

BMP Verification Ad-Hoc Action Team

Meeting Minutes

March 11th, 2022

9:00 AM – 11:00 AM

Meeting materials: [link](#)

Summary of Actions and Decisions

Decision: The BMPVAHAT approved the [February meeting minutes](#).

Action: Please complete [this poll](#) by **COB Monday, March 28th** to indicate your preference on meeting frequency and adjourning the group moving forward. (*Note: If your organization does not allow the use of Google Forms, please contact Jackie at pickford.jacqueline@epa.gov*).

Action: Reach out to Marcie Dunn and Andrew Kling (marcie.dunn@usda.gov; andrew.kling@usda.gov) with any additional questions or comments about their presentation on the NRCS/USDA-ARS remote sensing pilot project.

Action: Reach out to Katie Walker (kwalker@chesapeakeconservancy.org) with any additional questions or comments about her presentation on the Chesapeake Conservancy's remote sensing projects.

Action: Jackie Pickford will reach out to the members who voted "HOLD" for partial credit to set up a meeting to discuss potential compromises or modifications of the proposal as an additional attempt to reach consensus.

9:00 Welcome, Introductions, Roll Call, *Elliott Kellner, Chair*

- Welcome & Roll Call of participants
- **Decision:** The BMPVAHAT approved the [February meeting minutes](#).
- **Announcement:** Wetland BMP Credit Duration Recommendation, *Vanessa Van Note, Coordinator*
 - Vanessa presented the BMPVAHAT feedback on the Wetland BMP credit duration recommendation to the Wetlands WG. Still waiting for follow up / comment response.
- **Announcement:** Meeting frequency and sunseting of the group, *Elliott Kellner, Chair*
 - **Action:** Please complete [this poll](#) by **COB Monday, March 28th** to indicate your preference on meeting frequency and adjourning the group moving forward. (*Note: If your organization does not allow the use of Google Forms, please contact Jackie at pickford.jacqueline@epa.gov*).
 - *Note:* Prior to sunseting this group, the leadership will compile a comprehensive report of the proceedings of the BMPVAHAT for review, feedback, and approval from the membership. Once approved, it will be presented to the WQGIT.
- **Next Meeting:** Friday, April 8th from 9:00 - 11:00 AM.

9:10 NRCS Remote Sensing Pilot Project in Pennsylvania, *Marcie Dunn and Andrew Kling, USGS/USDA-ARS (50 min)*.

In an effort to assist the Commonwealth of Pennsylvania to receive additional credit for applied agricultural conservation practices, Pennsylvania Natural Resources Conservation Service (NRCS) and the Pennsylvania Department of Environmental Protection (DEP) undertook a joint proof of concept pilot project. The concept tested was to determine if remote sensing imagery could be utilized to identify and inventory conservation practices and if their associated attributes can also be collected using these methods. The secondary benefit of the pilot will be the development of a baseline inventory of conservation practices applied in the Pennsylvania portion of the Potomac River Watershed. Marcie and Andrew gave an overview of this pilot project and described how it was completed.

Discussion

Leon Tillman: How much of the data used is/was publicly available? Do you see this being a potential avenue for jurisdictions to be able to identify practices for verification?

Marcie Dunn: The data itself is protected by 1619, so we have it but it is not publicly available. The empty database structure is available, but not the data. However, a lot of the aerial photography is publicly available, but the CLU data (that shows farm boundaries) is not.

Andrew Kling: So a local entity could update the database, build it to their needs, change attributes and practices, and source their own imagery to run this themselves.

Dana York: When you counted the practices, did they meet NRCS standards?

Marcie Dunn: There's no way to know from aerial imagery. We can't be sure unless they go into the field.

Dana York: How do we know if they're farmer applied or past NRCS practices still in existence?

Marcie Dunn: We don't know.

Dana York: What time of year was this imagery taken?

Marcie Dunn: We used NAIP imagery which means it was taken with leaf-on. In some cases we use digital globe imagery that isn't available to everyone but is updated monthly, sometimes weekly.

Dana York: Did you create documents to train GIS people to recognize signatures on the ground?

Marcie Dunn: We did not create those. We did offer an optional virtual class on remote sensing.

Dana York: Beyond you all, did any other NRCS staff have a feel for why there was such a large number that might appear on farms but not on the tool?

Marcie Dunn: We did not get a good understanding of why that was.

Andrew Kling: It could be that our internal NRCS business tools were specifically built to deal with our NRCS programs, so anything outside of that would not have been captured.

Dana York: I've always thought that there were more practices on the ground than what is being captured, so this seems like a good way to identify where they are. And the next step would be getting a field team to go verify them.

Joe Sweeney (in chat): What was the budget for this and was there any consideration/use of Lidar for the BMP verification?

Andrew Kling: I think the total was about \$400,000. A lot of that went to getting the database built and up and running, doing initial collection and field verification, etc. Now that the procedures and database is built, all they would need to do is update the database, source aerial data, and fund staff for field verification, so it would be a lot less than that initial cost.

Marcie Dunn: Some people did use the Lidar data, but not everyone. It's definitely a good option.

Lisa Beatty (in chat): Did this presentation include lessons learned from the tetra tech follow up?

Marcie Dunn: This presentation did not, but we have reports if you're interested we can share them.

Alex Echols (in chat): There are many conservation practices that will never show up in remote sensing. A good example is precision nutrient application. We are working with a TSP custom applicator who is reducing nutrient application by 40% on most farms. Can there be a mechanism to capture this in the scoring some day?

Marcie Dunn: Not that I'm aware of. For cover crops, we did try to look at FSA data and cover crop surveys but we couldn't get an accurate feel.

Alex Echols (IN CHAT): If you use TSP that is a legitimate third party verification. Can we build a mechanism to do that?

Alana Hartman (in chat): USGS recently reported on a remote sensing cover crop data at a Bay WG meeting.

Leon Tillman: The national ag census is starting a pilot where producers can report bmp implementation in a future census.

Marcie Dunn: Do you know if it would ask about if it's federally funded or voluntary?

Leon Tillman: I'm not sure.

Alex Echols (in chat): Most custom application has nothing to do with government incentive. Market is very powerful and we should figure out how to use it.

Marcie Dunn: When they went out and did field verification, the majority of customers had no issues with them looking at their practices on their land.

Action: Reach out to Marcie Dunn and Andrew Kling (marcie.dunn@usda.gov; andrew.kling@usda.gov) with any additional questions or comments about their presentation on the NRCS/USDA-ARS remote sensing pilot project.

10:00 **Remote Sensing Discussion, Katie Walker, Chesapeake Conservancy (50 min.)**

Watershed planning and project reporting are key aspects of accomplishing nutrient and sediment reduction goals. Chesapeake Conservancy has been exploring ways to utilize remote sensing and other geospatial technologies to support BMP Verification. This presentation provided context for previous efforts and discussed possible opportunities for moving these conversations forward.

Discussion

Elliott Kellner: For jurisdictional representatives, how many of you considered remote sensing methods for verification?

Lisa Beatty: PA has.

Elizabeth Hoffman: MD has as well, we've utilized it for cover crops already.

Elliott Kellner: Have you considered applying it to structural BMPs?

Elizabeth Hoffman: We have for certain practices like buffers, but we haven't really had the challenge of location. We're still considering it in conjunction with other data access.

Jennifer Walls (in chat): DE is open to further exploring remote sensing as a tool and will likely be looking at it further.

Action: Reach out to Katie Walker (kwalker@chesapeakeconservancy.org) with any additional questions or comments about her presentation on the Chesapeake Conservancy's remote sensing projects.

10:50 **Partial Credit Update**, Vanessa Van Note, EPA (10 min.)

In February, the BMPVAHAT did not reach consensus on approving the recommendation for partial credit of federally funded BMPs (see official votes and rationale [here](#)).

Vanessa brought the issue to the WQGIT leadership and sought feedback on next steps. The WQGIT leadership recommended an additional attempt to reach consensus by meeting with the members who voted "HOLD" to discuss potential compromises or modifications of the proposal. If consensus is not reached after this additional attempt, the issue will be elevated to the WQGIT. Vanessa also discussed the group's desire to elevate the conversation of access to federal data. The WQGIT leadership indicated that these discussions would not take place until after the pilot projects in PA and VA come to a close.

Action: Jackie Pickford will reach out to the members who voted "HOLD" for partial credit to set up a meeting to discuss potential compromises or modifications of the proposal as an additional attempt to reach consensus.

11:00 **Adjourn**

Meeting Chat

From Joe Sweeney to Everyone 09:44 AM

What was the budget for this and was there any consideration/use of Lidar for any of the BMP verification?

From Lisa Beatty, PA DEP to Everyone 09:45 AM

Did this presentation include lessons learned from the tetra tech follow up report?

From Alex Echols to Everyone 09:55 AM

There are many conservation practices that will never show up in remote sensing. A good example, is precision nutrient application. We are working with a TSP custom applicator who is reducing nutrient application by 40% on most farms. Can there be a mechanism to capture this in the scoring some day?

If you use a TSP that is a legitimate third party verification. Can we build a mechanism to sue that

From Alana Hartman, WVDEP to Everyone 09:55 AM

USGS recently reported on a remote sensing cover crop data at a Bay workgroup meeting. Must not have been this group.

From Alex Echols to Everyone 09:57 AM

Most custom application has nothing to do with any government incentive

Market is very powerful and we should figure out how to use it

From Katie Walker to Everyone 09:58 AM

Dean Hively presented at this group's last meeting.

From Andrew.Kling to Everyone 10:17 AM

Elliott I was able to locate the cost breakdown and new project estimate if you would like to review it.

From Me to Everyone 10:24 AM

Andrew - If you send it to me I can include it in the meeting minutes. Thanks!

From Jennifer.Walls to Everyone 10:30 AM

Delaware is open to further exploring remote sensing as a tool and will likely be looking at it further

Participants

Jackie Pickford, CRC

Vanessa Van Note, EPA

Elliott Kellner, WVU

Jennifer Walls, DNREC
Clare Sevcik, DE DNREC
Suzanne Trevena, EPA
Dana York, Green Earth Connection
Clint Gill, DDA
Jon Duncan, Penn State University
Katie Walker, Chesapeake Conservancy
Helen Golimowski, Devereux Consulting
Mark Dubin, UME/CBPO
Leon Tillman, USDA-NRCS
Jennifer Starr, LGAC
Andy Kling NRCS
Alex Echols, Keith Campbell Foundation for the Environment
Alana Hartman, WVDEP
Marci Dunn, USDA - NRCS
Joe Sweeney, Water Science Institute
Emily Dekar, Upper Susquehanna Coalition
Elizabeth Hoffman, MDA
Katie Brownson, USFS
Cassie Davis, NYS DEC
Curt Dell, USDA-ARS, University Park, PA
Jessica Rodriguez, DoD CBP
Adrienne Kotula, CBC
Tony Anastasi
Lisa Beatty, PA DEP
Norm Goulet, USWG, NVRC
Sally Claggett, USFS
KC Filippino, LUWG, HRPDC
Rebecca Hanmer, FWG
Jeff Sweeney, EPA
Loretta Collins, UMD/CBPO - AgWG Coordinator
Matt Ehrhart, Stroud Water Research Center
Ruth Cassilly, UMD