

Agricultural Modeling Team (AMT) Phase 7: Charge and call for nominations

BACKGROUND:

The Chesapeake Bay Program is in the process of updating its suite of modeling tools, including the Watershed Model (WSM) which is used to estimate pollution reductions in the Chesapeake Bay watershed. This process will require technical knowledge to improve model data inputs for agriculture between now and 2025. The current Agriculture Workgroup (AgWG) lacks the capacity to adequately address these data issues. Therefore, an Agricultural Modeling Team (AMT) is necessary to ensure the best data inputs are used for the WSM.

CHARGE:

The AMT will provide agricultural modeling assistance to support the AgWG through the development of the Phase 7 WSM inputs.

FUNCTIONS:

Support will be accomplished by providing the capacity for in-depth analyses of agricultural items of interest brought forward by the partnership. From these in-depth analyses, technical decisions will be made regarding the processing of input data in the Phase 7 WSM. The functions of the group will be to:

- Review data preprocessing methods and agricultural inputs to ensure that Phase 7 WSM utilizes the best available information to reflect agricultural conditions in the watershed and how they change through time.
- Review current [Phase 6] WSM assumptions related to the applications of nutrients on agricultural lands and determine if changes are appropriate for Phase 7. Several examples of relevant topics include manure and fertilizer nutrient inputs; legume fixation; crop application goals; cover-factors for RUSLE*; changing environmental conditions; and soil phosphorus data.
- Consider land use/load source category changes.
- Coordinate with USDA agencies to identify analysis methods and agricultural databases.
- Make decisions on what the most appropriate agricultural input data are for the Phase 7 WSM.

*RUSLE or the Revised Universal Soil Loss Equation estimates soil loss from rill and inter-rill erosion caused by rainfall on cropland.

GOVERNANCE MEMBERSHIP:

Governance membership on the AMT is for individuals with an expertise in agricultural systems, the application/storage of both manure and fertilizer, as well as agricultural nutrient modeling data within the Chesapeake Bay watershed. **More detailed fields of expertise can be seen in Table 1 below.**

Table 1. Specific areas of expertise desired for participation on the AMT. (Please note the following is not a comprehensive list and the AMT is open to other expertise.)

Agricultural systems	Application/storage of both manure and fertilizer	Agricultural nutrient modeling data within the Chesapeake Bay watershed
<ul style="list-style-type: none">• Bovine• Equine• Hogs• Poultry• Livestock Feed• Row crop• Hay and Ag Open Space• Pasture and Riparian Pasture• Specialty Crops	<ul style="list-style-type: none">• Storage and handling• Transport• Nutrient Management• Soil Phosphorus• Volatilization	<ul style="list-style-type: none">• CAST• SPARROW• USDA• Land Use• Data management• Model My Watershed• Changing environmental conditions

To facilitate effective operations and decision-making, the governance membership will consist of approximately 12 voting members with the ability to identify alternates. Voting members will be the AMT chair, representatives from the six signatory state jurisdictions of the Chesapeake Bay Program partnership, the EPA, and four at-large positions (Table 2.). Jurisdiction-specific representatives will be nominated by each jurisdiction. We strongly encourage the participation of members who do not have an existing voting role in the AgWG but defer to jurisdictions to make this decision. At-large membership is encouraged from federal agencies, and academic institutions with appropriate experience, as listed in table 1.

Governance member nominations will be submitted by Jurisdictions, the AgWG or directly recruited by the AMT coordinator. Nominees will be asked to submit their CV or resume, and a signed [conflict of interest document](#). These documents can be submitted to Butler.Thomas01@epa.gov and will be vetted and approved by the AgWG. At-large nominees receiving the strongest AgWG endorsement will be selected to fill positions. The AMT coordinator will directly contact approved nominees to describe member responsibilities and determine the nominee's area(s) of expertise, willingness, and availability to serve on the group.

Table 2. AMT voting member structure.		
<u>Affiliation</u>	<u>Primary</u>	<u>Alternate</u>
Chair		NONE
Delaware		
Maryland		
New York		
Pennsylvania		
Virginia		

West Virginia		
U.S. EPA		
At Large		
At Large		
At Large		
At Large		

The AMT will strive to have a broad representation of expertise across all jurisdictions to ensure a balanced perspective. There will be several non-voting advisory positions on the AMT geared towards people with historical or relevant knowledge pertaining to the groups scope. These positions will include but are not limited to the AgWG coordinator, WTWG coordinator, Modeling WG representative, Watershed model representative, and Chesapeake Bay Program Senior Agriculture advisors. Additional experts or stakeholders will be consulted by the AMT as needed according to the topic, but consensus decisions will reflect the views of the governance members. Throughout the group's discussions, members are expected to provide their input in a timely manner and engage as needed based on their respective role and expertise. AMT meetings will be publicly accessible and available on the CBP's public meeting calendar.

Due to the scientific foundation for decisions within this group we would encourage all interested parties to review ethical considerations found in the [CBP Governance document](#), like conflict of interest. Nominated members must not represent entities with potential conflicts of interest, such as entities that could receive a financial benefit from changes to agricultural inputs. Those nominated to serve on the AMT are asked to identify any potential financial or other conflicts of interest prior to serving on the group.

Table 3. General member time commitment breakdown	
Activity	Time commitment (Hrs./Mo.)
Meeting preparation	4
General activities	4
Monthly meetings	2
TOTAL	10

AMT governance members will be expected to spend approximately 10 hours a month on the AMT, see the breakdown in Table 3. Jurisdictional representatives will remain on the AMT until such time as their jurisdiction seeks to replace them. At large members will be expected to engage in group activities for a term of two years but can refresh their term with AMT approval. The AMT chair will be voted on by the general members at the first meeting of the AMT and as needed thereafter. This nomination will then be reported back to the AgWG for approval or rejection. The chair will be expected to contribute approximately 20 hours a month to the AMT a further breakdown is seen in Table 4. The chair will be expected to commit to a term of two years.

Table 4. Chair time commitment breakdown	
Activity	Time commitment (Hrs./Mo.)
Meeting preparation	6
General activities	4
Monthly meetings	2
Meeting agendas	2
Direct group work	4
Preparatory meetings	1
Post meeting briefs	1
TOTAL	20

A list of voting individuals will be periodically updated on the [AMT Phase 7](#) web page.

TOPICS:

A list of [initial topics](#) was identified from the [CAST Issue Tracker](#), previous STAC workshops, and expert opinions. Due to the changing needs of both the AgWG and CAST, the AMT coordinator will make a monthly report to the AgWG and determine if any new topics of interest should be considered. In addition, a nonvoting seat within the AMT will be reserved for the AgWG coordinator should they wish to bring up any new topics for consideration. New topics will be added to the groups list as lower priority items to be completed as time allows. The exception to this is if the AgWG, or other higher-level group, assigns the new topic as being the highest priority. In this case the AMT will stop evaluating all other items and focus on the new topic. The list of current topics can be found on the [AMT Phase 7](#) webpage.

GOVERNANCE:

This group will operate on a [consensus based](#) decision making process outlined in the [CBP Governance and Management Framework document](#). This means that the AMT will work to make decisions related to agricultural data inputs as a stand-alone entity. If no decision can be reached the item will revert to its phase 6 status quo unless voting members choose to advance the topic to the AgWG for review. To ensure transparency in decision making meetings will be open to the public. All group materials will be posted to the AMT webpage. Decisions will be recorded in minutes and in the Phase 7 CAST documentation.

TIMELINE (Tentative):

- August 8th, 2022 – Begin nomination’s process.
 - Please submit name, contact info, COI form, and CV/resume to Tom Butler Butler.Thomas01@epa.gov
- September 15th, 2022 – Deadline to submit AMT nominations.
 - Begin AgWG review of nominees.
- October 20th, 2022- Seek final AgWG approval of proposed AMT membership
- November 2022 - Mandatory Immersive Workshop to introduce materials, discuss charge, and set a timeline
- December 2022 through 2026 – Hold monthly AMT meetings