

BMP Verification Ad-Hoc Action Team

Meeting Minutes

Friday, February 12th, 2021

9:00 AM – 11:00 AM

This meeting is recorded for internal use to ensure the accuracy of the meeting minutes

Summary of Actions and Decisions

Action: Provide comments to Sally Claggett (sally.claggett@usda.gov) by COB Friday, February 26th.

Action: Please review the BRC and LLM Discussion Recap from February 12th's meeting. Submit additional input to Vanessa Van Note (vannote.vanessa@epa.gov).

Action: If you believe the credit duration of Grass Buffers should extend past 10 years or if the credit duration of Grass Buffers should remain the same, please submit your rationale to Vanessa Van Note (vannote.vanessa@epa.gov) by COB Friday, March 5th.

Action: If you are aware of justification for extending the credit duration of wetland restoration past 15 years, please contact Vanessa Van Note (vannote.vanessa@epa.gov) prior to March 12th's monthly meeting.

Meeting Minutes

9:00 AM

Welcome, Introductions, Roll Call, Elliott Kellner, Chair (WVU)

- Welcome
- Roll Call of participants
- Announcement – Wetland Restoration, Vanessa Van Note (Coordinator)
 - **Vanessa Van Note:** Credit duration of 15 years brought up to the group for potential reconsideration. Still working to get more information on this credit duration. Unable to progress further with two weeks in between meetings. I will be contacting the wetlands WG over the next month before our next meeting.
- Announcement –Back-Out and Cut-Off due to Land Use Update from WTWG, Jeff Sweeney, WTWG Coordinator

Jeff Sweeney: Cutoff is when the reported BMPs in a specific spatial scale are cutoff due to the level of implementation being reached. Seeing a lot of cutoff on BMPs reported in animal units. Almost all Ag information is at the county scale, but there are opportunities to tell the model where within the county the animals are. The high res land cover should also help us to understand the aerial extent of the land cover within the model. The WTWG is finalizing this. Cutoff is not currently explained in our modeling documentation. Backout is not easily explained. I have a meeting scheduled with Sally to discuss the potential for extending backout for tree BMPs. At the moment, we give tree BMPs (saplings) full credit. We remove the model

credit after a certain amount of time if the trees are included in the land cover. There will be discussion on a recommendation at the WTWG in March (March 4th).

- **Announcement** – Are there any other announcements for the group?
[Bill Tharpe](#): I have been named chair of the nonurban stream restoration EPEG. I will provide comments after our next meeting in March.
- **Next Meeting:** **Friday, March 12th, 9:00 am to 11:00 am**

9:20 AM

Discussion on Credit Durations of Forestry Practices, Sally Claggett, FWG Coordinator

- Sally will present recommended credit durations for the following practices: Forest Buffers, Narrow Forest Buffers, Tree Planting, and Forest Planting.

Goal: Sally will be looking for the BMP Verification Ad-Hoc group to offer its preliminary thoughts on the material she presents.

Discussion/ Questions:

[Sally Claggett](#): This document is to get a preliminary reaction to what the FWG is thinking about regarding the practice and credit life of forestry practices. As a quick introduction (will be coming back to this group after further discussion within the FWG).

[Sally Claggett](#): Here are the tree and forest BMPs that we are looking at. Do these look like the right BMPs or are there any missing? The Forestry WG did not make original decisions on some of these practices. I intentionally did not fill in the proposed lifespan since I still have to have that conversation with the FWG. The only practices that are forest planting practices are the buffer practices and urban forest planting. There is a greater investment, more guidelines and more planning for forest plantings. These are regenerative practices. To put a number on the practice life is a bit arbitrary. There is no real science (probably social science) behind the practice life numbers on the document. In the presence of No Action, the trees will grow. Woody vegetation is expected to grow on land that is not managed. There are significant differences with these forest practices because they can be detected by land imagery. However, this could also cause a higher standard that these practices need to reach. Are there any questions at this point?

[James Martin](#): What is the significance of practice life and verification?

[Sally Claggett](#): What we are seeing is this is important when looking at cost effectiveness of the BMP. It is important for conservation financing initiatives. States are going with annualized cost, though this is not an ideal way to look at these practices.

[James Martin](#): I am understanding you to say that it does not have anything to do with verification, but it is important to the partnership and CAST.

[Sally Claggett](#): These decisions were made by the WTWG. It was interesting to see the numbers they came up with without consulting the FWG.

James Martin: I have seen that CAST has a lifespan of 75 years for a number of the forestry related practices, which on the good side made them look like one of the most cost-effective practices on an annualized basis.

Sally Claggett: There were some decisions made and some of the logic was a bit circumspect, so we wanted to take another look at it.

Jill Whitcomb: Is there a failure rate associated with Tree Planting that can help with identifying what the credit duration should be?

Sally Claggett: I think there are some data regarding that. With the failure rate, the practice standard of “if the planting fails, you go back and replant it”. That has been happening. The FWG has always looked at the 15-year mark. At that mark, it is a forest, it is not going to fail.

Jill Whitcomb: That is where the overall confusion lies with these natural sector BMPs and the associated expectation for reverification at the expiration data. As you said, it then becomes naturalized. Should that not be picked up by the land cover data for us to then get credit for the management actions.

Sally Claggett: that is what we are recommending for these practices. For buffers, because they have an upland benefit, we need to continue re verifying them after the 15-year mark. We have to find a way to help the states to that since we know it is a struggle. We do not have the location data for these plantings, and we know that there is loss going on, though it may not be a loss of what has been planted. It does not have to do with the effort of the BMP. I feel we might be missing a few steps, so we want to update the verification guidance. What do we do if a county would like to do 50 miles, implement 20 miles, but lose 30 miles? Because of development, they have lost acreage. Our current guidance says that because there is a net loss, there is no gain. How can we balance that? There is a huge penalty if you do not have net gain, though a net gain appears to be the appropriate course.

Jill Whitcomb: Those are the type of questions that really need to be discussed and worked though.

Sally Claggett: It is a good question for this group and the WTWG. Looking across all the BMPs and having similar parameters as far as some of these questions.

Vanessa Van Note: What is the rationale between what makes the green practices different than the buffer practices in pink?

Sally Claggett: The pink practices are forest plantings and the green practices are tree plantings. So again, the forest plantings have a larger investment and are longer lived. The tree plantings are not planned, implemented, or tracked in the same way. They also receive less credit. There are no changes planned for the Forest Harvesting BMP.

Another point I would like to make is about the Narrow Forest Buffer in the Tree Planting Section. I do not consider those forest buffers, but more like a strip of trees. They also receive the same credit as the tree planting. I do not believe they should be called forest buffers.

Elliott Kellner: Could you provide data about the width differences between the forest buffer and narrow forest buffer?

Sally Claggett: A forest buffer is any buffer from 35 feet to 300 feet. The narrow forest buffer is anything up to 35 feet. They are usually around 10 feet wide.

James Martin: Is there any difference between upland treatment efficiency between a 35 foot buffer and a 300 foot buffer?

Sally Claggett: They receive the same treatment efficiency.

James Martin: That does not make sense.

Sally Claggett: The science is based on a 35-foot buffer. We try to accommodate those using the NRCS practice standard. The average width is ~100 feet.

Jeremy Hanson: If you had a 300-foot-wide buffer, that is a larger area than the same length of a 35 foot buffer, so there would be a much larger upland area treated. There would be a greater reduction in the model.

Ted Tesler (in Chat): There is no upland benefit on narrow buffers.

Sally Claggett: That is where you are going to get the acreage to achieve your WIP goals is in the larger width.

James Martin: Why are some of these practices have the terminology of being modeled as a land use and others are not.

Sally Claggett: This is a rough draft. It's mostly the ones that are not buffers. The only ones that we are trying to track through NEIEN and not revert to the land use model are buffers because of the upland credit. This looks correct to me. Narrow forest buffers would also be modeled as land use after a time. The 10 year is okay as a credit duration for everything except the forest buffer. We believe forest planting practices should be 15 years to make the distinction between a forest and a tree planting.

Elliott Kellner: Is there any difference between the stem density of these practices?

Sally Claggett: The buffers have a standard of 400 stems per acre. The tree planting practices are 300 trees per acre. The buffer 400 stems per acre is a bit variable from state to state. In VA, it used to be 120 stems per acre. At 400 trees per acre, they are anticipating up to 40%. For the forest planting, it can really depend since a forester is planning the planting. The forester can decide the stocking density.

Cassandra Davis: Won't buffers also be captured with land use/land cover.

Sally Claggett: They will be, but to receive the upland credit, they will need to be reverified. We will need to continue tracking them in NEIEN even when they show up in the land cover data.

We would like to use the land use data to verify, but we keep running into barriers. It would be great to have a group to think on that.

Jill Whitcomb: With all the high res hydrography and land use/land cover imagery we have to identify gaps and identify at a 1m resolution, there should be some kind of algorithm or calculation methodology for the upland benefit without having to continue to rely on on-the-ground people to make sure they still exist.

Sally Claggett: That is definitely what we are seeing. We want to get the land use data to help us verify but we keep running into barriers. It would be great to have a group to help think on that.

Vanessa Van Note: What would you like from this group? Would you like comments?

Sally Claggett: I would like preliminary comments. If people think particular points need to be drawn out. I will be adding discussion on backout about when certain plantings are being picked up by high res imagery. Knowing that that is being added in and figuring out if we can do verification with the high res imagery. Is there some algorithm where we can track that at a certain scale even though we do not have the lat long of the plantings? If a particular LRS or county lose acreage of buffers, how do we proceed? Those are outstanding questions that we have right now.

Jeff Sweeney: I will add one more. In model world we get immediate credit for forest buffers are if they had been there for 15-years. Certainly, those saplings are not treating what is flowing into it right off the bat.

Sally Claggett: That would entail redoing the EP, right?

Jeff Sweeney: That would entail using the model for a totally different purpose. Now we are capturing annual change in conditions rather than a management action. Now we are trying to get the progress runs to look like every single year when the objective was to get a credit for the management actions.

Sally Claggett: Investments in trees and forest have never been about WQ per se. If you do not manage the land, you would get a forest or some time of mixed open land. Even though the trees are young, you have got a lot of things working for it in favor of WQ. The investments are to grow tall healthy trees and habitat. That is what costs money.

Any suggestions on places to really dig in and the FWG will pick this up at the March 3rd meeting.

9:45 AM

Discussion on Barnyard Runoff Control and Loafing Lot Management Credit

Durations, Elliott Kellner (WVU), Chair and Vanessa Van Note (EPA), Coordinator

- We will continue our discussion from last week to determine if there is any other rationale for extending credit durations and/or keeping them the same.
- Kate Bresaw will present data from PA's PracticeKeeper database.

Goal: The goal of this discussion is to determine if we would like to continue pursuing extending the credit durations of these practices or if there is not enough justification to extend these credit durations. The leadership team would like to collect enough information to begin drafting a recommendation.

BRC = Barnyard Runoff Control

LLM = Loafing Lot Management

T&W = (Animal) Trails and Walkways

Discussion/Questions During BRC Portion of the Presentation

Vanessa Van Note: I am unsure of how the different units are converted to Barnyard Runoff Control acreage.

Jason Keppler: The conversion factors should all be in the NEIEN Appendix document.

Emily Dekar (in Chat):

Livestock*0.001278

Poultry*0.000019

beef*0.00189

broilers *0.000003

dairy heifers*0.002881

Goats*0.000344

hogs and pigs*0.000311

hogs for slaughter*0.000111

horses*0.006765

layers*0.00004

other cattle*0.002385

pullets*0.00001
sheep and lambs*0.000574
Swine*0.000211
turkeys *0.000023
Systems *1
Animals *0.001278
Dairy Animals*0.002881

Vanessa Van Note: James would you like to say anything about the data that DCR may or may not be able to share?

James Martin: I put in a request with DCR to provide those data to me but I am unclear as to whether the data would have the confidentiality restrictions that much of the data has. I have to ask if DCR has the resources to do the analysis if the data cannot be shared.

Vanessa Van Note: Alana, did you want to say anything about the possibility of sharing data?

Alana Hartman: I had reached out to the three NRCS district conservationists in our bay drainage region of WV and one of them wrote back that they do not track that data, so I am not confident that we will be able to provide data for the other practices.

Mark Dubin: I wanted to add that I am working on a data project in WV and this year we will be able to verify AWMS poultry systems in WV and we will be providing a dataset on that. We will be able to identify the known and unknown systems for poultry operations.

Kate Bresaw: (On the PA PracticeKeeper Data) As part of the regulatory compliance, all ag operations in PA that are doing plowing or tilling activities as well as having HAUP areas (5000 sq feet) are required to have an Ag E&S plan, which is similar to an NRCS conservation plan and would have a lot of LLM and BRC practices. As part of the planning practices, the planner will walk the farm and identify resource problem areas and verify existing BMPs are functioning as intended. If not, they will be replaced or will be rewritten in the E&S plan. We correct the BMP if there is a problem associated with it. However, as part of the planning process, we will document all BMPs are functioning as expected and include a proper maintenance system in the E&S plan regardless of when those BMPs were originally installed. WE have BMPs that are 20-30 years old in these plans.

For the BRC, we can document approximately 43% (775 out of 1802) of Barnyard Runoff Controls were inspected after expiration and were functioning as expected. On average, they were 19 years old (9 years past their credit duration). We can't really determine a failure age but we can show that they are upwards of 20 years old and are present following the expiration of their credit duration.

Discussion on Barnyard Runoff Control

Elliott Kellner: Any comments/questions?

Alana Hartman: As I stated last time, our comment was already captured as #1 on the document. The Roof Runoff Structure was 15 years. I learned an argument against that would be other practices that have 10-year lifespans. Vanessa, did you say that animal trails and walkways is one of those 10-year systems?

Vanessa Van Note: Yes.

Alana Hartman: Okay, and in your presentation, you showed that states are using the 10 year ones. That makes me think it is okay to not extend credit durations since we have evidence that others are reporting these 10-year practices.

James Martin: Can somebody from the AgWG speak to why Animal Trails and Walkways are being reported in this category?

Jason Keppler: Very good question, James. I was also thinking that myself.

Vanessa Van Note: I am currently working to figure that out as well. I was unable to figure out why it is this way. Something to note, is that Animal Trails and Walkways, according to our NRCS representatives, Tim and Chad, are identified as a supporting practice of LLM and allow animals to travel from a HUAP to a pasture. Along with prescribed grazing (an associated practice to LLM), which would go hand in hand with Animal Trails and Walkways.

Jason Keppler: It does map to the feed default land use and maps to the Barnyard Runoff Control. It is mapped to allow for that credit in NEIEN.

I have a question for PA. I noticed diversion was included. Diversion has a broad application and I was curious if they are able to segregate the 362 (diversions adjacent to a feed lot) vs those that might be used in a crop or pasture setting.

Kate Bresaw: We would need to do a higher spatial analysis to relate it to other practices nearby. If you had questions about a specific diversion, we would be able to do that very quickly. For higher numbers, we would need to do a higher analysis than what I did to get the numbers we are looking at today.

Jill Whitcomb: I would like to note that practice lifespans is the minimum amount of time that is expected. Not an average, not the maximum. What we are finding in our data is on average, these practices are at a 19-year age. From my perspective, 15 years is conservative if we are finding on average, these practices are at 19 years with some reaching 20 or 30 years.

Dana York: Could the NRCS person speak to Animal Trails and Walkways.

[Tim Peters was having technical difficulties.]

Kate Bresaw: In PA, it is called Trails and Walkways, though our database still has the old name.

Mark Dubin: I recently looked at the NRCS standard and the design is intended for erosion control but not for nutrient control. It doesn't address runoff. It is addressing erosion from a Heavy Use area. It is a stabilization practice and a supporting practice to the Heavy Use Area and other practices. Back a few years ago during a grazing panel, we view it as a supporting practice to prescribed grazing.

Jason Keppler: It can have a broad application. It can be used for vehicles and other traffic.

Mark Dubin: There is the Access Road standard as well. Its combined for livestock and vehicles.

Dana York: It is mostly a 2:1, not very steep practice.

Mark Dubin: Mostly grade control, stabilization practice. Culverts are installed if needed. Can allow for stream crossings. Things of that nature.

Dana York: My only point is a lot of these practices, other than that one, we used to call armoured. Other than that one, there is fencing, gutters...things like that that have been created to be there for a longer period of time. Other than that one, animals will go where they go.

Mark Dubin: It is a 10-year practice because of the maintenance needed. They are mostly an aggregate base. There is fencing, of course. I think it is not as armoured engineer practice as you might expect with a BRC system.

Dana York: I couldn't remember if it has an aggregated base. But it does not look like an armoured practice. Mostly to keep animals off a steep slope and prevent sediment from moving.

James Martin: It seems to me having animal trails and walkways included in BRC is what is confounding the question. If it was just the roof runoff structure and gutters associated with the barnyards and loafing lots, it seems the 15 year or longer makes complete sense. Because we have lumped so many different things into this one practice, all being simulated the same way, it confounds the question. If we were able to split these practices into a more appropriate category, or if we can track them, maybe we can say for the Trail and Walkway component, will stay at 10-years, while the other practices are 15-years. I do not know how the model or NEIEN can do that. It seems like an elegant solution.

Mark Dubin: to add onto that, when I was involved in the pasture expert panel, we specifically looked at T&W, and the experts determined that they could not find a satisfactory answer. There are so many variations with them and really it is a sediment reduction practice. They felt that the best way was to incorporate it into the larger primary practice, the prescribed grazing practice.

Vanessa Van Note: How was it combined into the prescribed grazing practice since that is an annual practice? At what point did it move away from the prescribed grazing practice?

Mark Dubin: It was considered a supporting component practice, but it was not considered the focal practice for crediting. The prescribed grazing practice is annual because it is based on a management grazing plan, similar to the nutrient management system, which is also an annual management practice. Even though subcomponents may have longer lifespans, they are not the central practice. Because prescribed grazing is the central practice, it is an annual practice.

Dana York: Is it possible to do what James said because I think that makes a lot of sense. I just replaced gutters that have been there for 50 years. The wood under the gutter rotted, not the gutter itself.

Elliott Kellner: Jeff, can you speak to that? What kind of lift would be involved in changing the way some of these sub practices are mapped into NEIEN.

Jeff Sweeney: It is simple. It is something that we make the changes when we need to, and it gets signed off by the WQGIT. However, it changes the history of the BMP, so you have to weigh how important that is.

Vanessa Van Note: If we were to do something like that, would we need to grant trails and walkways its own reduction efficiency if it becomes its own practice?

Jeff Sweeney: That is what would make sense. We are not pushing expert panels due to resource, but there are other ways to get at defensible estimates of what the benefits are without going through an entire EP, so we would need to take a route like that.

Loretta Collins: So, what we are talking about now is separating BMPs with its own efficiency value. I think what Mark just said about a pasture EP that he was on was that they could not come up with an efficiency reduction value for walkways.

Mark Dubin: That is correct, Loretta.

James Martin: They could not come up with an independent efficiency.

Jeff Sweeney: Right.

James Martin: They included it in the efficiency of prescribed grazing.

Loretta Collins: If we separate it, couldn't we get into double counting? If it's a sum of the parts and walkways is one of the parts and then you pull it out and a group could not come up with an efficiency because the benefit is part of the whole. I don't know how you would do that.

Jill Whitcomb: That is consistent with the rest of the agriculture practices. Cover crop, no till.... Those types of annual practices are pulled out, but they are also part of the implementation of the soil and water conservation plans. In my mind, if trails and walkways do not fit into any of these categories, they should stand alone. They are more alike to the loafing lots or HUAP; but that may not be as Jason put it, these trails may be used by equipment and not animals, so it may be better to separate it out.

Mark Dubin: when we looked at it, if I remember right, we looked at it during two different Eps, going back to Simpson and Weimer.. but I think part of the issue was is that we could not find supporting data for what the reduction benefits were. If there is interest to look at it in a different way, we would need to go back and see what information is available now that was not available back then.

James Martin: Somewhere down the line, someone determined they perform like a BRC system or LLM system, right?

Mark Dubin: That is correct, James.

James Martin: Maybe we call them their own thing and give them that efficiency. It would take care of major disruptions in the modeling system.

Mark Dubin: We shouldn't jump to it without further evaluation. I do not think a walkway is exactly the same as a LLM system. There is more of a transport function.

James Martin: I agree with you in real world, but in model world, they are equal. If they are already equal, lets leave them equal.

Mark Dubin: I guess the question is if that is correct or not.

Jeremy Hanson: If the discussion is about what actions count under under what practice or what is the correct efficiency, we could have an Ad-Hoc group. We would not need a full blown panel unless evaluation of a new standalone efficiency was needed. The other problem going down that route, we would run into issues for these practices since we do not have the greatest documentation about what led to these BMPs. We should be wary about what roads we go down. Also, if we are talking about a sediment reduction, both loafing lot and BRC apply to a feed space. I do not believe there is a sediment load for feed space.

Jason Keppler: I am concerned about certain jurisdictions that allow NRCS to report these standards directly, the 575 standard, if the standard is implemented specifically for vehicle access, they could be reported against the animal feeding space, which would not be accurate. Do we need to figure out how we are going to verify whether or not practice is actually adjacent to a feeding space and treating that area or if it is the side of a hill or something?

Mark Dubin: I think that is the underlying element of this. These could occur on very different land uses with very different loading rates. These could be located way out in the back 40 as part of a rotational grazing system and that is a very different loading space than a feeding area. That is why we need to look at this in that regard.

Jill Whitcomb: What new information is available to inform the discussion further and beyond that which was available at the time these groups got together and couldn't figure out the efficiency values. To reiterate, if there isn't anymore data or information available, why not start with replicating the efficiency value already provided? We know that is partnership approved and already under another grouping of practices. I am confused why we would go back....which would come first?

Mark Dubin: The work that was going on dates back to before 2010, so it is over a decade ago. There has been a lot more work on rotational grazing. IT is in our BMP protocols to periodically take a look back

and see if there is anything new. I think it is worthwhile to take a look and see what is available. It would not necessarily take an EP to do that.

Jill Whitcomb: We do not use T&W for equipment. That would be reported to us as an Access Road. That is the typical standard we use in PA. Based on our data, those (T&W) inspected after their credit duration were found 6 years past their credit duration when inspected and reverified.

Discussion/Questions During LLM Portion of the Presentation

Kate Bresaw: We looked at Access Roads and HUAP, approximately 39% or 261 practices out of 663 were inspected after their credit duration expired as part of the E&S program and they were all functioning as intended. On average these BMPs were 8 years past their credit duration, or 18 years old. Again, we have records of these practices being more than 20 or 30 years beyond their credit durations as well.

Discussion on Loafing Lot Management

Elliott Kellner: If anyone has questions or comments on the LLM credit duration, I would like to hear those now.

Mark Dubin: What was the NRCS practice lifespan for HUAP?

Vanessa Van Note: It is 10 years.

Mark Dubin: When we originally developed these credit durations, that is the primary practice we looked at for LLM, which is why we chose that value at that time.

Jill Whitcomb: When was that? When was it decided that LLM would have 10 years.

Mark Dubin: That was a series of discussions we had with the AgWG prior to the finalization of the verification protocols. Each workgroup was asked to develop recommended lifespans for practices associated with their sectors.

Vanessa Van Note: I think it was 2015.

Loretta Collins: I was also thinking 2015. The approval might be in the list of the Ag modelling subcommittee decisions.

Mark Dubin: We had an Ad-Hoc meeting with the jurisdiction representatives where we looked at the information before providing recommendations to the Ag modelling subcommittee and the AgWG.

Jill Whitcomb: Did you have data to support the 10 years or did you base it on the practice lifespan?

Mark Dubin: For the majority of Ag BMPs, we looked at the State Programs and NRCS Programs.

Jill Whitcomb: So, moving forward, we have been able to supply data to support a longer practice credit duration based upon real inspection/verification data as we implement or verification programs. I would like to suggest that while historically we derived credit durations from NRCS practice lifespans, with more information provided to us through implementing our

respective verification programs, that is why we are coming to this group to talk about extending them based on what we found.

Mark Dubin: Part of the discussion at the time, the NRCS lifespans were readily available data. We heard this from NRCs, those timeline values were not based on the physical lifespans that you might see, it was looking at the conservative value and the oversight that is provided by the programs. We were looking at the oversight element that would further encourage producers to maintain the practices. Once they were out of the oversight, it was questionable whether or not the practices would be continued to be maintained to meet the standard.

[**Tim Peters** was having technical difficulties. Stated that he would caution using only the NRCS contract lifespans to determine longevity.]

Dana York: Did you say HUAP was used for this? Which is mostly aggregate, sometimes vegetation, though not recommended.

Mark Dubin: Yes, there is that. T&W could be a supporting component.

Dana York: It is stated to keep these practices as far away from water as possible to allow for filter.

Mark Dubin: You might see these typically as feeding areas. PA has recommended these feeding areas be moved upslope away from streams. And to provide some amount of erosion or nutrient protection downslope towards the stream.

Dana York: This is where you would use gutters because you do not want clean water entering these areas.

Mark Dubin: That is correct. You could have vegetated areas downslope of these structures to mitigate storm flows. Typically, what you are looking at with HUAP, there is a lack of vegetated covers. They are typically trampled, which is why you try to stabilize and remove them from water sources.

James Martin: I think we are mixing terms. The 10 years was based on the contractual period. We now have data based on inspections that suggest that we should adapt the program and extend the credit durations. MD and PA have shown very high pass rates for these practices and going back to the overall goal of verification, which is to make sure we have the best available data in the model. Eliminating 100% of the practices that have not been inspected after 10 years when we have evidence that 90 to 100% continue to function is wrong. We need to use the data we have. We need to use it to guide decisions and adaptively manage the credit durations. They should be perhaps 15...maybe 20.

Jeremy Hanson: To piggyback off James' point, we want to have the best data, but we had the whole verification effort and credit durations to respond to the trust issues we had with the previous model. We were assuming a practice got reported and remained in the model indefinitely. We needed to come up with a way to have a reasonable assumption how long a practice would remain on the ground. How long can we reasonably assume a practice is out on the landscape? We only set these credit durations up 6 years ago. So, if we are going to be

extending or shortening them, hopefully we have better data than we did 6 years ago. I believe the most compelling data is what we have seen from PA and MD. Trying to justify it in terms of other NRCS practice lifespans is less compelling to me than other empirical data about how long these practices are functioning within the landscape because we did not have that data 6 years ago.

It is not about the design to me; it is about how long we can expect these practices to remain on the landscape.

Jill Whitcomb: That is part of the design, Jeremy. That is the whole point of these structural practices. There are going to be times when people don't maintain them properly; but if we base our decisions on the handful of farmers who are cutting through the curbing on the HUAP structures then everything would be one year.

Jeremy Hanson: It is about the balance between design and trust.

Jill Whitcomb: I think it is important that we use the verification programs that the states have been instituting over the past 6 years to inform the policies and procedures of the bay program partnership because we did not have this information at that time...now we do. What do we do with it? Why not use it to ensure that we are not only being conservative, but realistic.

Jeremy Hanson: I am not disagreeing. I think we are all agreeing on key points. I am trying to bring in the qualitative factors, like trust and transparency, because those were key factors in the partnership's decision.

James Martin: There is a huge difference between practices lasting in perpetuity, which is the what the previous model/pre-verification did and trying to hone in on the right credit duration for practices based on data that we now have available. I do not think this is anyway backsliding or going against what is originally written in the verification program. I believe this is exactly what the verification program asked us to do 6 years ago. Collect data so we can figure it out and adaptively manage.

Emily Dekar: For NY, we have verified 71% of all HUAP in the state. All the practices passed inspection. I do not have the exact numbers for the supporting practices, the diversion or access roads or T&W, but it is similar. I just do not have those numbers in front of me.

Those practices date all the way back to 1988 for implementation dates.

Jeff Sweeney: If you read the verification documentation, the credit durations are largely connected to how often you need to go out there to do a reinspection to make sure things are functioning so there is a piece here where maybe those practices are there 40 years later because someone was walking the farm every 5 years to make sure they were still functioning and suggesting maintenance. It is more about that. The frequency of which inspections should be done. It is not "lets do an inventory and its still there so maybe we should extend the credit duration", it is still there maybe because inspections were done throughout time.

Jill Whitcomb: I would like you to expand on where most, if not all, jurisdictions are implementing our verification programs in different ways. But that correlation you just

described between the amount of time people are out on the site as cause for maintenance. Where do you find that causation?

Jeff Sweeney: Listening to these discussions, I see a big difference between how you discuss ag practices and how the USWG determined their credit durations. They said these practices should be inspected every 5 or 10 years. Period. They know that they are likely to last a lot longer, but they wanted to ensure that there is a verification program. That someone is going out there to do a reinspection to ensure maintenance is being done. That is part of the permits as well in the regulated community. It had little to do with, how long can these things last if you do not do any inspections and more to do with enforcing a program to do regular inspections. There was a connection, not forcing. There was a strong connection with how often should you be going out there to do the reinspection.

James Martin: Do you think the farmers that have installed these practices put them in and never look at them again?

Jeff Sweeney: No, of course not.

James Martin: Of course not. They are inspecting them regularly to ensure they meet their needs.

Jeff Sweeney: They are maintaining them because they invested in them.

James Martin: Exactly. So, it is not like no one is laying eyes on them or nobody has a vested interest in maintaining them... I do not understand the point you are trying to make.

Jeff Sweeney: The point is, does the conservation district go out there as well and take a look and do a reinspection on what is on the farm and make suggestions on the maintenance needed. That is really what a verification program is.

James Martin: If that is what a verification program is, the BMPs should not be backed out of the model. If the idea is to have a program that sets up inspections, let's have a program that sets up inspections. Leave everything in the model.

Jeff Sweeney: That is what the discussion was if you look at the appendices for each source sector workgroup. That is what the task was...about reinspection programs.

Jill Whitcomb: I can tell you this. If you missed how Kate described the arrival of these data, but the majority come from the first look. Farmers that had installed these practices, years later we have conservation district professionals go out and visit throughout inspection program or planning when they ask for assistance. At that first look is when we are finding that these practices are exceeding their credit duration. I understand in 20 or 30 years from now when there is an inspection program to go out once every 10 years and hit the farms in our watershed.... In the last 6 years we're finding all these practices implemented 20 years ago. It is a longshot to say practices are still in place *because* of the verification program rather than the other way around.

Bill Tharpe: I believe the duration we (MD) go out is based on us making sure we can keep the credit values in the model for those BMPs that are working properly. We do not believe MD is

going out there because the NRCS lifespan structure is going to fail or the structure is finish being used. We believe it is desirable to go out to make sure these practices remain in the model. Our hope is to have gotten through as close to 100% of the BMPs to keep them in the model. We intend to keep doing so in the future.

[James Martin](#): I agree. Jurisdictions set up inspection programs to meet their needs. The credit durations are effectively when we remove a practice from the model. The right time to remove a practice is when it has a high chance of not being functional. Similar to the half-life, or 50% of the practices expected to still be functional. It certainly should not be 90% of practices are still functional and we are dropping them out of the model. That is just not right.

[Dana York](#): I can say, now that I am a farmer and have had animals for 10 years, we get the cost-sharing because it helps us dramatically reduce the expenses that we would have. There is not a repair function in NRCS, and we are basically stingy, and we do not want to replace anything until it is basically falling off the barn. Also, there is an animal health issue, why these things are working. There is also the harassment of winter weather. You do not want to slop through mud every day, so we keep these areas cleaned off. I would say a lagoon would have a much harder time extending because it can overflow easily. As a farmer, we are going to take care of these just because I do not want to slop through manure and mud every day.

11:00 AM **Meeting adjourns, Elliott Kellner, Chair (WVU)**

- Meeting Recap – Vanessa Van Note (Coordinator); Next Meeting Topics
[Elliott Kellner](#): We will take up this discussion again to come a conclusion about extending these durations or keeping them the same. We hope to go towards a conclusion at the next meeting. Can I please have a motion to adjourn?
[Dana York](#): I so move.
[Loretta Collins](#): Seconds.

Call Participants

Vanessa Van Note, EPA
Elliott Kellner, WVU
Jill Whitcomb, PA DEP
Emily Dekar, USC
Jason Keppler, MDA
Jen Walls, DNREC
Jennifer Star, LGAC
Kate Bresaw, PA DEP
Katie Brownson, USFS
Loretta Collins, UMD
Mark Dubin, UMD
Rebecca Hanmer, FWG
Cassandra Davis, NYSDEC

Ted Tesler, PA DEP
Clare Sevcik, DE DNREC
Alana Hartman, WV DEP
Bill Tharpe, MDA
Brittany Sturgis, DNREC
Chad Wentz, NRCS
Tim Peters, NRCS
James Martin, VA DEQ
Norm Goulet, NOVA
Sally Claggett, USFS
Matt Ehrhart, CAC
KC Filippino, HRPDC
Emily Dekar, NY USC
Dana York, DEC
Jeremy Hanson, VA Tech
Jessica Rodriguez, DoD CBP
Rebecca Hanmer, FWG
Jeff Sweeney, WTWG, EPA