



*Protecting, Maintaining and Improving the Health of All Minnesotans*

March 13, 2024

Rebecca Oldenburg-Downing  
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Dear Ms. Oldenburg-Downing,

This letter is in response to your notification soliciting input on the initiation of the Middle St. Croix Watershed Management Organization's (MSCWMO) 2025 Watershed Management Plan (Plan). Thank you for the opportunity to submit comments regarding water management issues and priorities for consideration in this planning process. Our agency looks forward to providing assistance to the MSCWMO and working together to achieve mutual goals.

The Minnesota Department of Health's (MDH) mission is to protect, maintain, and improve the health of all Minnesotans. An important aspect to protecting Minnesotans' health is the protection of drinking water sources. MDH is the agency responsible for implementing programs under the Safe Drinking Water Act.

Source Water Protection (SWP) is the framework MDH uses to protect drinking water sources. The broad goal of SWP in Minnesota is to protect and prevent contamination of public and private groundwater and surface water sources of drinking water using best management practices and local planning.

To aid in the development of MSCWMO's new Plan, and to assist in working together toward addressing mutual goals and priorities, MDH SWP staff have compiled the enclosed recommendations and considerations on various priority issues related to source water and drinking water protection.

Within the recommendations and considerations, you will find various data, information, and resources to aid in the development and implementation of the Plan and associated projects. If you have any questions, or would like additional resources or technical assistance, please feel

free to contact me at (651) 201-4386 or [abby.shea@state.mn.us](mailto:abby.shea@state.mn.us). Again, thank you for the opportunity to be involved in your watershed planning process.

Sincerely,

A handwritten signature in black ink, appearing to read 'Abby Shea', with a long horizontal flourish extending to the right.

Abby Shea, Principal Planner  
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Enclosures: MDH Priority Issues

CC: Mark Wettlaufer, MDH Source Water Protection Unit  
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Water Resources Planning, Metropolitan Council  
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# MDH Priority Issues

## FOR THE MIDDLE ST. CROIX WATERSHED MANAGEMENT ORGANIZATION'S 2025 WATERSHED MANAGEMENT PLAN

### Groundwater Source Water Protection

Over 20% of the area of the Middle St. Croix Watershed Management Organization (Watershed) overlaps with one or more groundwater Drinking Water Supply Management Areas (DWSMAs), most of which is of moderate or high vulnerability. Additionally, there are many private drinking water wells spread throughout the Watershed.

In order to help protect the aquifers supplying local drinking water, the Minnesota Department of Health (MDH) recommends the following be considered for inclusion in the Watershed's 2025 Watershed Management Plan (Plan) or other Watershed policy documents.

### Infiltration Considerations

Consider the following limits on infiltration to protect groundwater quality:

- Limit infiltration in delineated Emergency Response Areas (ERAs) within highly vulnerable DWSMAs.
- Limit infiltration within transportation corridors in highly vulnerable DWSMAs (e.g., highly vulnerable areas along State Highways 36 and 95).
- Limit or prohibit infiltration within 100 feet of a public drinking water well.
- Limit or prohibit infiltration within 50 feet of any drinking water well.

Where the local government unit (LGU) is the project manager, consider recommending or encouraging the above limits on infiltration to protect groundwater quality.

To view DWSMA and vulnerability information, visit MDH's online map viewer: [Source Water Protection Web Map Viewer - MN Dept. of Health](https://www.health.state.mn.us/communities/environment/water/swp/mapviewer.html) (<https://www.health.state.mn.us/communities/environment/water/swp/mapviewer.html>).

The following webpage contains links to these geospatial data files available for download: [Reports and Geospatial Data Source Water Protection - MN Dept. of Health](https://www.health.state.mn.us/communities/environment/water/swp/maps/index.htm#geospatial) (<https://www.health.state.mn.us/communities/environment/water/swp/maps/index.htm#geospatial>). Geospatial data files for ERAs within DWSMAs are not available online. For this information, please contact the appropriate public water supply system. MDH Source Water Protection staff can assist with providing these files to Watershed staff with permission from the public water supply system.

Additional guidance on determining the suitability for infiltration within DWSMAs is available here: [Stormwater and wellhead protection - Minnesota Stormwater Manual](https://stormwater.pca.state.mn.us/index.php/Stormwater_and_wellhead_protection) ([https://stormwater.pca.state.mn.us/index.php/Stormwater\\_and\\_wellhead\\_protection](https://stormwater.pca.state.mn.us/index.php/Stormwater_and_wellhead_protection)).

The locations of many non-public drinking water wells can be found in the following database: [Minnesota Well Index \(MWI\) - MN Dept. of Health \(https://www.health.state.mn.us/communities/environment/water/mwi/index.html\)](https://www.health.state.mn.us/communities/environment/water/mwi/index.html). Please note that missing information does not guarantee there is not a well on a property.

## Land Use and Potential Contaminant Sources

Recommend LGUs consider the impacts of future land use and zoning changes that could alter groundwater hydrology or introduce new potential contaminant sources in DWSMAs. MDH Source Water Protection staff can provide assistance with evaluating these changes either to the Watershed or to the LGUs directly.

Consider recommending LGUs limit future pollutant-generating development activities within highly and moderately vulnerable DWSMAs.

Examples of such pollutant-generating activities include, but are not limited to, facilities with aboveground and underground chemical storage tanks, feedlots, landfills, hazardous waste generating facilities, and stormwater infiltration BMPs.

Consider recommending LGUs and other entities throughout the Watershed incorporate continuous potential contaminant source management at locations identified in the potential contaminant source inventory for DWSMAs as included in the various associated Wellhead Protection Plans. LGUs should attempt to manage sources within their jurisdiction, regardless of whether the source is within their DWSMA or the DWSMA of a neighboring community or non-municipal system (e.g., Minnesota Correctional Facility). Examples of potential contaminant source management include, but are not limited to:

- Installing secondary containment measures around aboveground and underground storage tanks,
- Maintaining safe salt storage,
- Sealing unused wells, and
- Applying fertilizers and pesticides in accordance with the product manufacturer's directions.

Encourage LGUs to consult the Wellhead Protection Plans for the DWSMAs within their jurisdiction for specific examples and to work with neighboring communities and systems to determine priority sources to manage and recommended BMPs.

Resources for managing potential sources of contamination are available at the following webpage: [Resources for Source Water Protection Implementation Source Water Protection - MN Dept. of Health](#)

<https://www.health.state.mn.us/communities/environment/water/swp/resources.html#contaminants>).

Copies of Wellhead Protection Plans can be obtained by contacting the appropriate public water supply system or MDH Source Water Protection Staff, who will distribute the plans with the systems' permission.

In the Plan, or in an education and outreach plan, include public outreach and education on contaminant source management strategies to protect groundwater. Encourage and promote the sealing of unused wells.

Source water educational resources are available here from the Minnesota Rural Water Association, in partnership with MDH: [Source Water Educational Resources – Minnesota Rural Water Association \(https://www.mrwa.com/swedu/\)](https://www.mrwa.com/swedu/).

Well sealing information is available at the following MDH webpage: [Sealing of Wells and Borings - MN Dept. of Health \(https://www.health.state.mn.us/communities/environment/water/wells/sealing/index.html\)](https://www.health.state.mn.us/communities/environment/water/wells/sealing/index.html).

Consider recommending the prohibition of alterations to the 100-year floodplain which would place wells within the floodplain.

## Karst Features

Karst features are present throughout the watershed. These features provide a quick and direct link between the land surface and groundwater. Water management practices should include an evaluation of nearby karst features and the impact they may have on the installation of best management practices (BMPs), as well as the BMP installations' impact on groundwater quality.

Maps, geospatial data, and other technical resources for protecting groundwater in areas with karst features are available here from the Minnesota Pollution Control Agency: [Resources for protecting waters in karst regions | Minnesota Pollution Control Agency \(https://www.pca.state.mn.us/business-with-us/resources-for-protecting-waters-in-karst-regions\)](https://www.pca.state.mn.us/business-with-us/resources-for-protecting-waters-in-karst-regions).

The Minnesota Department of Agriculture and various partners, including MDH, have compiled educational resources relating to karst and groundwater quality. While these are specific to southeast Minnesota, they can be used to understand the impacts karst features have on water resources more generally. These resources are available here: [Southeast Minnesota Groundwater Resources | Minnesota Department of Agriculture \(https://www.mda.state.mn.us/segwresources\)](https://www.mda.state.mn.us/segwresources).

## Private Wells

As mentioned above, there are many private drinking water wells spread throughout the Watershed, particularly in the southern portion of the Watershed. While many residents rely on these wells for the water they drink, no public entity is responsible for water testing or management of a private well after drilling is completed and before it is sealed. LGUs are best equipped to assist private landowners through land use management and ordinance development, which can have the greatest impact on protecting private wells.

Other suggested activities to protect private wells include hosting well testing or screening clinics, providing water testing kits, working with landowners to better manage nutrient loss, promoting household hazardous waste collection, managing stormwater runoff, managing septic systems, and providing best practices information to private wells owners.

Protecting private wells not only benefits private well owners, but everyone else who relies on drinking water from the same aquifer.

The Department of Natural Resources now hosts groundwater and drinking water information within the [Watershed Health Assessment Framework | Minnesota DNR \(https://www.dnr.state.mn.us/whaf/index.html\)](https://www.dnr.state.mn.us/whaf/index.html). This framework provides an organized approach for understanding natural resource conditions and challenges. Utilizing the online map tool allows for the ability to make informed land management decisions that lead to groundwater protection. Specific layers that would be beneficial to protecting groundwater sources of drinking water include the following:

**Pollution Sensitivity of Near-Surface Materials.** This information can help with understanding the ease with which recharge and contaminants from the ground surface may be transmitted into the upper most aquifer on a watershed scale.

**GRAPS Primary Aquifers by Section.** This data source displays the general distribution of aquifer use in the watershed, signaling where drinking water is at greatest risk to contaminants from the ground surface. This information allows for targeting of projects to the sources of water people are drinking.

**GRAPS Drinking Water Wells per Section.** This layer shows the density distribution of wells within the watershed by showing the number of known wells in each section. Only wells used for drinking water were included in the analysis to create this layer.

**GRAPS Pollution Sensitivity at Wells.** This data source displays the geologic sensitivity at wells, as opposed to only at the surface. Well records from the Minnesota Well Index were used to create this layer. This information can help with understanding the ease with which contaminants can enter the aquifers and wells that watershed residents are obtaining their drinking water from.

Information on well water testing and drinking water quality for private well owners is available at the following webpage: [Water Quality/Well Testing/Well Disinfection - MN Dept. of Health](https://www.health.state.mn.us/communities/environment/water/wells/waterquality/index.html) (<https://www.health.state.mn.us/communities/environment/water/wells/waterquality/index.html>)

## Surface Water Source Water Protection

While no portion of the Watershed is within a surface water DWSMA, the local groundwater is vulnerable to contamination from infiltration of surface waters. In order to help protect this source of drinking water, MDH recommends the following be considered for inclusion in the Plan or other Watershed policy documents.

### Land Use and Potential Contaminant Sources

Recommend LGUs consider the impacts of future land use and zoning changes that could alter source water hydrology and, subsequently, water quality.

Encourage non-point potential contaminant source management by LGUs and other entities and individuals throughout the Watershed. Examples of this include, but are not limited to:

- Maintaining safe salt storage,
- Maintaining effective erosion control measures around construction sites, and
- Applying fertilizers and pesticides in accordance with the product manufacturer's directions.

In the Plan, or in an education and outreach plan, include public outreach and education on non-point potential contaminant source management strategies to prevent negative impacts to surface water contributing to drinking water sources.

Source water educational resources are available here from the Minnesota Rural Water Association, in partnership with MDH: [Source Water Educational Resources – Minnesota Rural Water Association](https://www.mrwa.com/swedu/) (<https://www.mrwa.com/swedu/>).

## General Source Water Protection

In addition to actions specific to either groundwater or surface water, the following are general recommendations for broader source water and natural resource protection in the Watershed.

It is recommended to review MDH source water DWSMA maps when developing and implementing comprehensive watershed management plans, subwatershed plans, rule or policy changes, and other related documents and efforts.

MDH Source Water Protection staff are available for technical assistance as requested.

Consider implementation and promotion of Smart Salting initiatives to reduce chloride applications in the winter.

In the Plan, or in an education and outreach plan, include outreach and education on the importance of proper water softener maintenance as it relates to chloride contamination of surface water and groundwater resources.

Promote septic system maintenance to limit non-functioning septic systems. Work with LGUs to encourage connection to sanitary sewer where available, as well as proper abatement of unused septic systems.

Septic system maintenance resources are available from the Minnesota Pollution Control Agency and others at this webpage: [Keep your septic system healthy | Minnesota Pollution Control Agency \(https://www.pca.state.mn.us/news-and-stories/keep-your-septic-system-healthy\)](https://www.pca.state.mn.us/news-and-stories/keep-your-septic-system-healthy).

On this webpage, there is an issue paper available on the potential impacts to drinking water from septic systems: [Resources for Source Water Protection Implementation Source Water Protection - MN Dept. of Health \(https://www.health.state.mn.us/communities/environment/water/swp/resources.html#contaminants\)](https://www.health.state.mn.us/communities/environment/water/swp/resources.html#contaminants).

Consider assessing and addressing potential climate change impacts on source water and drinking water supply.

## Funding Resources

MDH would like to make the Watershed aware of two funding opportunities for groundwater and drinking water projects: the Groundwater Protection Initiative Accelerated Implementation Grant and the Drinking Water Sub-Grant through the Clean Water Fund Projects & Practices Grant.

The purpose of the Groundwater Protection Initiative Accelerated Implementation Grant is to accelerate implementation of groundwater projects across the state. Funds can be used to conduct pre-project identification, planning, and design work that is required before on-the-ground projects can be implemented. For more information, visit the grant webpage: [Accelerated Implementation Grant Groundwater Protection Initiative - MN Dept. of Health](#)



<https://www.health.state.mn.us/communities/environment/water/groundwater/accimpgrant.html>).

The Drinking Water Sub-Grant within the Projects & Practices program was established to support drinking water protection through land treatment projects that will protect or improve the quality of drinking water sources. This can be for a groundwater or surface water source of drinking water and is administered by the Board of Water and Soil Resources (BWSR). More information can be found on the project factsheet [Drinking Water Sub-Grant Factsheet \(PDF\)](https://www.health.state.mn.us/communities/environment/water/docs/swp/bwsrgrant.pdf) (<https://www.health.state.mn.us/communities/environment/water/docs/swp/bwsrgrant.pdf>) as well as in the RFP on the BWSR grant webpage [Grant Profile: Projects and Practices | MN Board of Water, Soil Resources](https://bwsr.state.mn.us/grant-profile-projects-and-practices) (<https://bwsr.state.mn.us/grant-profile-projects-and-practices>).