

CHESAPEAKE BAY PROGRAM
WATER QUALITY GOAL IMPLEMENTATION TEAM
FEBRUARY 14, 2022 CAST21 Webinar
Meeting Materials: [Link](#)

WEBEX CHAT SUMMARY:

from Jill Whitcomb to everyone: 1:08 PM

When will USWG provide feedback and recommendations?

from Normand Goulet to everyone: 1:09 PM

@Jill, hopefully March or April

from Jill Whitcomb to everyone: 1:09 PM

Thanks, Norm. How will it be built into the "test" phase of this beta-2 version?

from Normand Goulet to everyone: 1:10 PM

It will also depend upon if we want to look at this and combine with other fertilizer issues with nutrient management.

from Normand Goulet to everyone: 1:10 PM

I do not have an answer to that

from Ed Dunne to everyone: 1:12 PM

Does (reviewed) include all updates that are not missing data or errors?

from Olivia Devereux to everyone: 1:13 PM

@Ed, Yes, CAST-21 reviewed includes all other updates including new BMPs, updated BMP history, land use, and other source data.

from Jill Whitcomb to everyone: 1:14 PM

How are the Nutrient Inventories and Trends that was presented by Dr. Robert Sabo et. al to the Modeling Workgroup in January 2021 been incorporated into the determination that ag intensification is the reason for increased load? Nitrogen Use Efficiencies is important.

from Gary Shenk to everyone: 1:17 PM

@Jill - Agree that NUE is important: CAST loads decrease with increased uptake if fertilizer remains constant so NUE is represented in CAST. On the list for phase 7 is revisiting the relative importance of inputs and uptake.

from Jill Whitcomb to everyone: 1:19 PM

By "missed" you mean that the previous years' data carried forward and was not zero, correct?

from KC Filippino to everyone: 1:25 PM

How often is AAPFCO data updated or provided?

from Lee McDonnell to everyone: 1:27 PM

That data set is running about 5 years behind. Our most current update was the addition of 2015-2016 data.

from Brosch, Chris DDA to everyone: 1:28 PM

thanks Lee, that's helpful info. What was the most recent AAPFCO data year during Phase 6 development?

from Jill Whitcomb to everyone: 1:28 PM

If ag surplus is decreasing over time, how are baseline loads increasing?

from Jill Whitcomb to everyone: 1:28 PM

Ag Surplus = Legume + Animal Manure Applied + Atm Dep On Ag Land + Ag Fertilizer + Direct Deposited Manure - N Crop Removal

from Suchith Ravi to everyone: 1:29 PM

@Jill you are correct it's not zero, it means 2020 was a projection based on 1985-2019 data for broilers.

@Chris For CAST-19 most recent was 2014(VA was missing). CAST-21 it's 2016(all states)

from Jill Whitcomb to everyone: 1:34 PM

"Actual Rate" is misleading.

How can we review by 3/18 if USWG is only meeting on 3/15?

from Lindsay Thompson to everyone: 1:36 PM

Does the overall "bucket" of available organic and inorganic nutrients stay the same as available for application based on the fertilizer sales and manure generation data regardless of yield? UMD recommendation for nutrient management for corn is 1lb of N per 1bu of expected yield. We are seeing actual nutrient use efficiency closer to .7 in many cases.

from Dinorah Dalmasy to everyone: 1:37 PM

Lee, you said the "complete" package will be available this Friday, but will that include the corrections to the Urban fertilizer issue that will affect P loads? Look at the question from Jill above.

from Lee McDonnell to everyone: 1:38 PM

@ Chris - 2012 was the latest year that AAPFCO data was available for the development of the phase 6 model

from Bill Keeling to everyone: 1:42 PM

We saw a reduction of crop N and P need along with increased fertilizer inputs. How does need go down when yields are going up?

from Camille Liebnitzky to everyone: 1:43 PM

what about new farms started since 2019? Are these maybe hobby farmers that don't know the best practices? Quarantine had people at home and perhaps some started these crop farms and account for the increase in farms?

from Mark Nardi to everyone: 1:45 PM

Olivia - can you explain why the TN Actual Applies diverges from the yield line?

from Olivia Devereux to everyone: 1:47 PM

@Lindsay, the percent of crop lbs/ bushel/acre stays the same after 2016 (last year of AAPFCO data). The amount met by manure changes based on animal manure available and the rest is made up with from fertilizer. There is no fertilizer data, so there is no "bucket" or stock.

from Olivia Devereux to everyone: 1:48 PM

@Mark, the TN Actual diverges from the typical yield because yields have increased and the amount of manure and fertilizer have increased.

from Jill Whitcomb to everyone: 1:50 PM

More time would be necessary for review, regardless

from Mark Nardi to everyone: 1:51 PM

So why do they diverge? I'm assuming that the N fertilizer recommendation has stayed steady at 1lb per bushel of expected yield.

from Dinorah Dalmasy to everyone: 1:51 PM

Agree, more time will be needed to review the entire package

from James Martin, VA DCR to everyone: 1:53 PM

Slide 13 say 6 major crops yields were missing and that the change in crop need is constrained to those 6 crops from 2017 forward. Is this correct? What are the 6 crops that are affected?

from Jill Whitcomb to everyone: 1:55 PM

Where is AAPFCO data submission documented? I would like to know specifically what AAPFCO receives from states, and where states get the information

from James Martin, VA DCR to everyone: 1:56 PM

Good question Jill. I would like to run our use of the data by the original source/

from Leon Tillman to everyone: 1:57 PM

In using the land grant university application rates, have the universities updated their application recommendations based on improved use efficiencies since 2015/16, similar to what Lindsay was asking?

from Lindsay Thompson to everyone: 1:59 PM

@Leon - Can't speak for all but Maryland's university recommendations have not been updated in that timeframe.

from Leon Tillman to everyone: 2:01 PM

Thanks @Lindsay. I agree with considering the NUE

from Gregorio Sandi to everyone: 2:02 PM

Agree with Jill about having the time to properly review model changes. I would also like to go one step beyond and to recommend a new workshop or meetings on how to interpret AAPFCO data and reviewing previous decisions regarding distribution of fertilizer in general.

from Jill Whitcomb to everyone: 2:02 PM

Agree with Greg.

from Mike LaSala to everyone: 2:03 PM

I agree with Jill and Gregorio. It feels as if we are forcing a net zero balance by assuming available nutrients is fully applied through a singular approach...just having a tough time digesting this is the case with all the other factors known (and mentioned by others today).

from Gregorio Sandi to everyone: 2:12 PM

I think one of the hardest things we have going for us is that it's relatively easy to find new data for inputs, which cause these significant changes. What's harder is how we get information that helps to account for additional reductions outside of traditional BMP assumptions. Can this be a discussion that we follow up on to help determine why we see monitoring data that contradicts inputs impacts.

from Brosch, Chris DDA to everyone: 2:15 PM

@Greg, you're exactly right. We can't just blindly plug in new numbers from the same old sources without reassessing the methods. This is precisely what caused the critical letters from states during the last review RE: the non-farm fertilizer spread. Just like Ag Census, AAPFCO can be a good source with bad data. Ultimately, there may be some bad methods that only appear in extreme circumstances. These inputs are extreme compared to the data in 2012 when this model was built.

from Jill Whitcomb to everyone: 2:15 PM

Can all questions in the chat be documented with responses and published after this meeting?

from Olivia Devereux to everyone: 2:15 PM

@Bill: Crop need didn't change. The land use changed; the BMP distribution changed the NM acres credited.

from Elizabeth Hoffman - MDA to everyone: 2:17 PM

They may also be on land use categorized as residential or other (for hobby farmers).

from Jill Whitcomb to everyone: 2:18 PM

It seems like a foregone conclusion that CAST-21 will be released. I believe it is imperative for the Management Board and PSC to have the opportunity to hear and ask questions / provide comment during the review period.

from Jeremy Hanson to everyone: 2:20 PM

@Jill about chat log and questions: we can take the chat log and I suggest we include the questions as part of the "response to comments" document.

from Chris Hartley to everyone:

Note- Land use transition from commercial ag to small farms and ranchettes can change nutrient inputs significantly - particularly on a per acre basis. Similarly transition to lawn associated with smaller holdings may reduce tillage substantially but increase nutrient inputs.