Fertilizer data in Chesapeake Bay Program Modeling tools

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Welcome!

- [Chesapeake Bay Program](#) (CBP)
  - 19 federal Agencies
  - 40 state agencies
  - 1800 local governments
  - 20 academic institutions
  - 60 non-governmental organizations
  - EPA coordinates/oversees

Chesapeake Bay Program

Science. Restoration. Partnership.

Why are we here?

Excess Nitrogen, Phosphorus, and Sediment pollute the Chesapeake Bay watershed

The Chesapeake Bay Program uses environmental models to estimate the impacts of management practices on these pollutants

There are concerns with the fertilizer data used in these models

A group of experts has been convened to improve fertilizer data inputs

What is this group?

Fertilizer Expert Group

- Formal committee
  - Works on both short-term and long-term solutions
- States
- Federal agencies
- Industry representatives
- **Make Recommendations**

What will this group produce?

Two sets of recommendations:

Short term (Phase 6) next four months

Long term (Phase 7) next two years.

What is the group's timeline?

Short term (Phase 6)

Current version of our modeling tools

Cannot change data sources

Must utilize trends of alternate data sets

Long term (Phase 7)

Next version of modeling tools

Complete redo

Can change data sources

Short term timeline (subject to change)

Solution	Activity	2022							2023					
		J	J	A	S	O	N	D	J	F	M	A	M	J
Phase 6 short term (FEG)	Meet individually with jurisdictions to discuss data	■	■	■	■	■	■	■						
	Discuss initial findings with CBP advisory group								■	■				
	Hold first full group meeting of FEG										■			
	Complete data review of preprocessing methods and ag inputs										■			
	MB informal briefing										■	■	■	
	USDA presentation to AgWG and WQGIT										■	■		
	Analyze compatability of new data sources												■	
	Summarize investigation results and brief PSC													■

Short term timeline (subject to change)

Solution	Activity	2022							2023					
		J	J	A	S	O	N	D	J	F	M	A	M	J
Phase 6 short term (FEG)	Meet individually with jurisdictions to discuss data	Finished												
	Discuss initial findings with CBP advisory group	Finished												
	Hold first full group meeting of FEG													
	Complete data review of preprocessing methods and ag inputs													
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	Analyze compatability of new data sources													
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We are here

Long term timeline

Solution	Activity	2022							2023												2024												2025											
		J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Phase 7 long term (AMT)	Participate in Phase 6 solutions																																											
	Create living workplan document outlining order of tasks																																											
	Make decisions for Phase 7 model																																											

Long term timeline

Solution	Activity	2022							2023												2024												2025											
		J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
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We are here

Different potential data sources:

Fertilizer Data Option	Description	Phase (6, 7, or both)	Should this option be considered? (Y/N)
Association of American Plant Food Control Officials (AAPFCO)	Continue the status quo.		
State reported fertilizer sales tonnage	Replacing or supplementing AAPFCO with state reports of fertilizer sales tonnage.		
USDA NASS Survey data	Examine the feasibility of developing new surveys or using alternate surveys.		
Fertilizer industry data	Engaging with fertilizer companies to determine what data could be collected to inform fertilizer applications.		
Other	Any alternative ideas not mentioned above.		

Questions?

Short term timeline (subject to change)

We are here

6-Mar-23
- Formally Meet with Fertilizer Expert Group

1-Apr-23
- Review current data processing methods
- clearly document in a Quality Assurance Project Plan (QAPP).

20-Apr-23
- USDA presentation to AgWG and WQGIT

30-Apr-23
- Itemize and characterize known sources of fertilizer data

May-23
- Provide phase 6 recommendations to AgWG, WQGIT, MB

8-Jun-23
- Present Path forward to the PSC