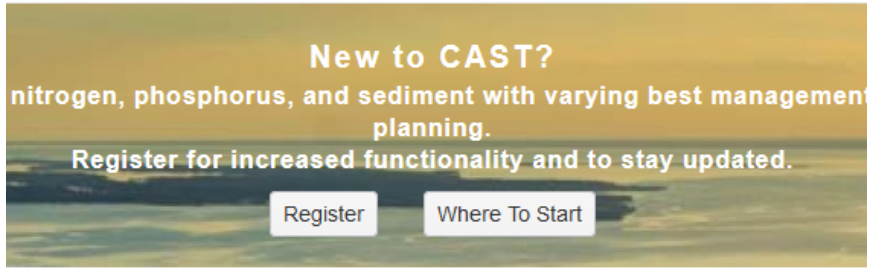
The Path Forward on CAST-21

SPECIAL DISCUSSION FOR PRINCIPALS' STAFF COMMITTEE

AUGUST 29, 2022

All photos courtesy of the Chesapeake Bay Program



RESOURCES

SOURCE DATA

Download data tables including information on load sources and agencies, BMPs, animals, geographic references and delivery factors.

View Source Data

COSTS

Download BMP costs data and view cost profiles for each state and Chesapeake Bay Watershed.

Learn More

What do we want to accomplish today?

- High level overview of themes/concerns identified by the jurisdictions.
- Explore options for moving forward/ discuss remaining challenge issues.
- Reach consensus on a path forward

COMMON THEMES

Communications

- Need public recognition of all that the farmers/jurisdictions have done to date
- Public acknowledgement that we're not going to meet the 2025 goals
- Clarify publicly that all additional loading will be dealt with post-2025

Model

- Generally, support the model and the intent of our current protocols
- Trust issues; model not building trust with ag community and other stakeholders

Data

- Don't trust the fertilizer data, especially the AAPFCO data; some data is not current enough, erratic
- Not getting credit for some BMPs
- Data doesn't reflect what's happening on the ground/in streams or fertilizer sales
- Should consider USDA-NASS data

Timing

- Concern we're trying to course correct too quickly/need to wait until after 2025 to make changes
- Maybe we need to delay/pause before updating; partners need time to address additional loads

THREE RECOMMENDATIONS FOR PSC CONSIDERATION

RECOMMENDATIONS FOR PSC CONSIDERATION

1. Address New Loads Post-2025

Recognize hard work and progress in all sectors, all jurisdictions, but still more to do. We have great opportunities ahead with more money. Let's address additional loads in a timeframe that works and is reasonable.

RECOMMENDATIONS FOR PSC CONSIDERATION

2. Address Fertilizer Issues Now

Convene appropriate CBP committee to develop interim solutions for short-term data fixes so we can move CAST21 forward now (with the understanding there is an effort underway to develop long-term fix for Phase 7).

RECOMMENDATIONS FOR PSC CONSIDERATION

3. Develop Process for Dealing with Data Anomalies

Update process to include additional safeguards to prevent data analysis errors and to assess reasonability of modeling results after CBP protocols are applied.

DISCUSS PATH FORWARD ON FERTILIZER DATA:

ADDRESS FERTILIZER SHORT TERM SO WE CAN MOVE FORWARD

Appendix:
Key Issues Raised during Individual Jurisdiction Meetings

New York

- **NY supports the model.** Not embracing comments from others to rely more on monitoring. Other updates to model are very positive and would hate to lose those helpful updates.
- Primary concern with CAST21 is with fertilizer data: it doesn't track with what we're seeing on the ground nor with the ag census data. Not seeing the increase in ag production and animal number, farm acreage, in NY specifically.
- Need to ensure that data is as reasonably **accurate** as possible; Need confidence in the data.
- NY no longer submitting data to **AAPFCO**; having database issues on their end.
- Suggest going back to method that fertilizer is applied to crop application need only (used in Phase 5 in the model). Create a nutrient application cap, based on crop application goal. This would remove surplus fertilizer applied that is not consistent with the ag census data.
- If we could get **more up-to-date data** and incorporate it in a **timelier** fashion, it might be helpful in overall conversation.

Chesapeake Bay Commission

- We generally look at modeled info by river segment; would be helpful to have by *monitored* segments for comparison. (We COULD do that; however, hard to do because of lag time. Working on things to bridge that gap.)

- We need to recognize the science/accurate targets, but still need to **recognize all the jurisdictions have done so far**. BUT still recognize there's still a lot of work to do by the full partnership.

- Frustration is that these issues/challenges were being raised but no hard decision/solutions was being made. Would like to see **options laid out** better for a decision at the PSC meeting. Keep in mind that a decision on CAST is very different than what's going in a new agreement… post 2025.

- Feels like we got to a point where we missed something and are **trying to course correct alarmingly fast**.. when maybe we need to continue on for now with CAST 19 recognizing the pros and cons.

Delaware

- Ag made major accomplishments cleaning up the Bay and we need to **get credit** for it.
- **Not getting credit for some BMPs**
- Concerns about the **accuracy** of the data.
- Acknowledge **we're not going to meet the 2025 goals;** however, keeping 2025 goals provides stability to state and local stakeholders.
- CBP materials should clearly spell out that **all additional loadings will be delt with post 2025**. Currently, it looks like ag is going the wrong way, but that's clearly not the case.
- While we had consensus on the last model, DE was not in agreement.

Maryland

- Concerned that Ag Modeling Team and Ag Workgroup **don't understand how on-the-ground-work is playing out** and is not taken into consideration in the model.
- Concerned we're seeing more fertilizer sales, but not considering more efficient plants and fertilizer uptake.
- Concerned **model applied for MD is overstated**. Assumptions made years ago should be re-considered ("whole bucket approach'). Feels like previous application will hurt MD in future.
- **Scientific integrity is important;** MD values science and models. Would like STAC's opinion whether the application of the data is sufficient to delay adding the fertilizer data to CAST and instead wait for it to be addressed in Phase 7 or is it appropriate to go add to CAST NOW.
- MD values STAC's independent, technical input is important to scientific integrity.
- Md is **not in general opposed to update**. It's the order of events. Hearing specific tech issues and seeking clarifications. Md is ready to assist in next steps.
- Concerned with strategy: updating model based on decision from the past. Now it becomes a strategic decision .. what is in best interest of bay program?
- **Don't want any surprises**; want assurance that CBPO will circle back with everyone before making final decisions.

VIRGINIA

- **Should the schedule for CAST be updated?** Need clarity about the order of decisions.
- Technical questions remain and **uncertainty about the fertilizer data** for CAST 19 and 21
- Seeking further **detail on internal controls to ensure error does not happen again**, Requesting further discussion on a role for state involvement in quality control.
- Need clarity about increasing monitoring trends in the VA portion of the watershed. Tied to increasing fertilizer applications? What databases will inform CAST 2023?
- **Additional time to address additional loads.** How would this work? Milestone evals reference additional loads to be addressed by 2025.
- **Need to recognize efforts to date and celebrate** as we get to 2025.
- Need more info on plans to spend the **additional funding** prior to the October EC.
- **Concern about whether the model is trusted by local stakeholders**? Agree the model must be accurate but may be too much focus on model updates vs. monitoring.

Pennsylvania

- **Data used in CAST is not the best available** nor can it be considered **the most recent 2015-16 or accurate**
- **Inflation and high costs of fertilizer should be accounted for** in the model projections
- PA's stakeholders are engaged more now than ever and constantly increasing level of effort as identified in the modeling tools leads to **increasing fatigue and distrust**
- All or nothing approach to CAST updates is counterproductive and **doesn't allow for inputs with questionable data to be addressed** parallel with the utilization of data that's supported by science and the partnership
- The partnership is relying on **AAFCO** data but, **USDA-NASS data should be considered**. **Age of data in 2015-16 is sales based, not application based**. Shows drop in applications (due to increased fertilizer cost, covid, etc.)
- Phosphate applications are also down in USDA-NAS data.

PENNSYLVANIA

PROPOSED SOLUTIONS:

- Move forward with partnership-approved data inputs (land use changes, extended forest buff credit duration, etc) and hold steady on fer data in CAST 19 that was approved in 2020
- Work with partnership including usda to improve fer data inputs. Set aside funds for this project for third-party consultatns to assist in the effort
- Develop comms tools and resources for states to use when discussing CAST with counties and stakeholders
- Hold any additional loads to post-2025 and re-evaluate in conjunction with data inputs that will be reviewed with phase 7.

WEST VIRGINIA Key Points

- **Lack of confidence in input data processing** to include in the model – not reflective of what's happening on ground. We need to have confidence in data/model so stakeholders have confidence.
- Concerned that the **urban fertilizer data is erratic**. Incremental changes make results for WV too variable. A three-year average and eliminating outliers might help smooth out some of the skewed data/variation. Doesn't make sense that phosphorus applications went up but seeing improvements in every monitoring station. Need to fix now.
- We *should* **make a fix for phase 6 now**, and truly resolve data issues, so that it's cleared up before we move on to the phase 7.
- Reduction in percentage in progress – 95% down to 64% (does not reflect trends).
- Decision about **fertilizer data used in Ag Workgroup was not consistent with data used in Urban Stormwater Workgroup.**
- **Build in a process step for assessing reasonability of modeling results *after* CBP protocols are applied**. Institute an "off-ramp" if results don't reflect what is reflective on the ground.