

# Inclusion of New BMPs and Scenario Builder Data Elements

Curtis Dell

USDA-ARS

Chair, Agricultural Modeling Subcommittee

Matt Johnston

University of Maryland

CBPO Non-Point Source Analyst

Coordinator, Agricultural Modeling Subcommittee

# Objectives

- Very briefly review the main task of the Ag Modeling Subcommittee (AMS)
- Review two timelines:
  - Early 2016 review of Scenario Builder and opportunity to provide more data
  - Full 2016 Model Development Timeline
- Highlight most important tasks left for Partnership to complete (BMPs, inputs, etc.)

# Load for a land use in a segment =

Estimated  
Average + Sensitivity \*  $\Delta$  Inputs  
Load

BMPs

Watershed Delivery Variance

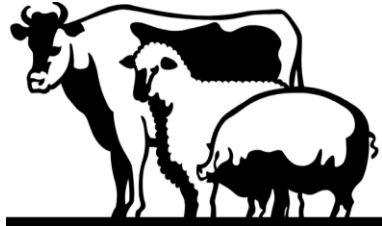
Stream Delivery

River Delivery

Phase 6

# Phase 6 Scenario Builder Conceptual Model

## Livestock Manure (and Biosolids)



## Barnyard



## Fertilizer



## Pasture



## Access Area



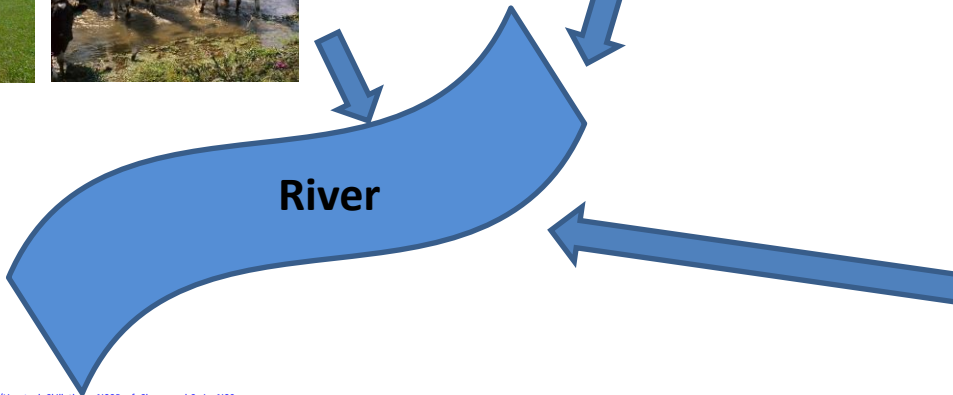
## Nutrient Application Prescription



## Crops



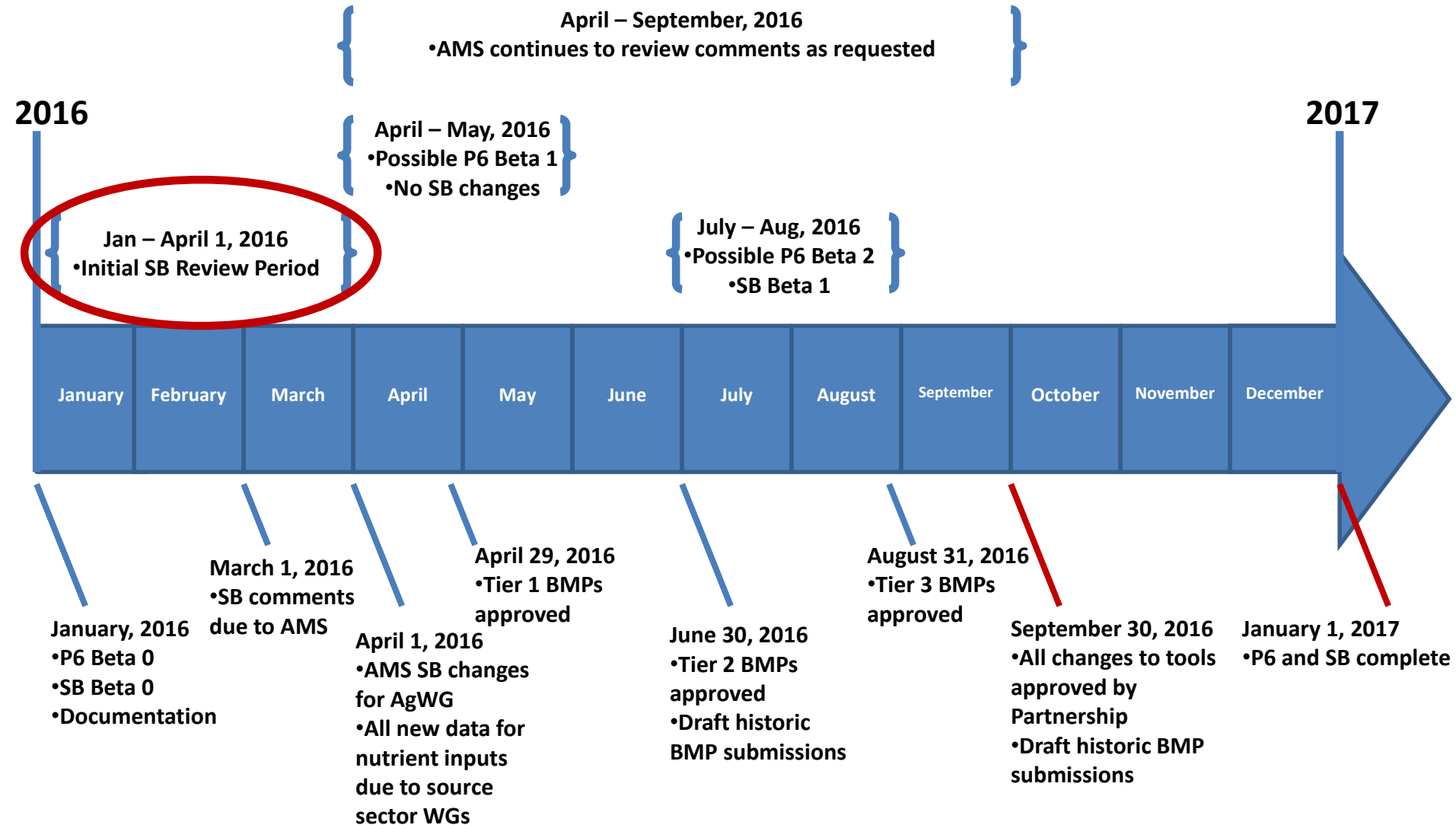
## River



# Grains with Manure in Washington County, MD 2012

CropName	LU	Month	Acres	Lbs Manure N/ Acre	Lbs Fertilizer N/ Acre	Total Lbs N/ Acre
Corn for Grain Harvested Area	gwm	3	6,690.71	66.07	31.33	97.40
Corn for Grain Harvested Area	gwm	4	6,690.71	0.00	20.32	20.32
Corn for Grain Harvested Area	gwm	5	6,690.71	0.00	20.32	20.32
Sorghum for Grain Harvested Area	gwm	5	295.26	40.00	18.97	58.97
Sorghum for Grain Harvested Area	gwm	6	295.26	10.00	4.74	14.74

# 2016 Phase 6 Model and SB Review Timeline



# What the AMS Plans to Review by April, 2016

- **Nutrient Application Rates**
  - Assess if nutrient application rates on various crops/land uses are appropriate.
- **Manure Eligible Acres**
  - Determine if additional data exists to inform the number of acres receiving manure.
- **Documentation**
  - Review Scenario Builder documentation in full to ensure new methods reflect committee's intent.
- **Partnership Comments**
  - Review comments from AgWG and other partners, and consider method changes if appropriate. **Comments received after March 1 will only be addressed if time allows.**

# What the AMS does NOT Plan to Review (Unless Asked)

- **Manure recoverability**
  - The AMS and AgWG approved draft manure recoverability numbers based upon NRCS estimates, but recommended the Animal Waste Storage Facility Panel recommend final recoverability rates.
- **Newly collected animal nutrient data**
  - New data must be submitted to the AgWG who will be in charge of assessing the data and recommending its use in the tools in the same way the Poultry Litter Subcommittee was formed to review new poultry litter nutrient information. **(Approve use by April 1, 2016)**
- **Newly collected urban fertilizer data**
  - The automatic reduction for urban fertilizer legislation does not apply for the Phase 6 Model. The Urban Stormwater WG has begun a process to gather fertilizer data to show a difference in fertilizer use on urban lands over the calibration period. **(Approve use by April 1, 2016)**
- **Ongoing Phase 6 BMP Panel recommendations**
  - Although panels may request input from AMS members



# Ongoing Phase 6 Panels

## Tier 1 Panels

- **Description:** Recommendations will significantly impact Phase 6 Model development and historic BMP submissions.
- **Suggested Deadline for completing full Partnership review:** April 29, 2016
- **Panels:**
  - Phase 6 Nutrient Management
  - Phase 6 Conservation Tillage
  - Phase 6 Animal Waste Storage Facilities
  - Advanced Onsite Systems (Part 2: Nutrient Attenuation)
  - Urban Tree Planting/Expanded Tree Canopy
  - Wetlands

# Ongoing Phase 6 Panels

## Tier 2 Panels

- **Description:** Recommendations will have some impact on Phase 6 Model development and historic BMP submissions, but the impact will not be significant.
- **Suggested Deadline for completing full Partnership review:** June 30, 2016
- **Panels:**
  - Manure Treatment Technologies
  - Manure Injection/Manure Incorporation
  - Oyster Restoration/Aquaculture
  - Cover Crops
  - Cropland Irrigation Management

# Ongoing Phase 6 Panels

## Tier 3 Panels

- **Description:** Recommendations will have a small impact on Phase 6 Model development and historic BMP submissions. Many of these panels are being developed for Phase 5 with recommendations that will carry over to Phase 6.
- **Suggested Deadline for completing full Partnership review:** August 31, 2016 (note some may be completed in coming months)
- **Panels:**
  - Algal Flow-Way Technologies (review ongoing)
  - Street Sweeping (review ongoing)
  - Floating Wetlands
  - Impervious Disconnection
  - Agricultural Stormwater Structures and Nursery Capture and Reuse
  - New Bioretention with enhanced Nutrient Reductions
  - Boat Pump-Out Facilities
  - Onsite Treatment Systems (Panel 2)

# 2016 Phase 6 Model and SB Review Timeline

