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To: House Agriculture Committee
From: Matt Smego, ^{MS}Legislative Counsel
Re: Michigan Agriculture Environmental Assurance Program (MAEAP) Return on Investment Information
Date: April 29, 2009

Program Cost State Input:

- **FY08** total program cost for the MAEAP Livestock, Farmstead and Cropping Systems was \$676,836. Michigan General Fund dollars provided \$340,336, or approximately half of the program cost. Additional funding of \$144,000 (Interdepartmental grant from MDEQ using USEPA 319 dollars) and \$192,500 (USEPA 319 dollars) were received to support conservation district MAEAP Specialists and supplement state spending.
- In **FY09** USEPA 319 dollars were reduced to \$100,000. This resulted in an increase in MI GF dollars of \$50,000 and the elimination of \$192,500 for conservation district MAEAP Specialists.

Federal and Industry Financial Support :

- USEPA 319 grant – annual renewal requested (for conservation district specialist staff) \$192,500 – reduced to \$0 for FY09.
- Interdepartmental grant from MDEQ \$144,000 – reduced to \$100,000 for FY09.
- Partner and Industry contributions and grants – annual average - \$100,000 for educational efforts and promotion
- Annually about one half million dollars in federal Farm Bill allocation is used for the development of Comprehensive Nutrient Management Plans in Michigan.

In addition, the average verified livestock farm (based on an average annual rate of 50 verifications) spent \$24,000 or 1.2 million dollars total annual investment related to MAEAP Livestock System verification. (2005 Master's thesis, Carrie Vollmer-Sanders). The spending was a mix of federal Farm Bill cost share and producer expense.

Return on Investment:

MDA provides program leadership and coordinates the contributions of a wide range of private and agency partners delivering the program. As such, the State General Fund contribution to the program of \$389,827 leverages \$600,000 in federal revenues [319 dollars (\$100,000) plus

CNMP development (\$500,000)], \$100,000 in private and partner agency contributions, and \$1.2 million in farmer investment in agronomic and conservation practices.

$$\frac{\$1,900,000 - \$389,827}{\$389,827} = 387\% \text{ ROI}$$

\$389,827

Investment Factors:

\$389,827 MDA GFGP revenues for operations and verification

Economic Gain Factors:

\$100,000 Education and promotional support provided by private industry

\$100,000 Federal 319 funds via MDEQ used for verifications

\$500,000 USDA Farm Bill cost share, annual (used for CNMP development)

\$1,200,000 spent annually for practice implementation (Farm Bill and private)

Environmental Return on Investment

As a result of 209 verified livestock farms:

- All soil and water resource concerns addressed on 238,609 acres covered by Comprehensive Nutrient Management Plans.
- Sedimentation controlled on all acres receiving manure and N, P and K amounts reduced to receiving waters. P loading through sedimentation was reduced by over 1 million pounds.
- 3,474,546 tons manure stored and properly used for nutrient value.
- 40,847,866 pounds of N (72,943 tons of 28%N) saved farmers \$47,412,702 in fertilizer cost, representing a savings of 7,221,319 gallons of Diesel Fuel Equivalents (DFEs) (had commercial fertilizer been purchased) representing a savings of \$26,718,881 (in DFEs) to farmers.
- 24,526,180 pounds of P (23,583 tons 11-52-0) saved farmers \$33,723,498 in fertilizer cost, representing a savings of 620,229 gallons of DFEs (had commercial fertilizer been purchased) representing a savings of \$2,294,849 (in DFEs) to farmers.
- 24,178,690 pounds of K (19,499 tons of 0-0-62) saved farmers \$21,448,838 in fertilizer cost, representing savings of 335,382 gallons of DFEs (had commercial fertilizer been purchased) representing a savings of \$1,240,913 (in DFEs) to farmers.

Special Initiative on Small & Medium Sized Livestock Farms:

- Over 1400 conservation practice changes adopted
- Over 1400 acres of filter strips and buffers installed annually
- Over 55,663 tons/year sediment reduction to surface water from conservation practices and filter strips

- Over 184,317 pounds/year Phosphorus reduction to surface water from conservation practices, filter strips, outside lot runoff, and silage runoff
- Almost 391,688 pounds/year Nitrogen reduction to surface water from conservation practices, filter strips, outside lot runoff, and silage runoff
- Almost 1.8 million gallons of silage leachate contained and prevented from reaching lakes and streams
- Over 265,005 pounds/year BOD (Biochemical Oxygen Demand) (5-day) reduction to surface water from silage leachate

Cropping System Outcomes:

- Almost 1 million acres receiving pesticides have implemented an approved pest management plan
- Almost 1400 acres filter strips have been installed
- Almost 10,000 acres of annual cover crops were planted
- Over 49,000 acres are farmed with no till/zone till or conservation tillage
- Over 400 gullies have been stabilized

Participation:

- 2,000 farmers participate in an average year
- 110 farms reach MAEAP verification annually
- Over 30 university, agency, conservation and industry partners participate in program development and implementation

