

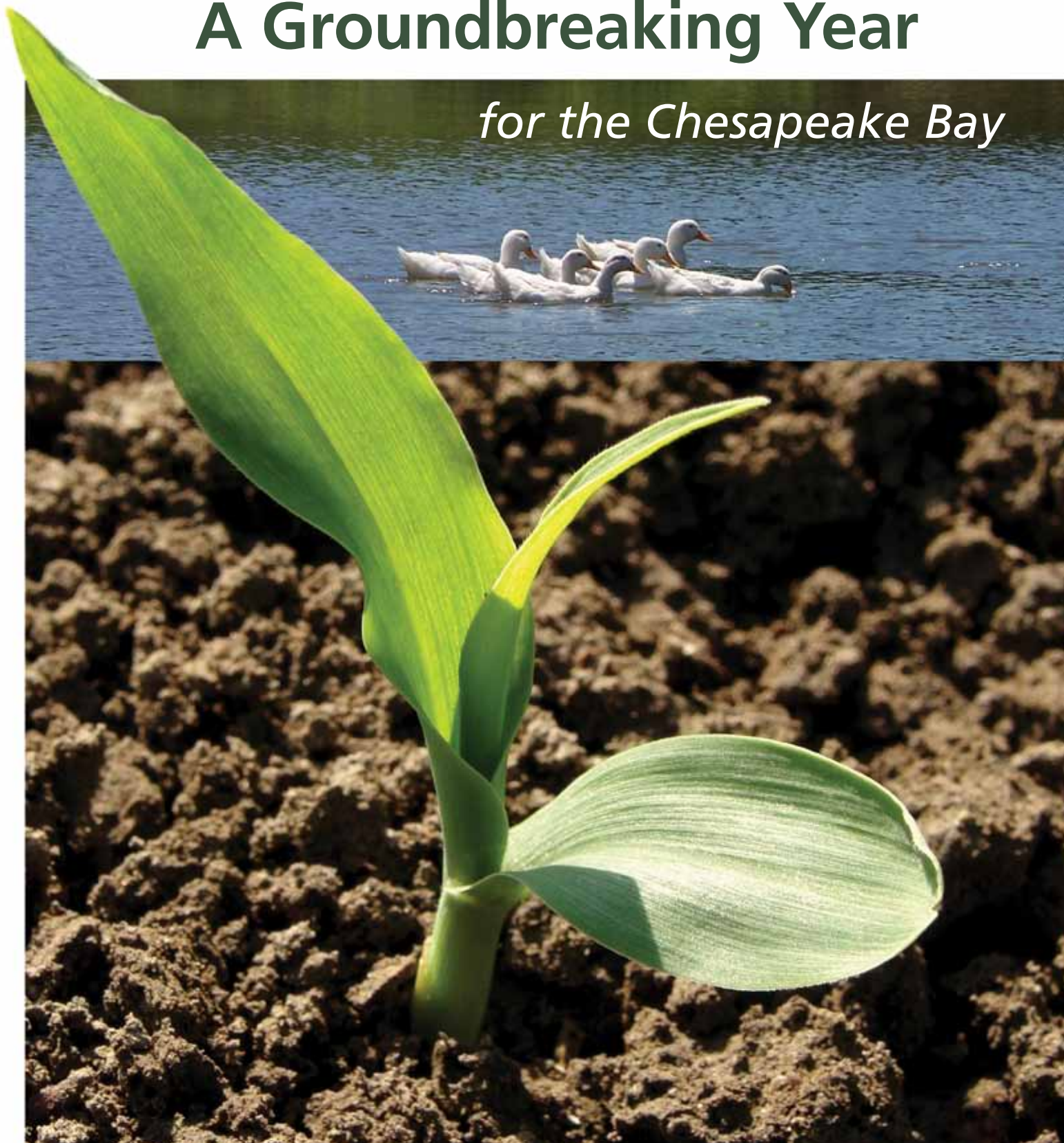
**Fiscal Year 2015 Annual Report**

Maryland Department of Agriculture  
Nutrient Management Program



# A Groundbreaking Year

*for the Chesapeake Bay*







## SECRETARY'S MESSAGE

2015 was a groundbreaking year for the Chesapeake Bay and the Nutrient Management Program. Shortly after taking office, the Hogan Administration reached a compromise with environmental groups, agricultural interests, and legislators on long-delayed regulations needed to implement the Phosphorus Management Tool. This updated environmental risk assessment tool uses the best available science to identify the potential risk of phosphorus loss from farm fields and prevent the additional buildup of phosphorus in soils that are already saturated.

The new regulations took effect June 8, 2015 and will go a long way toward helping Maryland meet its federally mandated obligation to reduce excess phosphorus from entering the Chesapeake Bay and its tributaries by 2025. Fields with the greatest risk of phosphorus runoff were immediately banned from receiving additional phosphorus. Additional at-risk farms were given a multi-year schedule to transition from the older Phosphorus Site Index to the updated Phosphorus Management Tool.

The new regulations are part of Governor Larry Hogan's broader Agriculture Phosphorus Initiative to improve water quality, strengthen agriculture, and bolster rural economies. As part of this initiative, the department has recruited farmers for an on-farm study to provide insight into the economic impacts and management changes required by the Phosphorus Management Tool. This will allow us to tailor alternative strategies such as manure transport to meet demand. The initiative also highlights the Animal Waste Technology Fund, a grant program that provides seed funding to companies that demonstrate new technologies to manage or repurpose manure resources.

On Maryland farms, our latest compliance and enforcement figures speak for themselves—99 percent of the state's 5,332 regulated farmers had nutrient management plans and 97.7 percent of farmers submitted annual reports on how they managed nutrients the previous year. Some 890 on-farm audits were conducted by our nutrient management specialists to evaluate management practices—an increase of approximately 18 percent over 2014.

On the urban side, lawn care professionals continued to make headway in meeting the certification and licensing requirements of Maryland's Lawn Fertilizer Law. By the end of the fiscal year, 1,507 individuals were certified as Professional Fertilizer Applicators and 848 businesses were licensed. An additional 1,248 lawn care workers were trained on environmentally-responsible fertilizer practices.

All in all, 2015 was a groundbreaking year on every front for the Nutrient Management Program. Please read on to learn the full extent of our accomplishments.



Sincerely,

Joe Bartenfelder  
Maryland Agriculture Secretary





Maryland's

# Nutrient Management Program

## *and the Chesapeake Bay*

The Nutrient Management Program helps protect water quality in the Chesapeake Bay and its tributaries by regulating the amount, placement and timing of commercial fertilizer products and organic nutrient sources used by farmers and lawn care professionals to grow crops and manage turfgrass. The program also works with poultry and livestock producers to ensure that animal manure is managed in an environmentally sound manner.

Guidance is provided by the Nutrient Management Advisory Committee, which includes representatives from agricultural interests, environmental groups, the turfgrass industry, University of Maryland, and government agencies.

### ***Agricultural Nutrient Management Program***

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 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. To ensure the quality of nutrient management plans, the department oversees a training, certification and licensing program for nutrient management planners and farmers. The compliance section ensures that nutrient management plans are developed, updated and followed according to state regulations.

New regulations adopted on June 8, 2015 require farms with high soil phosphorus levels to begin phasing in the new Phosphorus Management Tool (see sidebar article page 5).

### ***Turfgrass Nutrient Management Program***

The Fertilizer Use Act of 2011—Maryland's Lawn Fertilizer Law—authorizes the Maryland Department of Agriculture to train, certify and license individuals and companies hired to apply lawn fertilizer to golf courses, parks, recreation areas, athletic fields, business properties, school campuses, cemeteries, highway right-of-ways and home lawns. The department's training and certification program—developed in partnership with the University of Maryland—focuses on fertilizer application restrictions, soil science, and best management practices that can be used to help protect waterways from nutrient runoff. A compliance program ensures that fertilizer applications are made following University of Maryland application and timing recommendations.





# Agricultural Nutrient Management Program

## Compliance and Enforcement

The department's nutrient management specialists verify that farmers are managing nutrients on their farms to protect water quality. They examine nutrient management plans submitted by farmers, analyze required documentation, and perform on-farm audits to confirm compliance with program requirements. The department is authorized to issue fines and penalties, take administrative actions and pursue civil proceedings against farmers who fail to comply with nutrient management requirements. Violators face fines and penalties of up to \$2,000 a year and loss of eligibility for Maryland cost-share grants.

### Nutrient Management Plans

Maryland farmers are required to submit copies of their initial nutrient management plans to the Nutrient Management Program. By the end of the fiscal year, over 99 percent of the state's 5,332 regulated farms had met the requirement (Figure 1). The department is pursuing enforcement actions against 25 farmers who have not submitted their initial nutrient management plans. In Fiscal Year 2015, the department issued \$5,600 in fines against 16 farmers who failed to file an initial nutrient management plan.



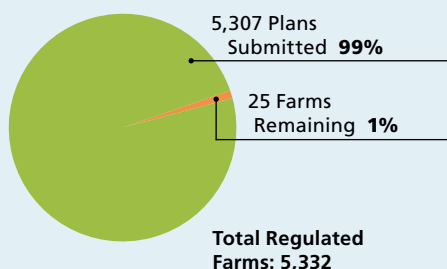
### Annual Implementation Reports

Farmers are required to update their nutrient management plans and submit Annual Implementation Reports to the department by March 1 summarizing their nutrient applications for the previous calendar year. In April 2015, the department issued warnings to 919 farmers who failed to file their reports on time, followed by 395 notices of pending fines and 143 default notices. By the end of the fiscal year, 97.7 percent of regulated farmers managing about 1.3 million acres of land had submitted their reports. In Fiscal Year 2015, the department issued \$30,750 in fines against 123 farmers for late or missing reports.

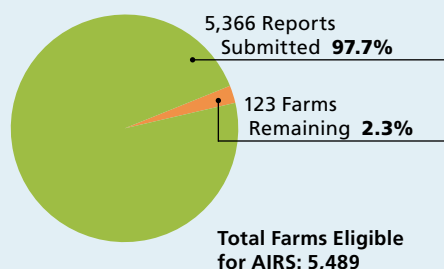
### On-Farm Audits and Inspections

During Fiscal Year 2015, the department's team of seven nutrient manage-

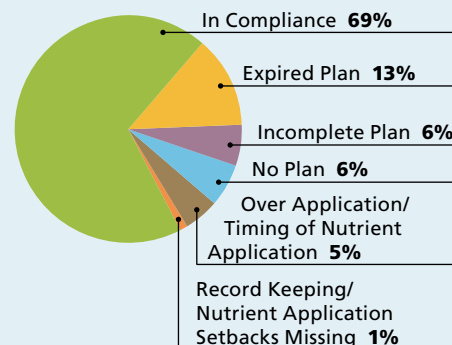
**Figure 1: Nutrient Management Plans Submitted**  
(As of June 30, 2015)



**Figure 2: Annual Implementation Reports Submitted**  
(As of June 30, 2015)



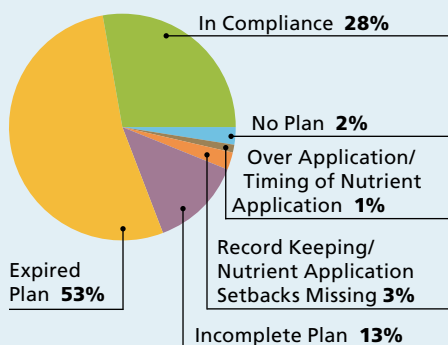
**Figure 3: "Random" On-Farm Audits**  
**772 Random Inspections Conducted**  
(Fiscal Year 2015)





ment specialists conducted 890 on-farm audits to confirm that farmers are using plans to manage nutrients effectively, an increase of approximately 18 percent over Fiscal Year 2014 (Figure 5). Of this number, 772 farms were selected randomly for audits with 69 percent determined to be in full compliance. An additional 118 farmers were flagged for audits due to incomplete, irregular, or inaccurate information reported on their Annual Implementation Reports. The majority of the violations documented for both random and targeted audits involved expired or incomplete nutrient management plans (Figures 3 and 4). The department is actively pursuing full compliance for all operations. In Fiscal Year 2015, it issued \$32,950 in fines against 47 farmers who failed to take corrective actions by prescribed deadlines.

**Figure 4: "Targeted" On-Farm Audits**  
118 Targeted Inspections Conducted  
(Fiscal Year 2015)



## Spotlight: Phosphorus Management Tool

Maryland's Phosphorus Management Tool regulations took effect June 8, 2015. They are designed to reduce the amount of phosphorus entering the Chesapeake Bay and its tributaries from agricultural sources. Over the next seven years, farms with high soil phosphorus levels will be required to use the Tool to identify at-risk fields and implement management options that can protect waterways from phosphorus runoff. Soils with high phosphorus levels are typically found on farms that have used manure or poultry litter as a crop nutrient over an extended period of time.

### EFFECTIVE IMMEDIATELY

- Fields at greatest risk for phosphorus runoff as indicated by a Fertility Index Value (FIV)\* of 500 or greater are prohibited from receiving additional phosphorus.
- All new/updated nutrient management plans must be developed using both the existing Phosphorus Site Index and the updated Phosphorus Management Tool for farm fields with an average phosphorus FIV of 150 or greater. Management requirements dictated by the Phosphorus Site Index govern phosphorus use.

### BEGINNING IN 2018

- New phosphorus management requirements begin to phase in for high-risk farms with an average phosphorus FIV that is greater than 450.

### BEGINNING IN 2019

- New phosphorus management requirements begin to phase in for medium-risk farms with an average phosphorus FIV of 300-450.

### BEGINNING IN 2020

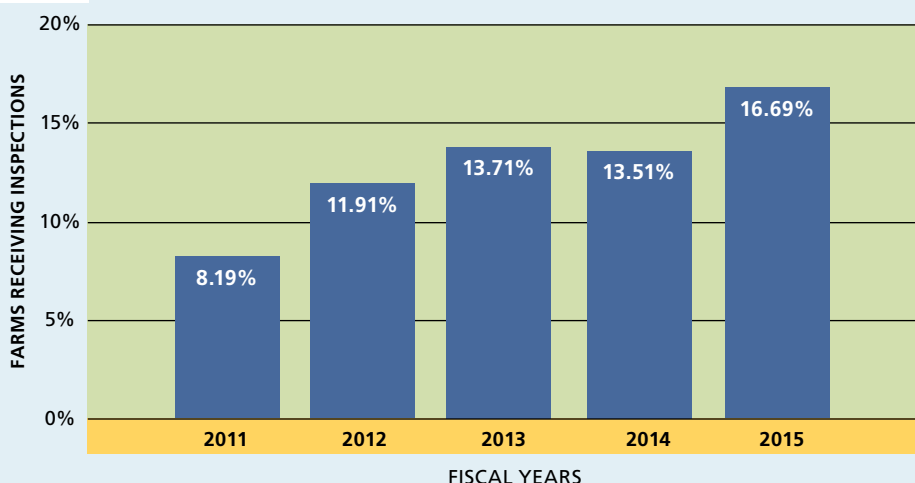
- New phosphorus management requirements begin to phase in for low-risk farms with an average phosphorus FIV of 150-299.

### JANUARY 1, 2022

- The Phosphorus Management Tool is fully implemented on all fields with an FIV of 150 or greater (unless the deadline is extended).

*\*The Fertility Index Value is a measurement of phosphorus in the soil as determined by a laboratory test.*

**Figure 5: Farm Audit and Follow-Up Inspections**  
Percentage of Farms Receiving Inspections  
(Fiscal Years 2011-2015)







## 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. Training focuses on sound management techniques to protect water quality and adhere to nutrient management regulations. In Fiscal Year 2015, 698 farmers attended 32 training sessions to obtain or renew their nutrient applicator vouchers.

## Certification, Licensing and Education Programs

### Certified Nutrient Management Consultants

The Nutrient Management Program trains and certifies consultants to provide farmers with nutrient management plans that balance crop nutritional requirements with the need to protect waterways from excess nutrient runoff. Managing the amount, placement, timing, and handling of commercial fertilizers, biosolids and animal manure is emphasized. In Fiscal Year 2015, the program certified 28 new consultants who passed the Nutrient Management Certification Exam, bringing the number of individuals who have successfully completed the program to 1,289. Approximately 25 percent of these consultants are actively writing plans for farmers (Figure 6.)

### University of Maryland Consultant Program

Twenty University of Maryland consultants were funded by the department in Fiscal Year 2015. These consultants provide farmers with nutrient management plans and support free of charge.

### Farmer Training and Certification

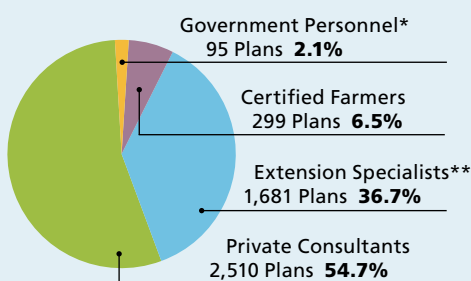
The Nutrient Management Program and the University of Maryland Extension train farmers who want to become certified to write nutrient management plans for their own operations. Farmers undergo about 11 hours of classroom instruction and practice in writing plans, and are required to pass an exam. They initially work with Extension specialists to develop nutrient management plans for their operations that meet departmental requirements. In Fiscal Year 2015, 38 farmers were trained and certified to write their own nutrient management plans. To date, 565 farmers have been certified to develop nutrient management plans for properties that they own or manage.

### 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. Farmers who are certified to prepare their own nutrient management plans are required to undergo six hours of continuing education every three years. In Fiscal Year 2015, the Nutrient Management Program and Extension sponsored 42 education classes on nutrient management topics. The department approved an additional 64 courses and field events sponsored by other recognized organizations. The sessions were attended by 2,806 individuals.



**Figure 6: 2015 Nutrient Management Plan Development**



\*Includes personnel from state agencies, USDA-NRCS, soil conservation districts, counties and municipalities.  
 \*\*Data by University of Maryland quarterly reports.





# Turfgrass Nutrient Management Program

The Fertilizer Use Act of 2011—Maryland's Lawn Fertilizer Law—requires individuals and companies to be licensed and certified by the department to apply fertilizer to lawns that they manage, including golf courses, parks, athletic fields, university campuses, highway right-of-ways, business properties, and home lawns.

The Law requires both homeowners and lawn care professionals to obey fertilizer application restrictions, use best management practices when applying fertilizer to lawns, observe designated fertilizer blackout dates, and follow University of Maryland fertilizer recommendations. The Turfgrass Nutrient Management Program, with technical guidance from the University of Maryland, has established a training, certification and licensing program for lawn care professionals and a public education program for homeowners.

## *Professional Training, Certification & Licensing*

In Fiscal Year 2015, the program, in cooperation with the University of Maryland, area businesses and trade organizations, conducted 27 training sessions and certification exams across the state for lawn care professionals. As of June 30, 2015, 1,507 individuals have earned Professional Fertilizer Applicator (PFA) certificates. Another 1,248 lawn care company employees were trained in turf management techniques and Bay-friendly fertilizer practices. Additionally, 848 business licenses have been issued to registered firms.

## *Recertification Training*

Professional Fertilizer Applicators are required to complete two hours of continuing education each year in order to renew their certificates. During the year, the program offered 46 recertification courses and approved numerous training courses offered by private industry and trade groups.

## *Annual Activity Report*

License holders are required to file an annual activity report with the program covering the previous year. The first activity report was due March 1, 2015. By the end of the fiscal year, approximately 99 percent of licensed businesses were in compliance with this requirement.

## *Enforcement Activities*

During the year, 344 reviews of turf managers' fertilizer records were conducted to assess compliance with the law. The program is authorized to issue fines and penalties of up to \$1,000 for the first violation and \$2,000 for each subsequent violation.



Ten warnings were issued and all but one were resolved through follow-up inspections and education. Warnings were issued for no-shows at inspections, inadequate record keeping, and over-application of fertilizer products.

## *Homeowner Outreach*

During the year, social media, the Internet and public events were used to help spread the word about Maryland's Lawn Fertilizer Law. In addition, the program provided support to local governments, homeowner associations and other organizations to ensure that lawn care contract specifications are in line with Maryland law and regulations.



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**Department of Agriculture**

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Boyd K. Rutherford, *Lt. Governor*  
Joseph Bartenfelder, *Secretary*  
James P. Eichhorst, *Deputy Secretary*