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Agriculture Workgroup (AgWG)

Meeting Agenda

June 20th, 2024

10:00 AM – 12:00 PM

Meeting Materials

Summary of Actions and Decisions

Decision: The AgWG approved the [minutes](#) from the May AgWG call.

Action: The Draft Methodology Development Plan for the PA DEP Remote Sensing BMP Verification Pilot Project will be released on July 8th; email Caroline (kleis.caroline@epa.gov) and Eric (hughes.eric@epa.gov) with comments and feedback on the Plan by July 22nd.

Decision: The AgWG approved the proposed [charge](#) of the Agroforestry Expert Panel Establishment Group (EPEG).

Action: Email Ruth (rcassilly@chesapeakebay.net) and Eric (hughes.eric@epa.gov) with names and contact information for nominees to serve on the Agroforestry Expert Panel Establishment Group (EPEG) by July 1st.

Intro & Announcements

10:00 **Welcome, roll-call, review meeting minutes – 5 minutes**

Kathy Brasier, AgWG Chair

- Welcome new AgWG staffer, Caroline Kleis!
- Roll-call of the governance body
- Roll-call of the meeting participants - *Please enter name and affiliation under "Participants" or in "Chat" box*
- **Decision:** The AgWG approved the [minutes](#) from the May AgWG call.

Data & Modeling

10:05 **PA DEP Remote Sensing BMP Verification Pilot Project: Phase 1 Summary Report – 65 minutes (presentation and Q&A)**

Tom Howard, Resolve Hydro; Ashley Hullinger & Scott Heidel, PA DEP

Following regular updates on the status of this project from the DEP/Resolve Hydro team, Tom Howard, Resolve Hydro, presented on Phase 1 of PA DEP's BMP verification pilot project.

Action: The Draft Methodology Development Plan for the PA DEP Remote Sensing BMP Verification Pilot Project will be released on July 8th; email Caroline (kleis.caroline@epa.gov) and Eric (hughes.eric@epa.gov) with comments and feedback on the Plan by July 22nd.

Discussion

Olivia Devereux (in chat): I believe that HGMRs should nest within the physiographic regions. There are 11 HGMRs and they are available here: <https://cast.chesapeakebay.net/Documentation/MapToolSpatialData#SpatialData>

Tom Howard: Thanks, Olivia. Yeah, I think that those data sets look very similar, and almost have overlapping boundaries. It would be good to see if there is any spatial variation between the HDMRs and the physiographic sections.

Hankui Zhang: I have a quick question about the format of your training and validation data for ground survey. Is that single pixel or is it polygon? Just make sure this format aligns well with your AI model because different AI models take different input.

Tom Howard: That is a fantastic question, Hank. The answer is both. What we will be doing is computing the area aggregated statistics, and we'll be using that as input for simpler machine learning models. But we'll also be resampling the satellite data to the same pixel size and, as necessary, performing an approach very similar to yours to try and capture that textural information of using more deep learning processes to analyze the entire pixel area individually, as opposed to as an aggregated unit.

Hankui Zhang: Sounds great, thank you.

Greg Albrecht (in chat): I had questions along the way, but the next slide always answered them! Thanks for the detailed approach. Very helpful.

Eric Hughes: I want to reiterate a point that Tom made, because I think it's a great one. First of all, I really appreciate, as Greg highlighted in the chat, how detailed you have been throughout the process. From a coordination standpoint, there's no ask yet. But we saw in one of your earlier slides that, come early next year, there is going to be an ask. It's going to be a decision item. Approving ag BMP verification methods is in our wheelhouse. It's one of the many things that we do. So, I just want to reinforce the idea that if anybody has any questions, comments, concerns, we want to address those as soon as possible, so we don't get to February of next year, it's a decision item, and folks are still on the fence, or still confused. We're trying to do the detail upfront to make sure everybody is clear on what the decision is ultimately going to be. Please take a look at the materials that Tom, Ashley, and Scott provide and let us know if you have any thoughts.

Ashley Hullinger: Thanks, Eric. Not a question, but another note of appreciation for the group's time and Tom's amazing work on this so far. Eric, you did a great job of reminders and a sendoff here, but I just want to reiterate we are at the end of phase 1 and, as we go into phase two starting July 1, and incorporating these comments and informing our next phases, we're looking forward to providing monthly updates for the group. So, in the past, it's been like 5 minute/10 minute updates on each agenda. So, we'll continue to do that. Just feel free to reach out to us and we'll also be getting our advisory committee together for the first time in August, hopefully, as well as that cross-pollination and communicating what we hear from you all with the review of the draft methodology development plan and to the watershed technical workgroup. Thanks, again everybody.

Tom Howard: Great, thank you all. Feel free to reach out and thank you, Ashley and Eric, you guys have been fantastic to work with.

Tom Howard (in chat): I will be logging off--please reach out to thoward@resolvehydro.com with questions.

Ashley Hullinger (in chat): I have to jump off as well. Thanks again, everyone! ahullinger@pa.gov

Accounting & Reporting

11:10 Agroforestry BMP Expert Panel Establishment Group – 10 minutes (discussion and vote)

Eric Hughes, AgWG Coordinator

Eric reviewed the proposed charge of the Agroforestry Expert Panel Establishment Group (EPEG), as discussed at recent AgWG meetings and shared directly with AgWG members on 6/7/24.

Decision: The AgWG approves the proposed charge of the Agroforestry Expert Panel Establishment Group (EPEG).

Action: Email Ruth (rcassilly@chesapeakebay.net) and Eric (hughes.eric@epa.gov) with names and contact information for nominees to serve on the Agroforestry Expert Panel Establishment Group (EPEG) by July 1st.

Discussion

Kathy Braiser: So, this is the decision item as written on the screen. Are there any questions or concerns you want to express? If not, could we do this by consensus? If there are any objections, please raise them now. Otherwise, we will approve the decision as stated here by consensus. I think we have a decision here for approval of the EPEG charge. Thanks to everyone who has been working on this for several months and moving this forward. The next step then, Eric, would be a conversation about membership, correct?

Eric Hughes: That is correct. So, we will be putting it out to the workgroup members and interested parties. But, workgroup members in particular, if you have interest in serving on this EPEG, or know of anyone who might be particularly well-suited, please let us know. We are accepting names and will be putting together a proposed list of folks and then we will coming back to you in July with that list for final approval and then the EPEG will get going, assuming the membership is approved.

Ruth Cassilly: Just a comment and thank you all. I still want to just ask for state-specific input on these practices. If you know that your state has new programs for funding the practices- basically any information you have about silvopasture, or alley cropping at this point, would be useful to add to our inventory that we are putting together for this conversation. I know Maryland just incorporated funding into their MACS program for agroforestry practices and there is a lot going on in individual states. So, if you are aware of anything, please send that to me. You can just do it via email and then I can add it into the inventory, so that we have all the information we can to add to the discussion.

Kate Bresaw: Eric, as a follow-up to your comment there, what is the deadline for nominations?

Eric Hughes: Ideally, we'd like to have those by the end of the month, so the 30th of June. But, Ruth, if there is wiggle room there, let me know.

Ruth Cassilly: That would be optimum if we could get them because we'd really like to start moving forward in July, once we have the nominations, actually reaching out to those people and confirming that they are, indeed, interested and putting all that together. That said, if you have someone and it's past the 30th, I'm not going to refuse the name. But, if you can get it in by the 30th, that would certainly help move this process along more efficiently.

Kate Bresaw: Certainly, thank you.

Innovation & Implementation

11:20 NFWF Funding Opportunities for Agricultural Projects – 35 minutes (presentation and Q&A)

Jake Reilly, National Fish and Wildlife Foundation (NFWF)

Jake provided an overview of NFWF funding opportunities for ag projects in the Chesapeake Bay Watershed.

Discussion

Olivia Devereux (from chat): Jake mentioned that the bulk of their funding comes from EPA. Is that true nationally or just in the Chesapeake Bay? How is NFWF keeping producer information confidential as required by some USDA and state laws? Especially with some funders' requirements for site specific reporting in Field Doc?

Jake Reilly: So, the way that NFWF tends to work is we do have national partnerships, but most of our funding tends to be driven by our landscapes of focus and priority. So, for the Chesapeake, that is a program that is mostly funded by EPA. If we looked at some of our programs working on forests in the Southeast US, those are mostly funded by the US Forest Service. Another program that we tend to get a lot of EPA funding for, just for context, is the Great Lakes program. I'll also just mention that, because of the way we work and our fundraising mechanisms, and, ultimately, our national scale and the relationships that we have with agencies, we do have a lot of national partnerships that benefit our work in the Chesapeake. So, we have a very well-established partnership with NRCS. Just in this last year, we've been able to secure 9 million dollars out of a much larger national agreement with NRCS to be able to pipeline into our Chesapeake program. Yes, local and regionally based pots of funding, but we also kind of pull on and leverage national pots that are out there. How is NFWF keeping producer information confidential, as required by some USDA and state laws? I would like for us all to talk about that more. At this point, I would say it's an unanswered question for us. So, in some of these grants we are actually spending NRCS TA money, so that just inherently comes along with 1619 requirements and those kinds of things. We actually have, based on some of those agreements, come to what I would argue are more helpful and open-minded ways in which we can collect and share data maybe than as the traditional which is like this is all confidential and we can't share any of it. So, maybe there's some opportunity to discuss there. As we go through our process to collect data at the parcel level and get that off to the jurisdictions, we just ultimately have a little bit of a vulnerability. I would just acknowledge ourselves that we ultimately are giving the jurisdictions probably a level of identifiable information that might be a little bit risky for us at this point. That is all in service to being able to give the states and the jurisdictions the best available information. I will just say, and this is potentially an example of a place for further discussion is, through these WIP reporting discussions, we've absolutely come to some pinch points where, for example, jurisdictions might only be getting data aggregated at a county level from certain USDA sources. So, that's at a county level. What we're able to provide them is at the parcel level. So, some of that parcel level data for us, as I mentioned, is implementation that ultimately was funding largely by EQIP or something like that. So that example is a case where the differing levels of geospatial precision and aggregation make it very difficult on the jurisdiction to essentially untangle the data and really understand whether those acres are already being counted by what they are getting from NRCS, or not. We have not solved that but that is, again, something we've seen in practice as we've had these discussions, and I would imagine this is something of interest for the AgWG. I know the unique challenges around confidentiality, and data, and those kinds of things.

Eric Hughes: Thank you, Jake. That was fantastic and I am looking forward to hopefully having follow-up discussions related to this. I want to pitch it to the group- how do we feel about this? What do we want to talk more about related to funding? Related to NFWF? I don't know if we'll get, in the last six minutes, if we'll get great feedback but Kathy, I think maybe we should talk about getting a more formal mechanism for getting that feedback from folks. This can potentially be a great topic for us to discuss at our in-person meeting in October. If anybody wants to chime in on that point now, certainly do so, or reach out to me or Jake afterwards. Is there anything anyone wants to say to that right now?

Olivia Devereux: On behalf of USGS, I am the person who acquires the data from NRCS and FSA and aggregate it to the county. We just went through a series of meetings with each of the state jurisdictions and talked about ways that we could do that in a way that better met their needs. There wasn't much change from what USGS does. There were some discussions about verification and different practices between each state and NRCS. We will make a few changes, but it will still be at the county level where we have 5 or more producers doing the same practice. I've offered to do it different ways. We've done it by HUC. You don't get much different results and you tend to lose a little more data and the model works pretty much by county because that's where NASS data comes from. I know some states have decided not use NFWF funding from a particular pot for agriculture because of the confidentiality requirements. I don't know if it's just one state or if there's more than one. I know there's some wiggle room. There's a less strict interpretation of the 1619 requirements that's part of the 2008 Farm Bill. It was section 619 of that bill, and that's why it was called 1619, but I don't know who to talk to at NRCS to discuss that in more detail. I remember talking to somebody at FSA and they said there are some other ways you could go about it. USGS would need to change its documentation and policy and agreement to do that. But, I think there are maybe some different ways of doing it, but it may not result in doing anything different. Just like switching to HUC does not result in anything different and, in fact, is actually kind of worse for the state. Maybe combined we should have that conversation with NRCS.

Jake Reilly: Sure, I totally appreciate that. This whole conversation has been going on for a long time. I know that. I'm sure that lots of the potential angles have been sussed out and we're still where we're at. I would agree that my experience, somewhat recently, has been that there is just a little bit more daylight on this than I think we are all collectively aware. That's not intentional, or obfuscation, or anything. It's just that this is complicated stuff. Olivia, maybe what would be helpful is we have a data science team and they're the ones who lead this question for us nationally, so, maybe trying to schedule time with you and them to talk through what sort of nuts have we been able to crack. The context and the use cases of the data are dramatically different, but there might be some kind of universal nuggets that might be of value. Feel free to shoot me an email and we can set up a call.

Olivia Devereux: Sounds great, thanks Jake.

Ruth Cassilly: I had one quick question about when you mentioned the innovative approaches to technical assistance and farmer mentoring. Did you say that that funding could not be issued to state agents like a soil conservation district? Would that need to be like a non-profit applying for that?

Jake Reilly: No. So, conservation districts are eligible for all of our programs. Districts are an amazing, untapped, under resourced resource in this space. So, I'm all for helping resource districts to do more with any of this stuff.

Ruth Cassilly: Great, thank you.

Kathy Brasier: The conversation, I think, will continue. As Eric noted, I think there are some avenues we should probably be talking more about how to connect better. Maybe we can talk about the successful projects and maybe highlight those over the next several months. Especially for the October in-person meeting, that would be a really great point of conversation to have.

Jake Reilly: One hundred percent. We just have such a rich buffet to be able to choose from, so the more specific in terms of places and practices, the better. Also, we have a little bit of hooks in some of these folks. So, depending on how it is, getting some of these folks to your meeting to be able to present, I'm happy to work with Eric on that.

Wrap-up

11:55 **New Business, Announcements & Updates – 5 minutes**

- **Agricultural Modeling Team**
 - Brief verbal update on the group's latest activities.
- **Opportunities in Agriculture for a Thriving Chesapeake Bay Watershed Beyond 2025**
 - July 23, 2024 – Optional reception/mixer in the evening (Time: TBD)
 - July 24, 2024 – Workshop (8:00 am – 4:30 pm)
 - Join a conversation with leading agricultural scientists and experts from across the Chesapeake Bay Watershed to discuss the latest advances in:
 - Nutrient management and soil health; economic and other incentives for conservation practice adoption; nutrient flows across the supply chain; movements and markets for local food; agricultural land preservation.
 - Through an interactive discussion with the workshop participants, scientists will share their recommendations based on decades of agricultural research in the Bay Watershed and how we can sustain thriving agriculture AND have a healthy Chesapeake Bay. Workshop recommendations will be shared with the Chesapeake Bay Beyond 2025 Steering Committee to inform efforts post-2025.

12:00 **Review of Action and Decision Items; Adjourn**

Next Meeting: Thursday, July 18th, 2024: 10AM-12PM (Virtual)

Participants

Caroline Kleis, CRC	Kristen Hughes Evans, Sustainable Chesapeake
Eric Hughes, EPA	Jackie Pickford, USGS
Kathy Braiser, PSU	Ruth Cassilly, UMD CBPO
Caitlin Grady, GWU	Todd Deroba
Tom Howard, Resolve Hydro LLC	Tom Butler, EPA
Kate Bresaw, PA DEP	John Lancaster, PA DEP
Olivia Devereux, Devereux Consulting	Dylan Burgevin, MDE
Brady Seeley, PA SCC	Grant Gulibon, PA Farm Bureau
Nicole Christ, MDE	Dean Hively, USGS
Bill Keeling, VADEQ	Amanda Barber, NY
Hannah Sanders, EPA R3	Greg Albrecht, NY
Arianna Johns, VADEQ	Carlington Wallace, ICPRB
Tyler Trostle, PA DEP	Katherine Brownson, FS, MD
Auston Smith, EPA	Emily Dekar, USC
Cliff Williamson, VA Agribusiness Council	Jennifer Skaggs
Helen Golimowski, Devereux Consulting/CBPO	Jeff Hill, York Cty. Conservation District
Marel King, CBC	Mark Dubin, UME/CBPO
Clint Gill, DDA	Paul Bredwell, US Poultry & Egg
Nick Hepfl, HRG	Jenna Schueler, CBF
Hankui Zhang, South Dakota State University	Thomas Butler, EPA
Emily Heller, EPA	Jeff Sweeney, EPA/CBPO
Ashley Hullinger, PA DEP	Sushanth Gupta, CRC

Wells Hively, USGS
Leah Martino, EPA

Jake Reilly, NFWF
Stuart Blankenship, DCR

Acronym List

AgWG- [Agriculture Workgroup](#)
AMT- [Agricultural Modeling Team](#) (Phase 7)
BMP – Best Management Practice
CAST- [Chesapeake Assessment Scenario Tool](#) (user interface for the CBP Watershed Model)
CBP- [Chesapeake Bay Program](#)
CBPO- Chesapeake Bay Program Office
CBW- Chesapeake Bay Watershed
CTIC – Conservation Technology Information Center
CVN – Conservation Validation Network
EPA - [United States] Environmental Protection Agency
EQIP- Environmental Quality Incentives Program
FSA – Farm Service Agency
HUC- Hydrologic Unit Code
MACS- Maryland Agricultural Water Quality Cost-Share Program
MLRI – Modeled Load Reduction Indicator
NRCS – Natural Resources Conservation Service
NFWF – National Fish and Wildlife Foundation
ORISE – Oak Ridge Institute for Science and Education
PADEP – Pennsylvania Department of Environmental Protection
PSC – [Principals' Advisory Committee](#) (CBP)
PSU- Penn State University
SWCD – Soil and Water Conservation Districts
WQGIT- [Water Quality Goal Implementation Team](#)
UMD - University of Maryland
USDA – United States Department of Agriculture
USGS – United States Geological Survey
USFS – United States Forestry Service