

# New Tool to Help Battle Those Dreaded Nitrates



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Are you battling elevated nitrates and feel like fighting back is hopeless? I hear these frustrations all over the state as I work with public water suppliers dealing with elevated nitrates. They feel helpless since the nitrates are originating outside of town and the majority of water operations specialists are not well versed in farming practices. Talking with farmers about how they manage their nitrogen inputs is usually outside the comfort level of most water operations specialists. Especially here in Minnesota where we are all Minnesota Nice!

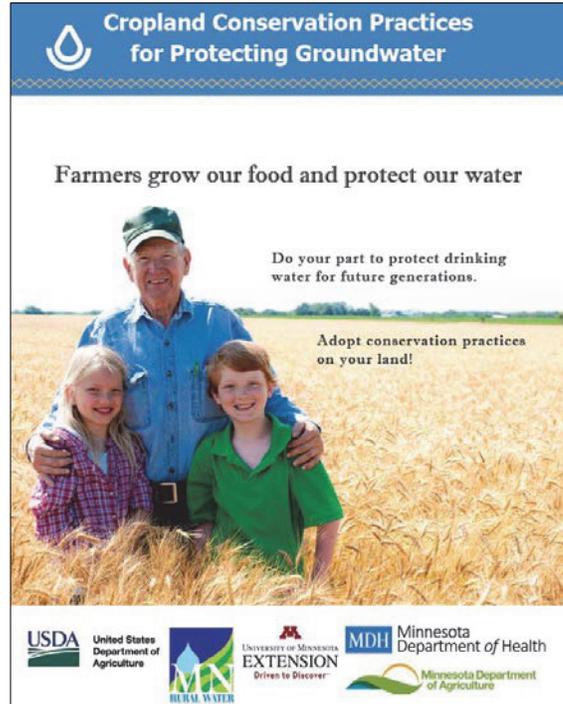
Well the good news is that we have developed some great partnerships at the local, state, and federal levels and they have staff willing and able to work with the farmers on nitrogen management issues. You can contact the various agencies directly and ask for assistance or you can contact me and I will work directly with them on your behalf. I am also willing to meet with farmers to talk with them about how they are

*“Are you battling nitrates and feel like fighting back is hopeless?”*

managing their nitrogen inputs and the potential impacts they may be having on groundwater if the government agencies are not willing or able to help.

Many public water suppliers have been asking for good outreach material to make talking with farmers easier. MRWA, working with a variety of partners (Natural Resource Conservation Service, Minnesota Department of Agriculture, U of M Extension, and Minnesota Department of Health) have created a new groundwater protection booklet titled *Conservation Cropland Practices for Protecting Groundwater*. This document is written for a wide range of audiences ranging from farmers to crop advisors to local units of government etc...and showcases actions landowners can implement to better protect groundwater sources from nitrates.

The practices range from the basics of nutrient management to cover crops to irrigation management. This is a well written booklet and would be a great item to share with farmers in your wellhead protection areas if are concerned with nitrates. You can download the digital version of the booklet via our website at <http://www.mrwa.com/sourcewater.html> if you need something in the short term. This document is so new it is not available in hard copy versions yet. If you want some hard copies in the future, contact me and we will see what we can arrange.



Are you familiar with practices you can adopt to help protect drinking water?

Each of the following practices will not only help protect drinking water but may also help improve your bottom line. The majority of these practices are effective in reducing nitrate loss to groundwater. Nitrate in groundwater is a human health concern in areas of Minnesota.

Conservation Practice	Description	Key Points
<p><b>Nutrient Management (590*)</b></p>   	<p>Managing the source, amount, timing, and placement of plant nutrients and soil amendments to improve crop nutrient use efficiency and minimize nutrient losses to surface and groundwater.</p>	<ul style="list-style-type: none"> <li>Nutrient management concepts are centered on the 4R Nutrient Stewardship Program, which recommends applying crop fertilizer or manure using the right source, right rate, right time, and right place.</li> <li>The 4R Nutrient Stewardship Program and the University of Minnesota's Best Management Practices (BMPs) for Nitrogen Fertilizer closely parallel each other. The BMPs form the core of the Minnesota Nitrogen Fertilizer Management Plan for groundwater protection.</li> <li>Key to good nitrogen management is crediting all sources of nitrogen when setting fertilizer rates; including nitrogen from previous crops, manure, soil mineralization, and fertilizers like MAP and DAP which apply nitrogen in addition to other nutrients.</li> <li>Split fertilizer application can synchronize nitrogen availability with crop demand, increasing nutrient use efficiency and reducing environmental risk.</li> <li>Nutrient management planning, soil sampling, manure testing, equipment calibration, and record keeping are tools used to improve nutrient management.</li> </ul>
<p><b>Irrigation Water Management (442*) and Irrigation System Sprinkler (449*)</b></p> 	<p>Determining and controlling the volume, frequency and application rate of irrigation water in a planned, efficient manner.</p>	<ul style="list-style-type: none"> <li>Maximizes the use of water stored in the soil profile.</li> <li>Minimizes the potential to over irrigate, decreases nutrient movement to surface and groundwater.</li> <li>Promotes proper and safe chemigation/fertiligation management.</li> </ul>

\*NRCS practice standard number

Above: Example pages from the booklet.