Michigan Agriculture Environmental Assurance Program (MAEAP)

2017 Annual Legislative Report

Pursuant to reporting requirements stated in P.A. 118 of 2015, this report is filed with the legislature on behalf of the Michigan Department of Agriculture and Rural Development (MDARD) and the Michigan Agriculture Environmental Assurance Program (MAEAP). The reporting language asks for single year, as well as historical totals for the program. Some specific historical numbers are available and have been provided below dating back to 2002. Not all historical data being asked for in the 2015 legislation was captured prior to that year. Implementation of the MAEAP database began early in FY17. We continue to work with DTMB on refining this system to address the data requirements of this report as well as our business needs

County and Statewide Total for FY17 for:

i. **Conservation Practices Implemented**. Historically the program combined conservation practices that technicians helped implement and technical assistance (risk assessments) into one document of total practices. To satisfy reporting requirements, the program split these two categories to report them separately. For FY17, technicians assisted in implementing 4,760 conservation practices on farms. Additionally, for FY17, there were 1,123 new risk assessments conducted on farms, and 500 re-assessments for a total of 1,623 technical assistance assessments done on farms. The total for FY17 by county are itemized and organized in the attachment titled ***"MAEAP Conservation and Technical Assistance Summary."***

ii. **Environmental Impacts of Practices Implemented.** Every year, MAEAP publishes a summary of environmental outcomes for the program. These outcomes are based on formulas utilized by the United States Department of Agriculture Natural Resources Conservation Service (NRCS) and the Michigan Department of Environmental Quality (MDEQ) to calculate the effects of conservation practice implementation. This information includes sediment reduction, nutrient loss calculations, as well as a listing of key, high impact best management practices implemented on farms that were verified in MAEAP during the fiscal year. This summary has been a limitation, because it does not capture any of the named practices implemented by farmers who are working with MAEAP, but have not yet been verified. The reporting database developed during FY16 was intended to allow the program to show the effects of all farms in the program, not just those recently verified. Due to the transition to a new database, this can only be

partially accomplished for FY17. For FY17, farms that were verified within MAEAP have 109,998 acres managed with a nutrient management plan; the amount of sediment reaching waterways is reduced by 160,322 tons; the amount of phosphorus runoff is reduced by 256,515 pounds; and nitrogen leaving farm fields is reduced by 513,030 pounds. The environmental impact of farms verified in FY17 statewide can be seen in the attachment ***"2017 EnviroSummaryInfo."*** The environmental impact breakdown by county for FY17 can be seen in the attachment ***"FY17 Envirosummary by County."***

iii. **Number of Verifications and Reverifications.** In FY17, there were 642 new verifications. This number reflected a record high number of initial verifications for the program. Of that 642, 223 are Cropping system, 200 are Farmstead system, 90 are Livestock system, and 129 are in the Forest, Wetland and Habitat system. In FY17, there were 59 total reverifications in the program. Of those 59, 21 are Cropping system, 21 are Farmstead system, and 17 are Livestock system. There are no Forest, Wetland and Habitat system reverifications as that system was new in FY16. The reverifications are down from the past few years. This is directly attributed to the legislated change from a three-year to a five-year reverification cycle, thus pushing the need for current reverifications out two more years. The breakdown by county can be found in the attachment ***"FY17 Breakdown Vers and Revers by County."***

iv. **Number of Unique Farms Verified.** In FY17, there were 431 unique sites verified in MAEAP. The county-by-county breakdown of these unique sites is included in the attachment ***"FY17 Unique Sites by County."***

v. **Number of Farms in Tiered Recognition System.** There are no farms currently in the tiered system. The new database currently requires the condition of Tier 1 to be met before a verification can occur, but still lacks functionality to print a document or an environmental report to producer's indicating they have reached this milestone. This is one of the functionality issues being addressed. With that clarified, technicians have not reported a desire by producers to have this feature. Our commodity partners, however, are very interested in the data to support their sustainability efforts so this is a priority item on the MDARD side of the database modifications.

vi. **Total area and percentage of this state's farmland involved**. Farms verified in FY17 had a total of 109,998 acres with nutrient management plans or comprehensive nutrient management plans. Based on the 2012 Census of Agriculture, Michigan has 7,669,071 acres of cropland. Based on that number, the acreage of farms verified in FY17 represents slightly over 1.4% of the total Michigan farmland.

<u>County and Statewide Program Totals To-Date</u>

i. **Conservation Practices Implemented.** Historically, technicians reported "Risk Reduction Practices," which is a combination of the Conservation Practices and Technical

Assistance Practices. The total "Risk Reduction Practices" implemented from FY2009 (oldest data on record) to FY2016 totals 48,668 practices combined. Beginning in FY17, as mentioned previously, these categories have been split. The 48,668 number will remain in this report annually moving forward for historical reference. These practices can be seen in the attachment ***"MAEAP Technical Assistance and Conservation Summary FY09-FY16."*** Beginning in FY17 the program totals will be kept as divided totals. As such, the total is equal to the FY17 numbers of 4,760 conservation practices and 1,623 total assessments as seen in the attachment ***"MAEAP Conservation and Technical Assistance Summary."***

ii. **Environmental Impacts of Practices Implemented.** Environmental impacts are only measured from FY13-FY17. This year's report also includes these figures by county for the first time. The FY13-17 cumulative numbers for nutrient management plan implementation total 1,214,708 acres; sediment reduction totals 1,813,330 tons; phosphorus reduction totals 2,998,922 pounds; and nitrogen reduction totals 6,481,886 pounds. The MAEAP program totals for FY13-17 can be found in the attachment ***"Total EnviroSummaryInfo."***

iii. **Number of New Verifications and Reverifications.** From FY02-17, there were 4,328 new verifications in MAEAP. This includes 1,803 Cropping system; 1,548 Farmstead system; 767 Livestock system; and 210 Forest, Wetland and Habitat system. Over the period FY05-17, there were 1,589 reverifications in MAEAP. This included 618 Cropping system, 628 Farmstead system, and 343 Livestock system. Verifications and reverification by year can be seen in the attachment ***"MAEAP Verifications Over Time FY17."*** Verifications and reverifications by county over the lifetime of the program can be viewed in the attachment ***"Verifications, Reverifications and Unique Sites Breakdown By County."***

iv. **Number of Unique Farms Verified.** The total number of unique sites verified from FY02 to FY17 is 2,456. The number of unique sites by county can be seen in the attachment ***"Verifications, Reverifications and Unique Sites Breakdown By County."***

v. **Number of Farms in Tiered Recognition System.** There are no farms currently involved in the tiered recognition system. This is being implemented as database corrections are implemented.

vi. **Total Area and Percentage of This State's Farmland Involved.** Based on the acres in nutrient management plans and comprehensive nutrient management plans from the FY13-17 environmental summary, that acreage totals 1,214,708 acres. The 2012 Census of Agriculture states that Michigan had 7,669,071 total acres of cropland. Based on that number, farms verified in MAEAP currently represent 15.8% of the cropland in the state of Michigan. Totals by county are not available for this period.

<u>Summary of Educational and MAEAP Standards Changes</u>

A summary sheet of standards changes for each system (Cropping; Farmstead; Livestock; and Forest, Wetland and Habitat) are found in the respective attachments for each system: ***"CAS Summary Sheet," "FAS Summary Sheet," "LAS Summary Sheet," and "FWH Summary Sheet."*** Changes to the A-Syst tools will be in the form of red-letter strikethrough documents for each system. Because the Cropping system contains multiple documents that focus on specific types of production, the changes for this systems' documents can be found in the attachments ***"2017 Nursery Proposed Amendments," "2017 Field Crop and Veg Proposed Amendments ," "2017 Fruit Proposed Amendments ," "2017 Greenhouse Proposed Amendments, " "FAS Proposed Amendments," "LAS Proposed Amendments," and "FWH Proposed Amendments."***

Summary of Subcommittee Work beyond Standards

i. **Farmstead Committee.** In addition to standards review and revision, the Farmstead committee worked to update the obsolete fueling bulletin from MSU, making sure to meet the current fuel laws in Michigan. Additionally, they worked alongside the Cropping and Livestock committees to review and update the major supplemental bulletin (FAS 112S) used as a resource by MAEAP technicians.

ii. **Cropping Committee.** In addition to standards review and revision, the Cropping committee is also working with a multi-partner group to address the development of best management practices for farmers utilizing chemigation and fertigation in their irrigation systems. There are no standards in place to ensure wellhead safety when these practices are utilized, and this is a common practice in areas with irrigation. Guidance to producer's is needed. The committee also is working to identify acceptable methods and standards for backflow prevention in irrigation, as the methods considered acceptable by MDEQ and county Health departments are neither functional nor practical in field production situations. The group is working with the same group coordinating the standard development for fertigation and chemigation. This committee also worked on updating the FAS 112S bulletin previously mentioned.

iii. **Livestock Committee.** In addition to standards review and revision, the Livestock committee worked to help promote a certification system for custom manure applicators. There is a need for such a system in the state. As this program is rolled out, they will evaluate usage of certified applicators as educational/standards question in the A-Syst tool. They also evaluated research done at MSU evaluating the cost of implementation of a ban on winter manure spreading in Michigan and the potential cost

to Michigan's livestock industries from such a policy move. The group also helped revise the FAS 112S document.

iv. **Forest, Wetlands and Habitat Committee.** This committee focused primarily on the standards review in FY17. The committee continued to tweak wording and standards language as we continue to learn more as the system is implemented. There was also a structural redesign of how the FWH tool was laid out, to allow more development of standards related to wetlands and habitat, rather than almost entirely focusing on forest management. This has helped technicians and verifiers more accurately evaluate properties involved in this system.