- **Sally Claggett:** We have studies that show how long forest buffers will continue on and I don't think that grass buffers have that.
- **James Martin:** I wonder if in the early years of a forest buffer if it is not all that different from the grass buffers. While I agree, a mature standing forest buffer is much more resilient to conversion than a grass buffer. A freshly planted forested buffer is pretty much identical to a grass buffer.
- **Sally Claggett:** True, except with a forest buffer you do have a 15-year commitment in most cases. In CREP if you get through the full 15-years than you have a stand.
- **Loretta Collins:** It seems like the key for forest buffers is establishment, you get through the first few years where maintenance is absolutely critical and if you have a contract you are hoping that maintenance is getting done. I understand that more entities are focusing in one that. Grass buffers can be bush-hogged under once any kind of contract is expired. Verification is a little more secure of what is going on in that forest buffer zone but with grass buffers verification might be a bit more critical.
- **Vanessa Van Note:** This conversation brings up a lot about what we understand scientifically about the longevity of a practice vs. the contract durations that have been taken into consideration when initially developing the credit durations of these practices. This conversation is a really good example to find that intersection.
- **Sally Claggett:** Some of it is cultural, societal, and economic to plowing under a grass-buffer. It occurred to me during a discussion yesterday about what happens when someone changes their mind which can happen to any practice (assuming its not under contract). When you are thinking about practice life, at any time, like grass buffers any practice could be converted (as long as its not under contract).
- **Mark Dubin:** Is the CREP 15-year contract still in place? My experience was that the majority of contacts were 15 but there were some that were 10 years as well.
- **Sally Claggett:** I do not have the data for that. I agree that they are mostly 15-years.

- **Lisa Beatty:** Is the BMP Ad Hoc to further investigate grass buffers – These are BMPs that are already established and more are being implemented in PA, especially on PA agriculture land
- **Vanessa Van Note:** The FWG would have to decide if there is cause or justification to further investigate grass buffers at this time.
- **Sally Claggett:** Did you say FWG?
- **Vanessa Van Note:** Yes, based on what I've read in the forest buffer-grass buffer expert panel it appeared like it was forest professionals discussing grass buffers.
- **Sally Claggett:** We did have one member, Ken Staver, who was a grass expert, and he would volunteer that there was just not data. Our main suggestion was just to please create an expert panel on grass buffers alone. That was our main suggestion.
- **Vanessa Van Note:** Lisa, I will further look into that.
- **Ted Tessler:** Sally, has NRCS looked at what non-reviewed CREP buffers are still standing?
- **Sally Claggett:** Yes, there has been a survey conducted by the USDA that gets at that and what happens to CREP buffers if they don't renew. I will send that to the group to see what we can get out of it. There is a lot of data in it. It was going to be one of the literature review that was cited in our recommendation.
- **Mark Dubin:** Sally, there was a study that was done on VA CREP buffers that had been done a few years ago. Do you have access to that as well?
- **Sally Claggett:** Maybe! I do remember some studies done by VA forestry in the last ten years but I can't think of what that VT study was right now.
- **Lisa Beatty:** My one other suggestion is that the Ad Hoc AgWG look at grass buffers because in PA that is the main area that they are on and that is one of the go-to BMPs for agricultural land especially areas near streams that are already established and being considerably planned within Pennsylvania.
- **Vanessa Van Note:** I am going to have a conversation with Ken Staver on grass buffers and bring that back to the group.
- **Loretta Collins:** Grass buffers is a BMP, PA can still use it. I can mention this at the next Ad Hoc AgWG meeting.
- **Vanessa Van Note:** My only concern with grass buffers is that our credit duration is not lowered, and it does not exceed the current NRCS related practices standards as well.
- **Jeremy Hanson:** I can pull up the tab for BMPs that have load source/land source change:
  - Impervious Surface Reduction
  - (Urban) Forest Buffer
  - (Urban) Tree Planting – Canopy
  - (Urban) Forest Planting
  - Abandoned Mine Reclamation
  - Forest Buffer-Streamside with Exclusion Fencing
  - Grass Buffer-Streamside with Exclusion Fencing
  - Forest Buffer-Narrow with Exclusion Fencing
  - Grass Buffer-Narrow with Exclusion Fencing
  - (Ag) Forest Buffer
  - Forest Buffer – Narrow
  - Wetland Restoration – Floodplain
  - Wetland Restoration – Headwater
  - Wetland Creation - Floodplain
  - Wetland Creation - Headwater

- Land Retirement to Pasture
  - Land Retirement to Ag Open Space
  - Grass Buffer - Narrow
  - (Ag) Tree Planting
  - Alternative Crops
  - Saturated Buffer
- **Rebecca Hanmer:** We may decide that the interpretation of the land use, forestry for example is a net interpretation. In other words, you are looking at the entire watershed and what trees exist and what don't which is quite different than saying that the particular BMP that you planted is credited or not. I think we have to look at whether or not we interpret this as net loss or net gain or whether we find some way to tie it to those BMPs that were credited which can be hard because if you don't have the lat/long data from the contracts you might not be sure if you are looking at contract trees or other trees that were credited in the first place. This is going to get to be a complicated discussion on backout. I don't feel now that the FWG can make good decisions about what to recommend on credit duration without having the full discussion on how backout and the land use interpretation is going to effect it. So for that particular group of BMPs that is the land use or load use BMPs we will probably have to take backout and credit duration together.
  - **Vanessa Van Note:** Thank you for that point, Rebecca.
  - **Sally Claggett:** Did this group already talk about and decide that grass, pasture, and land-retirement is something we can pull out from the aerial imagery.
  - **Vanessa Van Note:** I would have to talk to Peter Claggett and the Chesapeake Conservancy about that first and try to get him to talk about that with this group.
  - **Mark Dubin:** From my personal work in the past, we have had some difficulties in separating those out but I will leave that to Peter to answer your question fully.
  - **Vanessa Van Note:** The backout discussion is a big one. It is primarily in the WTWG and it is a large discussion. I do want to make sure that anyone who is interested continues to attend the WTWG meetings and we will continue to try to have those discussions here as well.
  - **James Martin:** I don't understand the basis for why ag tree planting would have fewer credit duration years than the ag tree planting. That may have been an inconsistency.
  - **Vanessa Van Note:** Urban forest planning was to establish an ecosystem or a true forest.
  - **Sally Claggett:** I understand it looks odd, the forest planting does have a higher bar you need more plans and is more closely monitored. Forest planting is on more of a designated footprint, it is really built to last while tree planting might be more one-off.
  - **James Martin:** Would you relate an urban forest planting to something more like an ag forest buffer?
  - **Sally Claggett:** Yes.
  - **Jeff Sweeney:** There is a lot of discussion about timing and when you actually see trees, when they are picked up in the imagery, and mortality rates. When you plant a tree or a buffer in the model, you immediately get full credit as to if it were a standing tree in reality there are only saplings there.
  - **James Martin:** Efficiency also takes some of that into account as well, correct?
  - **Jeff Sweeney:** Right, there is an efficiency in a land change but the benefits of the forest buffer are realized immediately as soon as its reported as being planted.
  - **Sally Claggett:** Jeff, that is true, and I also want to point out the same thing for grass buffers, they receive 70% of forest buffers. For the first couple of years, you would get most of the credit already. So, a lot of credit from both forest and grass buffers from day one.

- **Jeff Sweeney:** Right, but you wouldn't in reality be seeing those benefits of the tree plantings or buffers within ten years. That's because the model is a management, what-if scenario model that is the way it works with all BMPs. A lot of BMPs do work that way and they actually work the best when they are first installed. It is important to keep that immediate benefit to saplings as if they are full stands of trees in mind.
- **Vanessa Van Note:** Again, this is exactly what I hoped would happen. These discussions are really important, and I hope to continue discussions like this in the future. I did create a presentation of 30 slides fully knowing that we will not get through them. You have access to these slides but I will also condense the questions.

**ACTION:** Interested parties are asked to please review Vanessa's slides and questions by **COB November 6<sup>th</sup>** and reach out with feedback and additional points that you would like considered in future meetings and presentations.

**11:00 AM**     **Impact of Verification on Load Reductions,** *Jeff Sweeney (EPA)*

- Jeff Sweeney will continued the discussion from the Watershed Technical Workgroup discussion on the impact of verification on load reductions

**Discussion:**

- **James Martin:** Just to make sure I am clear; your presentation shows the one year the BMPs fell out of credit duration between 2018 and 2019 progress. It is not the cumulative effect of all BMPs that fell out of progress?
- **Jeff Sweeney:** Correct, based on that suggestions last week we are running a lot more scenarios, taking it back to 2019. We will do this annually so you can look at it over a long period from 2009 – 2018.
- **Ted Tessler:** From a historical perspective, a good year in N is a little over 2 million pounds. We (PA) are basically treading water when looking at our implementation 2 years ago. We did have a lot of implementation ten-years ago with a big ramp up and that ramp up curve is what we are fighting now as we (PA) ramp up again so we kind of stay flat and that is a very good way to look at it.
- **James Martin:** The 2 million pounds of reduction that PA might see in a good year is all of the cumulative BMPs that are still within the credit duration. This 700,000 lbs. is just the BMPs they lost in one year between 2017-2018 they probably lost another 700,000 lbs. and the years before that. I think if we look at the cumulative effect of any given year in any given years progress. If we just looked at 2019 we would see a much bigger number in the load reduction not realized because of BMPs expiring.
- **Jeff Sweeney:** Right, if you look over 35 years and take out all of the BMPs that have expired and put those back in there it is a significant number and I am sure that some of those BMPs are no longer functioning. While some are, there are many that are not. I also want to add that I have excluded wastewater in this exercise. This is just the BMPs so a lot of the reductions between a year have come from wastewater which is excluded from this exercise here.
- **James Martin:** I ask for you (Jeff) to share the data behind these graphics with the group. I would like to find a little bit more detail to identify what the best representation for what this effect is.
- **Jeff Sweeney:** It is this group that really had asked for this originally but I think there is an interest at the WTWG for this material.
- **Vanessa Van Note:** We will be working together on the technicalities of this and the agendas. If this is going to be brought up at the next WTWG, I will reach out to the group and let you know.

**11:30 AM     Meeting adjourns**

- Meeting Recap – Vanessa Van Note (EPA); Next Meeting/Future Meeting Topics

**Participants**

Whitney Ahead, CRC  
Elliott Kellner, WVU STAC  
Vanness Van Note, EPA  
Jeff Sweeney, EPA  
Lee McDonnell, EPA CBPO  
Loretta Collins, UMD AgWG  
Gary Felton, UMD AgWG  
Mary Gattis, Bay Journal  
Emily Dekar, Upper Susquehanna Coalition  
Jason Keppler, MD  
Jessica Rodriguez, DoD  
Jeremy Hanson, VT  
Clare Sevcik, DNREC  
Rebecca Hanmer, FWG  
Curt Dell, ARS  
Ruth Cassilly, UMD Extension CBPO  
Dana York, Green Earth Connection  
Norm Goulet, USWG  
Matthew English, DC  
Jess Blackburn, CAC  
Cassandra Davis, NYSDEC  
Ted Tessler, PA DEP  
Bill Tharpe, MDA  
Joe Wood, CBF  
Sally Claggett, USFS  
Adrienne Kotula,  
Kate Bresaw, PA DEP  
KC Filippino, HRPDC  
Lisa Beatty, PA DEP  
Brittany Sturgis, DE  
Alana Hartman, WV