



# On Board and On Track

Meeting Chesapeake Bay Nutrient Reduction Goals



Nutrient Management Program | 2014 ANNUAL REPORT



# Message from Secretary Hance



The growth of railroads in the 19th century transformed agriculture in Maryland and around the world by allowing farmers to quickly and inexpensively transport crops to markets. Today, farmers continue to embrace new innovations and technologies that improve agricultural production while protecting the natural resources that sustain our industry. In 2014, the Maryland Department of Agriculture (MDA) and Maryland farmers remained on board and on track in meeting Chesapeake Bay nutrient reduction goals.

During the year, Maryland farmers established fertilizer application setbacks next to waterways, incorporated organic nutrient sources into the soil, limited fall nitrogen applications to small grain crops and improved their management of manure and other organic nutrient sources by using state-of-the-art technology and best management practices.

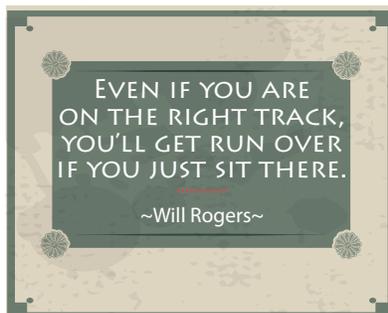
Compliance with nutrient management reporting requirements remained strong. In FY 2014, 98.6 percent of farmers had nutrient management plans and 97.9 percent of farmers had submitted required information on how they managed nutrients during the previous cropping season. Farmers submitting late, incomplete or inconsistent data were audited. Sixty-six percent of these farmers passed their initial on-farm inspections and MDA is working to bring the remaining farmers into compliance.

Regulations to implement the Phosphorus Management Tool (PMT)—an element of Maryland's plan to reduce phosphorus loads to the Bay by 2025—remained on hold in FY 2014 while economists at Salisbury University completed an economic impact study.

Providing farmers with ample resources to comply with new requirements is an MDA priority. During the year, a \$2.5 million Animal Waste Technology Fund was established to jump-start new technology and provide incentives to companies that develop alternative strategies for managing manure. In January, MDA issued a request for proposals and received eight applications. Four awards were approved in early FY 2015. But that's not the end of it. MDA plans to offer the technology grants on an annual basis.

Interest in grants for manure transport skyrocketed during the year, with farmers shipping 119,000 tons of manure to approved farms and businesses—more than double the amount transported last year. Grants to inject or incorporate manure were at an all time high as well, as farmers complied with the new requirements.

In FY 2014, lawn care professionals came on board as full partners in the Bay restoration effort as certification and licensing requirements specified by the Fertilizer Use Act of 2011 kicked in. During the year, our Turfgrass Nutrient Management Program trained and certified more than 1,200 professionals and issued 454 business licenses. Citizens were educated on new lawn fertilizer restrictions and best management practices that they must now follow.



Please read on to learn how the Maryland Nutrient Management Program is on board and on track with Bay restoration goals.

Sincerely,

Earl F. Hance  
*Maryland Agriculture Secretary*



# Maryland's Nutrient Management Program and the Chesapeake Bay

The Nutrient Management Program (NMP) protects water quality in the Chesapeake Bay and its tributaries by ensuring that farmers and lawn care professionals apply fertilizer, animal manure and other nutrient sources in an environmentally sound manner. The program receives guidance from the Nutrient Management Advisory Committee, which includes representatives from agricultural interests, environmental groups, the turfgrass industry, the University of Maryland, and government agencies. The NMP promotes ongoing research and field testing of innovative nutrient reduction strategies and works closely with local, state and federal agencies to coordinate research needed to meet Maryland's Chesapeake Bay restoration goals and two-year milestones.

## AGRICULTURAL NUTRIENT MANAGEMENT PROGRAM

The Water Quality Improvement Act (WQIA) of 1998 requires all farmers grossing \$2,500 a year or more or livestock producers with 8,000 pounds or more of live animal weight to follow nutrient management plans when fertilizing crops and managing animal manure. These plans specify how much fertilizer, manure or other nutrient sources may be safely applied to crops to achieve yields and prevent excess nutrients from impacting waterways. MDA's compliance section ensures that nutrient management plans are developed, updated and followed according to state regulations. Violators face fines and penalties of up to \$2,000 a year and loss of MDA cost-share grants.

To ensure the quality of nutrient management plans, MDA oversees a training, certification and licensing program for nutrient management consultants and farmers.

MDA's revised nutrient management regulations provide enhanced protections for Maryland waterways by requiring farmers to incorporate manure and other organic nutrient sources into the soil, establish no-fertilizer zones next to streams, and curb livestock access to waterways. The regulations further limit fall nitrogen applications to small grains and, beginning in 2016, phase in a ban on spreading manure, biosolids, and organic nutrients in winter.

## TURFGRASS NUTRIENT MANAGEMENT PROGRAM

The Fertilizer Use Act of 2011—Maryland's Lawn Fertilizer Law—requires lawn care professionals to be licensed and certified by MDA to apply fertilizer to lawns that they manage. The law, which took effect October 1, 2013, significantly strengthened MDA's existing Turfgrass Nutrient Management Program by expanding its regulatory authority to include more than 1,500 individuals and companies that apply lawn fertilizer to golf courses, parks, recreation areas, athletic fields, business properties, school campuses, cemeteries, highway right-of-ways and home lawns. MDA, in partnership with the University of Maryland Extension (UME), has developed a training, certification and licensing program for these lawn care professionals that focuses on new fertilizer application requirements and best management practices that help protect waterways from nutrient runoff.

MDA publishes a list of certified lawn care professionals on its website at [www.mda.maryland.gov/fertilizer](http://www.mda.maryland.gov/fertilizer) and conducts enforcement activities to ensure compliance with the law. In addition, it works with UME to educate homeowners on ways to prevent excess fertilizer from washing off lawns.



# Agricultural Nutrient Management Program

## COMPLIANCE AND ENFORCEMENT

MDA nutrient management specialists make sure that farmers are complying with the law and that water quality objectives are being met. Specialists review nutrient management plans submitted by farmers, analyze required documentation, and perform critical on-farm audits to verify compliance with program requirements. MDA is authorized to issue fines and penalties, take administrative actions and pursue civil proceedings against farmers who fail to comply with nutrient management requirements. In June 2014, MDA filled two vacant positions and now has a full complement of nine nutrient management specialists.

**Nutrient Management Plans**—Maryland farmers are required to submit copies of their initial nutrient management plans to MDA (Figure 1). By the end of the fiscal year, 98.6 percent of the state’s 5,426 regulated farms had met this requirement. MDA is pursuing enforcement actions against 75 operators who have not submitted their initial nutrient management plans. In FY 2014, \$3,850 in fines were issued against 11 farmers who failed to file an initial nutrient management plan.

**Annual Implementation Reports**—Farmers are required to follow updated nutrient management plans and submit Annual Implementation Reports (AIRs) to MDA by March 1 summarizing their nutrient applications by crop for the previous growing season (Figure 2). In April 2014, MDA issued warning notices to 974 farmers who failed to file their AIRs on time, followed by 299 notices of pending fines and 117 default notices. By the end of the fiscal year, 97.9 percent of regulated farmers managing about 1.3 million acres of land had submitted their AIRs. In

FY 2014, MDA issued \$23,250 in fines against 93 farmers for late or missing AIRs.

**On-Farm Audits and Inspections**—MDA nutrient management specialists conducted 733 on-farm audits in FY 2014, representing about 14 percent of regulated farms (Figures 3 and 4). During these visits, specialists verify that nutrient management plans are current, examine fertilizer receipts and nutrient application records for consistency with plans, and confirm that farmers are using plans to manage nutrients effectively. Specialists issued 211 warnings to correct major violations and documented minor violations to be corrected. Follow-up visits determined that 66 percent of the operators had come into compliance. Enforcement actions are underway with the remaining

operators. This figure represents a drop in compliance levels from 2013 and coincides with MDA’s increased focus on operations submitting late, inaccurate or inconsistent AIRs. In FY 2014, MDA issued \$21,450 in fines against 33 farmers who failed to take corrective actions in a timely manner.

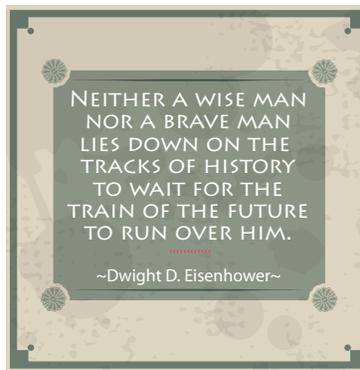


FIGURE 1:  
Nutrient Management Plans Submitted (as of June 30, 2014)  
5,426 Regulated Farms

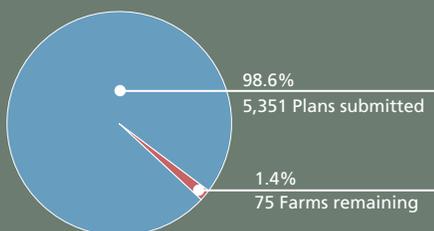


FIGURE 2:  
Annual Implementation Reports (AIRs) Submitted (as of June 30, 2014)  
5,501 Farms Eligible for AIRs

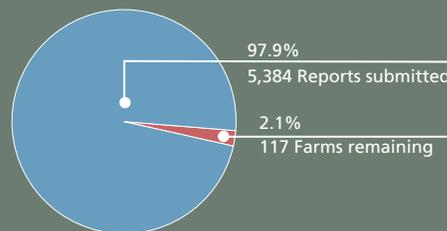
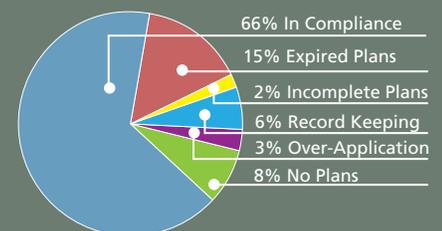


FIGURE 3:  
On-Farm Audits (Fiscal Year 2014)  
733 Initial Inspections





## CERTIFICATION AND LICENSING

### **Certified Nutrient Management Consultants—**

The Nutrient Management Program trains and certifies qualified individuals to provide farmers with nutrient management plans that balance crop nutrient needs with environmental protection. Proper storage, handling and application of commercial fertilizers, biosolids and animal manure are emphasized. In FY 2014, MDA certified 23 new consultants who passed the Nutrient Management Certification Exam, bringing the number of individuals who have successfully completed the program to 1,261. Approximately 25 percent of these consultants are actively writing plans for farmers (Figure 5.)

### **University of Maryland Consultant Program—**

Twenty University of Maryland consultants were funded by MDA in FY 2014. These consultants provide farmers with nutrient management plans free of charge.

**Farmer Training and Certification—**MDA and University of Maryland Extension train farmers who want to become certified to write nutrient management plans for their own operations. Farmers undergo about 11 hours of classroom instruction and practice in writing plans and are required to pass an exam. They work with Extension specialists to develop nutrient management plans that meet MDA requirements. In FY 2014, 46 farmers were trained and certified to write their own nutrient management plans. To date, 547 farmers have been certified to develop nutrient management plans for properties that they own or manage.

FIGURE 4:  
Farm Audit and Follow-up Inspections  
Percentage of Farms Receiving Inspections  
(Fiscal Years 2010-2014)

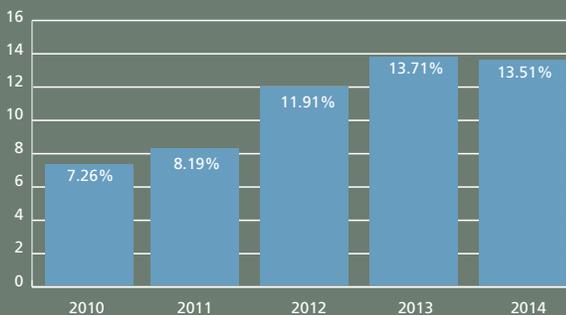
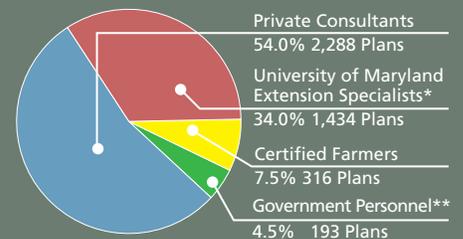


FIGURE 5:  
Nutrient Management Plan Development  
(Fiscal Year 2014)

Includes New Plans and Updates



\* Data provided by UME Quarterly Reports

\*\* Includes personnel from state agencies, USDA-NRCS, soil conservation districts, counties and municipalities.





## CONTINUING EDUCATION

***Nutrient Applicator Voucher Training***—Farmers who apply nutrients to 10 or more acres of cropland are required to attend a nutrient applicator training course once every three years. In FY 2014, MDA and UME conducted 22 voucher training sessions attended by 335 farmers seeking to obtain or renew their vouchers.

***Continuing Education***—Certified nutrient management consultants are required to take 12 hours of continuing education credits every three years in order to renew their certificates. To remain eligible to update and revise their nutrient management plans, certified farmers must take six hours of continuing education classes every three years. In FY 2014, MDA and UME sponsored 46 education classes on nutrient management topics and approved an additional 47 courses and field events sponsored by other recognized organizations. The sessions were attended by 2,664 individuals. In addition, MDA provided a two-day training course for individuals planning to take the Nutrient Management Certification Exam.



# Turfgrass Nutrient Management Program

## LAWN FERTILIZER LAW TAKES EFFECT

On October 1, 2013, the Fertilizer Use Act of 2011 took effect. Its aim is to reduce the amount of nutrients washing into the Chesapeake Bay and its tributaries from urban sources—mainly lawns and other managed grassy areas. Bay experts estimate that 14 percent of the nitrogen and 8 percent of the phosphorus entering the Bay and its tributaries can be attributed to these urban nutrient sources. The law requires both homeowners and lawn care professionals to obey new fertilizer application restrictions, use best management practices when applying fertilizer to lawns, observe newly designated fertilizer blackout dates, and follow University of Maryland fertilizer recommendations.

**Certification Program Launched**—A key component of Maryland's Lawn Fertilizer Law directed MDA to establish a certification and licensing program for lawn care professionals hired to apply fertilizer to properties that they manage.

During the year, MDA obtained approval of its turfgrass nutrient management regulations and worked closely with University of Maryland Extension to establish a training and certification program for lawn care professionals. An extensive outreach effort was conducted to ensure that these professionals understood the new requirements, had access to study materials, and were on board with the program.

In FY 2014, MDA, in cooperation with University of Maryland Extension, area businesses, and trade organizations, conducted 164 precertification training sessions across the state to prepare lawn care professionals for the certification exam. By June 30, 2014, 1,218 Professional Fertilizer Applicator certificates were issued to qualified individuals. Four hundred fifty-four business licenses were issued during the same period. MDA maintains a list of certified professional fertilizer applicators on its website at [www.mda.maryland.gov/fertilizer](http://www.mda.maryland.gov/fertilizer).

**Enforcement**—The Fertilizer Use Act authorizes MDA to impose civil penalties against lawn care professionals of up to \$1,000 for the first violation and \$2,000 for each subsequent violation. In FY 2014, MDA conducted 16 reviews of turf managers' fertilizer records to assess compliance. Two warnings were issued; one for over-application of nitrogen and the other for missing fertilizer application records. To assist with inspections, an enforcement specialist was hired at the end of the fiscal year with grant support from the Chesapeake Bay Trust.

**Homeowner Outreach**—In fall 2013, and again in spring 2014, MDA rolled out a public education campaign using social media, the Internet and print advertising to help spread the word among homeowners about Maryland's new lawn fertilizer law. Educational exhibits were set up at high volume public events statewide including county fairs, the Maryland Home and Garden Show, Master Gardeners Conference and the Maryland State Fair. Fact sheets were updated and reprinted and displays were presented at various public events and functions.

In all, more than 40,000 publications were distributed.



# Maryland Department of Agriculture

## Nutrient Management Offices

### WESTERN MARYLAND

**Allegheny, Garrett and Washington counties**

3 Pershing Street, Room 100  
Cumberland, MD 21502  
301.722.9193

**Carroll, Frederick, Howard and Montgomery counties**

92 Thomas Johnson Drive, Suite 110  
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301.694.9290, ext. 136 or 137

### CENTRAL MARYLAND

**Baltimore, Cecil and Harford counties**

19 Newport Drive, Suite 106  
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410.838.6181, ext. 118

### SOUTHERN MARYLAND

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**Calvert, Charles and St. Mary's counties**

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