

# Implementing Nutrient Management in Maryland



In Maryland, protecting the health of streams, rivers and our great Chesapeake Bay is a top priority. It stands to reason that enforcement of our state's most aggressive and far reaching Bay cleanup initiative, the *Nutrient Management Law*, is on the minds of many Marylanders. During the year, the Maryland Department of Agriculture (MDA) made substantial progress in ensuring that farmers and urban land managers are on board and complying with the law, which is designed to protect waterways from nutrient runoff.



Like many complex laws, the Nutrient Management Law has been phased in over the years in order to give farmers and other land managers time to comply. Education and outreach programs have been, and continue to be, a critical component of the program. However, now that all deadlines have come and gone, a stronger level of enforcement has become necessary to ensure that the environmental objectives of the law are being met.

Our latest compliance figures for the agricultural nutrient management program speak for themselves. As of December 31 of this year, 97 percent of the state's 6,100 eligible farmers have filed nutrient management plans with MDA. These farmers are documenting ongoing compliance by filing annual implementation reports that describe how they followed their nutrient management plans during the preceding year. Enforcement actions are underway to bring the few remaining farmers who do not have plans into compliance. We are also ramping up inspections to ensure that plans are updated and implemented.

Our urban nutrient management program is moving forward with compliance and enforcement procedures. In response to newly released fertilizer guidelines completed by the University of Maryland, MDA's urban program is beefing up its reviews of golf course fertilizer programs. In addition, follow up inspections have been performed at companies that previously received unsatisfactory reviews. These firms have been given deadlines for compliance and face fines for continued infractions.

In a word, nutrient management progress was strong in 2007. As we look ahead to the upcoming year, MDA will continue its work to ensure that the agricultural community and urban land managers are complying with the Nutrient Management Law in order to protect our valuable water resources.

A handwritten signature in black ink that reads "Roger Richardson". The signature is written in a cursive, flowing style.

Roger Richardson, *Maryland Secretary of Agriculture*

## The Water Quality Improvement Act of 1998

### Summary of Requirements

Nutrient management plans are science-based documents that help farmers manage fertilizers, animal waste and other nutrient sources more efficiently in order to meet crop needs while protecting water quality in streams, rivers and the Chesapeake Bay.

The Water Quality Improvement Act 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 run their operations using a nutrient management plan that addresses both nitrogen and phosphorus inputs. The requirement applies to all agricultural land used to produce plants, food, feed, fiber, animals or other agricultural products. Farmers are required to update their nutrient management plans, take new soil samples a minimum of once every three years and file annual reports with MDA describing how they implemented their nutrient management plans during the previous year.

Farmers who own or manage 10 or more acres of agricultural land and apply their own nutrients are required to attend a two-hour MDA-sponsored education program on nutrient application once every three years. Professionals and farmers certified to prepare nutrient management plans are required to take continuing education courses in order to keep abreast of the latest nutrient management technologies and regulations.

Commercial, non-agricultural nutrient applicators, including lawn care companies, landscapers, golf course managers and public groundskeepers, are required by law to follow Maryland Cooperative Extension guidelines when applying nutrients to lawns, athletic fields or other landscapes.



## Agricultural Enforcement

MDA's six nutrient management specialists review nutrient management plans submitted by farmers, perform on-site inspections, analyze Annual Implementation Reports submitted by farm operators and follow up on citizen complaints. The compliance section works closely with the Maryland Agricultural Water Quality Cost-Share (MACS) Program to ensure that operators who receive grants to install conservation practices are in compliance with the program. MDA has authority to issue fines and penalties, take administrative actions, which are heard before the Office of Administrative Hearings, and pursue judicial actions, including civil or criminal proceedings heard in court. Administrative and civil actions can result in orders and/or penalties. Criminal proceedings can result in fines and/or imprisonment.



*Maryland Attorney General Douglas Gansler (left) visited a poultry and grain farm in Queen Anne's County last fall to witness the inspection process first hand.*

### Nutrient Management Plan Submissions

Nutrient management plans are required by law to be developed by a certified and licensed consultant or farmer who is trained and certified by MDA to develop an approved plan for his/her operation.

MDA's nutrient management specialists ensure that nutrient management plans are developed and submitted to the Nutrient Management Program according to state regulations. By December 31, 2007, approximately 97 percent of the state's 6,100 eligible farmers submitted nutrient management plans to MDA. These plans cover approximately 1.3 million acres or 98 percent of the cropland affected by the law.

In 2007, MDA ramped up enforcement efforts to bring the small number of farmers without nutrient management plans into compliance with the law. In calendar year 2007, MDA issued 90 first notices and 43 warning letters to farmers who had not submitted plans. Most farmers subsequently submitted nutrient management plans to MDA; however, 16 charge letters were sent to the remaining non-compliant farmers ordering them to comply with the law, pay the fine or attend a hearing.

### Nutrient Management Implementation Reports

Once a farmer has obtained a nutrient management plan, he/she is required to submit an Annual Implementation Report to MDA by March 1 of each year. The report describes how a nutrient management plan was implemented during the previous cropping season and verifies that an up-to-date plan is in place for the upcoming year.

By December 31, 2007, 94 percent of the state's 6,100 eligible farmers had filed their Annual Implementation Reports with MDA. These farmers care for approximately 99 percent of the state's 1.3 million acres of regulated cropland.

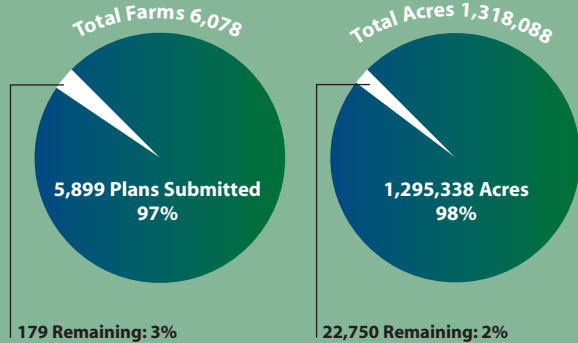
### On-Farm Inspections

MDA's goal is to annually conduct inspections on 10 percent of regulated farms to verify that nutrient management plans are current and being implemented. The inspections are targeted toward farmers who have not submitted their Annual Implementation Reports, operations with a history of compliance problems, and certain high risk animal operations and farms using manure, imported organic wastes and sludge.



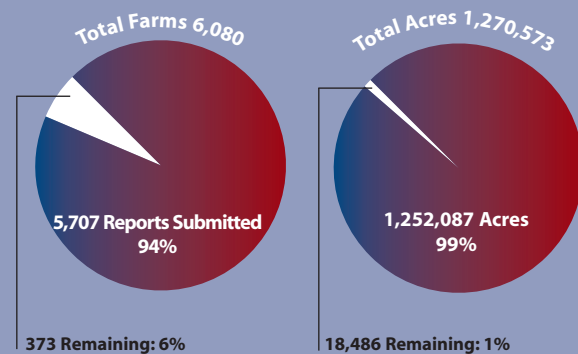
## Nutrient Management Plans Submitted

as of December 31, 2007



## Annual Implementation Reports Submitted

as of December 31, 2007



MDA is refining its inspections to employ a more deliberate risk-based approach to enforcement using information gathered on the number of animals, waste storage, excess manure, compliance issues and complaints.

In calendar year 2007, MDA's enforcement team conducted 500 on-farm nutrient management inspections. MDA provides farmers with additional training and guidance in minor areas that need improvement, such as record keeping or offenses that present no imminent threat to public health or the environment. The inspector may request that a violation be corrected prior to leaving the operation, in which case no follow-up is needed. These minor violations are documented by the inspector and become part of the record for that operation.

Certain violations uncovered during an inspection, however, are considered significant, including major excursions from prescribed standards and offenses that pose a direct threat to public health or the environment. Such violations warrant a timetable for correction and follow up visits by MDA inspectors. They can result in penalties.

## Certification and Licensing Programs

### Nutrient Management Consultant Certification Program

The Nutrient Management Program trains and certifies qualified applicants to provide farmers with farm-specific nutrient management plans that balance crop nutrient needs with natural resources protection. Proper storage, handling and application of commercial fertilizers, biosolids and animal manure are emphasized.

In Fiscal Year 2007, MDA certified 21 new consultants who passed the Nutrient Management Certification Exam, bringing to 1,090 the number of certified consultants available to Maryland farmers. The figure includes 200 consultants who operate under licenses and are actively writing plans and 30 Maryland Cooperative Extension consultants who are funded by MDA.

To ensure the quality of plans written by certified consultants, MDA conducts periodic reviews and field inspections. In Fiscal Year 2007, MDA specialists conducted 80 field inspections while evaluating approximately 500 plans for MDA cost-share projects to make certain that they met regulatory standards.



### Farmer Training and Certification Program

MDA and the University of Maryland Cooperative Extension offer a Farmer Training and Certification Program for farmers who want to become certified to write their own nutrient management plans. This specialized program allows farmers to focus on nutrient management issues and techniques specific to their operations. Specialized workshops are offered regionally for livestock, poultry, crop and nursery and greenhouse operations.

To become certified, farmers must learn the basics of nutrient management planning, pass a specialized nutrient management exam and initially work with an MDA or Cooperative Extension expert to develop their own plans.

In Fiscal Year 2007, MDA trained and certified 30 farmers to write their own nutrient management plans. To date, 230 farmers have been certified by MDA to write nutrient management plans for their own operations.

## Education Programs

### Test Preparation Workshop

The Nutrient Management Program offers a training course for individuals interested in taking the Nutrient Management Certification Exam. In Fiscal Year 2007, 35 individuals attended the two-day workshop bringing to 1,600 the total number of individuals that have taken the training since 1993. Approximately 66 percent of these individuals have subsequently passed the nutrient management certification examination.



### Continuing Education

Nutrient management consultants are required to take six hours of continuing education classes in order to renew their certificates following the first year of certification, and 12 hours of continuing education classes once every three years thereafter. In addition, certified farmers are required to attend six hours of continuing education classes once every three years in order to remain eligible to update and revise their plans.

In Fiscal Year 2007, MDA, in partnership with the University of Maryland Cooperative Extension, offered 26 comprehensive continuing education workshops on numerous topics ranging from the Phosphorus Site Index to Advanced Nutrient Management Training for Nursery and Greenhouse Operations. Approximately 700 participants attended the training during the year.

Additionally, MDA reviewed and approved an additional 50 workshops and training programs sponsored by recognized organizations and neighboring universities to help consultants fulfill their continuing education requirements.

### Applicator Voucher Training

Individuals who apply any nutrients to 10 or more acres of cropland that they own or operate are required to attend an applicator training course once every three years. In Fiscal Year 2007, MDA and Maryland Cooperative Extension conducted 52 voucher training sessions attended by more than 1,400 participants. As of August 31, 2007, 4,846 nutrient applicator vouchers were issued by MDA.

## Incentive Programs

### Nutrient Management Consulting Services

MDA provides financial assistance to farmers who prefer to hire a certified, non-government consultant to develop or update their nutrient management plan rather than an Extension specialist. Administered by the Maryland Agricultural Water Quality Cost-Share (MACS) Program, the reimbursement rate to hire a private consultant is 87.5 percent of the cost of the plan, up to \$3,000 per operation. Certain out of pocket expenses incurred by farmers certified by MDA to develop their own plans and operators whose plans are developed by Cooperative Extension consultants are also covered.

During Fiscal Year 2007, MACS issued \$405,066 in cost-share grants to 343 farmers who hired private consultants to develop nutrient management plans for 183,662 acres of farmland. Due to high demand and limited funding, the program exhausted its funding budget in May and temporarily stopped accepting new cost-share applications.

### Manure Transport Program

The Manure Transport Program provides grants to help poultry, dairy, beef and other animal producers transport excess manure off their farms. Animal producers with high soil phosphorus levels or inadequate land to spread their manure can receive cost-share assistance of up to \$20 per ton to transport excess manure to other farms or alternative use facilities that can use the product in an environmentally safe manner. Cost-share rates are 20 percent higher for farms located in Dorchester, Somerset, Wicomico or Worcester counties, due to the high concentration of poultry farms in this area.

In Fiscal Year 2007, the Transport Program provided farmers with \$490,000 in state grant payments to transport 99,300 tons of manure to other areas that could use the product safely. Cost-share funds to transport poultry litter were matched by Delmarva poultry companies, bringing the total amount of financial support provided to transport excess manure to \$847,000. Transport of other types of animal manure is cost-shared at 87.5 percent.





**Maryland**  
**Department of Agriculture**  
 Office of Resource Conservation  
 Nutrient Management Program

[www.mda.state.md.us](http://www.mda.state.md.us)

### Nutrient Management Offices

**Region 1: Allegany, Garrett and Washington counties**

Maryland Department of Agriculture  
 Nutrient Management Program  
 3 Pershing Street, Room 100  
 Cumberland, MD 21502  
 301-722-9193

**Region 2: Carroll, Frederick, Howard and Montgomery counties**

Maryland Department of Agriculture  
 Nutrient Management Program  
 92 Thomas Johnson Drive, Suite 110  
 Frederick, MD 21702  
 301-694-9290, ext. 136 or 137

**Region 3: Anne Arundel, Calvert, Charles, Prince George's and St. Mary's counties**

Maryland Department of Agriculture  
 Nutrient Management Program  
 50 Harry S. Truman Parkway  
 Annapolis, MD 21401  
 410-841-5959

**Region 4: Baltimore, Cecil, Harford and Kent counties**

Maryland Department of Agriculture  
 Nutrient Management Program  
 19 Newport Drive, Suite 106  
 Forest Hill, MD 21050  
 410-838-6181

**Region 5: Caroline, Dorchester, Queen Anne's and Talbot counties**

Maryland Department of Agriculture  
 Nutrient Management Program  
 317 Carter Avenue, Suite 100  
 Denton, MD 21629  
 410-479-4905 or 410-479-4929

**Region 6: Somerset, Wicomico and Worcester counties**

Maryland Department of Agriculture  
 Nutrient Management Program  
 27722 Nanticoke Road, Unit 2  
 Salisbury, MD 21801  
 410-677-0802



Martin O'Malley, Governor  
 Anthony G. Brown, Lt. Governor  
 Roger L. Richardson, Secretary  
 Earl F. Hance, Deputy Secretary



Financial assistance provided by the Coastal Zone Management Act of 1972, as amended, administered by the Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration (NOAA).



## Urban Nutrient Management Program

### Enforcement

Commercial applicators who apply nutrients to 10 or more acres of nonagricultural land, including lawns, golf courses, athletic fields and public grounds, are required by Maryland law to follow University of Maryland nutrient recommendations, take soil tests and keep specific records of their fertilizer use.

Since inspections began in 2002, MDA has reviewed the records and fertilizer programs of 252 companies. Forty-eight of these inspections were performed in Fiscal Year 2007. Program compliance is based on the firm's phosphorus and nitrogen application rates, record keeping and soil testing. One hundred seventy-five of the firms inspected were fully or substantially in compliance with the law; 60 firms received a fair rating; and the remaining firms received unsatisfactory reviews. Efforts are ongoing to ensure that companies with fair or unsatisfactory reviews improve their fertilizer management programs. The program also worked to ensure that newly licensed companies were briefed on the nutrient management requirements.



### New Golf Course Guidelines

Maryland's 200 golf courses maintain approximately 16,400 acres of turfgrass. In 2007, nutrient guidelines for Maryland golf courses were released by the University of Maryland.

The guidelines include application rates for nitrogen, phosphorus and potassium and can be downloaded by golf course managers from MDA's website. In addition, MDA sponsored a workshop for golf course managers and superintendents to brief them on the new guidelines. In 2008, MDA will target inspections toward golf course fertilizer programs to ensure compliance with the new guidelines.

### Urban Nutrient Management Workgroup

A number of training programs for landscapers, lawn care providers and county and state land managers were sponsored during the year by the Urban Nutrient Management Workgroup, which is comprised of representatives from MDA, Maryland Cooperative Extension, tributary teams, local governments and concerned citizens. As a result of these and other efforts, urban compliance continues to grow. The group is now working with the lawn care industry to develop Bay-friendly lawn care programs for homeowners.

*Photos contributed by: Dan Bard, Kevin George, Delmarva Farmer, Governor's Office, MDA Nutrient Management Program and Albert Schramm.*