

Agriculture Workgroup (AgWG) Mid-Point Assessment Priorities

Approved Final 10/11/2012

	DE
Priority 1 Recommendation	A full assessment and review of the current poultry manure volume and nutrient coefficient.
Description	We realize this is happening with Jim Glancey's work, but it remains a high priority.
Linked Recommendation	
Linked Priority	Modeling Baseline/Input Data Assumptions/Needs
AgWG Priority	1
Priority 2 Recommendation	Review and update as necessary cover crop uptake values by planting rate and harvest methods.
Description	
Linked Recommendation	
Linked Priority	Modeling Baseline/Input Data Assumptions/Needs
AgWG Priority	1
Priority 3 Recommendations	Review and update as necessary the models' assumed fertilizer (nutrient application) rates by crop type.

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	DE
Description	
Linked Recommendation	
Linked Priority	Modeling Baseline/Input Data Assumptions/Needs
AgWG Priority	1
Priority 4 Recommendations	Recommend the use of yearly census data when available.
Description	
Linked Recommendation	
Linked Priority	Modeling Baseline/Input Data Assumptions/Needs
AgWG Priority	1
Priority 5 Recommendations	Review/reassessment of P transport
Description	
Linked Recommendation	US Poultry & Egg Assn: Shares concern. Also concern over the amount of P lost during house clean out operations. Acknowledge that this was attempted to be addressed by reducing the amount lost if certain BMPs are implemented but we feel the starting point of 15% is arbitrary and unreasonable.
Linked Priority	Model Data Processing
AgWG Priority	4
Additional Topics	<ul style="list-style-type: none"> •An assessment/review of irrigation effects on nutrient uptake and transport by crop type and various irrigation methods. •An appropriate/documented/valid accounting of heavy use pads in the model. Del state work for DENRCS.
Linked Priority	Establishment and Update of BMP Definitions and Efficiencies
AgWG Priority	3

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	MD
Priority 1 Recommendation	More accurate characterization of agriculture landscape including landuse, animal numbers, manure generated and distribution
Description	
Linked Recommendation	
Linked Priority	Modeling Baseline/Input Data Assumptions/Needs
AgWG Priority	1
Priority 2 Recommendation	Stacking of BMP- Continuous No-till not available for other reductions by other BMPs (cover crops, nutrient mgt. etc.)
Description	
Linked Recommendation	CBC: Concerns regarding explaining modeling processes (e.g. BMP stacking) to practices on the ground. Reduced understanding leads to reduced model credibility.
Linked Priority	Establishment and Update of BMP Definitions and Efficiencies
AgWG Priority	3
Priority 3 Recommendations	<u>Nutrient Management</u>

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	MD
Description	AGWG information provided on load reductions with nutrient mgt. (5%). CBP used <1.5%. Single efficiency value for Enhanced Nutrient Mgt.- A tiered approach would be more accurate
Linked Recommendation	
Linked Priority	Establishment and Update of BMP Definitions and Efficiencies
AgWG Priority	3
Priority 4 Recommendations	Cover Crop Efficiencies
Description	Cover crops lack P and suspended solids reductions. Also certain CC not recognized (triticale, spring oats, rapeseed/canola and forage radish)
Linked Recommendation	
Linked Priority	Establishment and Update of BMP Definitions and Efficiencies
AgWG Priority	3
Priority 5 Recommendations	Crop Yields- Blended yield averages for state vs. county
Description	
Linked Recommendation	
Linked Priority	Modeling Baseline/Input Data Assumptions/Needs
AgWG Priority	1
Additional Topics	
Linked Priority	
AgWG Priority	

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	NY
Priority 1 Recommendation	Ph6 Model must be fully tested by the partners, jurisdictions, etc. and ready for application before we start developing our Phase III WIPs.
Description	<ul style="list-style-type: none"> • Ph6 Model/Scenario Builder needs to include the model changes finalized by the Ag Workgroup's BMP Expert Panels. • Recommend the significant differences between the states be fully reflected in the WSM (nutrient balances, animals/acre, soil test P levels, Land Grant University Guidelines, etc.). • Some BMPs and their efficiencies can be applied across all six states, but there are BMPs which need to be defined specific to a state. • While not finalized by the Nutrient Management Expert Panel, replacing the current suite of somewhat unrelated nutrient management practices with a progressive suite of related nutrient management practices that start basic and build in complexity and model credit (e.g., Basic Nutrient Management, Enhanced Nutrient Management, and Enhanced Nutrient Management with Continuous Improvement).
Linked Recommendation	CBC: Sufficient time for review and understanding of any model changes is needed.
Linked Priority	Scenario Builder and Chesapeake Bay Program Modeling Suite Transparency, Accuracy, and Confidence
AgWG Priority	2
Priority 2 Recommendation	<u>Greater transparency in the model inputs, intermediary steps, and outputs</u> is critical to ensure confidence by the states, counties, conservation districts, agribusiness, producers, and others. Producers and other local partners are turned off from the TMDL process when a model input or outcome cannot be explained or does not adequately match local data.
Description	<ul style="list-style-type: none"> • Work to provide the states with model inputs and outputs during the scenario development/running processes themselves so the states can confirm the numbers are correct prior to finalizing each scenario • It's been a challenge to determine what inputs were used and how they were determined, including animal numbers, riparian buffer acres, AFO/CAFO acres, etc. • Also need to better define and perhaps refine how land uses, animal numbers, applied BMPs, etc. are handled in counties partially in the watershed. • BMPs should be linked to efficiencies not land use changes, so practices may be more clearly compared to each other. • Tools for Jurisdictions to do "what-ifs" to get a sense of model accuracy <ul style="list-style-type: none"> <input type="checkbox"/> Improve efficiency, user-friendliness of tools. • E.g. – question remains if CAST is delivering same data as Scenario Builder/WSM? • Update WSM and Scenario Builder documentation manuals. • CAST support has been very much appreciated, but need more technical staff supporting CAST and similar tools.
Linked Recommendation	
Linked Priority	Scenario Builder and Chesapeake Bay Program Modeling Suite Transparency, Accuracy, and Confidence
AgWG Priority	2
Priority 3 Recommendations	Increase the number of modeling staff to provide more support and model evaluation assistance directly to the states (with more modeling staff, success would depend on regular, detailed coordination among modeling staff to ensure consistency across the jurisdictions).

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	NY
Description	
Linked Recommendation	
Linked Priority	Scenario Builder and Chesapeake Bay Program Modeling Suite Transparency, Accuracy, and Confidence
AgWG Priority	2
Priority 4 Recommendations	The principle (used in the 2003 allocation) that Bay jurisdictions are expected to do more because they benefit from Bay improvements must be re-instituted for the 2017 re-evaluation and TMDL redo.
Description	
Linked Recommendation	NRCS: Concerns regarding the modeling methods of determining load allocations, especially in the agriculture sector.
Linked Priority	Chesapeake Bay Program TMDL and WIP/Milestones Policy
AgWG Priority	5
Priority 5 Recommendations	Evaluating the atmospheric deposition components of the model with other N deposition datasets/models, such as those developed by jurisdictions, to improve accuracy of N deposition estimates across all land uses (e.g., ag, forest, urban, suburban, etc.).
Description	
Linked Recommendation	
Linked Priority	Modeling Baseline/Input Data Assumptions/Needs
AgWG Priority	1
Additional Topics	
Linked Priority	
AgWG Priority	

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	PA
Priority 1 Recommendation	Increase the size of watershed model segments to more closely match county size to reduce error caused by linear averaging/splitting of data.
Description	
Linked Recommendation	
Linked Priority	Model Data Processing
AgWG Priority	4
Priority 2 Recommendation	Verification of automatic calibration for headwater areas so hydro-geomorphic regions in split-basin counties have similar loading rates (example: Adams County).
Description	
Linked Recommendation	
Linked Priority	Model Data Processing
AgWG Priority	4
Priority 3 Recommendations	All necessary reporting protocols should be clearly explained to states prior to development of BMP input files for NEIEN. This does not eliminate the opportunity to make minor changes that would be needed for a state to submit data. All changes made during the reporting period should be communicated to all the states.

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	PA
Description	
Linked Recommendation	
Linked Priority	Model Data Processing
AgWG Priority	4
Priority 4 Recommendations	What is the process for states to review linear split-out of BMPs from county reporting area to existing small model segments? What opportunity is there to adjust for error in the arbitrary linear split of BMPs?
Description	
Linked Recommendation	
Linked Priority	Scenario Builder and Chesapeake Bay Program Modeling Suite Transparency, Accuracy, and Confidence
AgWG Priority	2
Priority 5 Recommendations	The suite of models should be more upfront in discussion of error/variance within each component and include discussion of sensitivity of input variable so that states have understanding of the usefulness of the model outputs.
Description	
Linked Recommendation	
Linked Priority	Scenario Builder and Chesapeake Bay Program Modeling Suite Transparency, Accuracy, and Confidence
AgWG Priority	2
Additional Topics	Use the current year rainfall for the 10th year of hydrology as an alternate run for temporal comparison.
Linked Priority	Model Data Processing
AgWG Priority	4

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	VA *Comments Received 9/24
Priority 1 Recommendation	Model Review Period
Description	
Linked Recommendation	
Linked Priority	Scenario Builder and Chesapeake Bay Program Modeling Suite Transparency, Accuracy, and Confidence
AgWG Priority	2
Priority 2 Recommendation	Uncertainty analysis
Description	
Linked Recommendation	
Linked Priority	Scenario Builder and Chesapeake Bay Program Modeling Suite Transparency, Accuracy, and Confidence
AgWG Priority	2
Priority 3 Recommendations	Improve Federal Facilities segmentation and land use.

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	VA *Comments Received 9/24
Description	
Linked Recommendation	
Linked Priority	Model Data Processing
AgWG Priority	4
Priority 4 Recommendations	New BMPs for Nutrient Management, Stackable Continuous No-Till, Conservation Tillage on HOM, Manure Alternative Use, Stackable Pasture BMPs, Animal Mortality.
Description	
Linked Recommendation	
Linked Priority	Establishment and Update of BMP Definitions and Efficiencies
AgWG Priority	3
Priority 5 Recommendations	Reevaluate manure production, concentration, mineralization (model and scenario builder), storage and handling loss, and volatilization.
Description	
Linked Recommendation	
Linked Priority	Modeling Baseline/Input Data Assumptions/Needs
AgWG Priority	1
Additional Topics	<ul style="list-style-type: none"> • Constrain calibration to prevent excessive variation in loading rates from literature values and geographic areas. • Consider PQUAL for agriculture simulation • Reevaluate HOM crops; consider replacing HOM with multiple land uses • Develop GIS data layers for all Land-Use • Reevaluate animal numbers and distribution
Linked Priority	
AgWG Priority	2,3,4

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	WV
Priority 1 Recommendation	Enhanced coordination and cooperation with, and between, Federal agencies.
Description	<ul style="list-style-type: none"> • Clarity and consistency between names and definitions of CBP BMP's and NRCS conservation practices • Address the need for more detailed BMP information from Federal agency (NRCS, FSA, etc.) databases (ie. PRS) that would provide for more accurate reporting of management practices • Streamline NRCS reporting system • Inclusion of tillage practices on FSA Crop Reporting Sheets
Linked Recommendation	
Linked Priority	Establishment and Update of BMP Definitions and Efficiencies
AgWG Priority	3
Priority 2 Recommendation	Address concerns regarding manure distribution and fertilizer algorithms, particularly regarding replacement of manure with commercial fertilizer
Description	<ul style="list-style-type: none"> • Poultry litter transfer and crediting within the CB Watershed Model
Linked Recommendation	
Linked Priority	Model Data Processing
AgWG Priority	4
Priority 3 Recommendations	BMP verification protocols.

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	WV
Description	
Linked Recommendation	
Linked Priority	Establishment and Update of BMP Definitions and Efficiencies
AgWG Priority	3
Priority 4 Recommendations	Address and fix land use/land use conversion projections.
Description	<ul style="list-style-type: none"> • Rectify the amount of TRP (Trampled Riparian Pasture) in the model to accurately represent the actual amount of TRP • Rectify land cover discrepancies between low-density residential and ag/forest land • Increase overall accuracy of agriculture land use/land cover projections
Linked Recommendation	
Linked Priority	Model Data Processing
AgWG Priority	4
Priority 5 Recommendations	Ensure that jurisdiction goals do not change, regardless of any other programmatic changes.
Description	
Linked Recommendation	
Linked Priority	Chesapeake Bay Program TMDL and WIP/Milestones Policy
AgWG Priority	5
Additional Topics	
Linked Priority	
AgWG Priority	

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	Non-State Partners
Priority 1 Recommendation	No Ranked Recommendations Received
Description	
Linked Recommendation	
Linked Priority	
AgWG Priority	
Priority 2 Recommendation	
Description	
Linked Recommendation	
Linked Priority	
AgWG Priority	
Priority 3 Recommendations	

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	Non-State Partners
Description	
Linked Recommendation	
Linked Priority	
AgWG Priority	
Priority 4 Recommendations	
Description	
Linked Recommendation	
Linked Priority	
AgWG Priority	
Priority 5 Recommendations	
Description	
Linked Recommendation	
Linked Priority	
AgWG Priority	
Additional Topics	<p>USDA-ARS, NRCS, and CBC: Use of multiple models for improved accuracy and allow for incorporation of local data.</p> <p>DE MD Agribusiness Assn: All priorities relate to Scenario Builder and the need for a systematic review of the tool.</p> <p>CBC: Relate the accuracy of inputs; improve understanding of lag time and other uncertainties.</p> <p>Poultry & Egg Assn: Concern that the model assumes N based Nutrient Management Plans are the standard (for all states except one) and does not consider P based.</p> <p>U.S</p> <p>AFT: Importance of farmland protection in restoration effort.</p> <p>AFT: Problematic that the model only considers cropland for agriculture.</p>
Linked Priority	
AgWG Priority	1,2