



September 21, 2018

Watonwan County
Land Management/SWCD
c/o Heidi Rudolph, Assistant Director
108 8th St S, Suite #2
St. James, MN 56081

Dear Ms. Rudolph,

Thank you for the opportunity to provide priority issues for consideration in the development of the Watonwan River Watershed One Watershed One Plan (1W1P). The Minnesota Department of Agriculture (MDA) looks forward to working closely with local government units, stakeholders, and other agency partners in the planning process, as well as providing practical information and feedback to appropriate landowners and agricultural organizations in the watershed.

One of MDA's roles that relates to the One Watershed One Plan process is technical assistance. The MDA maintains a variety of water quality programs including research, on-farm demonstrations and groundwater and surface water monitoring. Our goal is to provide you with the data from these programs to help better understand the resource concerns and further engage the agricultural community in problem solving.

The MDA's research and on-farm demonstration projects help ensure that current and accurate scientific information is made available and used to address water quality concerns in agricultural areas of Minnesota. These activities support farmer-led discussion and peer-to-peer learning. They engage both farmers and crop advisers knowing that this trusted relationship is essential in on-farm decision making.

MDA Priority Concerns

The presence of nitrate and pesticides in groundwater and surface water are a priority concern for the MDA in this watershed. Although MDA has not identified unusual compounds or detected abnormal concentrations of pesticides or nitrate in the Watonwan River Watershed, the continued groundwater and surface water monitoring discussed below is warranted.

Pesticide Water Quality Monitoring

The MDA has been conducting pesticide monitoring in groundwater since 1985, and in surface waters since 1991. Annually, the MDA completes approximately 250 sample collection events from groundwater and 800 sample collection events from rivers, streams, and lakes across the state. In general, the MDA collects water samples from agriculture and urban areas of Minnesota and analyzes water for up to 150 different pesticide compounds that are widely used and/or pose

the greatest risk to water resources. Groundwater monitoring is conducted by MDA and Minnesota Pollution Control Agency staff. Surface water monitoring is conducted by MDA and local organizations. All monitoring is completed following annual work plans and standard operating procedures (SOPs) developed by the MDA.

The purpose of the MDA's pesticide monitoring program is to determine the presence and concentration of pesticides in Minnesota waters, and present long-term trend analysis. Trend analysis requires a long-term investment in monitoring within the MDA's established networks. **The MDA releases an annual water quality monitoring report that includes a summary of all pesticide water quality data and long term trends available at www.mda.state.mn.us/monitoring.** All MDA ambient groundwater and surface water quality data is available for download at the National Water Quality Portal at <https://www.waterqualitydata.us/>. The MDA will continue to conduct statewide pesticide monitoring in the future and will provide additional information related to the occurrence of pesticides in Minnesota waters.

The MDA began evaluating pesticide presence and magnitude in private residential drinking water wells as part of the Private Well Pesticide Sampling (PWPS) Project in 2014 as a companion program to the MDA Township Testing Program (TTP). Townships in different counties have been, and will continue to be, sampled every year until the project concludes in 2021. Townships in the PWPS depend on the participation of well owners and may not reflect all of the townships sampled in the TTP. Water samples are collected by trained MDA hydrologists and analyzed by a private contract lab for compounds similar to the MDA ambient water quality monitoring program. All monitoring is completed following annual work plans and SOP's developed by the MDA.

Groundwater data related to the Watonwan River Watershed

- The MDA samples two sites in the watershed. Sampling began at one site in 2006 and at the second site in 2013. Note that at one site the initial well (Unique well number 733711) was damaged and replaced in the same location with a new well (Unique well number 809300). Both sites have been sampled at least once a year since they were established. Pesticide and nitrate water quality data are available for the sites. Semiannual water level measurements are also available from each site.
- As part of the PWPS Project, wells in at least one township (Riverdale) in Watonwan County will be targeted for nitrate and pesticide sampling in 2020. There will be pesticide and nitrate data available for the homeowners and a summary report for Watonwan County.

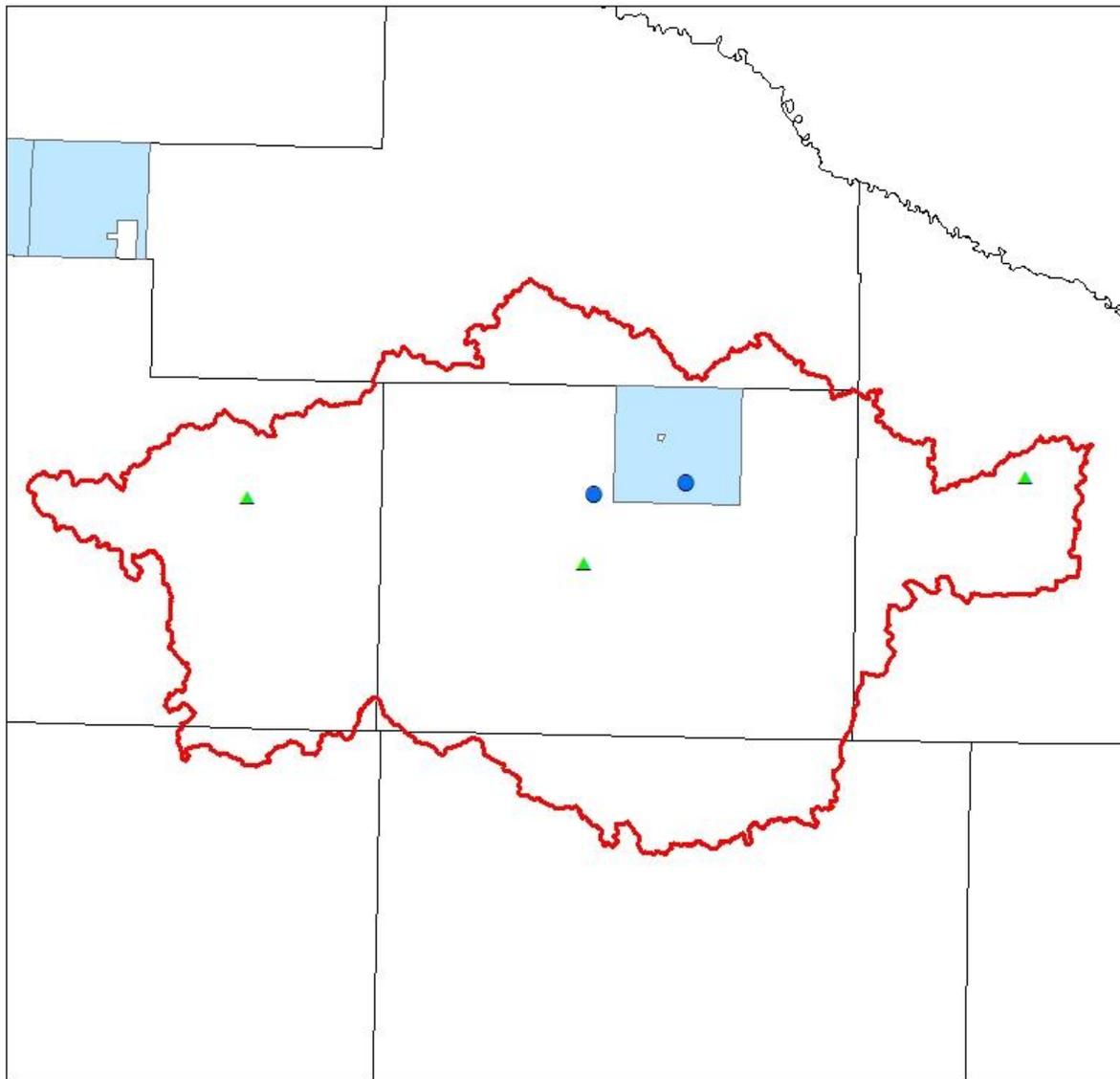
Surface water data related to the Watonwan River Watershed

- The MDA has completed 48 pesticide and/or nutrient water quality sample collection events from two river/stream locations within the Watonwan River Watershed from 2002-2017. The MDA has also completed one pesticide water quality sample collection event from one lake in 2017. This lake sample was only analyzed for glyphosate and the glyphosate degradate AMPA. There are currently no pesticide water quality impairments in the watershed.

- The MDA has actively monitored the Watonwan River at CSAH-13 near Garden City, Minnesota (S000-163) in 2002 and 2013-2017. The MDA collected pesticide water quality samples at this location in 2018 and will continue monitoring through at least 2021.

Figure 1. MDA surface and ground water monitoring sites in the Watonwan River Watershed.

MDA surface and groundwater monitoring sites in the Watonwan River Watershed



Legend

-  MDA Surface Water Locations
-  MDA Groundwater Location
-  Townships to be tested for PWPS
-  Counties



Nitrogen Fertilizer Management Plan (NFMP)

The NFMP is the state's blueprint for preventing or minimizing the impacts of nitrogen fertilizer on groundwater. The original plan was developed in 1990 and recently updated in March 2015. The 2015 Nitrogen Fertilizer Management Plan (NFMP) is available at:

<http://www.mda.state.mn.us/nfmp>

The primary goal of the Nitrogen Fertilizer Management Plan *“is to involve the agricultural community in problem solving at the local level. We all need to work together to respond to and address localized concerns about unsafe levels of nitrate in groundwater.”* – Commissioner of Agriculture, Dave Frederickson.

As part of the NFMP, the MDA designed the Township Testing Program to determine current nitrate-nitrogen concentrations in private wells in areas that are vulnerable to groundwater contamination.

Township Testing Program

The MDA has identified townships throughout the state that are vulnerable to groundwater contamination and have significant row crop production. The MDA plans to offer free nitrate testing to 70,000 private well owners, within over 300 townships, by 2019. This work is being done in close partnership with local government units across the state.

More information, including a sampling schedule is available at:

<http://www.mda.state.mn.us/township-testing-program> or available upon request.

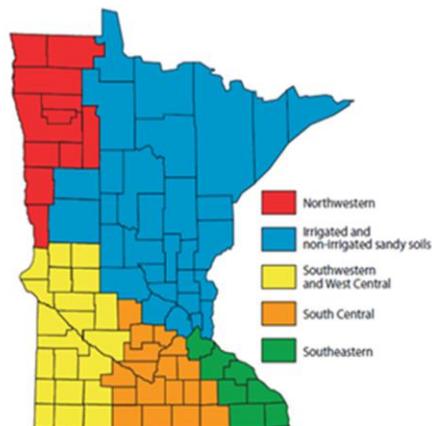
- One township in the Watonwan River Watershed may be sampled as part of the Township Testing Program.
 - If this area is mostly served by rural water the MDA may not test private wells because they are not the primary drinking water source.

Nitrogen and Pesticide Use

The MDA surveys farmers through the National Agricultural Statistics Service (NASS). The most recent nitrogen use survey was for the 2014 crop year and the most recent pesticide use survey was for the 2013 crop year.

The attached nitrogen use information is (pdf document) from the 2014 nitrogen use report, specifically the Southwestern and West Central BMP region and South Central BMP region.

Minnesota Nitrogen Best Management Practices Regions



Additional Resources and Opportunities for BMP funding and cost-share

Since there is a significant portion of the watershed in agricultural production, we would like to bring to your attention a couple resources, listed below, that we encourage you to reference during the planning process.

- 1) The **Agricultural BMP Handbook for Minnesota** (*recently updated*) is a comprehensive inventory of agricultural best management practices that address water quality impairments. The handbook is available on-line and hard copies are available upon request. State agencies and local government partners have found this a useful resource in the WRAPS and 1W1P processes.

Webpage: <http://www.mda.state.mn.us/protecting/cleanwaterfund/research/handbookupdate>

- Download at: <https://wrl.mnpals.net/islandora/object/WRLrepository:2955>

2) Minnesota Agricultural Water Quality Certification Program (MAWQCP)

<http://www.mda.state.mn.us/awqcp>.

The MAWQCP is a voluntary opportunity for farmers and agricultural landowners to take the lead in implementing conservation practices that protect our water. Those who implement and maintain approved farm management practices will be certified and in turn obtain regulatory certainty for a period of ten years. We encourage you to consider this program in the IWIP process because it is an opportunity for agricultural producers to evaluate nutrient and field management practices within the Watonwan River Watershed to help reduce losses.

- There are currently 22 farmers, 90 fields, and approximately 12,000 acres certified in the Watonwan River Watershed. In addition, there are currently 5 farmers, 17 fields, and approximately 2,100 acres which are assessed and are currently awaiting certification.

3) The AgBMP Loan Program

<http://www.mda.state.mn.us/agbmploans>

The AgBMP Loan Program is a water quality program that provides low interest loans to farmers, rural landowners, and agriculture supply businesses. The purpose is to encourage agricultural best management practices that prevent or reduce runoff from feedlots, farm fields, and other pollution problems identified by the county in local water plans. Loans can be used as match for other federal or state dollars supporting implementation.

4) Nutrient Management Initiative (NMI)

<http://www.mda.state.mn.us/nmi>

The NMI assists farmers and crop advisers in evaluating nutrient management practices on their own field through the use of on-farm trials. This is a great opportunity to promote new strategies that are available that could improve fertilizer use efficiency, evaluate new ideas or changes to practices, and help open the door to work directly on the farm by including local cooperators in the water quality discussion.

Furthermore, advanced trials working with the University of Minnesota research staff, help guide current nitrogen rate recommendations. There have been approximately 500 on-farm trials established in Minnesota through the NMI program since 2015.

- Two on-farm nitrogen rate evaluations have been located in the Watonwan River Watershed. These two trials showcased new equipment, technology, and precision agriculture strategies cooperative advisers are using to help farmers to apply nitrogen more efficiently.

We look forward to being involved in the 1W1P process. If you have any questions please do not hesitate to contact me.

Sincerely,

Aicam Laacouri

Aicam Laacouri
Minnesota Department of Agriculture
625 Robert Street North
St. Paul, MN 55155
651-201-6487
aicam.laacouri@state.mn.us