

Meeting Minutes
August 18, 2022
10:00 AM-11:00 PM
Agriculture Workgroup Conference Call
Materials: [Link](#)

Summary of Actions and Decisions

Decision: The AgWG approved of the [meeting minutes](#) from the July AgWG call.

Decision: The AgWG approved the [charge](#) of the Ag Modeling Team via email on August 4th.

Action: Please send all nominations for the Ag Modeling Team to Tom Butler (butler.tom01@epa.gov) by COB Thursday, September 15th, including the following information: name of nominee, CV/resume, and [conflict of interest form](#).

Action: Please reach out to Peter Claggett (pclagget@chesapeakebay.net) with any questions or feedback on the LUWG ag-related GIT funding project. Q&A is included in the meeting minutes.

Introduction

- 10:00 **Welcome, introductions, roll-call, review meeting minutes** Workgroup 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 July AgWG call

CBP Assignments/Data & Modeling

- 10:05 **Moving Forward: Addressing Ag Inputs in Phase 7 (25 min)** Tom Butler
- Tom Butler, EPA, reviewed the approved charge for the Agricultural Modeling Team that will address agricultural inputs needs for Phase 7 Watershed Model development and what comes next as far as determining membership and timelines into the future.

Decision: The AgWG approved the charge of the Ag Modeling Team via email on August 4th.

Action: Please send all nominations for the Ag Modeling Team to Tom Butler (butler.tom01@epa.gov) by COB Thursday, September 15th, including the following information: name of nominee, CV/resume, and [conflict of interest form](#).

10:30 **New Business & Announcements (15 min)**

- **Fertilizer Data Concerns**
 - In the process of meeting with individual jurisdictions about their fertilizer data and working on comparing each states' data with the AAPFCO data to identify any differences. Group meeting with all jurisdictions is forthcoming.
- **[PA Cover Crop Pilot Study](#)**
 - Update on Cover Crop Enhancement Project described by Penn State for July AgWG call
- **Accounting for Forage Acres**
 - Update in September on progress on July questions regarding representation of forage acres in CAST land uses
- **State Ag Leadership Letter to EPA**
 - Leaders DE, MD, PA, VA, WVA submitted a letter to EPA Region III describing concerns stemming from review of CAST-21. Letter posted [here](#).

- **Crediting NRCS Practices**
 - The WTWG requested more guidance on crediting certain NRCS practices the AgWG previously endorsed for inclusion in the Phase 6 NEIEN appendix (see [Aug WTWG calendar page](#)). Discussion tentatively scheduled for September 15 AgWG meeting.
- **August 25, 2022, 3:00p ET – Impact of Cover Crops on Nitrogen and Phosphorus Dynamics Webinar**
 - Cover crops and reduced tillage practices affect nutrient and sediment losses from croplands and, as a result, impact water quality. NRCS and the University of Maryland's Wye Research and Education Center (WyeREC) have partnered to improve accuracy in measuring these conservation outcomes through USDA's Conservation Effects Assessment Project (CEAP). In this Conservation Outcomes webinar, Dr. Staver will discuss key findings from his research on cover crop systems that achieve multiple objectives, including reducing nutrient losses from croplands.
 - *Presenter:* Dr. Kenneth Staver, UMD
 - No registration required. Access webinar [here](#).
- **Article:** Addressing conservation practice limitations and trade-offs for reducing phosphorus loss from agricultural fields: <https://access.onlinelibrary.wiley.com/doi/10.1002/ael2.20084>
- **Principals' Staff Committee (PSC) Meeting to Discuss CAST-2021 – Monday, Aug 29th from 1:00 to 3:00 PM**
 - Agenda forthcoming.
- **[New study shows importance of streambank erosion and floodplain deposition on sediment, phosphorus, and nitrogen sources and transport in the Chesapeake watershed | U.S. Geological Survey \(usgs.gov\)](#)**
 - The USGS just released an article on the amount of sediment and attached nutrients being trapped through floodplain accretion and lost through erosion of streambanks. Statistical models were developed to extrapolate these rates to all non-tidal streams to better understand the importance of stream geomorphic change to sediment and nutrient transport through the watershed to the Bay.
 - Contact: Greg Noe (gnoe@usgs.gov)
- **Animal Mortality Expert Panel Technical Appendix**
 - Most recent draft technical appendix available [here](#)- CBPO working through revisions based on feedback. Date for next WTWG discussion TBD.
 - Contact Jeremy Hanson (hansonj@chesapeake.org) with questions/comments.
- **ASA, CSSA & SSSA International Annual Meeting: Nov 6-9**
 - Baltimore, Maryland
 - More information here: <https://www.acsmeetings.org/>
 - July 12 – Abstract submission deadline
 - Oct 3 - Early registration deadline
 - October 14 – Standard registration deadline
- **Pre-proposals due for Achieving Conservation Through Technology, Information, Outreach, and Networking (ACTION) – August 31, 2022**
 - The Foundation for Food & Agriculture Research and the Walton Family Foundation have an open call for pre-proposals for their program, Achieving Conservation Through Technology, Information, Outreach, and Networking (ACTION). They seek to fund projects that will compare strategies for building landowner willingness to adopt in-field, edge-of-field, and edge-of-stream conservation practices with follow-up implementation plans. The call closes on August 31st. Information can be found on their [website](#).

- The Conservation Drainage Network will hold its April 2023 national meeting on MD's Eastern Shore, likely in Easton. Look for more details to follow soon. Additional information about the organization's mission and objectives can be found on their [website](#).
- **National Fish and Wildlife Foundation (NFWF) Innovative Nutrient and Sediment Reduction Grant (INSR) Request for Proposals - late August.** Link TBD.
- **Other Announcements?** - send to Jackie Pickford (Pickford.Jacqueline@epa.gov) for inclusion in "Recap" email

10:45 **Ag-Related Goal Implementation Team (GIT) Funding Project Idea (10 min)** Peter Claggett
 Peter Claggett, USGS, reviewed a potential [GIT funding project](#) of the CBP's [Land Use Workgroup](#) that relates to improvements in mapping agricultural lands in the high-resolution land use/land cover dataset. He gave a brief overview of the project and asked the AgWG for feedback.

Project Description: Develop methods to improve the mapping of agricultural field boundaries and to differentiate pasture from hay based on spectral and other remotely sensed properties. Field boundaries are difficult to discern, particularly in the western portion of the watershed where fields and fallow land are adjacent and intertwined. This project would help improve the accuracy of the agricultural data informing the Bay TMDL and related partnership efforts to reduce nutrient pollution.

Discussion

Olivia Devereux (in chat): @Peter, do you have information on the amount of open space that could potentially be confused with pasture/hay? What about turfgrass compared to open space? It seems like all low lying vegetation in open areas could be confusing from the imagery.

Peter Claggett: According to the Census of Agriculture- in all 206 counties in the Bay model domain, there are 5.85 million acres of pasture + hay. In this same area, we map 7.52 million acres, an overestimate of 1.67 million acres (if the Census is accurate). In the 2013 CAST pre-BMP land use data, there are 6.02 million acres of Pasture+Hay+AgOpenSpace. About 5% of this is ag open space, 46% pasture, and 49% hay. The reason that CAST does not also have a 28% overestimate of pasture/hay is because it represents a blend Census and mapped acres. Assuming the Census is accurate, as we transition to a pure mapped representation of land use for Phase 7, there is the possibility of significantly overestimating pasture and hay acres if we don't improve the mapping accuracy of these classes. AgOpenSpace is less of a concern because it is such a minor percentage of the total.

Kathy Boomer (in chat): Does turf grass include sod farms?

Peter Claggett: We currently classify and map sod farms as cropland.

Olivia Devereux (in chat): Turfgrass is an urban land use and not sod farms.

Peter Claggett: Correct. We map sod farms as cropland.

Kathy Boomer (in chat): So the GIS analysis captures sod farms as croplands and not herbaceous acres?

Peter Claggett: The land cover data capture sod farms as "herbaceous" and the land use/cover data capture them as cropland-herbaceous.

Greg Albrecht (in chat): Tricky (maybe dopey) question....fence posts do appear on aerial imagery (helps if sunny when captured). Machine learning opp?

Peter Claggett: Yes- it may be possible for machine learning to pick up on this nuance of pastures if fence posts are consistently detected in the imagery.

Olivia Devereux (in chat): The Ag Modeling Team and Land Use WG may advise that pasture and hay be a combined land use in Phase 7.

Peter Claggett: Yes- this is a possibility but one that we may be able to avoid with this project.

Dave Montali (in chat): if you improve, will you be able to backcast to 1995?

Peter Claggett: We can and will backcast the data in a general sense. For example, if we map a herbaceous area as “pasture” in 2021, we will backcast it as “pasture” to previous years if it remains herbaceous in the imagery back to 1995. However, if it was always herbaceous and used for cropland for 10 years, then hay for 10 years, and then pasture for the pasture for 7 years, we may have no way of knowing this except for NASS reporting and possibly from USGS’ LCMAP data. USGS will begin the backcasting process later this year and will investigate this challenge in more detail.

Mark Dubin: I’m supportive of better data quality for pasture/hay land. Commodity cover crop data quality is usually high. Data quality for pasture/hay is not. Looking at the livestock operations - there are a lot of abandoned or converted facilities. So we should be mindful of that with the imagery.

Peter Claggett: Abandoned facilities have been brought up before. We’re not proposing to map animal operations to count animals, but to help distribute the animals and manure that are currently only distributed generally across land in the watershed model.

Mark Dubin: That would be an improvement. I do see discrepancies in the number of operations that NASS reports (typically reporting much higher than what is on the ground).

Action: Please reach out to Peter Claggett (pclagget@chesapeakebay.net) with any questions or feedback on the LUWG ag-related GIT funding project. The Q&A is included in the minutes.

10:55 **Review of Action and Decision Items (5 min)**

11:00 **Adjourn**

Next Meeting:

Thursday, September 15: 10AM-12PM, Call-in Zoom

Meeting Chat

From Greg Albrecht (NYS AGM) to Everyone 10:19 AM

Northeast Region CCA Conference, Syracuse, NY: Nov. 29-30 (<https://www.nysaba.com/educational-meetings>).

Probably not a major conflict for the CAST 2-day session, but posting just in case.

From Thomas Butler to Everyone 10:20 AM

Thank you Greg, this is good to know. We will try to work around it.

From Olivia Devereux to Everyone 10:54 AM

@Peter, do you have information on the amount of open space that could potentially be confused with pasture/hay? What about turfgrass compared to open space? It seems like all low lying vegetation in open areas could be confusing from the imagery.

From Kathy Boomer to Everyone 10:57 AM

does turf grass include sod farms?

From Olivia Devereux to Everyone 10:58 AM

Turfgrass is an urban land use and not sod farms.

From Kathy Boomer to Everyone 10:59 AM

So the GIS analysis captures sod farms as croplands and not herbaceous acres?

From Greg Albrecht (NYS AGM) to Everyone 10:59 AM

Tricky (maybe dopey) question....fence posts do appear on aerial imagery (helps if sunny when captured).

Machine learning opp?

From Olivia Devereux to Everyone 11:00 AM

The Ag Modeling Team and Land Use WG may advise that pasture and hay be a combined land use in Phase 7.

From Dave Montali to Everyone 11:01 AM

if you improve, will you be able to backcast to 1995?

From Greg Albrecht (NYS AGM) to Everyone 11:03 AM

Dave, good question, given image variation over time.

Participants

Jackie Pickford, CRC

Loretta Collins, UMD

Jeremy Daubert, VT

Kathy Braiser, PSU

Tom Butler, EPA

Peter Claggett, USGS

Tom Butler, EPA

Kristen Hughes Evans, NFWF

Ruth Cassilly, UMD/CBPO

Jeff Sweeney, EPA

Helen Golimsowki, Devereux Consulting, Inc.

Mark Dubin, UME/CBPO

Mark Nardi, USGS

Kathy Boomer, STAC/FFAR

Carlinton Wallace, ICPRB

Karl Blankenship, Bay Journal

Kristen Saacke Blunk, Headwaters LLC

Olivia Devereux, Devereux Consulting, Inc.

Cassie Davis, NYSDEC

Dave Montali, WV, Tetra Tech, MWG

Marel King, CBC

Clint Gill, DE

Elizabeth Hoffman, MD

Greg Albrecht, NY

Seth Mullins, VA

Cindy Shreve, WV

Jeff Hill, YCCD

Ken Staver, UMD

R.O. Britt, Smithfield Foods

Emily Dekar, USC

Tim Rosen, ShoreRivers

Tyler Groh, Penn State

Gurpal Toor, UMD

***Common Abbreviations**

AgWG- [Agriculture Workgroup](#)

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 and myriad contractors and grantees working towards CBP goals)

CBW- Chesapeake Bay Watershed

CRC- [Chesapeake Research Consortium](#)

EPA- [United States] Environmental Protection Agency

NEIEN- National Environmental Information Exchange Network

NFWF- [National Fish and Wildlife Foundation](#)

PA DEP- Pennsylvania Department of Environmental Protection

STAC- Scientific & Technical Advisory Committee

WQGIT- [Water Quality Goal Implementation Team](#)

WTWG- [Watershed Technical Workgroup](#)

UMCES- University of Maryland Center for Environmental Science

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*