



Farmers Stepping Up for Clean Water and a Healthy Chesapeake Bay

# Maryland Agriculture Phosphorous Initiative 2015

February 2015

*Enhancing Maryland's efforts to improve water quality, strengthen its agricultural industry, and enhance rural economies*

## Background

The **Phosphorus Management Tool (PMT)** is a risk assessment tool that only applies to farms where soil phosphorus has a Fertility Index Value (FIV) of 150 or more. The FIV is a measurement, determined by a soil test, of how much phosphorus is in the soil compared to how much is needed to grow crops. The PMT identifies areas where excess phosphorus is present in the soil and where there is a high potential for phosphorus loss. A loss of phosphorous contributes to excessive nutrient runoff into nearby waterways and the Chesapeake Bay. The PMT also allows farmers to evaluate different management practices they can use on their farms to reduce the risk of phosphorus loss.

The PMT, which will replace the Phosphorus Site Index (PSI), reflects the latest research by University of Maryland scientists in collaboration with regional and national experts. Revising and updating the tool is an element of Maryland's Watershed Implementation Plan (WIP), the federally mandated document that outlines specific steps the state will take to protect and restore the Chesapeake Bay.

The Maryland Department of Agriculture's original PMT regulations were published in the *Maryland Register* in January 2013. Since then, PMT proposals have been submitted, and withdrawn three times. See [chart that summarizes the different proposals](#).

Governor Larry Hogan signed an executive order on January 21, 2015 to stop the last proposal to allow for a more balanced approach that will protect water quality while still enabling a vibrant agriculture industry in Maryland. The new Hogan-Rutherford "**Agriculture Phosphorus Initiative**" strikes that balance by:

- Promulgating enhanced PMT regulations;
- Immediately initiating an on-farm economic analysis of PMT implementation on 1,000 acres;
- Expanding investments in new technologies that use manure and/or improve manure management; and
- Providing additional resources to mitigate certain economic impacts of implementing more stringent environmental requirements on farms.



*Photo by Edwin Remsberg*

## 2015 PMT Regulatory Proposal

The new proposal uses the November 2014 PMT proposal as a starting point and makes **four significant enhancements** that address key concerns of the agricultural community while providing immediate environmental protection and comprehensive data on agricultural soil phosphorus conditions across the state.

### Enhancements:

#### **1. Ensures adequate time for farmers to fully understand and plan for new requirements.**

The new proposal shifts the seven-year implementation schedule so that all farms will implement the PMT one year later than the November proposal required. This allows farmers two full years to develop nutrient management plans using both the existing PSI and the new PMT before making required management changes. Two full crop years will give farmers a clearer picture of how the PMT will affect their operations and allows them time to better plan and prepare for such change. Running both tools will begin formally for the 2016 crop year, with a phased implementation transition beginning in 2018. All farms will fully implement the PMT in crop year 2022. [See a [seven-year schedule chart](#).

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## 2. Assures agricultural producers that critical elements are available for implementation.

There are critical elements necessary for a viable transition to a fully implemented PMT. For instance, markets must exist for the relocation of additional amounts of manure; sufficient infrastructure for manure handling and transportation will need to be in place; and alternative uses and new technologies will need to begin providing new outlets and markets for animal manures. In 2019, 2020 and 2021, an analysis of these key elements will be conducted to ensure they are in place so farmers can move toward full PMT implementation. If the analysis shows that these key elements are not in place, farmers could postpone moving to the next level of management for one year. However, the state intends to expand its investment in new animal waste technologies and other manure transport programs to ensure these elements are available. [See *Funding & Resources, at right*]

## 3. Enacts an immediate ban on additional phosphorus on soils highest in phosphorus.

Upon final adoption of the 2015 regulations, **fields with a soil FIV of 500 or greater will be immediately banned from applying additional phosphorus.** This ban would remain in effect until the PMT is fully implemented. After that, potential phosphorus applications on these fields would be determined by the PMT. Farms with high soil P (>500 FIV) will receive priority for cost-share assistance under the Manure Transport Program to relocate newly excess animal manure.

## 4. Provides comprehensive information on soil phosphorus conditions statewide.

Beginning in 2016 and every six years thereafter, soil test phosphorus data will be collected for all farms in Maryland subject to nutrient management plan requirements. Consultants preparing nutrient management plans will be required to submit to the Maryland Department of Agriculture (MDA) current soil test phosphorus values for individual fields, including FIV, field acreage and county information. Data will be submitted without identifying information related to the farmer, the farm or its specific location within the county. Consultants will report separately to MDA a list of farm operations for which they have provided soil test phosphorus data. This data will provide MDA with accurate soil fertility data to monitor trends in phosphorus levels and help identify potential areas to redistribute newly available manure.

## PMT On-Farm Economic Analysis Project

This spring, MDA will roll out an on-farm economic analysis project on farms across Maryland. MDA will recruit 10 to 12 Maryland farmers to evaluate the economic impacts of implementing the PMT on a minimum of 1,000 acres. These farms will collect and provide farm-scale cost and crop yield data related to PMT implementation. The farms will represent a cross-section of farm types and geography and include poultry,

dairy, grain and organic operations. The farm scale economic data collected, combined with information from running both the PSI and PMT, will help determine what other resources are needed for a more effective PMT implementation statewide.

## Funding & Resources

### Expand Investments in New Animal Waste Technologies

The Administration will provide funding for the [Animal Waste Technology Grant Fund](#) for new technologies to improve manure management, create new sources of energy and products created from animal manure and improve water quality.

MDA will gain additional insight from technology projects currently under construction:

- [Planet Found Energy Development](#) – Worcester County, poultry litter, energy generation/nutrient separation;
- [Biomass Heating Solutions \(BHSL\)](#) – Dorchester County, poultry litter gasification, energy generation; and
- [Green Mountain Technologies](#) – Howard/Frederick Counties, equine/dairy, composting.

Advancing deployment of new animal manure technologies will accelerate water quality improvements and provide cost-effective, long-term alternatives to land application. Finding new uses for products derived from animal manures, generating energy using animal manures as fuel stocks, and improving on-farm management of animal manures will provide for a stronger agricultural industry, more robust local economies and improved energy independence. Increasing these investments now will accelerate our realization of these benefits, including a better quality of life for all Marylanders.

### Additional Resources to Offset Economic Impacts on Farms

The Administration will also provide additional resources to mitigate certain economic impacts of implementing more stringent environmental requirements on farms. MDA will create a program to offset economic impacts of new environmental regulations, which will provide a stronger agricultural economy and share costs of environmental improvements. The level of support will be based on the on-farm economic analysis project described above.

For more information, visit: [www.mda.maryland.gov](http://www.mda.maryland.gov)



### Maryland Department of Agriculture

50 Harry S. Truman Parkway  
Annapolis, Maryland 21401  
[www.mda.maryland.gov](http://www.mda.maryland.gov)  
[mda.news@maryland.gov](mailto:mda.news@maryland.gov)

Governor Larry Hogan  
Lt. Governor Boyd Rutherford  
Secretary Joe Bartenfelder  
Deputy Secretary Mary Ellen Setting