Clean Water Fund FY14-15

CLEAN WATER LAND & LEGACY AMENDMENT

MINNESOTA DEPARTMENT OF AGRICULTURE

Agriculture comprises a significant portion of the state's land use, and the way farmers manage their land can make a big contribution to achieving state goals for clean water & resource conservation. The activities described in this brochure are designed to help farmers, crop advisors and conservation professionals protect and restore Minnesota waters.

Minnesota Agricultural Water Quality Certification Program

$3 million for FY14-15

The MAWQCP is designed to accelerate voluntary adoption of on-farm conservation practices that protect Minnesota's water resources. Farmers who implement and maintain approved conservation plans will be certified and in turn assured that their operation meets water quality goals and standards for a set period of time. Certification will give farmers and the public greater certainty about conservation achievements and regulatory standards.

The MAWQCP is a state-federal partnership that includes: Minnesota Department of Agriculture, Minnesota Pollution Control Agency, Minnesota Board of Water and Soil Resources, Minnesota Department of Natural Resources, U.S. Department of Agriculture's Natural Resource Conservation Service (USDA-NRCS), and U.S. Environmental Protection Agency (EPA). It is a major new initiative to address water quality from agricultural non-point sources in a voluntary and cooperative manner.

An advisory committee, including agricultural, environmental, and conservation organizations, as well as local governments, conducted a series of meetings and delivered program recommendations to Minnesota Commissioner of Agriculture Dave Frederickson. This program will begin on a pilot project basis in 2013.

Nitrate in Groundwater

$5 million for FY14-15

Nitrate-nitrogen from agricultural sources is one of the most common contaminants in groundwater and frequently exceeds health based standards in vulnerable areas. This funding is being used for activities that help identify potential sources of nitrate contamination and evaluate and implement practices to reduce nitrates in groundwater. MDA works with local partners to assess groundwater in agricultural areas and work directly with local farmers and agri-business in the impacted or threatened areas. MDA also works with University researchers to develop, promote and provide education on Nitrogen Fertilizer Best Management Practices (BMPs).

MDA's efforts include: pass through funding to local governments to develop and implement locally-led BMP promotion and evaluation projects; accelerated private well testing in groundwater sensitive agricultural townships; developing accurate and inexpensive methods for local groundwater monitoring to evaluate nitrate trends; and working with local governments and farmers to improve water quality in areas where groundwater quality is adversely impacted.

Funding will be used for a variety of projects related to groundwater and drinking water protection, including:

- Private well monitoring networks
- Validating nitrogen recommendations and water quality impacts under irrigated agriculture
- Irrigation and nitrogen management workshops
- Adaptive nitrogen management programs
- Nutrient management surveys to evaluate on-farm adoption of BMPs

Irrigation Water Quality Protection

$220,000 for FY14-15

Under poor water and nitrogen management, nitrate losses from irrigation of nitrogen demanding row crops (such as corn, potatoes and edible beans) is a major potential source of nitrate in groundwater, especially in areas with sandy soils. This funding will provide a regional irrigation water quality specialist position through a contract with the University of Minnesota Extension. This water quality specialist will develop guidance and provide education on irrigation and nitrogen BMPs for Minnesota Irrigators. Many farmers, particularly those newly implementing irrigation, would benefit from increased education and training.

Ag Non-Point Source Research & Evaluation

$2.1 million for FY14-15

The goals of the program are to evaluate the effectiveness of agricultural conservation practices, identify underlying processes that affect water quality and develop technologies to target critical areas of the landscape. Funded projects will help to provide current and accurate scientific data on the environmental impacts of agricultural practices and help to develop or revise conservation practices that reduce environmental impacts while maintaining farm profitability.

Since 2008, the MDA has announced four requests for research proposals. Any organization, research entity or individual may apply for these funds. The MDA works cooperatively with various researchers and provides administrative support for the program. This program has sponsored twenty-one projects, seven are on-going and fourteen have been completed. An example of a recent project is the award-winning Ag BMP Handbook.

This program will help answer questions such as:

- *Where are pollutants coming from and what is the magnitude of each source?*
- *How will we improve water quality? Which practices work best? What are the costs and benefits?*
- *Where in the landscape should conservation practices be placed? What tools can local resource managers use to focus limited protection and restoration funds?*

Impaired Waters Technical Assistance

$3 million for FY14-15

MDA's technical assistance helps ensure that current and accurate scientific information is made available and used to address water quality concerns in agricultural areas of Minnesota. This funding is used to evaluate the effectiveness of agricultural conservation practices, share information about research and new technologies and enhance outreach and education.

Technical assistance efforts include activities that support the Impaired Waters Process; participating in local work groups and providing technical advice regarding the appropriate use of agricultural BMPs. Technical assistance also fills an important need for field demonstration and validation of practices. Information collected can be used to inform computer simulation models and support implementation decisions. MDA uses on-farm, edge-of-field monitoring to assess sediment and nutrient loss at the field-scale and to evaluate the effectiveness of conservation practices. Both new and existing practices are evaluated at these sites including many that have been developed or studied within MDA's Clean Water Research program. MDA works with many partners including Universities, private industry, Soil and Water Conservation Districts and farmers.

MDA conducts outreach and education activities to engage the agricultural community in water quality restoration and protection and ensure that information learned at research and demonstration sites is shared with local governments, farmers, crop consultants, co-op dealers and researchers statewide. Outreach efforts include field days and workshops as well as factsheets, brochures and videos.

This funding will be used for a variety of activities including:

- Root River Field to Stream Partnership
- Clay County Drainage Site
- Discovery Farms Minnesota
- Surveys of on-farm management practices
- Promoting precision conservation to local governments
- Support for the Impaired Waters Process

Agricultural BMP Loan Program

$400,000 for FY14-15

The AgBMP Loan Program provides low interest loans to individuals for management practices that restore or protect water quality. The goal of the AgBMP Loan Program is to implement recognized BMPs with proven environmental benefits with as little administrative costs as possible.

Loans can be used to finance virtually any practice that prevents, reduces, or eliminates any nonpoint source water pollution problem in rural Minnesota, whether on a farm or non-farm, a residence or business, an unsewered community or a lakeside cabin. Projects typically funded include agricultural waste management projects, septic system upgrades, purchase of conservation tillage equipment, constructed erosion control structures and the repair or relocation of some wells.

Pesticide Monitoring & Assessment

$700,000 for FY14-15

The MDA has been monitoring the state's water resources continuously for more than 20 years. The purpose of MDA's monitoring activities is to determine the presence and concentration of pesticides in Minnesota's ground and surface water. MDA's water quality data is used to evaluate the need for and effectiveness of protective actions for ground and surface water.

Clean Water funding has increased the capability and capacity of the pesticide monitoring program through the provision of new analytical instruments in the MDA lab. The new equipment is capable of detecting a broader suite of pesticides at lower concentrations and has enabled MDA to analyze 600 additional samples each year.

Manure Applicator Education

$100,000 for FY14-15

Funding will be used to develop training manuals and resource materials for two levels of manure applicators (senior applicators and field hands). These educational materials will help ensure that manure is safely handled and properly applied. These efforts will help to reduce nutrient losses from manure application. These manuals can be used to support training and education for both commercial and private manure applicators.

Research Inventory Database

$250,000 for FY14-15

The MDA is developing a database to provide access to an inventory of thousands of water research records in support of Minnesota's clean water implementation activities, on a public website devoted to this purpose. The database was identified as a high priority by state and local agencies and others involved in clean water implementation. It is being developed with their input to meet the needs of a wide range of water research stakeholders.

Clean Water funds will be used to continue populating and managing the database in partnership with other agencies. This includes entering existing reports, papers and summaries to ensure that decades of relevant field work and research are fully utilized to support ongoing clean water efforts. MDA will provide support and training for partner organizations and conduct intensive outreach to Minnesota's broader water and research communities.

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