# Agriculture Workgroup (AgWG)
## Meeting Minutes
### November 16th, 2023
### 10:00 AM – 11:50 AM
### **Meeting Materials**

## Summary of Actions and Decisions

**Decision:** The AgWG approved the minutes from the October AgWG call.

**Action:** Call for nominations for at-large members and a vice chair position. Please send nominations via email (pickford.jacqueline@epa.gov; hughes.eric@epa.gov) by January 18th.

---

## Introduction

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 October AgWG call.

## Informational Presentations

**Findings from the Thriving Ag project with implications for Chesapeake Bay restoration**

10:05   **What makes Chesapeake Bay farms different? – 10 minutes –** Dave Abler, Ph.D., College of Agricultural Sciences, Penn State University

Dave presented research on the characteristics that make Chesapeake Bay farms distinctive and some potential implications on future land use and farmer decisions including conservation adoption.

**Discussion**

Elizabeth Hoffman (in chat): Thanks for this presentation. I'd be interested in hearing more on either your findings on, or plans to explore, the "missing middle" that is a hurdle for building strong local food systems. So lack of aggregators or processors. In Maryland we have only a handful of meat processors and so improving some of the infrastructure needed to support local food systems, rather than have meat go out of state for processing just to return to a market in Maryland, etc. Another example is the ability for small scale producers to be able to meet contract demands either for volume or consistency of produce, that an aggregation system would help offset. Thanks!

Dave Abler: The project is not looking directly at the missing middle but we're aware of it. It's a major challenge in MD, PA, and other parts of the CBW. One of the members of our Stakeholder Advisory Board in Howard County, MD is a producer of livestock and has commented on this on many occasions. In this project, we focus mostly on the farm level and the consumer end of things, however, there is an important part of the project on blockchain technology that we

didn't mention in this presentation where we are finding ways to aggregate products across producers. This experiment is taking place on a sheep farm right now. We hope that work will allow smaller scale livestock and vegetable producers to aggregate products for sales to processing facilities which can then be marketed as local products.

Ruth Cassilly (in chat): For Dave Abler- with respect to scenario 4 "Local food
Local consumers embrace the agricultural community, and food systems become more localized, allowing farms to produce more specialty crops and value-added products" - is there a way we could tie this conversation into the CBP Beyond 2025 Initiative and the CESR report's recommendation concerning the need to address the nutrient mass balance issue within the CBW through some type of agricultural forum in the future?

Elizabeth Hoffman (in chat): To build upon that point, we'd need to discuss some of the competition between land uses mentioned earlier. This study by USDA, https://content.govdelivery.com/accounts/USDAARS/bulletins/35e5655, highlighted that some. "The study found that reaching 30 percent self-reliance would require bringing close to 1 million acres of farmland into production (400,000 from farmland that is currently underutilized or idle and 590,000 in land that was once farmed but has returned to trees), reversing a century-long trend of land leaving agriculture. Total land in cropland and grassland pasture across the six-state region has hovered around 1.9 million acres since 1997. A possible pathway to increasing food self-reliance, without clearing new land, involves leaving less land idle and converting to crops that require more intensive cultivation (e.g., field crops or vegetables vs. hay crops or grazing land).

Dave Abler: Curious what you have in mind about Beyond 2025 and the CESR report?

Ruth Cassilly: We're having many discussions about Beyond 2025, many reports being published, and ag secretaries seeking an increasing role for ag representatives in those conversations. Getting all these parties together and research efforts, including Thriving Ag and your work, to determine how we should move forward seems like a good idea. I think having a workshop or a food systems forum would be beneficial.

Dave Abler: We had a similar idea. We've held workshops throughout the watershed as part of this project. We are looking at a workshop in VA and hoping we could put together a collaborative larger workshop next summer to address some of the things you mentioned.

Lisa Waigner: Caitlin Grady at George Washington University has been doing some mass balance modeling demonstrating the effect that was mentioned in the CESR report. She has an order of magnitude estimate of that and we've been looking at scenarios projecting forward the likelihood of that increasing, so having this conversation will definitely be relative. Probably need to be thinking of some economic incentives and other things that could change the behavior that we're trying to achieve.

Jackie Pickford (in chat): I don't want to speak for AgWG leadership but we could potentially dedicate an AgWG meeting to brainstorming ideas and unofficial recommendations for consideration of the beyond 2025 committees (need to double check if there's a process in place for that).

Mark Dubin (in chat): Dave - The food shortages experienced during the COVID pandemic underscored the potential challenges of the national food distribution system.

10:15 **Reducing nitrogen runoff by customizing application – 30 minutes –** Charlie White, Ph.D., College of Agricultural Sciences, Penn State University

Charlie's team is exploring how a simple model of nitrogen mineralization can help farmers quantify the effect of cover crops and soil organic matter on the nitrogen fertilizer requirements

for corn, allowing farmers to fine-tune their nitrogen application rates and thereby prevent excess nitrogen runoff while preserving yields.

**Discussion**

Dave Graybill (in chat): Are you in conversation with anyone at Pennsylvania Farm Bureau or American Farm Bureau as part of the conversations for your project?

Margaret Ann Frederick (in chat): Hi Dave, Joel Rotz (former PA Farm Bureau Manager) has been involved in conversations for the project and he is on the Stakeholder Advisory Board.

Dave Graybill (in chat): Great tool, Charlie. It explains the fertilizing habits of good farmers that have kept track of yields, moisture availability and response to N applications. At the farmer level I have seen this wide variation of yield and nitrogen applied farm to farm that really explains the understanding folks have of their soils and climate.

Jeremy Daubert: Are you working on some of the recommendations for other crops other than corn and other nutrients as well?

Charlie White: We haven't taken it beyond corn for this particular tool that I presented on, but we could certainly do that in the future. Corn is just a starting point. We have started working on taking it to different regions, such as VA, and we're exploring MD as well. We are also working on recommendations for other nutrients. We're making incremental improvements but so far just corn nitrogen recommendations.

Ken Staver: It struck me that the big opportunity for changes is dealing with manure management and cover crops are sort of a side dressing on all of that, based on your two examples.

Charlie White: I would agree with that. In the model, the variable that really drives nitrogen reductions is the soil carbon and soil carbon to nitrogen ratio. I think manure usage impacts that most. There is still value for cover crops in other aspects, however, such as winter N leaching. Farms with really high soil carbon and high use of manure can afford to have really immobilizing cover crop biomass because it's offset by the soil carbon that's been built up. Cover crops are still part of the equation.

Ken Staver: Is it safe to say that big changes in N recommendations come from manure? Cover crops less so?

Charlie White: Yes that's correct. Cover crops play less of a role, manure has a larger role.

Ken Staver: When doing outreach to farmers, it can be a challenge if you had a negative experience for a farmer who doesn't have manure and then they can get turned off by cover crops because you show a case where you don't account for any mobilization, then you can really take a hit.

Charlie White: Right, I think that is where this tool plays an important role.

Dave Graybill: Great presentations. Can you explain if this is in the CBP model already or how it could potentially play a part in how we model things?

Charlie White: I don't think they are comparable, but someone else might be better able to answer that question. The scope and objectives of the models are different, so I don't think it would be compatible to integrate this into CAST. But once farmers start adopting this and changing their nutrient application and stop or reduce their fertilizer purchases based on this information, my understanding is that those effects would start to show up in the Bay model.

Dave Graybill: Got it. Something that increases farmer confidence in the model is the ability to improve over time and adapt to new information.

Mark Dubin (in chat): The P6 NM BMPs also have an enhanced N application rate BMP reported by acre.

Marel King, CBC (in chat): Article about cover crops in Midwest that seems to affirm the limitations Charlie described. https://lancasterfarming-

Ken Staver: You mentioned veg not moving the needle much on nitrogen. Is that for no-till or when you work it in you don't get a big N availability out of the veg crop?

Charlie White: It's for both, we have both tillage and no tillage in our dataset. There's a slight difference in those. You get a little more N when you till it in. It gives a boost to unfertilized corn yield, but when we look at the delta yield (unfertilized yield and yield plateau), the more you shrink that delta yield the less efficient your fertilizer applications become, so it's not moving the need on a 1:1 basis. It's moving on a flat response curve. It's a compounding factor so it doesn't move the needle on overall N requirements as much as we thought because you're moving onto an inefficient part of the response curve. Another compounding factor is the mineralization of cover crops.

10:45 **What works to increase conservation practice adoption? – 20 minutes –** Lisa Wainger, Ph.D., UMCES

Lisa presented results from socio-economic research into what approaches by technical service providers appear most effective at promoting conservation adoption. The research has implications about how to increase interest in conservation practices by production-oriented producers.

**Discussion**

Elizabeth Hoffman (in chat): Thanks for your presentation, Lisa. Another relevant element is the time needed to site visit and plan before a BMP is even installed. ""It just takes a long time to do this work. There's no one easy, quick pill to make this happen," said Denice Coleman, Pennsylvania state conservationist with the NRCS. "It's building relationships. Every farm is different." It's not unusual, she said, to have seven or eight visits before a farmer signs off on a practice, especially an expensive one like a manure storage facility that can cost $120,000 or more." https://www.bayjournal.com/news/pollution/lack-of-people-power-is-barrier-to-reducing-farm-runoff-in-chesapeake-bay/article_38596aae-4773-11ee-80c3-7b8b516b9a1f.html

Lisa Wainger: I agree relationships are very important in this work. It's interesting that people using different approaches are having different successes. There are issues within the whole enterprise of technical assistance that might need to be addressed.

Jeremy Daubert: Agreed. There are a lot of cultural differences within the Chesapeake Bay Watershed and could affect how you go about talking to farmers.

Jeremy Daubert: When you're doing these interviews, how did you find the farmers? Have they already implemented BMPs?

Lisa Wainger: We had a representative set of adopters and non-adopters. But we ended up with more adopters than non-adopters. We recruited farmers by looking at who signed up for insurance programs and also lists unrelated to BMP adoption.

Jeremy Daubert: Did you call them or visit them in-person?

Lisa Wainger: It was during covid so we emailed people at first and then called them if they were willing to be interviewed.

Jeremy Daubert: Were there plain sect farmers represented?

Lisa Wainger: We tried but I don't believe so.

Elizabeth Hoffman: Which of the MACs practices were in that study?

Lisa Wainger: Anything related to farm management, tillage, etc.

Elizabeth Hoffman: So, manure transport?

Lisa Wainger: I'll have to double check and get back to you.

**11:05**   **Q&A - discussion listed above.**

## Wrap up

**11:35**   **New Business & Announcements (10 min)**
- **AMT Updates –** Tom Butler
- **Website Updates –** Jackie Pickford
- **Dec 8th Principals Staff Committee Meeting –** Decision item on forming an action team to consider the creation of the proposed agricultural advisory committee
- **CAST Updates**
  - At the October AgWG and WQGIT manure eligibility was discussed for Phase 6 only.
    - Consensus approval was reached at both the AgWG and WQGIT.
  - New version of CAST-23 will incorporate changes to manure eligibility.
- **Membership**
  - Deadline: Thursday, Jan 18th, 2024
    - Vice Chair (1 position), 2-year term
    - At-Large Members (6 positions), 2-year term
- **December Meeting**
  - Canceled
- **Other Announcements?**
  - Send to Jackie Pickford (Pickford.Jacqueline@epa.gov) for inclusion in "Recap" email.

**11:45**   **Review of Action and Decision Items (5 min)**

**11:50**   **Adjourn**

## Next Meeting: Thursday, January 18th, 2024: 10AM-12PM, Call-in Zoom

## Participants

| | |
|---|---|
| Jackie Pickford, CRC | Matt Royer, PSU |
| Eric Hughes, EPA-CBPO | Carlington Wallace, ICPRB |
| Tom Butler, EPA-CBPO | Tyler Trostle, PA DEP |
| Jeremy Daubert, VT | Amanda Barber, New York |
| Kathy Braiser, PSU | Mark Dubin, UME/CBPO |
| Clint Gill, DE | Caroline Harper, The Keith Campbell |
| Elizabeth Hoffman, MD | Foundation for the Environment |
| Greg Albrecht, NY | Sara Ramotnik, Choose Clean Water Coalition |
| Tyler Echard, PA | Hunter Landis, VA DCR |
| Seth Mullins, VA | Kate Bresaw, PA DEP |
| Cindy Shreve, WV | Karl Blankenship, Bay Journal |
| Marel King, CBC | Ken Staver, UMD Wye |
| Jeff Sweeney, EPA | Nicole Christ, MDE |
| Jeff Hill, YCCD | Kristen Hughes Evans, Sustainable Chesapeake |
| Dave Graybill, Farm Bureau | Ruth Cassilly, UMD |
| Jenna Schueler, CBF | Nicole Christ, MD |

Tyler Groh, PSU

Dean Hively, DC

Dave Abler, PSU

Caitlin Bolton

Auston Smith, EPA-CBPO

Charlie White, PSU

Lisa Wainger, UMCES

Olivia Devereux, Devereux Consulting

Peter Hughes

**\*\*Common Acronyms**

AgWG- Agriculture Workgroup

AMT- Agricultural Modeling Team (Phase 7)

BMP – Best Management Practice

CAST- Chesapeake Assessment Scenario Tool (user interface for the CBP Watershed Model)

CBP- Chesapeake Bay Program

CBPO- Chesapeake Bay Program Office

CBW-Chesapeake Bay Watershed

CESR – Comprehensive Evaluation Systems Report

EPA- [United States] Environmental Protection Agency

N - Nitrogen

NM - Nutrient Management

NRCS – Natural Resources Conservation Service

PSC – Principals' Advisory Committee (CBP)

PSU- Penn State University

P6 - Phase 7 (Watershed Model)

WQGIT- Water Quality Goal Implementation Team

UMD - University of Maryland

UMCES – University of Maryland Center for Environmental Science