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Office of the Auditor General

201 N. Washington Square, Sixth Floor • Lansing, Michigan 48913 • Phone: (517) 334-8050 • www.audgen.michigan.gov

Doug A. Ringler, CPA, CIA
Auditor General

April 28, 2016

The Honorable Mike Green
Michigan State Senate
Farnum Building, Room 805
Lansing, Michigan

Dear Senator Green:

Enclosed are answers to the questions you posed in your January 25, 2016 letter to our office regarding the Michigan Agriculture Environmental Assurance Program (MAEAP), Michigan Department of Agriculture and Rural Development. Also enclosed is an exhibit of selected MAEAP environmental outcomes for fiscal years 2014 and 2015.

We appreciate the opportunity to assist you regarding this topic. If you have further questions or a request for other services, please do not hesitate to contact our office.

Sincerely,

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

Doug Ringler
Auditor General

Enclosures



Q1: How well does the program meet its objectives?

A: The objective of MAEAP is to help farmers reduce the risk of agricultural soil and water pollution and comply with State and federal environmental regulations. MDARD accomplishes this objective by:

- Actively engaging agricultural producers through educational presentations.
- Facilitating assistance in assessing environmental risks.
- Identifying practices to comply with regulations.
- Providing third-party verification that generally accepted agricultural and management practices are followed and regulatory compliance is in place.

In fiscal year 2015, MAEAP sponsored 104 presentations attended by more than 8,400 farmers. Also in fiscal year 2015, MDARD completed 619 new verifications and 375 reverifications, an increase of 15% and 83%, respectively, over 2014. These results indicate continued expansion of MAEAP.

Q2: What are the outcomes of the program and its cost-effectiveness?

A: One outcome of MAEAP is the on-site verifications performed by MDARD employees in accordance with protocols adopted by the Michigan Commission of Agriculture and Rural Development to determine if MAEAP standards have been met. Another outcome is reverification, which requires that farmers complete one or more risk assessments, update and implement the corresponding MAEAP conservation plan, and obtain an on-site evaluation from MDARD. Verification and reverification activities for fiscal years 2014 and 2015 were:

System Type	First-Time Verifications		Reverifications	
	Fiscal Year		Fiscal Year	
	2014	2015	2014	2015
Cropping (including field and greenhouse)	255	282	92	167
Farmstead (including greenhouse)	201	239	75	144
Livestock	83	98	38	64
Total	539	619	205	375

Additional MAEAP outcomes are identified in the attached exhibit of selected MAEAP environmental outcomes. Outcome results may vary depending upon the farms and farm types verified each year.

Due to the voluntary nature of the program, the cost effectiveness of MAEAP outcomes is not readily measurable and would depend on a comparison of current costs of prevention with estimated future costs of repairing environmental damage resulting from practices inconsistent with MAEAP. The cost to operate the

program results in some benefits which cannot reasonably be measured, as indicated in Q13 and the attached exhibit.

Q3: What have been the amounts and sources of funding for the program?

A: MAEAP funding includes appropriations from the State General Fund; the Freshwater Protection Fund (FPF); and various federal grants from the United States Environmental Protection Agency, the United States Department of Agriculture, and the National Fish and Wildlife Foundation. FPF represents revenue from statutory annual fees and registrations of pesticides required for manufacturers and fees based on the weight of fertilizer sold by manufacturers or distributors. MAEAP funding for fiscal years 2014 and 2015 was:

Source*	Funding			
	Fiscal Year 2014		Fiscal Year 2015	
	Total	Percent	Total	Percent
General Fund	\$1,335,600	37%	\$1,342,030	31%
Freshwater Protection Fund	2,290,805	63%	2,650,835	63%
Federal Grants			244,751	6%
Total	<u>\$3,626,405</u>		<u>\$4,237,616</u>	

* These funding sources relate only to activities supporting the verification process, as outlined in Question 9. MAEAP funds were categorized within a single appropriation in fiscal year 2015. In fiscal year 2014, FPF funds were included in another appropriation applicable to other programs. Only the FPF funds used for MAEAP are presented in the preceding table; FPF funding for ancillary programs such as the Michigan Clean Sweep Program, Pesticide Container Recycling Program, and Forestry Assistance Program which are authorized by statute are not included.

Q4: What have those funds been used for (by resource category, including personnel)?

A: MAEAP expenditures for fiscal years 2014 and 2015 were incurred as follows:

Type*	Expenditures			
	Fiscal Year 2014		Fiscal Year 2015	
	Total	Percent	Total	Percent
Employee payroll and benefits	\$1,380,345	38%	\$1,841,513	44%
Contracts, supplies, services, and materials	94,896	3%	183,494	4%
Technical assistance grants to local conservation districts	2,151,164	59%	2,212,609	52%
Total	<u>\$3,626,405</u>		<u>\$4,237,616</u>	

* These expenditures relate only to activities supporting the verification process, as outlined in Question 9. These expenditures do not include ancillary programs such as the Michigan Clean Sweep Program or the Pesticide Container Recycling Program.

Q5: How does the program interact with other programs in a multi-purpose way? Are there any other funds or resources utilized for this program that may have come from a source not dedicated to this program?

A: The Michigan Clean Sweep Program and the Water Monitoring Program are important ancillary programs to MAEAP. The Michigan Clean Sweep Program provides annual funding to counties and conservation districts for proper disposal of pesticides and containers. The Water Monitoring Program provides sampling of private drinking water wells, including monitoring to assist farmers in evaluating risks posed by various pesticide and nitrogen fertilizer use practices. Both programs are available to non-MAEAP farmers and receive source funding through MDARD's Environmental Stewardship Division (ESD). Additional programs that interact with MAEAP include the Pesticide Container Recycling Program, Forestry Assistance Program, and Right to Farm Program. MDARD also provides training for conservation district MAEAP technicians that enable them to assist farmers in securing federal funding, such as grants through the United States Department of Agriculture Environmental Quality Incentives Program (EQIP), as well as contact with MDARD engineers who provide expertise in designing installations to meet MAEAP and federal standards. Other funds or resources for MAEAP were identified in our response to Question 3.

Q6: Are there any uses of MAEAP-dedicated funds or resources used for other purposes?

A: We reviewed samples of MDARD payroll transactions, federal grant payments, and technical assistance payments to conservation districts. We noted no use of MAEAP-dedicated funds other than for activities directly related to the program.

Q7: To what degree are MAEAP employees multi-tasked with other programs?

A: MDARD employees provide advisory support to MAEAP technicians in conservation districts, coordinate educational sessions for farmers interested in MAEAP verification, maintain verification of records, and provide on-site MAEAP verifications. These activities directly support the program. We noted nonmaterial amounts of funding allocated for ESD management and support staff, grant monitoring, and similar administrative tasks for time spent on MAEAP. We noted one ESD employee who performed duties related to the Michigan Clean Sweep Program, Water Use Reporting Program, and the Pesticide Container Recycling Program, who was partially funded by the FPF, as authorized by statute.

Q8: How do locals fit into the program, if at all?

A: MAEAP supports local conservation districts via technical assistance grants. The 78 conservation districts are governmental subdivisions of the State, established to provide for the conservation of farmland and the control and prevention of soil erosion. The technical assistance grants fund conservation district MAEAP technicians, who work directly with farmers to educate, assist, and evaluate readiness to obtain a formal MAEAP verification. The conservation districts also assist farmers in completing federal grant applications, as noted in Question 5.

MAEAP provided \$2.08 million and \$1.87 million in State-funded technical assistance to 34 conservation districts in fiscal years 2014 and 2015, respectively.

Additional agencies that support MAEAP include the Michigan Farm Bureau, Michigan Agri-Business Association, Michigan Milk Producers Association, the Cherry Marketing Institute, and other organizations that provide advertising, referrals, and sponsorship for MAEAP educational programs and the verification process.

Q9: On average, how long does the certification process take?

A: MAEAP involves, by law, a verification process which requires the completion of three steps:

Step 1: Educational requirement. Farmers attend a presentation in their community or view the presentation on-line. More than 8,400 individuals attended the 104 informational sessions offered at township halls, community centers, conference venues, and local farms in 2015.

Step 2: Risk assessment. Conservation district technicians perform one or more on-site visits to applicant farms over a period of weeks or months, during which the farmers complete required updates to practices or install improvements to meet compliance requirements. MDARD does not track the dates of these farm visits and risk assessments in a central database.

Step 3: Verification. An MDARD verifier visits the applicant farm and inspects all required areas of the system requested for verification and reviews required documentation. MDARD records the information, which represents the end of the verification process and the beginning of the 5-year approved verification.

MDARD does not calculate average verification time and could not provide us with an estimate of the time needed to complete the verification process because of variations in time frames for completing Step 2. Time frame variations are based upon a farmer's readiness and pace to complete the required items to meet compliance requirements. For the farms with a first-time verification recorded by MDARD in fiscal year 2015, one had initially completed Step 1 in 2001 and another completed Step 1 within one month prior to final verification.

Q10: How many individual farms have been certified? How many farms have received multiple certifications?

A: From the initial Step 1 presentations in 2001 through February 2016, MDARD has certified 1,731 individual farm sites, including 1,072 farms with multiple verifications (such as cropping farmstead, livestock, forest, wetlands and/or habitat).

Q11: How much does it cost an operator and the State to certify an operation?

A: State statute established MAEAP as a voluntary and confidential program. Therefore, MDARD does not require farmers to disclose their costs associated with the MAEAP verification process and does not charge a fee. MDARD does not track the cost of technicians or verifiers to visit individual farms during the verification process. Consequently, we could not identify a cost per verification.

Q12: How many operations go through part of the process and then drop out?

A: From 2001 through February 2016, MDARD certified 3,104 systems on 1,731 farms. MDARD does not maintain records of farmers who dropped out prior to MAEAP verification, as this is a confidential program until the farm is verified.

Q13: Does a farm ultimately save money by becoming certified? How?

A: MDARD does not track cost savings by individual farm. However, MDARD estimated potential cost savings of almost \$6 million (see attached exhibit). Farmers save money through reduced fertilizer use and lower irrigation frequency. Reduced soil erosion resulting from the MAEAP best practice of planting cover crops and riparian buffer strips should decrease counties' expense of dredging ditches and streams.



Selected MAEAP Environmental Outcomes

Information collected from the 421 and 754 MAEAP farms verified by MDARD during fiscal years 2014 and 2015, respectively:

Outcome:	Fiscal Year	
	2014	2015
Acres included in a nutrient plan or CNMP*	234,485	388,348
Acres of buffer/filter strips	3,606	4,820
Acres of cover crops	35,319	44,407
Acres of conservation tillage	111,545	142,268
Acres of no-till, zone till, or grass cover	86,358	88,680
Number of gullies stabilized	1,156	1,780
Feet of livestock exclusion	204,201	66,150
Size of silage pad (acres)	9	31
Acres of farms with Pest Management Plans	212,154	268,453
<u>Changes in agricultural practices resulted in the following:</u>		
Reduced sediment (tons)	357,232	576,248
Reduced phosphorus (pounds)	572,139	947,309
Reduced nitrogen (pounds)	1,171,532	2,015,395
Reduced biochemical oxygen demand from silage leachate (pounds)	535,900	1,813,837

* Comprehensive Nutrient Management Plan for livestock operations.

Estimated cost savings from sediment, phosphorus, and nitrogen reductions on MAEAP farms in fiscal year 2015 are:

Sediment (based on removal costs from county drains)	\$4,610,000
Phosphorus (based on fertilizer costs)	464,000
Nitrogen (based on fertilizer costs)	920,000
Total	<u>\$5,994,000</u>

Source: The Office of the Auditor General prepared this exhibit using data obtained from MDARD.