FY22-23 PROPOSED

Clean Water Fund

DEPARTMENT OF AGRICULTURE

MINNESOTA AGRICULTURAL WATER QUALITY CERTIFICATION PROGRAM

$6 million for FY22-23

The Minnesota Agricultural Water Quality Certification Program (MAWQCP) is a first of its kind, voluntary program. It supports the implementation of conservation practices on a field by field, whole farm basis. Through its innovative and nationally recognized process of identifying and mitigating agricultural risks to water quality, the MAWQCP delivers on-farm conservation that helps protect and restore Minnesota's lakes, rivers, streams, and groundwater. The MAWQCP is a national demonstration project that is operated as a federal-state partnership between the State of Minnesota, the United States Department of Agriculture, and Minnesota's 88 soil and water conservation districts. The certification program has also partnered with industry leaders, including Land O'Lakes, Inc. and Hormel, to promote the program and enroll additional acreage.

Farmers and landowners who treat all risks to water quality on their operation are certified and are deemed to be in compliance with any new water quality laws or rules for ten years. Certification gives farmers and the public greater certainty about regulatory standards and assures the public Minnesota's farmers are doing their part to protect water quality. The MAWQCP keeps tens of millions of pounds of soil and nutrient runoff from entering Minnesota's waters annually, treating more than 670,000 acres and reducing GHG emissions by over 37,000 CO2-equivalent metric tons per year.

NITRATE IN GROUNDWATER

$5.006 million for FY22-23

Nitrate-nitrogen is one of the contaminants of greatest concern for groundwater in Minnesota. In some vulnerable areas of the state a significant percentage of private wells have nitrate levels which exceed the drinking water health risk limit of 10 mg/L. The Minnesota Department of Agriculture (MDA) has developed the Nitrogen Fertilizer Management Plan and Groundwater Protection Rule to address nitrate from fertilizer in groundwater.

The MDA works with local partners to monitor groundwater, implement prevention strategies, respond in areas with elevated nitrate in groundwater and provide education on nitrogen fertilizer best management practices (BMPs), vegetative cover and other practices that can reduce the levels of nitrate in groundwater. Primary partners include counties, soil and water conservation districts, agri-businesses, University of Minnesota researchers, and individual farmers.

The MDA's groundwater and drinking water projects include:

- Working with local farmers in vulnerable areas and Drinking Water Supply Management Areas around public wells to prevent or minimize groundwater contamination
- Regional efforts with the University of Minnesota Extension and local governments to promote BMPs, cover crop and other practices to reduce nitrate levels in vulnerable areas
- Establishing groundwater monitoring networks to determine the effectiveness of nitrogen fertilizer best management practices
- Apply computer modeling tools to quantify the potential benefits to ground water quality for a wide range of agricultural practices
- Demonstration sites validating nitrogen fertilizer recommendations and water quality impacts under irrigated agriculture
- Nutrient management surveys to evaluate on-farm adoption of BMPs

IRRIGATION WATER QUALITY PROTECTION

$270,000 for FY22-23

Nitrate losses from irrigation of nitrogen demanding crops (such as corn, potatoes and edible beans) is a potential source of nitrate in groundwater, especially in areas with sandy soils. This funding provides an irrigation water quality specialist position through a contract with the University of Minnesota Extension. The water quality specialist develops guidance and provides education on irrigation and nitrogen BMPs for Minnesota irrigators. Many farmers, particularly those newly implementing irrigation, will benefit from increased education, training, and direct support.

AgBMP LOAN PROGRAM

$150,000 for FY22-23

The AgBMP Loan Program provides low interest loans to individuals for best management practices (BMPs) that restore or protect water quality. The goal of the AgBMP Loan Program is to implement recognized management practices with proven environmental benefits.

Loans are used to fund practices that prevent, reduce, or eliminate a nonpoint source water pollution problem in rural Minnesota, whether on a farm, a residence or business, an unsewered community, or a lakeside cabin. Funded projects typically include manure management, feedlot improvements, septic system upgrades, purchase of conservation tillage equipment, erosion control structures, and the repair or relocation of some wells.

This program is structured with a revolving loan framework where repayments from past loans capitalize future loans. In addition to FY22-23 appropriations, approximately $4 million in repayments from prior loans will be available for future loans during this biennium. The current demand for loans is greater than the amount available for new loans.

TECHNICAL ASSISTANCE AND ON-FARM DEMONSTRATIONS

$2.904 million for FY22-23

The MDA's technical assistance helps to ensure accurate scientific information is available and used to address water quality concerns in agricultural areas of Minnesota. This funding is used to evaluate conservation practices, share information about research and new

technologies, and enhance outreach and education to the agricultural community and local government partners.

Technical assistance also fills an important need for field demonstration and validation of practices. The 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.

The MDA works with many partners including universities, crop consultants, soil and water conservation districts, farmers and other state agencies.

Technical assistance activities include:

- Discovery Farms Minnesota
- Root River Field to Stream Partnership
- Nutrient Management Initiative
- Red River Valley Drainage Water Management Project
- Providing support to the Impaired Waters Process

PESTICIDE MONITORING AND ASSESSMENT

$700,000 for FY22-23

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

These funds go to the MDA Laboratory and have resulted in an increase in capability and capacity. It has allowed the MDA to increase the number of detectable pesticides in water from 44 in 2009 to 178 in 2020, increase the sensitivity of detection of certain pesticides, and increase the overall number of samples that can be analyzed each year. The increased laboratory capacity has allowed the MDA to provide cooperative pesticide monitoring and assessment with other state agencies (Minnesota Department of Health and Minnesota Pollution Control Agency) on lakes, wetlands, and public water supply systems.

FOREVER GREEN

$3.872 million for FY22-23

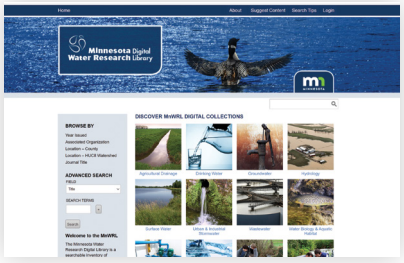
The Forever Green Initiative (FGI) brings researchers together from multiple disciplines (plant breeding, agronomy, food science and economics) to develop new, high-value perennial and winter annual crops that preserve and enhance water quality, and to support development of new supply chains that provide profitable markets for these crops.

Perennial crops provide continuous cover on the land, while winter annuals and cover crops grow between the time when annual crops, such as corn and soybeans, are harvested in the fall and a new planting is established in the spring, protecting the otherwise bare soil from erosion and nutrient loss. Many of the new FGI crops could fit into a corn and soybean rotation to provide soil and water protection and new economic opportunity for rural Minnesota.

The MDA administers the distribution of funds and coordinates reporting on progress, results, and outcomes. Funding directly supports the University of Minnesota Forever Green Initiative. This funding supports the work related to research and implementation. Additional information is available at: **www.forevergreen.umn.edu**.

RESEARCH INVENTORY DATABASE

$80,000 for FY22-23



The Minnesota Water Research Digital Library (MNWRL) is a user-friendly, searchable inventory of water research relevant to Minnesota. It includes both peer reviewed articles as well as white papers and reports. The library provides one-stop access to all types of water research.

The MNWRL is available online and includes over 3,200 diverse research articles and scientific reports. Clean Water funds are used to enhance and manage the database in partnership with other agencies. The MDA provides support and training for partner organizations and conducts outreach to Minnesota's water and research communities. Access MNWRL at: **www.mn.gov/wrl**.

PESTICIDE TESTING OF PRIVATE WELLS

$678,000 for FY22-23

Clean Water funding supports the Private Well Pesticide Sampling (PWPS) Project. The primary goal of the PWPS Project is to provide information to homeowners and the general public related to the presence of pesticides in private drinking water wells located in geologically vulnerable areas with row crop agriculture. Over the last four years the PWPS program has collected samples from 4,966 wells in 42 counties. Ongoing sampling will focus on the herbicides cyanazine and atrazine, and their degradates, as well as nitrate, in vulnerable aquifers. Previous PWPS data has indicated these agricultural chemicals represent the greatest risk to homeowners with private drinking water wells in these settings.

FOR MORE INFORMATION CONTACT

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www.mda.state.mn.us/cleanwaterfund