Agriculture Workgroup (AgWG)
Meeting Minutes
June 15, 2023
10:00 AM – 12:00 PM
Meeting Materials

Summary of Actions and Decisions

Decision: Approval of minutes from the April AgWG call.

Action: The EPA requests that the forestry workgroup, provide empirical data which compares the survivability of forest buffers privately implemented as Resource Improvement (RI) BMPs 9 or 10, to forest buffer BMPs implemented under public agency standards with financial and/or technical assistance. Please send these data to Jeff Sweeney (sweeney.jeff@epa.gov). A formal vote on the extension of the credit durations for these practices will occur at the July AgWG meeting.

Meeting Minutes

10:00 **Welcome, introductions, roll-call, review meeting minutes** – Jeremy Daubert, AgWG Chair.

- Roll-call of the governance body
- Roll-call of the meeting participants- *Please enter name and affiliation under "Participants" or in "Chat" box*
- **Decision:** Approval of minutes from the April AgWG call

Accounting & Reporting

10:05 **Forestry Resource Improvement Practices: Extension of Select Credit Durations (30 min) –** Jackie Pickford, CRC/BMPVAHAT Staffer.

The AgWG did not reach consensus in April to extend the credit durations of Resource Improvement Practice 9: Forest Nutrient Exclusion Area on Watercourse and RI 10: Forest Buffer on Watercourse from 10 to 15 years. Jackie presented the concerns from voting members about extending the credit durations and the responses from the Forestry Workgroup. There was time for additional discussion, questions, and concerns to be raised.

Discussion

Elizabeth Hoffman: Are we able to put this to a vote?

Jackie Pickford: We weren't planning to call a vote today, but it depends if EPA and others are comfortable with the responses provided.

Scott Heidel (in chat): PA DEP is in favor of this.

Elizabeth Hoffman (in chat): Maryland is in favor as well.

Chris Brosch: DE agrees.

Jeff Hill: To add to the summary - I was part of the original RI panel and we looked at this from the standpoint of buffers that had already been installed and may have been coming out of CREP

contracts, such as those that didn't want to re-up their contracts, but the farmer wasn't necessarily going to rip the buffer out. Focus was more on practices already installed, not new practices being put in place.
Jim Riddell: I believe the information and concerns raised and how they were addressed has been good. I recommend approval.
Jackie Pickford: Are there any concerns from EPA or others that you feel haven't been addressed to the point where you're comfortable approving this?
Jeff Sweeney: The RI report states that all RI practices have reduced reverification intervals. In addition, we believe that RI riparian forest buffer practices lack the contractual provisions of cost share practices as well as corresponding implementation and maintenance and oversight and therefore the credit duration shouldn't be the same. In order for us to move from a hold status, we'd have to see data from the state RI visual indicators checklist used to report these practices.
Jeff Hill: But a lot of them are after those federal contracts are finished or just not re-upped. So they would still have the design specs, but the federal contract would just be expired.
Ken Staver: This doesn't seem like that big of a deal to me because it's just saying that you would have to go back and check it after 10 years instead of 15 years.
Jeff Hill: Yeah, in the grand scheme of things this is insignificant.
Jeff Sweeney: If this is approved, there would no longer be an RI version of these practices, it would be the exact same as the NRCS or state cost-shared programs. So it seems like we'd be eliminating these practices.
Jeff Hill: No because these would be voluntary. Yes, you are more likely to find those contracted CREP buffers, but there are on a few occasions, there are voluntary practices.
Ken Staver: I don't think we are discussing if these should be eliminated, right? Is someone arguing that these shouldn't be credited?
Jeremy Daubert: No, we are just talking about if the credit durations should be 10 or 15 years.
Ken Staver: Right, I think there were buffers that came out of CREP contracts early on. Now the landscape is changing a bit. There are buffers that are being implemented outside of CREP for various reasons. It doesn't seem like a huge burden for folks to check these practices at 10 years instead of 15 years, so I guess it seems like a lot of discussion for something that seems somewhat insignificant.
Elizabeth Hoffman: Yeah, we don't report a ton of these practices so it's not super significant, but the idea is that the source sector experts are recommending this (the FWG) and our state foresters also recommend it because they also see and work with these buffers. Also, to EPA's point, if there was a problem previously with these practices being the same credit duration, then it would have occurred in the last 10 years while the credit durations have been the exact same. Some other points - we have a big plain sect community who install these practices and they can't accept cost-share, but they still get technical assistance from districts and DNR forestry folks, so it's not like these buffers are not maintained. They're just not NRCS practices. Also, because these are put in outside of a contract, they are fully invested all by the farmer, so it wouldn't make sense for the farmer to tear these out after 10 years. I think we should listen to what our technical experts are recommending.
Jeff Sweeney: In order for EPA to move off hold, we need some data from these checklist that would give us an idea of whether everything is the same between federal or state contracted riparian buffer practices.
Elizabeth Hoffman: So you want to see what is on the visual indicators checklist and how many of these practices are reported under this RI code?
Jeff Sweeney: Yes. Need to see what is on the checklist and if you're actually checking the function, density, and things like that.

Elizabeth Hoffman: We check everything on the checklist for it to be eligible for reporting as an RI practice. So it has to meet the visual indicator checklist criteria or else it wouldn't be reported as an RI.
Jeff Sweeney: Well the proposal is to eliminate this as a practice.
Elizabeth Hoffman: It's not to eliminate it. It is just extending the credit duration to 15 years.
Jeff Sweeney: Yes, which is the exact same as NRCS practices.
Elizabeth Hoffman: Yes, but that is how they are now, and they still exist as a practice. They both have a credit duration of 10 years.
Ken Staver: At what stage is this checklist done?
Elizabeth Hoffman: It's done once for the buffer when it's completed or when the planner/technician is out on the farm, they confirm that the visual indicators are met. Sometimes for the plain sect community, they fill it out at a completion of a project that they provided technical expertise on and they put it in their NRCS plan file so it's kind of like part of a conservation plan but without an official contract in place.
Ken Staver: For trees, do they have to wait a few years to make sure it actually took?
Elizabeth Hoffman: A lot of instances are when the farmer implements it on the ground and then when the planners are out there a few years later, they document it via visual indicators checklist. But it depends when they work with the district.
Jackie Pickford: Other states have also indicated that many of these practices are already on the ground and when they do whole-farm inspections they are capturing them as RI buffers and doing the visual indicators checklist.
Jeff Hill: Agreed. Many of these are already on the ground and we're just trying to credit them after they've been implemented.
Jeremy Hanson: The end of August is the deadline for CAST, so if we're going to adjust the credit durations, the decision needs to be made before this. If consensus isn't reached in July at the AgWG then we'll bring it to the WQGIT in August.

Action: The EPA requests that the forestry workgroup, provide empirical data which compares the survivability of forest buffers privately implemented as Resource Improvement (RI) BMPs 9 or 10, to forest buffer BMPs implemented under public agency standards with financial and/or technical assistance. Please send these data to Jackie Pickford (pickford.jacqueline@epa.gov) and Jeff Sweeney (sweeney.jeff@epa.gov). A formal vote on the extension of the credit durations for these practices will occur at the July AgWG meeting.

10:35 **Animal Mortality Best Management Practice Technical Appendix Progress (30 min) –** Auston Smith, EPA.

In October 2021 the AgWG approved the Animal Mortality Expert Panel Report. Auston presented on the recent progress made towards the technical appendix for the animal mortality BMP report. The technical appendix will reflect the implementation of Animal Mortality BMPs into CAST. The AgWG was asked for feedback on how the technical appendix fits with state reported practices. This presentation was informational only - no decision will be requested from the AgWG. Following the discussion, the AgWG supported the technical appendix being moved to the WTWG for official approval.

Discussion

Victor Clark: To confirm, the WQGIT still has to decide whether it's a planning BMP or a credited BMP?
Auston Smith: I'll defer to Jeremy but I think there is a potential that it would be planning. But the plan is to get it as a BMP that is credited in the model.
Victor Clark: If there is no rush, then I would rather take the time to look at this more closely. If there is a possibility to get this put in as a final BMP then I understand the rush. Also, I'm not clear why we need to have a baseline. If we compare it to manure, is there a baseline that the manure number needs to be discounted from?
Jeremy Hanson: For the first question, it depends on what the WQGIT decides on the Phase 6 CAST timeline and if we will have another version of CAST before Phase 7. This will need to be approved by WTWG and WQGIT by August 31 in order to be included in the next version of CAST, otherwise we will have to wait until the subsequent version but could still add it as a planning BMP at any point.
Victor Clark: So is this a placeholder? Since this is just what we can do now in the model, will the representation of this BMP be different later on? And, if so, can you show what that would look like?
Jeremy Hanson: I don't think we can show what that would look like in the future because its dependent on how the Phase 7 model operates, and the partnership is still figuring that out in our working groups.
Jeremy Daubert: August deadline is for Phase 6, right?
Jeremy Hanson: Yes, correct.
Paul Bredwell: For the manure transport comparison slide - these are just what if scenarios if you use the reduction percentages?
Olivia Devereux: Yes.
Ken Staver: So this is what difference it made in this example county for composting 200 animal units?
Olivia Devereux: Yes.
Ken Staver: Is this a mortality rate based on the number of total animal units that you would expect?
Olivia Devereux: This is just on broilers and the mortality rate for that is 5%, so i just took a portion of those numbers and made sure it didn't exceed that percentage.
Victor Clark: There are counties that have surplus nutrients, though. There is variation between counties.
Olivia Devereux: I did this in a few counties and got similar results across the board.
Victor Clark: So manure transport in some counties that have a surplus in nutrients, then removing 100 lbs of manure or whatever that surplus of N is doesn't need to be replaced because there is enough surplus generated in the county. It's a county by county effect.
Olivia Devereux: The way the model works right now for manure transport isn't relevant to animal mortality. We're doing this as an efficiency BMP for Phase 6, until we get to Phase 7 when we might be able to change that depending on what the Ag Modeling Team decides on how the model will operate.
Paul Bredwell: I don't think we should rush this. I think we should spend the time talking about the issues with this.
Chris Brosch: Concerning that the manure transport in this example increases loads. I understand there is a lot of specificity in these estimates - what is the county that was used in this?
Olivia Devereux: I did this in both Kent and Sussex counties. And I got similar results.
Chris Brosch: That's helpful. Sussex county would normally receive a positive benefit for manure transport and Kent county would not. So that would heavily influence the value in the last row. It

looks like compost was worth 15 lbs, incineration and render yielded a little over 40 lbs of N. So applying that to the whole DelMarVA, composting and rendering would have an effect that is measurable. Is that correct?
Olivia Devereux: Yes that's correct.
Tom Butler: Just to reiterate, the AMT will be tackling a lot of these specifics for the Phase 7 model if folks don't want to push for this BMP in Phase 6.
Alex Echols (in chat): Several of the aggregators are moving away from composting mortality to other systems. Does this recognize delta?
Alex Echols (in chat): Most of the mortality is while the chickens are small. What size was presumed for chickens in this calculation? Big difference between a 5 oz bird and a 5lb bird.
Chris Brosch: Size of mortalities was considered in the 2015 poultry litter subcommittee report. The type of BMP is up to the states to report.
Olivia Devereux (in chat): 1 ton of carcass = 2 AU for broilers per the report.
Olivia Devereux: The expert panel report was published in 2021. If this waits for Phase 7 then it won't be implemented until 2028.
Chris Brosch: It's also useful because it mechanistically describes where the advantages are in the fate of the pollution. We shoehorned it for the estimate today. I'd like to get it in the model for Phase 6 so we can start to get credit for the investments made by the state. In phase 7, I think this gives us a good roadmap for how we can do it more accurately.
Victor Clark: Where does the volatilization load go? Struggling to understand how incineration and rendering have an equal impact on the overall load. But I'll follow up with you all offline about this.
Doug Hamilton: The panel actually finished this in 2020. We'd like to see it approved quickly so we can get this information out to the public. Olivia, you have a number of animal units and applied the reduction, in phase 6. To address the question that Alex had, the main thrust of the panel was trying to determine the mass of the mortalities for a grow out which won't be addressed until Phase 7. Correct?
Olivia Devereux: Yes, that's correct. Most of the report is about the mass of mortality. That information will feed into the AMT to determine how this will play out in Phase 7. The Phase 6 modeling structure doesn't allow for mass of mortality, so we are discussing how to translate a recommendation from the panel to something we can apply in Phase 6.
Chris Brosch: Does the WQGIT have to approve the appendix after the WTWG decision? What are the next steps?
Olivia Devereux: It has to get support from the AgWG for it to move to the WTWG.
Chris Brosch: I support this moving on to the WTWG.
Victor Clark: Is there still an opportunity to work on this more before the WTWG? I'm okay with AgWG giving their blessing on this.
Jeremy Daubert: I would work with Jeremy, Tom, Olivia, and Auston on that.

Data & Modeling

11:05 **Agricultural Data Inputs (30 min) -** Tom Butler, EPA.

Tom provided an update on the Phase 7 Agricultural Modeling Team (AMT) and their June meeting. Additionally, he provided an overview of the recommendations on how to deal with agricultural fertilizer in CAST Phase 6 finalized by the Fertilizer Expert Group on June 5th . Feedback was requested from the AgWG, but no decision will be requested.

Discussion

Chris Brosch: Has the analysis of this process been performed? Do we know what it will look like? Want to know the tonnage information.
Tom Butler: I have the change in fertilizer over time that I can show you.
Jeremy Daubert: Is this the whole state or just the portion of the state in the watershed?
Tom Butler: I would have to check and get back to you.
Chris Brosch: What is the most recent AAPFCO data in CAST?
Olivia Devereux: In the current version of CAST, the most recent AAPFCO data is from 2014.
Chris Brosch: So this would be in addition to what has already been scooped up and used?
Olivia Devereux: Yes we would have the more accurate data through 2020, as opposed to the current data which is through 2014.
Scott Heidel: To clarify - if a state has data, you would use that percent change per that state? And then the ones that don't have that data get the average applied?
Tom Butler: No, you would use the data from the reporting state if they have it. We would take the sum of all the values from states reporting and use the percent change to the last reported value.
Ken Staver: This is based on state data. How does that look in comparison to our current method? Extrapolating using some method?
Tom Butler: Right now, the percentage is fixed at the last year we have data. We don't extrapolate.
Ken Staver: Not using state data now?
Tom Butler: No, not directly from the state.
Ken Staver: So the 2016 and 2020 bar would be the same size for the way we're doing it now?
Chris Brosch: Following the last year of AAPFCO data, the trajectory of AAPFCO data is used to plot future fertilizer use. This is an opportunity to change the trajectory of the AAPFCO data with the actual state data that covers that period. This improves the accuracy.
Ken Staver: Curious what those bars would look like with the extrapolation method that we're currently using and seeing the comparison.
Chris Brosch (in chat): The issue that remains is the pace of fertilizer increases exceeds the expected annual increase of crop yields due to genetic improvements. The results of this change are still saddling agriculture with more load than the crops can assimilate.

11:35 **Briefing on Pennsylvania Verification Pilot Project (15 min) -** Scott Heidel, PA DEP, and Joshua Glace, Larson Design Group**.**
Scott and Joshua gave a presentation on the recent Pennsylvania project regarding Non-Intrusive BMP Verification methodology. The AgWG will be asked to approve the methodology at a future meeting for BMP collection and reporting to increase BMP implementation credit in the Bay model**.**

Discussion
Scott Heidel: We hope to get this approved in July or August. The analysis of onsite inspections has not been fully completed yet, but we will be presenting that at the next meeting.
Ruth Cassilly: For clarification - the information is turned over to the conservation districts and then entered into PracticeKeeper to verify it. Are they just verifying that it's not preexisting in their database? Is there any contact or conversation with the farmer at any point in this process?
Joshua Glace: No, there is no contact with the landowner at any point in this process. No landowner interview is required in the visual indicators checklist so that is how the methodology is developed. Conservation district puts this into PracticeKeeper, the districts themselves are doing the QAQC.
Jeff Sweeney: How do you know what the implementation date is?

Joshua Glace: We look at the historical aerial imagery to determine when they were implemented.
Jeff Sweeney: So you're not reporting an implementation date, it's a change in implementation over a certain period of time?
Joshua Glace: We're reporting when that practice showed up on the landscape as an implementation date. We are doing in-field and landowner interviews for the analysis of this project and finding that an actual implementation date for farmers is not usually dead-set - they are usually saying a loose implementation date of a few years ago.
Jeff Sweeney: But you're using a specific date when it shows up in your aerial imagery?
Joshua Glace: Yes, correct.
Jim Riddell: What is the cost of this method?
Joshua Glace: I don't have that now but I can include it in our next presentation.
Jim Riddell: Yes, please. Would be nice to note what a system like this would cost.
Joshua Glace: In about a day, we can do 1-2 municipalities for identification on the aerial verification side. On the field doing windshield surveys, we've seen 30-50 BMPs verified in a day. Depends on the proximity of how efficient we can be. But I'll get a better estimate for that for our next presentation.
Leon Tillman: Can you provide cost savings information for this method as well? In comparison to more typical methods?
Joshua Glace: Yes, I can do that.
Conservation Innovation Center (in chat): What is the impact of treating the full catalog of practices as RI practices and not full BMPs?
Elizabeth Hoffman, MDA (in chat): A note for RI-17s, I think moving forward they'd need a drainage management plan, the default area treated of 26 acres previously is going away at some point I thought, was supposed to be in CAST-21
Olivia Devereux (in chat): Generally RIs have a more frequent inspection requirement for model credit.

Wrap up

11:50 **New Business & Announcements (5 min)**

- **Cover crop BMP verification hybrid method**
  - Present AgWG approved cover crop survey hybrid method to WTWG for update to verification protocols (date pending).
- **Other Announcements? -** send to Jackie Pickford (Pickford.Jacqueline@epa.gov) for inclusion in "Recap" email.

11:55 **Review of Action and Decision Items (5 min)**

12:00 **Adjourn**

Next Meeting:

Thursday, July 20th: 10AM-12PM, Call-in Zoom

Participants

Jackie Pickford, CRC
Tom Butler, EPA-CBPO
Jeremy Daubert, VT
Clint Gill, DE
Chris Brosch, DE
Elizabeth Hoffman, MD
Scott Heidel, PA
Seth Mullins, VA

Matt Monroe, WV
Jeff Sweeney, EPA
Jeff Hill, YCCD
Leon Tillman, NRCS
Dave Graybill, Farm Bureau
Ken Staver, UMD
Paul Bredwell, US Poultry and Egg Association
RO Britt, Smithfield Foods
Jim Riddell, VA Cattlemen Association
Ruth Cassilly, UMD
Mark Dubin, UME/CBPO

Kristen Hughes Evans, NFWF Field Liaison, Sustainable Chesapeake
Cassie Davis, NYSDEC
Karl Blankenship, Bay Journal
Olivia Devereux, Devereux Consulting
Victor Clark, DE/Farm Freezers
Helen Golimowski, Devereux Consulting
Auston Smith, EPA
Tyler Trostle, PA DEP
Alex Echols, Campbell Foundation
Nicole Christ, MDE
Joshua Glance, LDG

**Common Acronyms
AgWG- Agriculture Workgroup
AMT- Agricultural Modeling Team (Phase 7)
BMP- Best Management Practice
BMPVAHAT- BMP Verification Ad Hoc Action Team
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
DPF – Dairy Precision Feeding
EPA- [United States] Environmental Protection Agency
EPEG – Expert Panel Exploratory Group
FWS – [United States] Fish and Wildlife Service
FWG - Forestry Workgroup
MUN – Milk Urea Nitrogen
NEIEN- National Environmental Information Exchange Network
NFWF- National Fish and Wildlife Foundation
PA DEP- Pennsylvania Department of Environmental Protection
PSC – Principals' Advisory Committee (CBP)
PSU- Penn State University
RI - resource improvement (bmps)
STAC- Scientific & Technical Advisory Committee
SWG – Small Watershed Grants Program
TMDL- Total Maximum Daily Load
WILD - Chesapeake Watershed Investments for Landscape Defense Grants Program
WQGIT- Water Quality Goal Implementation Team
WTWG- Watershed Technical Workgroup
UMD- University of Maryland
USDA-ARS- United States Department of Agriculture-*Agricultural Research Service*
USDA-NASS- United States Department of Agriculture-*National Agricultural Statistics Service* USDA-NRCS- United States Department of Agriculture-*Natural Resources Conservation Service*