



**Chesapeake Bay Program**  
**Watershed Technical Workgroup (WTWG)**  
**Meeting Minutes**  
Thursday, February 3, 2022  
10:00 AM to 12:00 PM  
**Calendar Page:** [Link](#)

**Summary of Actions and Decisions**

**Decision:** WTWG approved the January meeting minutes as long as VA's suggested correction is incorporated.

**Action:** WTWG leadership will make sure that the minutes and presentation accurately show that Nutrient Management and Cover Crops can be on the same acre. (*post-meeting note:* the presentation on excess states this so the clarification is not needed).

**Action:** Cassandra Davis will send Norm Goulet septic information and map of street sweeping excess at the Land River Segment. A slide will be added to today's presentation on excess.

**Action:** Cassandra Davis and Vanessa Van Note will follow up with James Martin on practices being reported at different scales. If possible, this will be presented at the March WTWG meeting.

**Action:** Vanessa Van Note and Cassandra Davis will follow up with PA regarding questions related to land use error rates for each county within PA portion of the Chesapeake Bay Watershed.

**Action:** WTWG will revisit CAST land uses and the ag census at a future WTWG meeting.

**Action:** WTWG will make a recommendation to use Cropland Idle in place of wild hay harvested area for the Phase 7 Model update.

**Agenda**

10:00 AM – **Introductions and Announcements** – Cassandra Davis, NYSDEC

- Approval of January Meeting Minutes – Cassandra Davis, NYSDEC
  - *Correction from Bill Keeling: page 4- "we do not need rotations to do a what if scenario down the road (related to Phase 7)."*
  - **Decision:** WTWG approved the January meeting minutes if the correction to page 4 is made.
- [WQGIT will be discussing CAST 2021](#) on February 14, 2022
- 2021 Progress Schedule Reminders – Vanessa Van Note, EPA
  - *Chris Brosch:* The calls have been valuable. Can you describe what the documentation looks like?
  - *Vanessa Van Note:* Basically, the follow up email I sent in December was moved into a word document and under each practice we added a description from the January and December meeting and the graphs and any questions that we didn't get to in our meetings.
  - *James Martin:* I appreciate the desire to document the whole process, and in the document, I think it might be helpful if we could differentiate issues that have been resolved from issues that remain.

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- *Vanessa Van Note*: we've color coded each question and included comments where outstanding issues remain. We can also add a "cover page" that lists the questions that still need to be addressed. We also welcome comments to improve this moving forward.
- *Lisa Beatty*: The document we sent you- if you could just put if it was resolved in blue font next to our comments that would be helpful.
- Update on the Ag Mortality Report – Jeremy Hanson, CRC
  - *Jeremy Hanson* was unable to make it this morning. This update will be pushed another month with tentative approval sought in April.
- Other announcements
  - *Helen Golimowski*: the next CAST webinar will be on stream restoration at noon on February 17<sup>th</sup>.

**10:15 AM – Cutoff Discussion** – Cassandra Davis, NYSDEC

Cassie will provide an update on how cutoff affected 2020 Progress, the steps jurisdictions can take to reduce cutoff and discuss modeling options to address cutoff when either the baseline is underrepresented and/ or BMPs are over prescribed.

**Discussion:**

*Emily Dekar*: do the remaining 30 acres still show up in the summary report? Or are they removed from that calculation as well?

*Cassie Davis*: the excess would show up in the summary report and would be in the "excess column"

*Olivia Devereux*: The excess and the amount credited is all in the "credited vs. submitted" report.

*James Martin*: Does anyone report practices at the LRS (land- river segment)?

*Cassie Davis*: yes, jurisdictions do, they all get proportioned down to the LRS in the model.

*Bill Keeling*: so that means in VA, coordinate pairs get plotted to the land river segment.

*Chris Brosch*: How do AUs (animal units) and the land in production areas correlate? Is there an interaction with the simulated area and AUs?

*Cassie Davis*: the only thing I can think of is the feed lot space would be the only place where AUs would influence the land use.

*Chris Brosch*: feed lot BMPs would not apply to AUs?

*Jess Rigelman*: yes, those are acres. If you report them as AUs we convert them to acres. Animal BMPs are converted to AUs. If you report them based on the animal type it is applied to, we will take those AUs and acres into account, but it really depends on the BMPs. Technically there should be enough animals to account for that.

*Lisa Beatty*: I thought Nutrient Management (NM) and cover crops can be on the same acreage as they are 2 separate BMPs.

*Olivia Devereux*: Yes, those BMPs can be on the same acre, and one would not conflict with crediting of the other.

*Lisa Beatty*: Thank you. It was said that NM and cover crops could not be on the same acres. Please clarify that in the actual meeting minutes instead of being in the attached chat since it is a very important distinction.

*Greg Sandi*: Are BMPs applied to double cropped areas? Does NM and other BMPs contribute to reducing loads from more than one crop on the same acres?

*Olivia Devereux*: Double cropped land use is treated the same way.

*James Martin*: Outside the watershed? (referring to the Scale Jurisdiction Reported BMPs in 2020 slide)

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*Cassie Davis:* from my understanding it occurs only once in the model and its any land segments outside of the watershed are included in excess. Anything within the LRS that is exceeding is included in excess.

*Chris Brosch:* that will conflate reasons that BMPS are not being included in the simulation. That is a problem.

*Jess Rigelman:* I am not sure I understand your point. The geography is 100% within the watershed or includes the whole county and the excess is determined at the LRS scale. If you were to report a BMP on county CBW only, then none of that BMP would be applied outside the watershed. If you proportioned on the entire county then it would be proportioned to the entire county. Excess won't happen in two places it will only happen on the individual LRS and if it's in or out of the watershed.

*James Martin:* So, it's not that the entirety of what's outside the watershed is considered excess. If there is excess in the data outside the watershed, and that's excess as defined as we've been defining it- no available land use to apply the practice- then it's also in excess.

*Jess Rigelman:* basically excess is determined by the LRS scale. It's just whether or not that LRS is in the watershed or outside the watershed.

*James Martin:* I think there would be value in reporting all of the practices that are outside the watershed. If a jurisdiction reports 100 units in the state and 60 units are in and 40 units are outside the watershed, I think there is value to seeing that information. I don't think that piece is visible now.

*Jess Rigelman:* it is visible in the submitted vs. credited report. If you were to do it by the LRS there is a report at the county scale that allows you to choose county within and out of the watershed. That sort of information is there if you get everything. We don't have a state in and state out of watershed geography, but we do have it by LRS and County.

*James Martin:* I think the whole outside of the watershed thing being part of the process is what confuses me. Do we simulate outside the watershed?

*Jess Rigelman:* yes, we do because all the crop and manure is done for the full county.

James Martin: the only time is that it will be confusing is anytime you look at a report that includes out of watershed.

*Jess Rigelman:* Yes, but in your example, if you did 40 out and 60 in, if you did only in then you will only see those 60 acres because that is not part of your report.

*James Martin:* if you were trying to correlate everything back to the data that the states reported and you ran a state scale to see that total, you wouldn't know how much is being credited in the watershed.

*Jess Rigelman:* I would encourage to look at the county level one and if you think that is useful, we could add something like that at the state scale as well.

*Bill Keeling:* VA DCR provides HUC12 so only Bay HUCs are sent up via NEIEN (referencing mapped examples of BMPs in the presentation starting with Upland BMPs)

*Norm Goulet:* do you have maps for all the excess? I am curious how we are running out of roads.

*Cassie Davis:* yes, we have a slide for the stormwater practices. Some of them have upwards of 12,000 acres of stormwater being backed out. Most of these are reported at the LRS. I was wondering if center points for counties were being used if exact coordinates are unknown. I am not sure if that is what is occurring.

*Norm Goulet:* this brings up a question- if we report at the lat / long and then have a combination of smeared BMPs at a small county level we could see excess urban BMPs because we have a mix of those two. (referring to the Stormwater Practices slide)

*Lisa Beatty:* PA has a county where about 500 animals are on a ½ acre of land.

*Vanessa Van Note:* are suggesting reporting AUs as percentage?

*Lisa Beatty:* I think it might be a deeper conversation that can occur offline. All our reporting is in AUs, would we have to convert everything to percentages?

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*Cassie Davis:* you can submit the percent of animals in the Watershed and outside of it?

*Olivia Devereux:* that is correct. That is the source data and not reporting BMPs. Let's say you have a million animals in a particular county that is  $\frac{1}{2}$  in and  $\frac{1}{2}$  out of the watershed but we know all 1 million animals are in the watershed. You can tell us that and we will put 100% in CBWS and 0% outside. When you report a BMP if specify CBWS only it will be a more accurate calculation. Alternatively, you can report the BMP at the county scale without specifying if its CBWS only or not. If we don't know the fraction within or without the watershed it gets distributed by the land use. What Cassie was discussing was related to source data and not related to the reporting of the BMP.

*Lisa Beatty:* it sounds like a path forward, but maybe having a deeper dive would be helpful. Do you have a timeline for this? Is this a model update or an annual reporting timeframe of when we can do it?

*Jess Rigelman:* for the source data we can update it every 2 years.

*Lisa Beatty:* is it possible to get this straightened out for CAST 2021 then?

*Jess Rigelman:* no, that deadline has been past, but it could be done for CAST 2023.

*Norm Goulet:* some of these are going to be long term fixes. I loved the graph because it really illustrated the problem with septic.

*Lisa Beatty:* I just also want to bring up that this issue has been brought up many times over the course of 2020-22. I think it would be considerate to include this in 2021.

*Cassie Davis:* the new things in this presentation are avoiding the coordinate center points, etc.

*Norm Goulet:* Lisa, some of these issues have been discussed for a decade.

*Jeff Sweeney:* I've been talking about cutoff with the group for 15 years, since Phase 4 of the model. We've never given more than 100% implementation in the domain where the BMPs model.

*Lisa Beatty:* It's difficult if it isn't mapped to see the information. Was this information provided before so that we could fix it.

*Jeff Sweeney:* the point of CAST is to provide the data to you so that you can use it. There are some intricacies hear that I didn't realize. What do you want changed in 2021? Most of the recommendations listed are on the states.

*Norm Goulet:* this discussion is great but it's useless at this level. It needs to be brought up at the GIT and MB level.

*James Martin:* I don't think we've had the full discussion yet. I noticed when I looked at your state tables that most states in cutoff are reported in multiple scales and that piece of the equation hasn't been discussed yet. I think looking at that would be helpful. In my view, cutoff shouldn't happen unless it happens at the scale it was reported unless there is no land use available in that county.

*Alana Hartman:* Jeff said that one slide has recommendations for states. We raised this issue last progress period, and we don't have a solution. I thought in a previous presentation and email, I thought scale was on the table to alleviate some of the problem. Since we can't update the base condition, we don't have better data except the Ag Census

*Cassie Davis:* what I don't want to happen is us to say to implement in some LRS and not in others.

*Dave Montali:* we have issues with cutoff on different fronts. When it comes to commodity cover crops the issue becomes that there is not enough small grain and double crop land to accommodate the commodity cover crops. There is the ag census and there is the rule that commodity cover crops can only go on certain land, so it puts us in a rock and a hard space. One county we are losing  $\frac{1}{2}$  and in the other we are losing  $\frac{1}{3}$  of what we are reporting. We could be disingenuous, but that doesn't feel right. (Reporting) at the next highest scale might help, but I don't think we would want that to happen to some of the other BMPs.

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**Action:** Cassandra Davis will send Norm Goulet septic information and map of street sweeping excess at the Land River Segment. A slide will be added to today's presentation on excess.

**Action:** Cassandra Davis and Vanessa Van Note will follow up with James Martin on practices being reported at different scales. If possible, this will be presented at the March WTWG meeting.

**Action:** Vanessa Van Note and Cassandra Davis will follow up with PA regarding questions related to land use error rates for each county within PA portion of the Chesapeake Bay Watershed.

**11:00 AM – CAST Land Uses and the Ag Census** – Leon Tillman, NRCS, Tony Dorn, NASS, and Vanessa Van Note, EPA- CBPO

Leon Tillman and Tony Dorn will discuss how USDA captures or does not capture Ag Open Space in the Ag Census.

**Discussion:**

*Olivia Devereux:* I am not sure I followed who is reporting idle crop land. I got a little lost with that.

*Tony Dorn:* if hay or wild hay is harvested for a farming operation, it's included as part of the cropland. If hay/ wild hay is not harvested, then it's included in idle cropland.

*Olivia Devereux:* do you remember where idle cropland is mapped?

*Jess Rigelman:* I will look it up and put it in the chat.

*Vanessa Van Note:* the ag census removed the wild hay category in 2017, now it goes to which category?

*Leon Tillman:* Tony, correct me if I am wrong, it's grouped with other hay in ag census.

*Loretta Collin:* I heard you say that farmers/ producers when they get the ag census is reflective of the year it was done. The person filling out the survey is saying I harvested it or didn't and depending on the choice they are either putting it in cropland or idle cropland.

*Vanessa Van Note:* would cropland idle be more appropriate for ag open space?

*Olivia Devereux:* our understanding is that wild hay was grown on its own and basically a transitional land use. But it sounds like it's not quite what it is for the farmer.

*Tony Dorn:* when acreage is included as hay it just means it was harvested.

*Olivia Devereux:* are they managing it anyway?

*Tony Dorn:* it depends on the region I would imagine.

*Mark Dubin:* if I remember correctly, you are basically dividing out cropland that was and wasn't harvested that year and then you are breaking down the cropland that was harvested. So the unharvested land could have multiple reason as to why that was the case.

*Olivia Devereux:* what if I plant a crop and fertilizer it, then we have drought and it's never harvested. Normally it would be unharvested cropland.

*Leon Tillman:* in the appendix, there is one of failed cropland. Essentially Tony, as it pertains to some of these buffer areas it would not fall under the hay category, correct?

*Tony Dorn:* correct.

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*Vanessa Van Note:* just as a reminder, we are talking about this to better understand how ag open space is developed in CAST. This is important for the land use change. Do you feel, Leon, when they are outperforming the Ag Census are they documenting grass buffers in one of these categories?

*Leon Tillman:* It would depend upon the producer and what that field's management or use is. From the land retirement and conservation reserve program, that is looked at as cropland retired. There are some that are not counted as hay. If they are going in and harvesting that hay, then it may be classified as hay.

*Tony Dorn:* under the cropland idle definition is acres that wasn't harvested or raised for hay.

Olivia: if a farmer has land in a CREP program, it would be crop to land conversion ag open space. Wild hay we put in ag open space but maybe shouldn't be in that category in the future.

*Leon Tillman:* that would be my recommendation for cropland idle. Are the buffers on pasture, is there exclusion to prevent them from being grazed?

*Leon Tillman:* Tony would that fall under cropland idle still? Or no?

*Tony Dorn:* if there was anything harvested during a year, then that falls under harvested cropland, if it's not harvested and just grazed then its pastureland.

*Leon Tillman:* if it wasn't pasture before 2017 and now it's a grass buffer that is not grazed

*Dave Montali:* yes, what ag census category would the farmer put that?

*Tony Dorn:* we are just using that reference year, so whatever happened during that year is what should be reported.

*Olivia Devereux:* If land is retired/ no longer being farmed, is it reported at all? Is there a situation where a farmer would leave out acres?

*Tony Dorn:* yes, there is land that is included like that.

*Leon Tillman:* isn't there an "other cropland" category as well?

*Tony Dorn:* yes.

*Marl Dubin:* from a personal standpoint, most of these producers are reporting to FSA, there is an incentive to report it NASS because you are also going to be reporting it to FSA

*Vanessa Van Note:* Olivia and Jess, what are your thoughts on this and any changes that we would need to make?

*Jess Rigelman:* if that is what the group decides, then we will make the change. I am not sure if we should change it in this version of the model since the whole model is calibrated to. We would need to bring in the Modeling WG.

*Olivia Devereux:* we could make a recommendation to include it in Phase 7, so we don't have to have this conversation again.

**Action:** WTWG will revisit CAST land uses and the ag census at a future WTWG meeting.

**Action:** WTWG will make a recommendation to use Cropland Idle in place of wild hay harvested area for the Phase 7 Model update.

**11:30 AM – Backout as it relates to Wetlands** – Vanessa Van Note, EPA- CBPO

Vanessa will provide a background on how wetlands base conditions are developed for CAST. A discussion on backout will follow.

*WTWG did not have time to get to this topic during the February call. It will be postponed till a later meeting.*

12:00 PM – *Meeting Adjourn*

**Webex Chat Summary:**

*Edited for clarity. Some of the chat is integrated into the meeting minutes above so there may be overlap.*

**from Emily Dekar - Upper Susquehanna Coalition to everyone: 10:19 AM**

Do the remaining 30 acres still show up in the Summary Reports? Or are they removed from that calculation as well?

**from James Martin, VA DCR to everyone: 10:20 AM**

Does anyone report practices at the LRSEG?

**from Olivia Devereux to everyone: 10:20 AM**

The excess and the amount credited is all in the Credited vs. Submitted report.

**from Brosch, Chris DDA to everyone: 10:22 AM**

How do AUs and the land in production areas correlate?

**from VVANNOTE to everyone: 10:24 AM**

(Unless Olivia, Jeff or Jess can answer) I am not sure how AUs may influence the land use. My understanding was outside of feeding space, they are handled independently.

**from Lisa Beatty, PA DEP to everyone: 10:25 AM**

I thought Nutrient Management and cover crops can be on the same acreage as they 2 separate BMPs

**from Olivia Devereux to everyone: 10:27 AM**

@Lisa, yes, those BMPs can be on the same acre and one would not conflict with crediting of the other.

**from Gregorio Sandi to everyone: 10:27 AM**

Are BMPs applied to double cropped areas? Does Nutrient Management and other BMPs contribute to reducing loads from more than one crop on the same acres?

**from Lisa Beatty, PA DEP to everyone: 10:28 AM**

Thank you. It was said that NM and cover crops could not be on the same acres. Please clarify that in the actual meeting minutes instead of being in the attached chat since it is a very important distinction.

**from Olivia Devereux to everyone: 10:28 AM**

@Greg, double cropped land use is treated the same way.

**from VVANNOTE to everyone: 10:29 AM**

Lisa, we will have Hilary do that and make the change in the presentation.

**from Bill Keeling to everyone: 10:41 AM**

DCR provides HUC12 so only Bay HUCs are sent up via NEIEN

**from Lisa Beatty, PA DEP to everyone: 10:46 AM**

What is the timeline for EPA CBPO to take a deeper dive into excess for each jurisdiction to "correct" some of the excess by changing to percent (especially animal units). We have a county where about 500 animals on 1/2 acre of land.

**from Jeff Sweeney to everyone: 10:47 AM**

Norm - For street sweeping, make sure what's being reported is NOT the distance travelled in a year X street width. It's the average footprint area, a snapshot in time.

**from VVANNOTE to everyone: 10:52 AM**

Lisa, are you referring to the animal fraction?

**from VVANNOTE to everyone: 10:53 AM**

Or, instead of submitting AUs, submit percentages?



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**from Norm Goulet to everyone: 11:00 AM**

Lisa, some of these issues have been discussed for a decade

**from Elizabeth Hoffman - MDA to everyone: 11:06 AM**

How will verification play into excess/cutoff - as we work towards 100% of some of these practices being field verified, it would be problematic to then say they aren't there. This may not be the place or time for that question but just wondering.

**from VVANNOTE to everyone: 11:07 AM**

Elizabeth, has MD run into the issue of practices that are confirmed to exist being cutoff?

**from Olivia Devereux to everyone: 11:08 AM**

@Elizabeth, if you verify, then it is highly unlikely that you will see any BMP not credited. That usually happens with incorrect reporting of data.

**from Elizabeth Hoffman - MDA to everyone: 11:09 AM**

We are not at that point of having looked at 100% but so I guess that will be a conversation when we get to that point.

**from Elizabeth Hoffman - MDA to everyone: 11:11 AM**

Verification has only improved data being reported, just thinking ahead.

**from VVANNOTE to everyone: 11:12 AM**

Thanks for the clarification!

**from Lisa Beatty, PA DEP to everyone: 11:13 AM**

Question from Ted Tesler: Ted Comment:

What is the numerically degree of uncertainty in regards of how and what cut off is applied in the model?

**from VVANNOTE to everyone: 11:13 AM**

@Lisa, does PA have animal fractions available to provide the Bay Program with to update the source data?

**from Lisa Beatty, PA DEP to everyone: 11:15 AM**

Also we submitted questions before the presentation that were not answered

**from Norm Goulet to everyone: 11:16 AM**

Just wondering if someone needs to revisit the conversation about using wall to wall instead of LU Change in CAST

**from Lisa Beatty, PA DEP to everyone: 11:18 AM**

We would like to see our questions explored in the next WTWG along with other issues raised by other jurisdictions and CBPO timeline path forward with solutions to address cutoff/excess issues.

**from Lisa Beatty, PA DEP to everyone: 11:22 AM**

I think discussing one particular county animals should be an offline discussion. We also had asked for numerical land use error rates for each county within the PA portion of the Chesapeake Bay and never received those numbers so that is why we were requesting error analysis.

**from VVANNOTE to everyone: 11:23 AM**

Lisa, can Ted forward me the request for land use error rates so I can get caught up on what was originally asked and what has been done since?

**from Lisa Beatty, PA DEP to everyone: 11:26 AM**

I have it in my notes from both the LUWG and WTWG and will forward you the dates it was discussed for a handful of counties.

Also may we have the meeting minutes from the Cut-Off/Excess discussion as soon as possible? We have county partners that are actively asking about this topic so we can provide them with answers and solutions.

**from Jessica Rigelman to everyone: 11:28 AM**



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crop = "cropland idle or used for cover crops or soil improvement but not harvested and not pastured or grazed"  
is mapped to the land use "Other Agronomic Crops"

**from VVANNOTE to everyone: 11:32 AM**

Lisa, that depends on Hilary's workload, but she will try to get them out as soon as possible.

***Next Meeting: March 3, 2022, from 10:00 to 12:00 PM***

**Call Participants**

Hilary Swartwood, CRC  
Vanessa Van Note, EPA  
Cassandra Davis, NYSDEC  
Leon Tillman, NRCS  
Tony Dorn, NASS  
Olivia Devereux, Devereux Consulting  
Emily Dekar, USC  
Elizabeth Hoffman, MDA  
Arianna Johns, VA DEQ  
Bill Keeling, VA DEQ  
Jessica Rodriguez, DoD  
Lisa Beatty, PA DEP  
James Martin, VA DCR  
Clint Gill, DNREC  
Karl Blakenship, Bay Journal  
Jeff Zimmerman, SRBC  
Loretta Collins, UMD/ AgWG  
Clare Sevcik, DNREC  
Norm Goulet, NOVA / USWG  
Mollee Dworkin, DNREC  
Marl Dubin, UMD  
Chris Brosch, DDA  
Helen Golimowski, Devereux Consulting  
Jordan Baker, HRG  
Jeff Sweeney, EPA- CBPO  
Greg Sandi, MDE  
John Maleri, DOEE  
KC Filippino, HRPDC  
Jackie Pickford, CRC  
Jess Rigelman, J7 Inc.  
Dave Montali, Tetra Tech (WV)  
Alana Hartman, WV DEP  
Ruth Cassilly, UMD

**Affiliation?**

Doug Hamilton,

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Kim Dagen,  
Victor Clark,