The Pioneer Grant Program

The 2016 Pioneer Grant Program aims to reduce nutrient and/or sediment contaminant loads to the Maryland portion of the Chesapeake Bay and Maryland Coastal Bays from any nonpoint source: agriculture, urban or suburban stormwater, air, and septic by seeking proposals that focus on new techniques, information, or programs that increase the rate at which load reductions can occur.

Maryland Department of Agriculture

Enhanced Non-agricultural Nutrient Management

Project Track: New Program

Research Question: This project provides support for the start up of a new program authorized in May 2011 by the Fertilizer Use Act to establish a training, certification and licensing program for Service Providers who are hired to apply fertilizer in non-agricultural landscapes, to limit fertilizer amounts applied to turf and to implement a homeowners' education program about best management practices to be followed when using fertilizers.

Research Results: MDA's Urban Nutrient Management program (UNMP) is a success. MDA issued 786 Fertilizer Business Licenses in 2015, certified 1,697 Fertilizer Professionals and registered 1,708 lawn care Employees.

Notable Information: Maryland's comprehensive urban nutrient management program has impacted fertilizer management on approximately 1.2 million acres of turf in the state. The program registers and provides Fertilizer Business licenses for all entities that apply fertilizer to turf, certifies designated Professional Fertilizer Applicators (PFAs) for these businesses, and requires that registered employees work under the supervision of these PFAs.

PROJECT PARTNERS

HOME & GARDEN Information Center

MARYLAND DEPARTMENT OF AGRICULTURE

UNIVERSITY OF MARYLAND EXTENSION
Solutions in your community

Maryland Department of Agriculture

Enhanced Non-agricultural Nutrient Management

2012-2016

Summary of Project

MDA's Urban Nutrient Management program (UNMP) endured a slow start. With the passage of 2011 Fertilizer Use Act, the State legislature increased the number of acres under MDA's existing Urban program, from 270,000 acres to 336,000 commercially maintained acres. In addition, 437,000 acres of land fertilized by homeowners are now regulated by the law. The law required any business which applied fertilizer to turf to be certified and licensed. The initial proposed legislation included a MDA budget increase of $70,000 for the expansion of this program. This funding was never appropriated. The funding granted by the CBT was essential for carrying out the requirements of the new law. Although MDA's intent was to hire the second NM Specialist in 2012, State budget cuts and hiring freezes delayed this hire until April 2014.

With only two Urban Nutrient Management Specialists for Maryland's 23 counties, and one part time office secretary, the program is understaffed. However, these employees devised the pre-exam training, Registered Employees training materials, programs and examinations; assisted with the design of the Maryland Professional Lawn Care Manual, brochures and fact sheets; conducted 516 on-site business inspections/reviews; taught 66 pre-exam classes and 82 recertification classes and processed over 11,000 registration transactions.

Project Evaluation

MDA's Urban Nutrient Management program (UNMP) is a success. MDA issued 786 Fertilizer Business Licenses in 2015 (the last full year available), certified 1,697 Fertilizer Professionals and registered 1,708 lawn care Employees.

One reason for the program's success was its wide acceptance by those in the turf care community. Many in this group already possess a pesticide applicators license and thought it was only a matter of time before fertilizer certification would be required. Turf care and golf course industry representatives were also included in the development of both the law and its regulations. MDA maintains a list of Certified Lawn Care Professionals on its website which is a good source of advertising for licensed companies. MDA's homeowner brochure "Ask Before You Hire, Choosing a Lawn Care Service that's right for you and the Chesapeake Bay" lists the link for finding State certified applicators. It is also called out in the homeowner training sessions by Master Gardeners.

Support from other state agencies, as well as counties and municipalities, have also helped the program to succeed. There is a general recognition of the nutrient reductions necessary to meet water quality goals and the role that urban nutrient reductions can play. Many local and state agencies have included a requirement in contract bids and specifications that any business hired to fertilize be certified. The Nutrient Management Program works closely with the Pesticide Section as both regulate many of the same companies and operators. This has been beneficial to both sections in identifying companies which should be regulated and in coordinating enforcement efforts.

Before the Fertilizer Use Act of 2011 was passed in Maryland, a similar was passed in New Jersey. The Chesapeake Bay Commission initially suggested that Maryland pass a law like New Jersey's in

order to help Maryland meet its water quality goals. They made similar suggestions in other states and other states passed similar laws. This regional approach has helped encourage compliance.

The law also included provisions for fertilizer manufacturers. It dictated certain changes in the composition and labeling of fertilizer bags. For example, fertilizer that is labeled for use on turf must contain at least 20% slow release nitrogen and when applied according to the label, may not provide more that 0.9 lb/1000 sq ft of nitrogen. Thus, even a fertilizer applicator who does not really understand the requirements, or is unable to properly calculate the proper application, need only follow the label directions to comply with the law. The MD State Chemist is responsible for ensuring that all fertilizer sold for use on turf in Maryland is compliant with the new law. Prior to enactment of this law, turf fertilizer
was typically labeled to provide coverage at the rate of 1 pound of nitrogen/1000 square ft, and was not required to have any slow release nitrogen.

In 2016, MDA began using email extensively to notify applicators of re-certification class offerings, sending reminders concerning continuing education credits, and to issue informal warnings and cautions concerning violations. MDA found that some applicators who received continuing education credits at Pesticide conferences, also attended the NMP 2-hour classes. As a result, fewer than 100 people lacked the continuing education credits required to renew their license. The NM Specialists also encourage applicators to take pictures of non-compliant companies and email them to us. The outstanding success of the e-notification effort will be adopted by the Nutrient Management Agriculture program in 2017.

Transferability and Sustainability

Maryland's Urban Nutrient Management program can and should be used as a template for other states in the Chesapeake Bay watershed. Delaware includes golf course superintendents and lawn care providers as a separate category of Nutrient Management Certification. Virginia also includes urban land managers as a separate category under their Nutrient Management certification program, but compliance by urban fertilizer applicators is voluntary. In 2015, however, Virginia instituted a certification and licensing program for turf care personnel which is very similar to the program in Maryland. Pennsylvania has been working on a similar program, but it is not yet in place. Training is one area that can be shared, despite small differences in the law between the states. We have several businesses that operate in more than one state and may choose to get their continuing education credits in another state. In 2016, the VA Turf Council and the MD Turf Council had a joint conference, which offered recertification credits, as well as testing for both states. This affords us greater opportunities to take advantage of turf experts in neighboring states. Unfortunately, because of small differences in the laws between the states, we do not offer reciprocity in certification, so individuals who work in multiple states still need to take multiple exams. How will these efforts be sustained in the future? Fees for certification will be used to pay for a third Nutrient Management Specialist for the urban program. In addition, there has been so much work that the Nutrient Management program has added a summer intern to staff to enter data from the 2014 and 2015 AFARs.

Monitoring and Maintenance

Throughout the year in re-certification classes and reviews, MDA has emphasized the importance of these reports and instructed applicators on how to fill them out correctly. As a result, more licensees submitted correct reports on time. In 2016, MDA sent warning letters to 86 businesses that did not file their AFAR on time. Business licenses and certifications are not renewed if the AFAR has not been submitted.

MDA staff began conducting inspections to verify compliance with fertilizer use restrictions on lawns and managed turf in May of 2014. From May 2014 - May 2016, five hundred and sixteen (516) on-site inspections were completed. In addition to the warning letters issued for non-submittal of AFARs, MDA has also issued 21 Warning letters for other fertilizer use violations and 26 letters of caution. The law provides for penalties of up to $1,000 for a first offense and may reach up to $10,000. Normally, the first step in enforcement is issuing a warning. If the company fails to correct the error within a specified time frame, MDA will issue a fine. As the program proceeds and applicators become better acquainted with the regulations, MDA will become more aggressive in issuing warnings and penalties.

MDA staff has used email extensively to notify applicators when re-certification classes are offered in the area, and to remind them to get their continuing education credits. Also, people who were certified between January, 2016 and April, 2016 were specifically notified that they need to get credits to renew their certification at the end of June, 2016. As a result, more than 90% of applicators had the credits needed to renew their certification at the end of June, 2016.

Certified professionals are required to obtain 2 hours of continuing education each year. MDA began offering re-certification (continuing education) classes beginning in June 2014. To date, MDA has offered 82 recertification trainings and 66 pre-exam trainings. The second certification/licensing renewal cycle is underway and, progressing more smoothly, as applicators better understand the procedure. Several organizations that organize pesticide recertification seminars have included fertilizer recertification credits as well, which permits people to get all the credits they need in a single day.

A PowerPoint presentation for training of “Trained Employees" was posted on the MDA website in June, 2014. MDA began to register trained employees who work under supervision of a Certified Professional Fertilizer Applicator shortly thereafter.

Partnerships

MDA wishes to acknowledge the assistance of our partners Dr. Gary Felton, Associate Professor, University of Maryland Environmental Science and Technology Department and Mr. Jon Traunfeld, Director, University of Maryland Home & Garden Information Center and State Master Gardener Coordinator. Dr. Felton prepared the Maryland Professional Lawn Care Manual, which is the training material for service providers who want to become certified. He has chaired the Urban Nutrient Management Workgroup since 2001 and helps with the re-certification and Master Gardener training.

Mr. Traunfeld coordinates the development of training materials for homeowner education and the Master Gardener resource materials. The Master Gardeners of Maryland have worked throughout the state, volunteering 565 hours toward informing homeowners about the new law, the proper method of fertilizing lawns, and pointing out the problems caused by over fertilization. The focus in recent years has been on agricultural runoff; however, urban homeowners can help or hinder the water quality of the Chesapeake Bay as well.

Accounting of Expenditures

Chesapeake Bay Trust - Grant Expenditures Final Report

Budget Item	Budget Category	Qty	Cost per Unit	CBT Funds Awarded	CBT Funds Spent	Cash Match	Source of Cash Match	In-kind Match	Source of in-Kind Match	Total
Project Manager 10%	personnel							$2,172	MDA	$ 2,172
Program Manager Benefits (45%)	personnel							$978	MDA	$ 978
Public Info Officer (24%)	personnel					$11,769.00	MDA			$ 11,769
Public Info Officer Benefits (45%)	personnel					$11,059.00	MDA			$ 11,059
NM Specialist II (50%)	personnel					$41,966.24	MDA			$ 41,966
NM Specialist-benefits (45%)	personnel					$13,947.00	MDA			$ 13,947
NM Specialist I (100%)	contractual			$ 80,144	$80,144.00					$ 80,144
NM Specialist I-benefits (8%)	contractual			$ 6,655	$6,655.00					$ 6,655
Training Manual Writer	contractual							$4,998	UME	$ 4,998
Training Manual Writer benefits (35%	contractual							$1,400	UME	$ 1,400
Training of Master Gardeners	contractual							$3,960	UME	$ 3,960
Design Database Specs	contractual							$6,400	MDA	$ 6,400
Professional printing of postcards	contractual							$750		$ 750
Pull-up displays	supplies							$1,845		$ 1,845
Soil Test bags	supplies							$3,965		$ 3,965
Postage (general)	supplies			$ 3,657	$ 3,657			$1,039	MDA	$ 4,696
Postage for postcards	supplies							$290	MDA	$ 290
Bubble scanner	supplies			$ 3,715	$ 3,715					$ 3,715
Printing of NM Training Manuals	supplies			$ 2,806	$ 2,806					$ 2,806
Printing of updated brochures	contractual							$3,559	MDE	$ 3,559
Printing of revised fact sheet	contractual					$ 1,414	MDA	$830	MDE	$ 2,244
Design of 2 counter cards	contractual							$540	MDA	$ 540
Misc Office Supplies	supplies			$ 1,546	$ 1,546					$ 1,546
Xerox	supplies			$ 737	$ 737					$ 737
Conf Booth/Regis Cost	supplies			$ 740	$ 740					$ 740
TOTAL				*$ 100,000*	*$ 100,000*	*$ 80,155*		*$32,726*		*$ 212,882*
Refund Due (this budget tab)	$ -									

Total personnel	$ 86,799	$ -	$ 78,741	$ 3,150
Total supplies	$ 13,201	$ 13,201	$ -	$ 7,139
Total contractual	$ 110,178	$ 86,799	$ 1,414	$ 22,437
Total travel	$ -	$ -	$ -	$ -
Total field trip fees	$ -	$ -	$ -	$ -
Total other	$ -	$ -	$ -	$ -