



2022 PROGRESS REPORT

IMPLEMENTING NUTRIENT MANAGEMENT PROGRAMS

A Report to Governor Larry Hogan
and the Maryland General Assembly
by the Nutrient Management Advisory Committee
July 1, 2022

Maryland Department of Agriculture
Office of Resource Conservation
Nutrient Management Program
50 Harry S. Truman Parkway
Annapolis, MD 21401
Phone 410-841-5959
www.mda.maryland.gov

Larry Hogan, *Governor*
Boyd Rutherford, *Lt. Governor*
Joseph Bartenfelder, *Secretary of Agriculture*
Steven A. Connelly, *Deputy Secretary*

THE NUTRIENT MANAGEMENT ADVISORY COMMITTEE

The Nutrient Management Certification and Licensing Law of 1992 required the Maryland Department of Agriculture (MDA) to establish a Nutrient Management Advisory Committee to be appointed by the Secretary of Agriculture. The Committee is charged with helping develop regulations and guidelines regarding nutrient management planning. The Water Quality Improvement Act (WQIA) of 1998 further defined membership and responsibilities of the Nutrient Management Advisory Committee as follows:

§8-804.

- (a)(1) The Department shall establish a Nutrient Management Advisory Committee. The Secretary shall appoint to the Committee representatives of the agricultural community, the environmental community, the commercial lawn care, biosolids and agricultural fertilizer industries, academia, and appropriate government units. The Secretary also shall appoint to the Committee a representative of county government from a list submitted by the Maryland Association of Counties. The President of the Senate of Maryland shall appoint to the Committee one Senator, and the Speaker of the House of Delegates shall appoint to the Committee one Delegate.
- (2) (i) The Nutrient Management Advisory Committee shall report to the Governor and the General Assembly, in accordance with §2-1246 of the State Government Articles, by July 1 of each year on the implementation of the requirements of the Water Quality Improvement Act of 1998.
(ii) The report required under subparagraph (i) of this paragraph shall include information regarding:
 - 1. the level of participation in the nutrient management plan program;
 - 2. additional resources that may be needed to meet the requirements of §8-803.1 of this subtitle;
 - 3. the effectiveness of nutrient application education programs, and;
 - 4. the effectiveness of the Manure Transport Project set forth in §8-704.2 of this title.
- (b) In consultation with the Nutrient Management Advisory Committee, the Department shall by regulation:
 - (1) Prescribe the criteria, form and content for certified nutrient management plans applicable to licensees and certificate holders;
 - (2) Establish continuing education requirements for certified nutrient management consultants and persons receiving vouchers of completion under §8-803.3 of this subtitle, and;
 - (3) Adopt guidelines and requirements for licensees and certified nutrient management consultants on record keeping and on reporting requirements to the Department on nutrient management plans.

2022 NUTRIENT MANAGEMENT ADVISORY COMMITTEE MEMBERS

Secretary Joe Bartenfelder, Chair

Maryland Department of Agriculture

Delegate Charles Otto

Maryland Grain Producers Association

Matt DeBaugh

Maryland Dairy Industry Association

Holly Porter

Delmarva Chicken Association

Jen Nelson

Maryland Association of
Soil Conservation Districts

Mark Fuchs

Delaware-Maryland Agribusiness Association

Mark Schlossberg

Maryland Association of Green Industries, Inc.

Doug Myers

Chesapeake Bay Foundation

Amy Crowl

Maryland Nursery & Landscape Association

Lisa Williams

Old Line Environmental, Inc.- Biosolids Ind.

David Kann

AET Consulting, Inc.- Certified Consultants

David Ruppert, Ph.D.

University of Maryland

Colby Ferguson

Maryland Farm Bureau

The Honorable Jason Gallion

Maryland State Senate

The Honorable Jay Jacobs

Maryland House of Delegates

Vacant

USDA Natural Resources Conservation
Service

Gurpal Toor, Ph.D.

University of Maryland

Suzanne Dorsey

Maryland Department of the Environment

Hans Schmidt

Maryland Department of Agriculture

Dwight Dotterer

Maryland Department of Agriculture

THE YEAR IN NUMBERS...

AGRICULTURAL

96% of regulated farmers submitted required annual implementation reports.

74% of audited farms passed their initial inspections.

18 new private nutrient management consultants were certified

21 additional farmers were certified to write their own nutrient management plans.

511 nutrient management vouchers were issued/renewed.

2,031 farmers and consultants attended 118 continuing education events.

TURFGRASS

98% of licensed businesses submitted required annual reports.

80% of audited firms passed their reviews.

1,383 professional fertilizer applicator certificates issued.

173 lawn care professionals took the professional fertilizer applicator exam.

1,501 lawn care company employees trained.

829 business licenses issued.

324 professional fertilizer applicators earned continuing education credits.

MARYLAND'S NUTRIENT MANAGEMENT PROGRAM

The Nutrient Management Program protects water quality in local streams and the Chesapeake Bay and helps reduce nitrogen losses to the atmosphere that contribute to climate change. It does this by regulating the amount, timing, rate, and placement of commercial fertilizer products and organic nutrient sources used by Maryland farmers to grow crops, and by lawn care professionals to fertilize lawns. The staff works closely with poultry, dairy, and other livestock producers to ensure that animal manure is managed to protect water quality while minimizing nitrogen losses to the atmosphere. Guidance is provided by the Nutrient Management Advisory Committee.

AGRICULTURAL NUTRIENT MANAGEMENT PROGRAM

Farms that generate \$2,500 or more in gross income or have 8,000 pounds or more of live animal weight must follow nutrient management plans when fertilizing crops and managing animal manure. The 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. The program ensures that plans are developed, updated, and implemented according to state regulations. The following rules apply:

- Setbacks and livestock exclusion measures must be in place to protect local streams.
- Farmers who till their soil are required to incorporate manure and other nutrient sources into fields within 48 hours of application and follow timing requirements for fall nutrient applications.
- All regulated operations are banned from spreading manure on fields in winter.
- Fields with high soil phosphorus levels must be managed using Maryland's Phosphorus Management Tool.

Compliance and Enforcement

Maryland farmers are required to follow nutrient management plans that specify the amount, timing, and placement of nutrients for each crop. These plans are prepared by University of Maryland Extension advisors, certified private consultants, or farmers who are certified to develop plans for their own operations.

Farmers are required to update their nutrient management plans before they expire, submit Annual Implementation Reports (AIRs) summarizing nutrient applications for the previous year, and most importantly, follow their nutrient management plans. The program's eight nutrient management specialists analyze Annual Implementation Reports and conduct site visits to verify that farmers follow their plans.

Nutrient Management Plan Submissions

New farming operations must submit copies of their initial nutrient management plans to the Department. The program works to locate new farming operations and pursues enforcement actions against operators who have not met this initial requirement.

Annual Implementation Reports (AIRs)

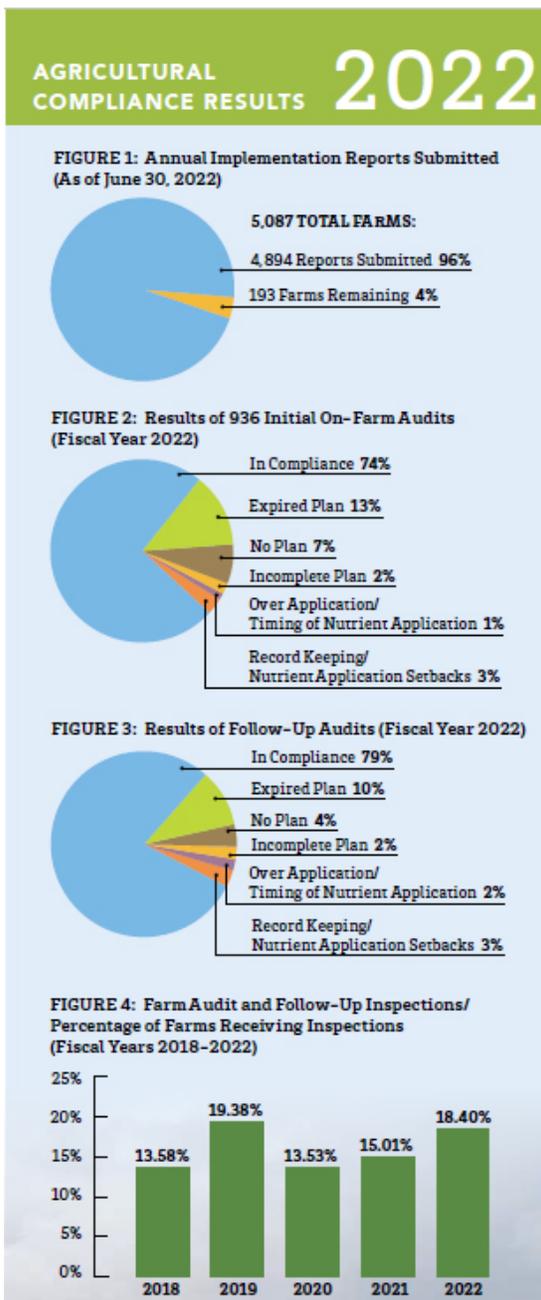
AIRs are due to the department by March 1. These reports summarize nutrient applications for the previous calendar year. By the end of FY2022, 96% of regulated farmers managing 1.25 million acres of land had submitted these reports. Fines were issued to 193 operators for late or missing reports. The program is working to bring these farms into compliance.

Electronic Reporting

Electronic reporting provided through Maryland OneStop continued to take root with farmers and lawn care professionals alike. In FY2022, 30% of regulated farmers took advantage of electronic reporting.

On-Farm Audits and Inspections

MDA nutrient management specialists conducted 936 on-farm audits in FY2022 representing 18.4% of regulated farms. Approximately 74% of audited farms were in full compliance at the time of inspection. Follow-up inspections determined that 78 farmers cited had corrected their violations, raising the compliance rate to 79% by the end of the fiscal year. The program is actively pursuing full compliance for all audited



Phosphorus Management Tool

Maryland's Chesapeake Bay cleanup plan calls for significant reductions in the amount of phosphorus entering local waterways from agricultural sources. The PMT uses the latest science to identify the risk of phosphorus losses from farm fields and prevent the additional buildup of phosphorus in soils that are already saturated.

FY2022 PMT Status Summary

Farmers with fields containing elevated soil phosphorus levels completed a multi-year transition to the PMT in July 2021.

- The majority of farmers with elevated soil phosphorus levels have fully complied with the regulations.
- The PMT Transition Committee will remain active until at least July 1, 2023 to address any unforeseen problems.
- State law requires soil phosphorus data to be collected every 6 years beginning in 2015.
- In September 2021, the program conducted a second round of soil data collection from nutrient management consultants as required by state regulations.
- Soil data was collected for 1,035,211 acres of regulated farmland. Approximately 20% of farm fields tested have soil phosphorus levels that require using the PMT.
- The program continues to target farms that have not submitted soil data for inspections.

Phosphorus Management Research

The Nutrient Management Program supports research on new technologies and risk assessment tools to manage phosphorus losses on farmland.

- *Risk Assessment Tools Study*—Work continued on a 5-year University of Maryland study of phosphorus loss risk assessment tools.
- *Soil Additives Study*—Research moved forward on an MDA-funded study to help determine the value of soil additives in preventing soil phosphorus losses. The University of Maryland Center for Environmental Sciences is conducting this study.

Certification, Licensing, and Education

The Nutrient Management Program manages a training, certification and licensing program for:

- Consultants who prepare nutrient management plans for farmers.
- Farmers who want to become certified to prepare their own nutrient management plans.

The following Activities Took Place in FY2022:

Certified Nutrient Management Consultant Program

The program certified 18 new consultants to write nutrient management plans for farmers and renewed 73 certifications.

University of Maryland Consultant Program

The program funded 20 University of Maryland Extension advisors in FY2022. These advisors provide farmers with nutrient management plans free of charge.

Farmer Training and Certification

The program trains farmers to become certified to write nutrient management plans for their own operations. Farmers are required to learn the basics of nutrient management planning, pass a specialized nutrient management exam, and work with a nutrient management specialist or Extension advisor to develop their plans. During the year, 21 farmers were trained to write nutrient management plans for their own operations and 90 certifications were renewed.

Nutrient Applicator Voucher Training

Farmers who apply nutrients to 10 or more acres of cropland are required to attend an applicator training course once every 3 years. The program partners with University of Maryland Extension to conduct a series of statewide voucher training sessions. In FY2022, 511 vouchers were issued or renewed.

Continuing Education

Certified consultants are required to earn 12 hours of continuing education credits every 3 years. During the year, 118 continuing education events were attended by 2,031 individuals.

NUTRIENT MANAGEMENT ADVISORY COMMITTEE MEETING
APRIL 19, 2022

- PMT is fully implemented, PMT Advisory Committee asked to stay on for another year.
- The urban license renewal period changed from June 30th each year to December 31st.
- Law change—AIR penalty will increase from the current \$250. The new law will increase the penalty by \$250 every 30 days until it reaches \$1,000.
- Changes in land application regulations for Food Processing Residuals. Reasons for regulation changes include increased odor complaints, material spread on the surface that should be incorporated, public perception as waste disposal, inadequate cover crops planted, better definition of saturated soils.
 - Soil amendment proof of registration
 - Seasons defined with calendar dates
 - Clearer definition of saturated soils
 - New summer guidelines have been incorporated
 - Food waste materials separated from all other organic materials
 - Pasture and hay fields defined
 - Moisture content for stockpiling clarified
 - What is not affected:
 - Water plant residuals
 - AD system digestate
 - Compost
 - Spent mushroom soil
 - Class A and Class B biosolids
 - Animal manures and poultry litter

TURFGRASS NUTRIENT MANAGEMENT PROGRAM

This program trains, certifies, and licenses individuals and companies hired to apply lawn fertilizer to non-agricultural land. The training and certification program—developed in partnership with the University of Maryland Extension—focuses on fertilizer application techniques, soil science, and best management practices to be used when applying fertilizer to lawns. A compliance program ensures that fertilizer applications are made following University of Maryland application and timing recommendations. Homeowner outreach is conducted jointly with the University of Maryland Extension. *Authorization: Maryland's Fertilizer Use Act of 2011*

Protecting the Bay from Excess Lawn Fertilizer

Maryland's Lawn Fertilizer Law limits the amount of nutrients that can be applied to turfgrass and restricts phosphorus content in lawn fertilizer. The goal is to help homeowners and lawn care professionals maintain healthy lawns without applying unnecessary amounts of nitrogen and phosphorus that can easily wash into the storm drains and streams that feed the Chesapeake Bay.

The law requires lawn care professionals to be trained and certified in proper fertilizer techniques for turfgrass or work under the direct supervision of an individual who is certified. It applies to professionals hired to fertilize home lawns, as well as individuals responsible for turf management at golf courses, public parks, airports, athletic fields, businesses, cemeteries, and other nonagricultural properties.

In addition, lawn care professionals and do-it-yourselfers are required to obey fertilizer application restrictions, use best management practices when applying fertilizer to lawns, observe fertilizer blackout dates, and follow University of Maryland fertilizer recommendations.

The following activities took place in FY2022:

Professional Certification and Licensing

- Nine professional fertilizer applicator exams were offered regionally and attended by 173 lawn care professionals.
- The program issued 829 business licenses and 1,383 professional Fertilizer Applicator Certificates.
- An additional 1,501 lawn care company employees have been trained to apply fertilizer under the supervision of a certified professional.

Recertification Training

- During the year, the program switched the renewal cycle for Professional Fertilizer Applicators (PFAs) and licensed businesses from July-June to January-December. The move was made to help lawn care professionals and businesses keep their renewals up to date by changing the deadline from peak season to off-season.
- Five virtual recertification classes were attended by 324 certified professionals in FY2022.
- Additional training opportunities were approved for private industry and trade groups.

Annual Activity Reports

License holders are required to file an annual activity report with the program by March 1, covering the previous year. In FY2022:

- The program received 814 activity reports representing a 98% compliance rate.
- 69% of licensed companies filed their annual reports electronically through the Maryland OneStop portal during its second year of operation.

Enforcement Activities

- During the year, the program conducted 220 record reviews.
- Both electronic and on-site reviews were conducted.
- 80% of the firms were in compliance. Violations were resolved through follow up visits and education.

Homeowner Outreach

The program continued to educate citizens about Maryland's Lawn Fertilizer Law through a partnership with the University of Maryland Master Gardeners.

Job Opportunities for Underserved Youth

During the year, the program partnered with the University of Maryland Extension to launch a pilot PFA certification program for high school students in Baltimore City. The project aims to help underserved students pursue a career in turfgrass management by providing educational support and eliminating financial barriers to certification. Feedback from the pilot program is being evaluated. Once finalized, the program hopes to expand the opportunity to students in underserved communities across the state, especially those who may find the cost of PFA certification restrictive until they can secure employment in the field. PFAs perform work for many types of employers, including lawn care firms, golf courses, public parks, colleges and universities.



**Maryland
Department of Agriculture**

Office of Resource Conservation

Nutrient Management Program

50 Harry S. Truman Parkway

Annapolis, MD 21401

410-841-5959 | mda.maryland.gov