DRAFT Agriculture Workgroup Task Matrix

Based on Recommendations from Building a Better Bay Model: a Workshop for Agriculture Partners May 22-23, 2013

green = completed	
orange = immediate work needed	
yellow = ongoing	
red = overdue	

Task	Recommended By	Date	Recommendation Contact	Datasets Needed	Dataset Contacts	Stakeholder Leads	CBP Leads	Update	Level of Effort	Expected Completion Date
Compare land uses between CBP Watershed Model and USDA-CEAP's.	Defining the Landscape	5222013	Matt Johnston	CEAP land uses	Lee Norfleet		Mark Dubin; Matt Johnston; Peter Claggett	May 22, 2013 - Proposed at Building a Better Bay Model Workshop		8012013
Investigate Cropland Data Layer and determine if it is possible to use CDL in defining gegraphic distribution of land uses.	Defining the Landscape	5222013	Matt Johnston	CDL through time	Thomas Morgart; Craig Goodwin		Mark Dubin; Matt Johnston; Peter Claggett	May 22, 2013 - Proposed at BBBM Workshop		10012013
Work with the states to gather local agricultural land use data.	Defining the Landscape	5222013	Matt Johnston	Multiple local land use datasets	State Ag Agency Contacts		Mark Dubin; Matt Johnston; Peter Claggett	May 22, 2013 - Proposed at BBBM Workshop		1012014
Define new agricultural land uses using the USDA's CDSI land cover as a guide.	Defining the Landscape	2142013	Mark Dubin; Dana York	NA	NA		Mark Dubin; Matt Johnston; Peter Claggett	May 22, 2013 - Proposed at BBBM Workshop; February, 2013 - Recommended at AgWG meeting		1012014
Define loading rates for new all new agricultural land uses.	Defining the Landscape	2132013	Mark Dubin	Full literature review needed for each land use.	NA		Mark Dubin; Matt Johnston; Peter Claggett	May 22, 2013 - Proposed at BBBM Workshop; February, 2013 - Recommended at AgWG meeting		1012015

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Explore use of USDA-FAS 5708 data, Common Land Unit (CLU) data.	Defining the Landscape	5222013		USDA-FAS 5708				May 22, 2013 - Proposed at BBBM Workshop		
Enable the use of nutrient data on different modeling scales.	Defining the Landscape	5222013						May 22, 2013 - Proposed at BBBM Workshop		
Identify and incorporate new soil and nutrient data for model.	Defining the Landscape	5222013						May 22, 2013 - Proposed at BBBM Workshop		
Better account for Nutrient Management systems: use general crop land use categories.	Defining the Landscape	5222013						May 22, 2013 - Proposed at BBBM Workshop		
Allow stacking of BMPs.	Defining the Landscape	5222013						May 22, 2013 - Proposed at BBBM Workshop		
Use USGS monitoring water quality data for both surface and subsurface monitoring, specifically nutrient lag time monitoring.	Defining the Landscape	5222013		USGS nutrient lag time monitoring				May 22, 2013 - Proposed at BBBM Workshop		
Explore use of USDA-NRCS (CEAP) soil data for slope and permeability.	Defining the Landscape	5222013		USDA-NRCS (CEAP) soil data				May 22, 2013 - Proposed at BBBM Workshop		
Address advanced manure treatment facilities to understand manure availability for land application.	Defining the Landscape	5222013						May 22, 2013 - Proposed at BBBM Workshop		
Coordinate uniform data collection amongst jursidictions.	Defining the Landscape	5222013						May 22, 2013 - Proposed at BBBM Workshop		

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Investigate elimination or modification of theoretical max nutrient uptake in favor of local crop yields.	Planting and Harvesting Crops	5222013						May 22, 2013 - Proposed at BBBM Workshop		
Replace statewide average yields with aggregated yield data from FSA individual farm records segmented by production systems.	Planting and Harvesting Crops	5222013		FSA				May 22, 2013 - Proposed at BBBM Workshop		
Replace fertilizer use as a SB default with direct representation of fertilizer applications. For MD and DE, use annual implementation reports (AIRs) under NM regulations; For PA, a public-private partnership with PA-4R alliance (CCAs and fert retailers); For VA, use NM data from RMAs (resource management plans); For NY, use NM data from AEM.	Planting and Harvesting Crops	5222013						May 22, 2013 - Proposed at BBBM Workshop		
Investigate simplification of Scenario Builder by restructuring Land Use segments through aggregated crop production systems data.	Planting and Harvesting Crops	5222013						May 22, 2013 - Proposed at BBBM Workshop		
Request NRI data from NRCS from the Bay CEAP and look for opportunities to partner with NRCS.	Planting and Harvesting Crops	5222013		NRCS NRI	NRCS			May 22, 2013 - Proposed at BBBM Workshop		
Utilize sales information for nutrient content of chemical fertilizer ("look on the label").	Nutrient Placement and Usage	5222013		Fertilizer sales				May 22, 2013 - Proposed at BBBM Workshop		
Use Extension recommendations for timing & rates of application based on crop and region.	Nutrient Placement and Usage	5222013			University Extensions			May 22, 2013 - Proposed at BBBM Workshop		

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Account for irrigated vs non-irrigated crop land – because of the significant yield difference.	Nutrient Placement and Usage	5222013						May 22, 2013 - Proposed at BBBM Workshop		
Obtain actual and expected yield from states' Nutrient Management Plans.	Nutrient Placement and Usage	5222013		Nutrient Management Plans	State Ag Agencies			May 22, 2013 - Proposed at BBBM Workshop		
Collect chemical fertilizer data from International Plant Nutrition Institute.	Nutrient Placement and Usage	5222013		Chemical Fertilizer	IPNI: http://www.ipni.net/			May 22, 2013 - Proposed at BBBM Workshop		
MD Annual Inventory Reports (AIR): manure & chemical fertilizers by operation – aggregate by basin and type of operation.	Nutrient Placement and Usage	5222013		MD AIR				May 22, 2013 - Proposed at BBBM Workshop		
Collect manure data from poultry integrators.	Nutrient Placement and Usage	5222013				Paul Bredwell		May 22, 2013 - Proposed at BBBM Workshop		
Collect litter transport data, CAFOs, biosolids, poultry (numbers?) from DEQ.	Nutrient Placement and Usage	5222013		Litter transport	(VA?) DEQ			May 22, 2013 - Proposed at BBBM Workshop		
Explore the use of Agri-Stats and USDA-NASS annual manure data.	Nutrient Placement and Usage	5222013		Annual manure data	Agri-Stats and USDA-NASS			May 22, 2013 - Proposed at BBBM Workshop		
Gilmore & Gilmore 1992 report – shows different rates of litter decomposition	Nutrient Placement and Usage	5222013						May 22, 2013 - Proposed at BBBM Workshop		
Collect generalized manure data by state from extension publications.	Nutrient Placement and Usage	5222013			University Extensions			May 22, 2013 - Proposed at BBBM Workshop		

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Track annual application of manure rather than manure generation.	Nutrient Placement and Usage	5222013						May 22, 2013 - Proposed at BBBM Workshop		
Mineralization rates – wet vs dry years – info available from Curtis Dell PSWMRU at Penn State	Nutrient Placement and Usage	5222013			Curtis Dell			May 22, 2013 - Proposed at BBBM Workshop		
Collect manure data from state labs: use data generated from state labs outside of Bay watershed.	Nutrient Placement and Usage	5222013						May 22, 2013 - Proposed at BBBM Workshop		
Nutrient Management Planning software from MD – NUMAN; similar efforts out of Purdue.	Nutrient Placement and Usage	5222013						May 22, 2013 - Proposed at BBBM Workshop		
In MD all plans are P-based, but not all plans are P-limited. Recommend finding out how many acres are P-limited.	Nutrient Placement and Usage	5222013						May 22, 2013 - Proposed at BBBM Workshop		
Incorporate transport data from SWAT modeling.	Nutrient Placement and Usage	5222013		Litter transport data SWAT?				May 22, 2013 - Proposed at BBBM Workshop		
Consider soil P index, which affects P loss.	Nutrient Placement and Usage	5222013						May 22, 2013 - Proposed at BBBM Workshop		
Consider using Delaware & Maryland annual reports – which are based on those who are required to obtain NMPs	Nutrient Placement and Usage	5222013		DE/MD AIR				May 22, 2013 - Proposed at BBBM Workshop		
Determine forage type with pasture nutrient management plans– some need manure, some don't.	Nutrient Placement and Usage	5222013						May 22, 2013 - Proposed at BBBM Workshop		

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In the model nutrients (biosolids) are being taking away from being a point source and is being assigned to non-point. You should make it part of the waste load allocation for point source before it moves.	Nutrient Placement and Usage	5222013						May 22, 2013 - Proposed at BBBM Workshop		
Need to get to milk producers, not only poultry – milk is where the large farms are.	Nutrient Placement and Usage	5222013						May 22, 2013 - Proposed at BBBM Workshop		
Establish confirmation system to verify AgCensus against other data sources.	Measuring the Impacts of Dairy and Beef	5232013						May 22, 2013 - Proposed at BBBM Workshop		
Develop mechanism to assess how to use these other data sources and apply them in confirmation system.	Measuring the Impacts of Dairy and Beef	5232013						May 22, 2013 - Proposed at BBBM Workshop		
Capture milk production, Milk Urea Nitrogen testing data, and animal numbers to better track nitrogen loads (data from surveys and milk processors).	Measuring the Impacts of Dairy and Beef	5232013						May 22, 2013 - Proposed at BBBM Workshop		
Approach ASABE to utilize their standards review process (standard D-384.2).	Measuring the Impacts of Dairy and Beef	5232013						May 22, 2013 - Proposed at BBBM Workshop		
Data: N model from EPA(?) (Jim Galloway) to better estimate changes in manure load/concentration over time.	Measuring the Impacts of Dairy and Beef	5232013						May 22, 2013 - Proposed at BBBM Workshop		
Trampled Riparian Pasture (TRP) doesn't appropriately reflect what's going on. Perhaps reclassify Land Use as riparian and categorize areas by use within pasture.	Measuring the Impacts of Dairy and Beef	5232013						May 22, 2013 - Proposed at BBBM Workshop		

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If not removing TRP, reevaluate 9x manure deposition figure.	Measuring the Impacts of Dairy and Beef	5232013						May 22, 2013 - Proposed at BBBM Workshop		
Consider outside or other data sources (ISU or VT)	Measuring the Impacts of Dairy and Beef	5232013						May 22, 2013 - Proposed at BBBM Workshop		
Something needs to be done with AFO/CAFO …change name to something else, e.g. "production area" and re-evaluate how acres are calculated.	Measuring the Impacts of Dairy and Beef	5232013						May 22, 2013 - Proposed at BBBM Workshop		
Loafing lot is too all-encompassing, recommend looking at c/s programs to specify types of practices.	Measuring the Impacts of Dairy and Beef	5232013						May 22, 2013 - Proposed at BBBM Workshop		
Replace crop need with actual yield data.	Measuring the Impacts of Dairy and Beef	5232013						May 22, 2013 - Proposed at BBBM Workshop		
Use industry benchmarks for mortality (seem to be less than 6%) –dairy, calves & heifers association	Measuring the Impacts of Dairy and Beef	5232013						May 22, 2013 - Proposed at BBBM Workshop		
Better capture widespread use of swine phytase.	Accounting for Swine	5232013						May 22, 2013 - Proposed at BBBM Workshop		
Update manure nutrient content data by animal type – better account for genetic improvements and carefully designed rations to match age, stage, gender, etc of hogs	Accounting for Swine	5232013						May 22, 2013 - Proposed at BBBM Workshop		

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Better understand legacy P in soils.	Accounting for Swine	5232013						May 22, 2013 - Proposed at BBBM Workshop		
Better tracking of wildlife numbers and contributions	Accounting for Swine	5232013						May 22, 2013 - Proposed at BBBM Workshop		
Data from National Pork Board Environmental Committee	Accounting for Swine	5232013			Allan Stokes			May 22, 2013 - Proposed at BBBM Workshop		
Data from Pig Production Environmental Footprint Calculator	Accounting for Swine	5232013			Allan Stokes			May 22, 2013 - Proposed at BBBM Workshop		
Revisit and revise 15% loss at EOF, look at permitted CAFOs.	Poultry Production and Nutrients	5232013		CAFO				May 22, 2013 - Proposed at BBBM Workshop		
Use soil test data instead of university – P, K (o Nutrient Management Plans, AIR, soil labs)	Poultry Production and Nutrients	5232013						May 22, 2013 - Proposed at BBBM Workshop		
Work with states to get best litter tracking information and bio-solids	Poultry Production and Nutrients	5232013			State Ag agency contacts			May 22, 2013 - Proposed at BBBM Workshop		
Use NASS production trends/trends for the model or for comparison. • Productions trends for current model. • Production data for new model	Poultry Production and Nutrients	5232013		NASS production trends				May 22, 2013 - Proposed at BBBM Workshop		

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Use good science and literature reviews for BMP efficiencies worst case vs. "normal" rather than "best professional judgment."	Poultry Production and Nutrients	5232013						May 22, 2013 - Proposed at BBBM Workshop		

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