Potential Paths Forward To Address Soil P Concerns in the Phase 6 Model

Potential Resolutions provided by James Davis-Martin, VA DEQ, Chair WQGIT

Responses and Potential Paths Forward provided by Matt Johnston, UMD-CBPO

Process

- Comments collected by CBPO.
- Water Quality GIT requested commenters and CBPO work toward resolutions of all comments.
- **Water Quality GIT Chair reviewed comments and proposed potential resolutions for comments to CBPO.**
- **CBPO presenting proposed resolutions, responses and potential alternative paths forward for Ag Workgroup consideration.**
- **August 31 is the deadline for all decisions by workgroups and Water Quality GIT in order to achieve an October recalibration!**
  - **Water Quality GIT has meeting on August 28.**

- Suggested Resolution: Urban soil P concentrations should be added based upon available turf soil sample data (May not be viable as a P6 solution. If not, commitment to build it into the next version).

- Response:
  - APLE is not a peer-reviewed, calibrated tool for urban soils, and should not be used for estimating runoff from urban soils.
  - No known model exists to simulate urban P runoff based upon soil P data.
  - The Ag Workgroup could recommend a STAC workshop to investigate how soil P in urban areas impacts runoff.

- Impact to Schedule: None, if workshop is chosen.

- **Suggested Path Forward: STAC Workshop to investigate soil P in urban areas.**

- Suggested Resolution: Refresh soil P data every Milestone period (two years) to incorporate new data and improve confidence in the results.

- Response: Agreed. The Agriculture Workgroup could request that states submit soil P test data every two years in a similar way that it requests animal nutrient concentration data.

- Impact to Schedule: None.

- **Suggested Path Forward: Collect soil P data every two years.**

- Suggested Resolution: Change P simulation from 25 years to something higher or lower to offset potential inequities.

- Response: Ag Workgroup will be deciding upon this issue later during this meeting.

- Impact to Schedule: None.

- **Suggested Path Forward: Vote later today!**

- Suggested Resolution: Lower soil P values on crops not receiving manure.

- Response: AMS recommended that all row crops should use the same soil P value because crops receiving manure might receive fertilizer the following year. For example, a grain crop receiving manure one year might be in soybeans the next year and would thus not be eligible for manure applications in some states.

- Impact to Schedule: None.

- **Suggested Path Forward: No change to methods.**

- Suggested Resolution: Only use soil P in manure-heavy counties, or lower the soil P values in manure-poor counties.

- Response: The Partnership agreed to use APLE and soil P values in response to a recommendation made by STAC. Choosing to only use APLE and soil P values in certain counties would not follow this recommendation. It also could lead to inequity issues between counties and states.

- Impact to Schedule: Revision would likely delay schedule and require a suite of specific recommendations from the Ag Workgroup.

- **Suggested Path Forward: No change to methods.**

- Suggested Resolution: Only use soil P values where sufficient data exists to satisfy a reasonable confidence level (BMP Verification standard for model BMP inputs was 80% confidence +/- 10% margin of error). Seems reasonable that other inputs be held to a similar standard.

- Response: The method to accommodate uncertainty in soil P values is backed by peer-reviewed Bayesian statistics that allows the use of data when uncertainty exists, and adjusts the values to be closer to the real soil P values when uncertainty is lower. This is a defensible technique that treats all soil P values and all counties in an equitable manner.

- Impact to Schedule: Revision would likely delay schedule and require a suite of specific recommendations from the Ag Workgroup.

- **Suggested Path Forward: No change to methods.**