

Chesapeake Bay Program
Phase 7 Agricultural Modeling Team (AMT)

Log of Actions and Decisions

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[*NOTE Sandbox decisions are tentative decisions made with the intent of providing a direction to allow test runs of CAST to facilitate the development of Phase 7.](#)

May 10, 2024 | [Meeting Materials](#)

Decision: The AMT approved the [April minutes](#)

Sandbox Decision: The AMT will continue to use the Phase 6 agricultural land uses for the purposes of testing additional changes during the development of Phase 7.

April 12, 2024 | [Meeting Materials](#)

Decision: The AMT approved the [March minutes](#)

Action: Ken Staver will write down and share with the group his proposed method for estimating split on grain with and without manure using what is known about plant available nitrogen per animal unit as opposed to animal units.

Action: Tom Butler will reach out to group members to inquire about and potential new data sources for informing the relationship between grain acres and manure applications.

March 08, 2024 | [Meeting Materials](#)

Decision: The AMT approved the [February 2024 minutes](#).

Action: If you have additional feedback on annual yield estimates, please email Joseph Delesantro (jdelesantro@chesapeakebay.net).

Action: Email Tom Butler (butler.thomas01@epa.gov) with feedback on land use loading ratios by COB Friday, March 15th, focusing specifically on the [discussion questions for a path forward](#).

February 09, 2024 | [Meeting Materials](#)

Decision: The AMT approved the [January 2024 meeting minutes](#).

Decision: The AMT agreed to evaluate changing the land uses for Phase 7 CAST. The specific land uses and associated loading rates have not yet been determined and will be further investigated at future AMT meetings.

Action: Email Tom Butler and Jess Rigelman (butler.thomas01@epa.gov; jrigelman@j7llc.com) by Friday, Feb 16th if you are interested in reviewing the CAST results data from the loading ratio tests.

January 12, 2024 | [Meeting Materials](#)

Decision: The AMT approved the [December 2023 meeting minutes](#).

Action: Provide feedback to Tom (butler.thomas01@epa.gov) on the time for Ag Modeling Team office hours (8 – 9 AM prior to our monthly meeting time).

Action: Tom Butler, EPA, will work with the CBPO & CAST team to address the following requests made from the group:

1. Continue providing updates on crop yields.
2. Distribute the data file specifying CAST inputs for livestock duration in different environments, as well as current manure generation and nutrient concentration values.
3. Discuss the possibility of in-person meetings with state representatives to streamline various data requests for CAST.
4. Provide updates on the impact of changing land use loading rates in CAST.

Action: Group members are asked to provide feedback on the following topics via email (butler.thomas01@epa.gov) or during the Feb 9 AMT meeting:

1. Which parameters we can use with existing data to improve the calculation of manure acres. Some questions include:
 - a. Has the relationship between animal units and manure acres changed?
 - b. Should we attempt to determine individual curves for different animal types?
 - c. Should we attempt to set these numbers with a relationship between the CAST animal units and manure acres?
 - d. Should we use plant available nitrogen (PAN) rather than total N to change this relationship?
2. Whether changes should be made to the existing livestock duration in different environments, manure generation, and nutrient concentration values.

December 8, 2023 | [Meeting Materials](#)

Decision: The AMT approved the [November 2023 minutes](#).

Action: Tom Butler will work with the CBPO & CAST team to address the following requests made from the group:

- Presentation on how manure acres are calculated in CAST.
- A “primer” on land use loading rates/ratios, including topics such as:
 - Why loading rates exist
 - How loading rates and ratios interact within CAST
 - How we determine values for loading rates
 - Additional examination and discussion of the existing loading rate/ratio report
- Provide relevant resources to the topic of BMP “excess” (formerly known as “cutoff”) for interested parties.
- Continue providing updates on Crop Yields, including the results of the poll sent to AMT members.

November 9, 2023 | [Meeting Materials](#)

Decision: The AMT approved the [October 2023 minutes](#).

Action: Please email Joseph Delesantro (jdelesantro@chesapeakebay.net) and Tom Butler (butler.thomas01@epa.gov) if you have any relevant crop yield data that can be used for crops with partial or no data. (See slide 8 of [linked presentation](#) for details.)

Action: VOTING MEMBERS ONLY: Please complete [this poll](#) by COB Wed, Nov 22, to provide feedback on which crops might share yield trends.

October 17, 2023 | [Meeting Materials](#)

Decision: The AMT approved the [September minutes](#).

Action: As per group feedback, data analysts from the Bay Program Office will continue assessing relationships between annually reported crop yields and five-year crop yields from the census of agriculture. Updates will be given at a future meeting.

September 8, 2023 | [Meeting Materials](#)

Decision: The Ag Modeling Team approved the [August meeting minutes](#).

Action: Group members will compile a comprehensive list of crops with available yield data. These data will be used to further examine methods to calculate expected yields.

August 14, 2023 | [Meeting Materials](#)

Decision: The AMT approved the [July meeting minutes](#).

Action: Look into replacing the current method of expected crop yield (best 3 of 5 for census + annual survey data) with the annual survey data to see if there is a major change.

July 14, 2023 | [Meeting Materials](#)

Decision: The AMT approved the [June minutes](#).

Action: Identify information gaps for crop yields and acreage for counties across the watershed. Explore spatial interpolation options for filling those data gaps.

June 9, 2023 | [Meeting Materials](#)

Decision: The AMT approved the May meeting minutes.

Action: Tom Butler will consult CBPO technical staff on ways to spatially distribute crop yield trends. More discussion will occur at the July AMT meeting.

May 12, 2023 | [Meeting Materials](#)

Decision: The AMT approved the [April meeting minutes](#).

Action: Tom Butler will work to:

- Calculate the linear trend from historic yields data from both Ag Census and NASS survey for crops used in CAST.
- Examine which crops have irrigation data that can be used to calculate trends.
- Brainstorm ways:
 - To potentially incorporate soil productivity maps.
 - Potentially update N removal rates.

April 14, 2023 | [Meeting Materials](#)

Decision: The AMT approved the [March meeting minutes](#).

Decision: The AMT informally agreed to remove timing and eligibility requirements for subsequent CAST testing runs.

Action: Tom Butler will work to provide:

1. Documentation for the yield goal calculation used by the CBPO.
2. A graphical depiction of the different data sets before and after data processing for the yield goal calculation.
3. For specialty crop low and high percentage of
 - a. Load contributed relative to the overall watershed loads.
 - b. Land covered over the watershed.
4. A visualization across the entire watershed of where fertilizer shifts.
5. Any analyses or perspectives on which topics may have more weight in terms of importance to CAST.
6. A background presentation discussing the groups next focus topic, Re-evaluating Land Uses.

March 13, 2023 | [Meeting Materials](#)

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

Action: Tom Butler will work with Jess Rigelman to develop scenarios for the AMT April meeting, including aspects such as moving around land uses, aggregating nutrient management multipliers, and revisiting the eligibility and/or timing components of nutrient management.

Post meeting update, after discussing several possible scenarios with group members two scenarios were agreed upon:

1. Make all manure eligible crops on manure eligible land uses 100% eligible for manure applications and remove the timing component to create a single annual average application.
2. Make all grains and silage land uses eligible to receive manure applications

February 10, 2023 | [Meeting Materials](#)

Decision: The AMT approved the [January 2023 meeting minutes](#).

Action: VOTING MEMBERS - please fill out this survey to prioritize discussion topics and decisional items that the Ag Modeling Team will address. The AMT leadership will compile the results of this survey to

develop a workplan for the group. (Note: this workplan will be a living document and is subject to change as the group progresses).

January 13, 2023 | Meeting Materials

Decision: The AMT approved the [December 2023 meeting minutes](#).

Action: If members are interested in viewing the county raw data used in the CAST presentation, please contact Tom Butler (butler.thomas@epa.gov).

December 9, 2022 | [Meeting Materials](#)

Decision: The AMT approved the [November 2022 meeting minutes](#).

Action: If members are interested in viewing the county raw data used in the CAST presentation, please contact Tom Butler (butler.thomas@epa.gov).

November 1-2, 2022 | Meeting Materials [Day 1](#) & [Day 2](#)

Action: VOTING MEMBERS ONLY: Please complete the following poll by COB Wednesday, November 23rd to determine the prioritization of topics for the AMT: <https://www.surveymonkey.com/r/6NMTRYV>.
Please note: This will be used as an initial “temperature check” to determine the AMT’s general timeline and schedule, however, this is not a comprehensive list of topics that the group will be discussing.

Action: Please complete the following poll by COB Tuesday, November 15th to determine a monthly meeting time for the AMT (two-hour meetings/month): <https://forms.gle/rtu3xHHnKiexYne9>.