

**Vadnais Lake Area Water Management Organization (VLAWMO)**  
**Watershed Management Plan (WMP)**

**“Notify” review entities**

**60-day comment period (Dec. 14, 2023—Feb. 13, 2024)**

**Comments received by close on February 13, 2024**

<b>Page</b>	<b>Reviewer Category</b>	<b>Name</b>
2	Plan Review Agency	Board of Water and Soil Resources (BWSR)
5	Local Plan Review Authority	City of White Bear Lake
8	Plan Review Agency	Metropolitan Council
12	Plan Review Agency	Minnesota Department of Agriculture (MDA)
14	Plan Review Agency	Minnesota Department of Health (MDH)
24	Plan Review Agency	Minnesota Department of Natural Resources (MN DNR)
32	Plan Review Agency	Minnesota Department of Transportation (MnDOT)
34	Plan Review Agency	Minnesota Pollution Control Agency (MPCA)



**MN Board of Water and Soil Resources  
520 Lafayette Road North  
St. Paul, MN 55155**

February 12, 2024

Dawn Tanner  
Vadnais Lake Area Watershed Management Organization  
800 East County Road E  
Vadnais Heights, MN 55127

**RE: Vadnais Lake Area Water Management Organization's Comprehensive Watershed Management Plan Update**

Dear Ms. Tanner,

This letter is in response to your December 14, 2023, email soliciting input for the next iteration of the Vadnais Lake Area Water Management Organization's (VLAWMO) Comprehensive Watershed Management Plan (Plan). Thank you for the opportunity to provide preliminary input.

The excellent work that VLAWMO does – including efficient and effective project implementation, collaboration with diverse partners, an exemplary monitoring program, and an outstanding education/outreach program – has created a solid foundation from which to launch the next 10-year Plan. I appreciated having the opportunity to talk with you and Phil Belfiori on November 16, 2023, about the planning process and Plan content requirements. I look forward to working with VLAWMO on their Watershed Management Plan update.

The Board of Water and Soil Resources' (BWSR) expectations for the Plan update focus on:

- 1) Process. Provide opportunities to discuss relevant topics and affirm, align, or change direction based on initial input and issue identification.
- 2) Coordination. Good planning is collaborative from the beginning and engages with multiple units of government, partners, and the public at many different levels of the process.
- 3) Plan Contents. Plans should focus on priority issues, clearly describe actions to be taken over the next 10 years, incorporate relevant and timely data and trends, and contain short-, mid-, and long-term measurable goals based on science, local priorities, and targeted implementation plans.
- 4) Organizational Capacity. Incorporate authentic self-evaluation, accountability, and potential efficiency of implementation to create ambitious yet realistic goals.

The requirements for the planning process and Plan content are outlined in Minnesota Rule 8410 (<https://www.revisor.mn.gov/rules/8410/>) and Minnesota Statute 103B (<https://www.revisor.mn.gov/statutes/?id=103B>). Please reference these documents throughout the process.

Additional resources that may be helpful for developing implementation actions and measurable goals can be found in the *One Watershed One Plan Guidebook* (<https://bwsr.state.mn.us/one-watershed-one-plan-resources>):

- *Identifying and Prioritizing Resources and Issues* (pages 7-10)
- *Setting Measurable Goals* (pages 11-14)
- *Targeting Implementation Activities* (pages 23-26)

Note that these resources are useful for watershed planning across the region, regardless of whether a plan is developed as part of the One Watershed, One Plan process or metro update process.

Below are a few specific comments for VLAWMO to consider as the planning process begins.

**Measurable Goals** (please refer to [MN Rule 8410.0080](#)):

- The Plan must include goals for water quantity, water quality, public drainage systems, groundwater issues, wetland management, and any other priority issues identified during the input process.
- Goals need sufficient detail to determine what will be accomplished by the end of the Plan and whether success has been achieved. BWSR recommends the following process:
  - define a strategy to prioritize the top resource concerns;
  - create *specific* and *measurable* goals for implementation activities; and
  - develop metrics to measure progress.
- The Plan should be written to ensure that highly prioritized projects are targeted, making it easier to show how VLAWMO is addressing both resource and constituent concerns. A clearly prioritized and well-targeted plan can also help communicate the need for specific projects in terms of achieving water quality improvements.

**Implementation Actions** (please refer to [MN Rule 8410.0100](#)):

- The implementation program should be clear in identifying what actions VLAWMO will undertake in the next 10 years with available local funds, regardless of whether they receive new grant funding.
- Identify a specific process or procedure to evaluate progress toward achieving plan goals and implementation activities at a minimum of every two years.
- Define VLAWMO's process for evaluating implementation of local water plans.

**Other comments:**

- Board Conservationists are often asked what makes a “good” plan. In general, “good” plans are those that are fundamentally useful to the organization, and the most successful plans are concise, easy to follow, and help the organization achieve its goals. “Good” plans lay out current conditions (assessment), desired conditions (measurable goals), actions being considered to produce change (implementation), and how the activities will be paid for (budget).
- Similarly, I encourage VLAWMO to consider how they can best utilize the Plan's Executive Summary. For example, an “elevator speech” approach can make important Plan information accessible to a broad constituency while also providing a concise summary of issues, main goals, and major actions. Utilizing an array of graphics and/or bulleted lists can clearly illustrate main points and still meet plan content requirements.
- Ensure that the land and water resources information and analysis is sufficiently updated and addresses all required elements outlined in [MN Rule 89410.0060, Subp. 1](#).
- VLAWMO has an excellent resource monitoring program and I look forward to seeing how those data, in conjunction with regional data sources (e.g., MN Department of Natural Resources, National Oceanic and Atmospheric Administration), are incorporated into the planning process and the Plan itself. Analysis and discussion of data trends must be included in the assessment and identification of priority

issues ([MN Rule 8410.0045, Subp. 7](#)), utilized in the resource inventory ([MN Rule 8410.006, Subp. 1F](#)), and included in establishment of water quality and quantity goals ([MN Rule 8410.0080, Subp. 2 and 3](#)).

- The current VLAWMO Plan mentions climate change as an emerging concern. I look forward to seeing greater prioritization and expanded efforts related to climate resiliency in the updated Plan as well as a discussion of any progress made in the last ten years. Consider impacts from changing temperature regimes, precipitation patterns (frequency, intensity, droughts, floods), and interactions between climate change impacts and land use. Among other resources, the BWSR Climate Resiliency Toolbox (<https://bwsr.state.mn.us/bwsr-climate-resiliency-toolbox>) may be useful.
- The current Plan does a good job describing threats to groundwater quality and quantity and outlines numerous efforts to address groundwater issues. However, increasingly complex groundwater issues have emerged over the past 10 years. In developing the next Plan, I encourage VLAWMO to thoughtfully consider how they will continue to address groundwater issues and outreach, particularly in collaboration with partners.
- Similarly, VLAWMO should continue and expand its efforts to address chloride pollution by utilizing resources and programs such as the Twin Cities Metropolitan Area Chloride TMDL, the Twin Cities Chloride Management Plan (MN Pollution Control Agency (MPCA)), the Regional Assessment of Chloride in Select Twin Cities Metro Streams (Met Council), and Smart Salting trainings (MPCA).
- As VLAWMO develops its public input process, we encourage consideration of diversity, equity, and inclusion elements to ensure robust community engagement that is representative of the changing demographics of Ramsey and Anoka counties over the past 10 years<sup>1</sup>. Tools such as [EJScreen: Environmental Justice Screening and Mapping Tool](#)<sup>2</sup>, the [Social Vulnerability Index](#)<sup>3</sup>, and the [American Community Survey](#)<sup>4</sup> may be helpful.

I look forward to providing additional input and BWSR assistance as VLAWMO works through development of the Plan. Please forward a copy of the proposed public input process once it has been finalized. Please also invite me to workshops, public input events, and advisory committee (TEC) meetings. If you have questions or need additional information, feel free to contact me by phone at 651-392-5064 or via email at [Anne.Sawyer@state.mn.us](mailto:Anne.Sawyer@state.mn.us).

Sincerely,

*Anne Sawyer*

Anne Sawyer  
BWSR Board Conservationist

CC: Marcey Westrick (Central Region Manager, BWSR, via email)  
State Review Agencies (via email)  
Megan Moore (DNR)  
Abby Shea (MDH)  
Jeffrey Berg (MDA)  
Maureen Hoffman (METC)  
Jeff Risberg (MPCA)  
Katie Kowalczyk (MNDOT)

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<sup>1</sup> Minnesota County Profiles. Minnesota Department of Employment and Economic Development. Accessed 6/2/2023.

<sup>2</sup> US Environmental Protection Agency, accessed 6/2/2023

<sup>3</sup> Agency for Toxic Substances and Disease Registry, US Centers for Disease Control, accessed 6/2/2023

<sup>4</sup> US Census Bureau, accessed 6/2/2023



## City of White Bear Lake

4701 Highway 61 N.  
White Bear Lake, Minnesota 55110  
651-429-8531 | [www.whitebearlake.org](http://www.whitebearlake.org)

February 13, 2024

Dawn Tanner  
Vadnais Lake Area Water Management Organization  
800 East County Road E  
Vadnais Heights, MN 55127

RE: VLAWMO Watershed Management Plan Update Request for Information

Dear Ms. Tanner:

Thank you for the opportunity to provide initial comments (below) on local water-related issues, water management goals, official controls, and programs in anticipation of VLAWMO's upcoming Comprehensive Watershed Management Plan update.

### **Local Water Related Issues and Goals**

- 1) The City appreciates VLAWMO's partnership in resolving numerous water related issues over the years and we look forward to continued partnership with the following ongoing and future planned projects:
  - Goose Lake TMDL: Oak Knoll Pond Spent Lime and future Goose Lake ALM, shoreline restoration projects, Polar Chev channel improvements, and Vento Trail stormwater treatment projects.
  - Lambert Creek TMDL: current IESF study and potential project and Ditch 13 maintenance agreement.
  - Birch Lake: 4<sup>th</sup> and Otter IESF and shoreline restoration maintenance agreements and future IESF drainage area sediment/treatment options.
  - Invasive species and native plant restorations: Rotary Nature Preserve wetland and buffers, 4<sup>th</sup> and Otter woodland and wetland, and future Birch Lake Sports Center shoreline expansion.

The City also looks forward to partnering on additional future projects as they are identified.

- 2) Groundwater conservation continues to be a priority goal for the City. We request that VLAWMO also continue to prioritize groundwater quantity and quality in its upcoming Comprehensive Watershed Management Plan update and consider additional funding for water conservation/reuse projects.



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- 3) The City's Environmental Advisory Commission and Park Advisory Commission are collaborating on an invasive species management and native plant restoration implementation plan that will identify upland invasive plant locations, raingarden projects, and shoreline, woodland, and prairie restorations on City property. VLAWMO partners with the City on various restoration projects including the 4<sup>th</sup> and Otter woodland/wetland buffer, Birch Lake shoreline, and Rotary Nature Preserve wetland buffers. The City appreciates this partnership and asks that VLAWMO consider upland as well as shoreline and wetland invasive species control and restoration work as a priority in the Comprehensive Watershed Management Plan update.

### Official Controls

- 4) The City is proposing to update its stormwater design standards within the next two years to be consistent with the MPCA Construction Stormwater Permit and upcoming watershed district rule revisions. The City is considering revisions to its rate control standards, infiltration design requirements, infiltration requirements for linear projects, floodplain/freeboard requirements, erosion and sediment control standards, wetland buffer language, and others. We will coordinate this process with VLAWMO's Comprehensive Watershed Management Plan update and any planned updates to the VLAWMO Water Management Policy.
- 5) The City is in the process of updating its Zoning Code, which includes the Shoreland Overlay District, Floodplain Overlay District, and Wetland Overlay District. The City will coordinate this work with VLAWMO's Comprehensive Watershed Management Plan update and any planned updates to the VLAWMO Water Management Policy.

### Programs

- 6) VLAWMO is a valuable partner in helping the City meet its MS4 requirements for education/outreach, public participation, and TMDL requirements. The City encourages VLAWMO to continue including these efforts as a priority in the plan, such as offering workshops and field trips, creating and distributing educational materials, partnering in the Rotary Nature Preserve Field Day program, participating in the City's Environmental Resources Expo, partnering with the City to complete capital stormwater projects, and others.
- 7) The City is in the process of updating its Storm Sewer Dataset within GIS for all Storm Water infrastructure within the City limits. We are interested in obtaining GIS data from VLAWMO for all applicable VLAWMO cost share and capital projects and corresponding pollutant removal summaries to add to our dataset. We are also interested in collaborating with



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VLAWMO to create a procedure for periodic updates to the database and other information sharing.

- 8) VLAWMO has a robust data collection and monitoring program which is essential for cost-effective decision making and evaluating the performance of projects. The City requests that VLAWMO consider continued prioritization of data collection and monitoring in the Comprehensive Watershed Management Plan update, including monitoring the performance of capital projects and sharing this information with the City. The City would also be interested in partnering with VLAWMO to complete an H&H model to analyze future flooding potential due to climate change.
- 9) The City is currently looking into options for enhanced street sweeping in partnership with two of our watershed districts. If VLAWMO is interested in prioritizing enhanced street sweeping in its Comprehensive Watershed Management Plan update, the following are a couple of options that are under consideration:
  - Contract street sweeping.  
This past fall, one of our watershed districts prepared a district-wide street sweeping priority area map and hired a contractor to provide enhanced sweeping in one of their high priority areas within the City.
  - Cost share funding to purchase a second City street sweeper.  
The City is in very early discussions with another watershed district regarding cost share funding to purchase an additional street sweeper. The maximum amount of funding would likely be based on the percentage of the City within this watershed district.
- 10) The City will continue offering a raingarden program as part of our street rehabilitation projects. We are planning street projects within VLAWMO in 2026 and 2027, if VLAWMO is interested in participating. Also, long term maintenance of private raingardens may become more challenging as some of the 10 year cost share maintenance contracts have expired. The City would like to collaborate with VLAWMO on how to keep these raingardens in place and functioning if a landowner is no longer providing maintenance.

Sincerely,

Connie Taillon  
Environmental Specialist/Water Resources Engineer



February 12, 2024

Dawn Tanner  
Program Development Coordinator  
Vadnais Lake Area Water Management Organization  
800 East County Road E  
Vadnais Heights, MN 55127

RE: Vadnais Lake Area Water Management Organization Plan Update Request for Information

Dear Ms. Tanner:

Thank you for the opportunity to submit our priority concerns for inclusion in the Vadnais Lake Area Water Management Organization's (VLAWMO) updated Watershed Management Plan (Plan), as well as the Metropolitan Council's (Met Council) expectations for the Plan outcomes. I have included a list of Met Council resources that may be of use in the Plan preparation.

### **Council Expectations and Priorities for Plan Preparation and Review**

Met Council staff will review the plan through the lens of the Council's *Thrive MSP 2040* document which is the Regional Development Framework for the seven county Twin Cities Metropolitan Area and the *2040 Water Resources Policy Plan*, both of which can be found on the Council's web page ([www.metrocouncil.org](http://www.metrocouncil.org)).

In particular, the *2040 Water Resources Policy Plan* (Policy Plan) includes policies and strategies to achieve the following goal:

*To protect, conserve, and utilize the region's groundwater and surface water in ways that protect public health, support economic growth and development, maintain habitat and ecosystem health, and provide for recreational opportunities, which are essential to our region's quality of life.*

The Policy Plan takes an integrated approach to water supply, water quality, and wastewater issues. This approach moves beyond managing wastewater and stormwater only to meet regulatory requirements by viewing wastewater and stormwater as resources, with the goal of protecting the quantity and quality of water our region's needs now and for future generations.

The Policy Plan includes policies and strategies to:

- Maximize regional benefits from regional investments in the areas of wastewater, water supply and surface water management and protection.
- Pursue reuse of wastewater and stormwater to offset demands on groundwater supplies.
- Promote greater collaboration, financial support, and technical support in working with partners to address wastewater, water quality, water quantity and water supply issues.
- Promote the concept of sustainable water resources through collaboration and cooperation, with the region taking steps to manage its water resources in a sustainable way with goals of:



- Providing an adequate water supply for the region
- Promoting and implementing best management practices aimed at protecting the quality and quantity of our resources
- Providing efficient and cost-effective wastewater services to the region
- Efficiently addressing nonpoint and point sources pollution issues and solutions, and,
- Assessment and monitoring of lakes, rivers, and streams to direct adequate management, protection, and restoration of the region's valued water resources.

The updated watershed management plan should include policies related to the protection of area water resources with these strategies in mind, with the end goal of water sustainability.

In addition to being consistent with the Met Council's policy plan, the Plan also should include quantifiable and measurable goals and policies that address water quantity, water quality, recreation, fish and wildlife, enhancement of public participation, groundwater, wetlands, and erosion issues.

Met Council staff will be looking for the Plan to address the issues and problems in the watershed and to include projects or actions and funding to address them. At a minimum the Plan should address:

1. Any problems with lake and stream water quality and quantity, including information on impaired waters in the watershed and the Organization's role in addressing the impairments,
2. Flooding issues in the watershed,
3. Climate and resilience planning,
4. Information on emerging contaminants within the watershed, outlining watershed district and partners' roles.
5. Stormwater rate control issues in the watershed,
6. Impacts of water management on the recreation opportunities,
7. Impact of soil erosion problems on water quantity and quality,
8. The general impact of land use practices on water quantity and quality,
9. Policies and strategies related to monitoring of area water resources,
10. Policies and strategies related to use of best management practices,
11. Issues concerning the interaction of surface water and groundwater in the watershed,
12. Erosion and sediment control standards and requirements,
13. Volume reduction goals at least as restrictive as requirements in the NPDES construction general permit, and,
14. Capital improvement plan with itemized list of actions, estimated costs, and timeline.
15. Specifics on long-term maintenance of projects identified in the capital improvement plan, including identification of entities responsible for funding and conducting maintenance, as well as how long-term maintenance will be documented,
16. Specify to what degree the Plan may be adopted by reference by a local government unit for all or part of its local water plan. Additionally, please include information in the Plan on what information local municipalities must include in their local water management plans to receive approval from VLAWMO.

The Met Council also encourages the plan to leverage partnership opportunities where possible and to state them clearly within the Plan. We believe that to achieve productive and effective water governance within Minnesota we must all work together, this includes partnering with the cities and townships within the watershed.

Additionally, the Met Council is in the process of updating the *2050 Water Resources Policy Plan*. We will be reaching out to you in the spring for your engagement and feedback on the draft plan.

### Specific Priority Issues

Based on Council policies, the following issues are specific to the VLAWMO watershed and are viewed as priorities by the Council for inclusion in the Plan:

- Bald Eagle Otter Lakes and Vadnais-Snail Lakes Regional Parks are located in the watershed. The Council has made a substantial investment in the regional park system through its park implementing powers. Improvement of water quality in the watershed would likely have a positive impact on the park, through improving fisheries and wildlife and/or by reducing risks to public health. The Plan needs to address any issues, problems, capital projects, or land use changes related to the regional park.
- The Met Council has updated its Priority Waters list, formerly known as the Priority Lakes list, which now includes rivers and streams. It will provide a key lens for developing policies and activities to include in the 2050 Water Resources Policy Plan. It will inform how the Met Council can align with the priorities of local and state partners, like VLAWMO, and provide value for the region.

The list includes Lambert Creek.

While the list was developed after the adoption of the 2040 Policy Plan and is a foundational dataset for the 2050 Policy Plan, it would be appreciated if VLAWMO could include these water designations in the Land and Water Resources Inventory.

### Available Council Resources

- **Local Planning Handbook:** The Met Council provides information about the cities and townships within your watershed boundaries, including community designations, forecasted population counts, generalized land uses, and other information that might be useful in your planning efforts.  
[Local Planning Handbook – Metropolitan Council \(metro council.org\)](https://metro council.org/local-planning-handbook)
- **Place-based equity research dataset:** The Met Council has published a new dataset, “Equity Considerations for Place-Based Advocacy and Decisions in the Twin Cities Region,” that provides equity-relevant characteristics for each of the 704 census tracts in the Twin Cities region. Formerly known as the Areas of Concentrated Poverty dataset, it has been expanded to provide a much more nuanced portrait of neighborhoods and their residents.  
[Place-based Equity Research - Metropolitan Council \(metro council.org\)](https://metro council.org/place-based-equity-research)
- **Climate vulnerability assessment (CVA):** The CVA is a tool that can assist in Met Council and community planning efforts in preparing and adapting to climate change because the CVA can reveal system vulnerabilities to currently occurring and, to some extent, expected climatic changes. Tools and resources currently include an extreme heat map tool and localized flood map screening tool.  
[Climate Vulnerability Assessment - Metropolitan Council \(metro council.org\)](https://metro council.org/climate-vulnerability-assessment)
- **Growing shade, tree canopy enhancement and preservation tool:** Growing Shade combines local stories and an interactive mapping tool to inform tree canopy enhancement and

preservation. The tool, designed in partnership with The Nature Conservancy and Tree Trust, allows users to generate reports based on various presets like climate change, conservation, environmental justice, and public health at a range of scales from city-township to census block groups. By combining different variables of your choosing, you can generate data to meet your specific needs, whether you want to set canopy goals for a community or produce supporting data for grant applications.

[Tree Canopy - Metropolitan Council \(metro council.org\)](https://metro council.org)

I will be happy to direct you to load spreadsheets and any other MCES data and analyses, as well as any spatial data. Please contact me at [maureen.hoffman@metc.state.mn.us](mailto:maureen.hoffman@metc.state.mn.us).

Finally, please feel free to me call at 651-602-1279 with questions about my comments or for any assistance during the plan preparation.

Sincerely,

*Maureen Hoffman*

Maureen Hoffman  
Senior Planner  
Water Resources Planning  
Metropolitan Council Environmental Services

cc: Anne Sawyer, Board of Soil and Water Resources  
Jen Kostrzewski, Metropolitan Council  
Water Resources Reviews, Metropolitan Council



Dawn Tanner <dawn.tanner@vlawmo.org>

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## VLAWMO Watershed Management Plan Update

2 messages

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**Berg, Jeffrey (MDA)** <jeffrey.berg@state.mn.us>  
To: "dawn.tanner@vlawmo.org" <dawn.tanner@vlawmo.org>  
Cc: "Sawyer, Anne (BWSR)" <Anne.Sawyer@state.mn.us>

Tue, Feb 13, 2024 at 3:18 PM

Greetings Dawn,

I did a quick review of the current VLAWMO Watershed Plan, and found limited agricultural land use or activities. Therefore I have no comments on the plan update.

However, as you develop the updated plan, if you have questions on agricultural activities, such as agricultural chemical (pesticides and fertilizer) use and monitoring, or other agriculture related items, feel free to contact me.

Thanks for the opportunity to review and provide comments.

Jeff Berg

Water Policy Specialist

[Minnesota Department of Agriculture](#)

651 201 6338



[625 Robert Street North](#)

[St. Paul, MN 55155](#)

Plan Review Agencies:

Please find the attached letter providing a notification of Watershed Management Plan Update Initiation & Request for Information Pursuant to MN Rules 8410.0045, Subpart 3.

We look forward to receiving your management expectations for the plan review priority issues, summaries of relevant water management goals, and water resource information.

We will continue to involve you and provide updates as the process continues. Please provide your comments to us by February 13, 2024.

Sincerely,

Dawn Tanner

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**Dawn Tanner** <dawn.tanner@vlawmo.org>  
To: "Berg, Jeffrey (MDA)" <jeffrey.berg@state.mn.us>

Tue, Feb 13, 2024 at 3:54 PM

Hi, Jeff.

Thank you for sending this response.

We appreciate your time and feedback.

Dawn

[Quoted text hidden]

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

February 9, 2024

Dawn Tanner  
Vadnais Lake Area Watershed Management Organization  
800 East County Road E  
Vadnais Heights, MN 55127  
[dawn.tanner@vlawmo.org](mailto:dawn.tanner@vlawmo.org)

Dear Ms. Tanner,

This letter is in response to your notification on December 14, 2023, soliciting input on the initiation of Vadnais Lake Area Watershed Management Organization's (VLAWMO) new 10-year Comprehensive 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 VLAWMO 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 VLAWMO'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  
Minnesota Department of Health  
Source Water Protection Unit  
PO Box 64975  
St. Paul, MN 55164-0975  
[www.health.state.mn.us](http://www.health.state.mn.us)

Enclosures: MDH Priority Issues

CC: Mark Wettlaufer, MDH Source Water Protection Unit  
Anneka Munsell, MDH Source Water Protection Unit  
Danielle Nielsen, MDH Source Water Protection Unit  
Dereck Richter, MDH Source Water Protection Unit  
Indran Kamalanathan, MDH Community Public Water Supply Unit  
Anne Sawyer, BWSR  
Jeffrey Berg, MDA  
Megan Moore, DNR  
Daniel Scollan, DNR  
Jason Swenson, DOT  
Katie Kowalczyk, DOT  
Water Resources Planning, Metropolitan Council  
Jeff Risberg, MPCA  
Brittany Faust, MPCA

# MDH Priority Issues

## FOR THE VADNAIS LAKE AREA WATERSHED MANAGEMENT ORGANIZATION'S 2027-2036 COMPREHENSIVE WATERSHED MANAGEMENT PLAN

### Surface Water Source Water Protection

Almost the entirety of the Vadnais Lake Area Watershed (Watershed) is within Priority Area A of the surface water Drinking Water Supply Management Area (DWSMA) for the Saint Paul-Chain of Lakes public water supply system. It is noted that the Priority Area A and B delineations will be revised in a future Source Water Assessment (SWA) to re-identify these areas as the Emergency Response Area (ERA) and Spill Management Area (SMA). In order to help protect this source of drinking water, the Minnesota Department of Health (MDH) recommends the following be considered for inclusion in the Watershed's 2027-2036 Comprehensive Watershed Management Plan (Plan) or other Watershed policy documents.

### Land Use and Potential Contaminant Sources

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

Consider recommending LGUs limit future pollutant-generating development activities within:

- 1) a 500-foot buffer of a stream or river that directly feeds into a source waterbody, 10 river miles upstream of either a lake outfall or the intake itself; and
- 2) a quarter mile (1320 feet) buffer around a lakeshore boundary that is designated as a source water.

For a list of source waterbodies, please contact MDH Drinking Water Protection.

At this time, an ERA and SMA for the Saint Paul-Chain of Lakes public water system has not been delineated and the Priority Area A is the smallest formally established protection area. The criteria listed above are what MDH uses to delineate the ERA and SMA, so we recommend it be used when evaluating future pollutant-generating development activities.

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

Consider recommending LGUs incorporate continuous potential contaminant source management at locations identified as high concern in the SWA for the Saint Paul-Chain of Lakes public water supply system once an updated SWA is published. The updated SWA will contain a delineated ERA and SMA, as well as an inventory of potential contaminant sources for



these areas. 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,
- Maintaining effective erosion control measures around construction sites, and
- Applying fertilizers and pesticides in accordance with the product manufacturer’s directions.

In the meantime, consider recommending LGUs and other entities throughout the Watershed manage any potential contaminant sources they are already aware of within the existing Priority Area A for the Saint Paul-Chain of Lakes public water supply system.

To view surface water DWSMA and Priority Area A/B 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 a link to this geospatial data file 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>).

In the Plan, or in an education and outreach plan, include public outreach and education on contaminant source management strategies to protect surface waterbodies identified as a source water.

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/>).

## Water Quality

Consider working with Saint Paul Regional Water Services (SPRWS) and/or volunteers to increase the scope and frequency of water quality monitoring on surface waters identified as source water. Parameters that are of particular concern to drinking water quality include temperature, pH, alkalinity, chloride, phosphorus, sulfate, *E. coli*, total nitrogen, dissolved oxygen, dissolved organic carbon, total organic carbon, turbidity, and mercury. Maintaining or increasing the number of volunteers participating in the Citizen Lake Monitoring Program on these waters (where water access is safe and feasible) by collecting Secchi disk water clarity measurements would be helpful in keeping a broad eye on the quality of these waters. Also coordinate with SPRWS where practicable to ensure the continuation of the collection of water quality information for Pleasant Lake.

When considering the use of chemical treatment for mitigation of aquatic invasive species, please remember that MDH does not approve aquatic pesticide individual permit applications for products that include primary Safe Drinking Water Act-regulated drinking water organic contaminants when the desired management area is:

- a class 1 water as defined in Minnesota Rules 7050.0221 subparts 2, 4, and 4 (a list of such waters is located within Minnesota Rules 7050.0470); and
- an active public water system drinking water source.

Aquatic pesticide ingredients that are not allowed in such situations include 2,4-dichlorophenoxyacetic acid (2,4-D), diquat, endothall, and glyphosate.

MDH strongly recommends using mechanical methods to treat any water body connected to a public potable water supply. All other chemical treatment mitigation methods not listed above must be submitted to the Minnesota Department of Natural Resources and MDH for permit approval prior to application. Additional monitoring may be required by MDH during any chemical treatment application. Please contact MDH Drinking Water Protection for further assistance on this matter.

## Groundwater Source Water Protection

Nearly the entire Watershed overlaps with one or more groundwater DWSMAs, ranging from low to high vulnerability, with the majority (by area) being of moderate vulnerability. Additionally, there are many private drinking water wells in the Watershed, especially in the community of North Oaks.

Note that ERAs and DWSMAs in this section refer to groundwater ERAs and DWSMAs. When considering DWSMAs, consider both municipal and non-municipal community public water supply systems. There is currently one delineated non-municipal DWSMA in the Watershed: Five Star Mobile Home Park in Vadnais Heights.

The following are recommendations related to groundwater source water protection.

## Infiltration Considerations

Consider the following limits on infiltration to protect groundwater quality:

- Limit infiltration in delineated ERAs within highly vulnerable DWSMAs.
- Limit infiltration within transportation corridors in highly vulnerable DWSMAs (e.g., highly vulnerable areas along the I-35E corridor).
- 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 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. 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 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) (<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.

## Private wells

As mentioned above, there are many private drinking water wells in the Watershed, especially in the community of North Oaks. 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)

## General Source Water Protection

In addition to actions specific to either surface water or groundwater, 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). Note that the issue paper is focused on impacts to wells and groundwater, but there are impacts to surface water sources of drinking water as well.

Continue efforts to address 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 (surface or groundwater source) 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 \(https://www.health.state.mn.us/communities/environment/water/groundwater/accimpgrant.html\)](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).

Central Region Headquarters  
1200 Warner Road  
Saint Paul, MN 55106

February 14, 2024

Dawn Tanner, Ph.D., Program Development Coordinator  
Vadnais Lake Area Water Management Organization  
800 East County Road E  
Vadnais Heights, MN 55127

**Re: Vadnais Lake Area Water Management Organization's Watershed Management Plan Update**

Dear Dawn Tanner,

This letter is in response to your notification soliciting input on Vadnais Lake Area Water Management Organization's (VLAWMO) Watershed Management Plan Update. This is an exciting time for VLAWMO as work begins on the 10-year update of the commission's Watershed Management Plan(s) (WMP). This process allows time to review and update past goals, strategies, and actions, and to think through watershed plans for the next ten years. To aid in this process, DNR has compiled this resource assessment letter to provide up-to-date information on DNR's priority issues for the watershed and useful data available through DNR that can help support watershed management organization planning, program management, and project development/design. The following narrative is divided into topics relevant to watershed resource management and included under each topic are DNR recommended actions. Continue to utilize information from State studies developed for the Watersheds including TMDLs and WRAPS to drive implementation programs and targeting.

Dan Scollan, the DNR East Metro Area Hydrologist, will be participating on the Technical Advisory Committee for VLAWMO Watershed Management Plan preparation process. If you have questions regarding the content of this letter or would like to discuss individual topics or recommendations further, please do not hesitate to contact him ([daniel.scollan@state.mn.us](mailto:daniel.scollan@state.mn.us); 651-259-5732). The DNR looks forward to working with VLAWMO on your next generation Watershed Management Plan and on future public waters projects.

Sincerely,



Megan Moore  
South District Manager – Ecological and Water Resources

cc: Michelle Jordan, BWSR  
Dan Lais, DNR  
Jack Gleason, DNR  
Dan Scollan, DNR  
Abby Shea, MDH



Jeff Berg, MDA  
Maureen Hoffman, Metropolitan Council  
Jeff Risberg, MPCA  
Katie Kowalczyk, MnDOT

## General Watershed Management Strategies

DNR recommends that the following general watershed management strategies be a part of your watershed management plan (WMP):

- Keep water where it falls by protecting and restoring wetlands, ensuring water courses are connected to their floodplains, and managing stormwater runoff with rate control and volume reduction standards.
- Protect and create buffers of native perennial vegetation along watercourses and water bodies.
- Reduce the flow of water volume and nutrients through drainage systems.
- Design culverts and bridges to retain floodplain functions and bank stability on natural channels and other drainage systems.
- Support land use planning and practices that protect, restore, and enhance priority ecological resources.
- Maintain and enhance perennial vegetation including protection of working forest lands.
- Use water efficiently and implement conservation measures that further reduce water demand.

## Integrated Water Resource Management

As the Vадnais Lake Area Water Management Organization begins the WMP update process, it's important that water resource issues and goals be addressed not as independent prescriptions, but as integrated activities strategically applied toward the improvement of the entire watershed system. DNR's Watershed Health Assessment Framework approach uses a five-component framework (hydrology, biology, connectivity, geomorphology, and water quality) to address the interdependent nature of ecological systems that operate within a watershed. Placing the goals and actions identified by the Committee into this framework may help to:

- Evaluate watershed goals and actions in the context of the five aspects of watershed health.
- Identify gaps between goals and actions.
- Prioritize chosen actions effectively.
- Examine the potential for unintended consequences.

Use the [Watershed Health Assessment Framework](#) interactive online map and [downloadable data sets](#) to help refine and organize the WMP within the context of a comprehensive watershed landscape.

Additional, more specific recommendations by topical area follows:

## Groundwater Sustainability

DNR continues to manage the state's groundwater resources to meet sustainability goals set out in statute. DNR recommends the VLAWMO's WMP contain some key objectives and actions in the plan, including:

- Increase communication about the risks of overuse and degradation of groundwater resources and promote water conservation.
- Maintain and enhance aquifer recharge.
- Maintain and enhance quality of water recharging aquifers.
- Explore opportunities for stormwater and rainwater harvest and use to reduce reliance on groundwater.
- Increase coordination of monitoring activities between organizations with water management responsibilities, including monitoring water level trends using water level measurements from member communities.
- Increase coordination of communication activities between organizations with water management responsibilities.

## Stormwater Management

The VLAWMO's land use is a mix of rural areas and developed impervious surfaces. To reduce the resultant impact of increased runoff and pollutant loading to water bodies requires improvements to existing urban stormwater management infrastructure.

VLAWMO plays an important role in urban stormwater management and DNR encourages the VLAWMO to continue to work with its partners to:

- Monitor and protect the water quality of the VLAWMO's water resources.
- Implement best management practices to reduce stormwater runoff.
- Investigate new stormwater management techniques.
- Promote green infrastructure.
- Address storm sewer infrastructure capacity and corresponding flooding problems.

One of the primary drivers of degraded water quality and habitat in rivers, streams, lakes and wetlands is nutrient and sediment-laden runoff from surrounding commercial, residential, and agricultural land uses. Minimum Impact Design Standards (MIDS) were developed by the Minnesota Pollution Control Agency to minimize stormwater runoff, minimize the amount of pollution reaching lakes, rivers, and streams, and to recharge groundwater. The development of MIDS is based on low impact development (LID), an approach to storm water management that mimics a site's natural hydrology as the landscape is developed. Continue to support the incorporation of MIDS (and the LID approach) into future development and redevelopment in the watershed.

Additionally, High Potential Zones for the federally endangered Rusty-patched Bumble Bee occur within the Vadnais Lake Area Water Management Organization. The Monarch Butterfly is also likely to be federally listed in the near future. Therefore, DNR encourages the use of BWSR-approved, weed-free, native seed mixes to the greatest degree possible in stormwater features and other landscaping in order to provide pollinator habitat.

## Septic Systems

Consider promoting homeowner education on the proper use and maintenance of septic systems to preserve their function. The University of Minnesota's Onsite Sewage Treatment Program designed a homeowner tool that allows users to create a custom guide for their septic system. The tool, known as H<sub>2</sub>O&M, can be found at this [website](#).

## Chloride

Chloride released into local lakes and streams does not break down, and instead accumulates in the environment, potentially reaching levels that are toxic to aquatic wildlife and plants. Consider promoting local business and city applicator participation in the Smart Salting Training offered through the Minnesota Pollution Control Agency. More information and resources can be found at [MPCA's Smart Salting training website](#). Many winter maintenance staff who have attended the Smart Salting training — both from cities and counties and from private companies — have used their knowledge to reduce salt use and save money for their organizations.

We encourage VLAWMO to request that project proposers who wish to significantly increase impervious surfaces develop a chloride management plan that outlines what BMP's and strategies will be used to reduce chloride use within the project area. We also encourage cities, counties, and watershed districts to consider how they may participate in the [Statewide Chloride Management Plan](#) and provide public outreach to reduce the overuse of chloride. Please consider metrics in your plan that includes encouraging member communities to consider adopting an ordinance regarding chloride use using the MPCA's chloride reduction model ordinance [MPCA's chloride reduction model ordinance](#).

## **Natural Shorelines**

Since Minnesotans started developing around our lakes and rivers, our state has lost an estimated 40 – 50% of its natural shorelines. The [loss of natural shorelines](#) allows more naturally occurring phosphorus to flow directly into surface waters, increasing algae growth. An average suburban style lakeshore contributes seven to nine times more phosphorus per summer compared to a lot with a natural shoreline. This increase in phosphorus can result in the generation of 100 pounds of algae along the shore, compared to 15 pounds under natural shoreline conditions. On the other hand, natural shorelines help to keep lakes clean for recreation and fishing. They stabilize shorelines, protecting property from wind and wave erosion, and they provide important wildlife habitat. Natural lakeshores also provide a place for relaxation and are central to Minnesota's identity as a good place to live.

Fortunately, much of the shorelines in VLAWMO have retained their natural functions. We encourage VLAWMO to invest in education for lakeshore property owners and provide opportunities for natural shoreline restoration and enhancement. DNR's Natural Shorelines [webpage](#) contains links to a number of helpful resources, including DNR's [Score your Shore](#) and [Restore Your Shore](#) tools.

Contact Dan Scollan, East Metro Area Hydrologist ([daniel.scollan@state.mn.us](mailto:daniel.scollan@state.mn.us); 651-259-5732) for public waters work permitting coordination on shoreline restoration projects.

## **Stream Bank Stabilization and Restoration**

DNR's underlying philosophy regarding stream management is that streams are self-forming and self-maintaining systems. When they are artificially manipulated there can be negative impacts to channel stability. Alterations in pattern, dimension, or profile of a stream can lead to an increase in stream bank erosion, increased turbidity, embedded sediments, and a general reduction in biological productivity. DNR encourages the VLAWMO to consider these stream dynamics when planning stream stabilization or restoration projects.

Before attempting to stabilize streambanks, understanding whether the underlying cause is systemic or localized is needed. If localized, then traditional stabilization techniques can be employed. DNR highly recommends using wood for toe stabilization given its habitat value. Toe-wood sod mats have been installed successfully on other rivers within the state to stabilize stream banks, protect infrastructure and provide habitat. DNR can provide site specific guidance if there is interest. If the underlying cause is systemic (e.g., altered hydrology), then additional assessment work is needed and streambank stabilization may not be appropriate for all sites due to the increased likelihood of project failure.

For more information and coordination on streambank stabilization and restoration, please contact Nick Proulx ([nick.proulx@state.mn.us](mailto:nick.proulx@state.mn.us); 651-259-5850), DNR Clean Water Specialist.

Contact Dan Scollan, East Metro Area Hydrologist ([daniel.scollan@state.mn.us](mailto:daniel.scollan@state.mn.us); 651-259-5732) for public waters work permitting coordination on these projects.

## **Geomorphic Approach to Road-Stream Crossings**

Poorly designed culvert and bridge openings and the encroachment of road fill into streams and their floodplains impact a watercourse's natural processes and ecological functions. DNR encourages communities to apply the [Geomorphic Approach to Infrastructure Design at Road-Watercourse Intersections](#) to foster natural system processes and establish stable watercourses through time.

A stable channel will effectively manage its water and sediment delivered with minimal changes through time. Past design methods for road-stream crossings focused on water conveyance alone; commonly concentrating all flow through the channel which can cause detrimental impacts to the stability of the natural watercourse. Applying the Geomorphic Approach can provide ecological benefits including long-term channel stability, ecological connectivity (e.g., fish passage), and floodplain connectivity.

For more information on this approach and grant funding opportunities, please contact DNR's Geomorphic Approach Team at [Geomorphicroach.dnr@state.mn.us](mailto:Geomorphicroach.dnr@state.mn.us). Contact Dan Scollan, East Metro Area Hydrologist ([daniel.scollan@state.mn.us](mailto:daniel.scollan@state.mn.us); 651-259-5732) for public waters work permitting coordination on these projects.

## **Fisheries**

Fisheries staff appreciate the VLAWMO's previous and continuing work to improve water quality and fisheries resources. For more information and coordination on fisheries management projects, please contact TJ DeBates ([timothy.debates@state.mn.us](mailto:timothy.debates@state.mn.us); 651-259-5770), East Metro Area Fisheries Supervisor.

## **Aquatic Invasive Species**

Aquatic invasive species (AIS) pose a significant threat to Minnesota's lakes and rivers and continue to be a high priority issue for DNR. Aquatic invasive plants such as Eurasian watermilfoil and curly-leaf pondweed form thick vegetative mats on the water surface, limiting recreational opportunities and often negatively affecting water quality. Both the control of existing AIS and the prevention of new infestations are important efforts in terms of AIS management.

In most cases, eradication of invasive aquatic plants is not an option. Therefore, herbicide treatments are generally used to target abundant beds of invasive plants that may create a recreational nuisance. In most cases, the use of herbicides on lakes classified as Natural Environment (NE) lakes is not appropriate, and mechanical means (e.g., commercial aquatic plant harvester) may be a management option.

The establishment of both aquatic and terrestrial invasive species is a major threat to the ecological functions of both wetland and upland plant communities. Include plans to combat invasive species and best management practices (BMPs) in watershed project plans and designs. Promote education of the public on the control and spread of invasive species – public awareness efforts targeting riparian property owners (lakeshore owners) are needed to increase overall compliance with AIS laws. DNR will continue to support local efforts to educate the public in AIS prevention and encourage local units of government to take a leadership role.

To avoid the accidental spread of AIS during routine watershed activities, DNR recommends developing plans for work that involve visits to multiple lakes, such as water quality sampling. Plans should include 1) a thorough documentation of the presence of AIS in VLAWMO lakes, including infestations like curly-leaf pondweed that may not be widely reported, 2) consideration of the order in which lakes are visited, and 3) decontamination procedures. Please contact April Londo ([april.londo@state.mn.us](mailto:april.londo@state.mn.us); 651-259-5861) for information on AIS infestations in VLAWMO lakes, and Christine Hokkala-Kuhns ([christine.hokkala-kuhns@state.mn.us](mailto:christine.hokkala-kuhns@state.mn.us); 320-223-7845) for information on decontamination procedures.

For more information on the AIS Program, contact April Londo ([april.londo@state.mn.us](mailto:april.londo@state.mn.us); 651-259-5861), invasive species specialist.

## **Conservation Partners Legacy Grant Program**

The Conservation Partners Legacy (CPL) Grant Program funds conservation projects that restore, enhance, or protect forests, wetlands, prairies and habitat for fish, game, and wildlife. The types of projects funded under this grant program include prairie restoration, river restoration, lake habitat enhancement, wildlife habitat restoration, floodplain forest restoration, bluff prairie restoration, fish barrier installation, buckthorn removal, fish passage restoration, and others.

Participate in the [Conservation Partners Legacy \(CPL\) Grant Program](#) where possible. To learn more about this grant program, contact the CPL Grant Program coordinator ([LSCPLGrants.DNR@state.mn.us](mailto:LSCPLGrants.DNR@state.mn.us); 651-259-5233).

## Consideration of plant communities, rare species, and special features

Information on the biology, distribution, ecology, habitat use, conservation, and management of rare species of interest is available in the [DNR's Rare Species Guide](#). The locations of state-listed species maintained in the Rare Features Database are considered sensitive information and is protected under the Minnesota Data Practices Act. This information is only available through a Natural Heritage Information System (NHIS) data request or by license agreement, and should be used for internal planning purposes only.

The NHIS is continually updated as new information becomes available and will include current records and surveys. You can visit the online [Minnesota Conservation Explorer](#) tool explore public data available for conservation planning, to request an automated Natural Heritage Review, and, for DNR recommends using assessment data of authorized users, to access nonpublic data.

DNR recommends using assessment data of watershed characteristics and natural resource features when completing long-range watershed planning efforts. The assessment of watershed characteristics and natural resource features is valuable for evaluating landscape functions and guiding land management decisions. These assessments provide important information on a landscape's integrity and its ability to provide benefits to ecosystems. For example, assessment data can be used to examine how projects will improve or affect flora and fauna, determine the cumulative impacts of land use, make regional scale land use decisions, and to balance land use development and natural resource protection.

The presence of rare species can be an indication of the health of a watershed, and plant and animal diversity helps landscapes to maintain important watershed functions. DNR recommends that the VLAWMO's WMP include goals and policies to address how rare species and habitat will be protected.

We encourage VLAWMO to require an NHIS review as early in the planning stage of projects as possible in order to allow sufficient time for review and coordination with DNR. If the proposer waits until WCA TEP review to consider potential impacts to rare species, it is often late in the planning stages and could cause significant delays to the project.

DNR data layers have been developed that are helpful in watershed planning. These are free and available to the public from the [Minnesota Geospatial Commons](#). Some key data layers include:

- DNR managed lands such as Scientific and Natural Areas, Wildlife Management Areas, and Aquatic Management Areas
- DNR native plant communities
- Karst features
- Minnesota Biological Survey (MBS) Sites of Biodiversity Significance
- Central Region Regionally Significant Ecological Areas (CRRSEA) – The purpose of this data is to inform regional scale land use decisions, especially as it relates to balancing development and natural resource protection.
- Regionally Significant Ecological Areas and Regional Ecological Corridors – Identifies potential habitat movement corridors that may be important for wildlife connections.

DNR encourages the use of site-appropriate native plants for shoreline stabilization, buffers, and erosion control for all watershed projects. These species provide important stabilization and erosion control functions, have the greatest chance of establishment success, and contribute to biodiversity of landscape vegetation. Query the DNR's [Your Shore Native Plant Encyclopedia](#) for a list of plants tailored to specific site characteristics. DNR recommends the establishment of native grassland and herbaceous plant communities in the place of mowed turf grasses on watershed and highway projects as a means to support native insect pollinator communities. Interest in pollinators has grown since the term Colony Collapse Disorder appeared in 2006. This phrase refers to the puzzling disappearance of honey bees from their hives. While this disorder does not affect native pollinators, many of the challenges that face honey bees also affect native insects, including pesticide use, habitat loss,

pathogens, parasites, climate change, and invasive species. DNR has developed a [Best Management Practices Guide](#) for restoring and enhancing native plant community habitat for native insect pollinators.

### **Forest Management Considerations**

Importance of forested riparian areas to water resources cannot be understated. Forested riparian areas provide an array of goods and services for plant diversity, wildlife and fish habitat, nutrient, sediment, and water interception, storage, and transformation and recreational opportunities. Keeping riparian areas intact so that the functions and roles of terrestrial and aquatic ecosystems can continue to provide these services is imperative. We recommend keeping forested riparian areas forested, which does not necessarily preclude forest management activities. If riparian forests are managed in the VLAWMO's area, we highly recommend consulting and using the [Minnesota Forest Resource Council's Voluntary Site-Level Forest Management Guidelines for Landowners, Loggers, and Resource Managers](#) to protect these valuable ecosystems into the future.

Emerald ash borer (EAB) will continue to impact communities in the VLAWMO area within the next 10-year watershed plan cycle. Communities should be planning for EABs impacts and take action now to reduce the sudden financial burden that comes with EAB. More information at this University of Minnesota Extension [website](#). You can visit this MDH [interactive mapping website](#) to see the status of EAB in Minnesota. The VLAWMO area is within the "Generally Infested Area" and all of Ramsey County is within the quarantine area. To minimize pesticide exposure in the environment and to save people's money, we would not recommend applying insecticides to save ash trees until symptoms of EAB infestation are within about ¼ - ½ mile of any given location. Note that ash trees can still be saved from EAB if they are lightly infested (they must still have over 50% of their normal number of leaves that are normally sized). Ideally ash trees should be treated when they are 100% healthy and not infested at all, so there is some risk of waiting until EAB infestation symptoms are visible within a ½ mile. In natural areas, forested wetlands with ash dominant in the canopy will experience a more drastic change in plant community composition and hydrology than upland communities with a minor ash component.

The Forest Stewardship Program at the DNR provides private landowners with at least 20 acres of forested land (or land that will have trees) professional forest management advice from a qualified DNR forester or private land forestry consultant. For a fee, landowners will consult with a forester to talk about their goals for forest management. The forester will write a forest management plan and the land will be eligible for property tax relief programs and state cost-share assistance for management work. For more information on the DNR's professional forest management assistance for private landowners, please visit our [webpage](#).

Communities interested in caring for and managing their urban and community forests can find helpful information at the DNR's Community Forestry [webpage](#). The page includes information and links about grant programs, DNR Arbor Month, and best management practices for preventing spreading invasive species and conserving wooded areas.

**Metro District, Water Resources Engineering  
Waters Edge**

1500 W. County Road B-2  
Roseville, Minnesota 55113

Office Telephone: (651) 775-5915

February 13, 2024

Dawn Tanner  
800 East County Road E  
Vadnais Heights, MN 55127  
[dawn.tanner@vlawmo.org](mailto:dawn.tanner@vlawmo.org)

RE: 60-Day Review: DRAFT Vadnais Lake Area Water Management Organization  
Watershed Management Plan 2027-2036 Initiation Notice

Dear Dawn Tanner,

MnDOT Metro Water Resources Engineering (WRE) is offering these comments to the Vadnais Lake Area Water Management Organization's (VLAWMO) Watershed Management Plan (Plan) Initiation Notice. We thank the VLAWMO for allowing us to participate in the development and review of the 2027-2036 plan.

We offer the following comments to help relay our priorities for the next plan:

1. As a MS4 within the VLAWMO Watershed, MnDOT is responsible for stormwater management within our transportation corridors. MnDOT will work to ensure that road development, redevelopment and construction meets NPDES requirements along the I-35E and 61 corridors within the watershed. For waterbodies with completed TMDL studies, MnDOT will work to meet waste load allocations for which we are assigned through MnDOT capital projects.
2. MnDOT would like to understand opportunities to participate in VLAWMO led efforts to improve impaired waterbodies where MnDOT could achieve the combined benefit of capital project compliance.
3. Regulatory Program: VLAWMO established performance and control standards for managing stormwater runoff, and management classifications, standards and procedures governing the use of wetlands as set out in the VLAWMO water management policy. The current VLAWMO Water Management Policy was last updated June 22, 2022. MnDOT suggests aligning the stormwater and erosion control standards in the Policy with those of the MS4 Permit. When new updates to Policy take place, MnDOT requests the opportunity to review any updates to stormwater and erosion control standards.



4. Infiltration: Much of the area within the I-35E and 61 corridors are within Wellhead Protection Areas and have Drinking Water Supply Management Areas ranked as moderate to high vulnerability which may limit the ability to achieve stormwater management through infiltration practices. Infiltration practices generally offer the most efficient stormwater treatment method, and investigation into infiltration feasibility can be extensive. We would benefit from identification of possible infiltration areas or approaches to be able to provide infiltration that account for the infiltration prohibitions present in the VLAWMO. Where infiltration is not feasible, we want to understand what other stormwater treatment options the VLAWMO would promote to reduce stormwater pollutants.
5. Operation and Maintenance of Stormwater Infrastructure: Would VLAWMO consider leading and managing collaboration or aggregation of services with respect to inspection, operation and maintenance for stormwater infrastructure?
6. MnDOT recommends communicating the status of current TMDL projects and any monitoring results that would support that waste load allocations are being met or reduced. Updates on meeting waste load allocations would be helpful, with identifying future opportunities for achieving assigned waste load allocations.
7. In order to obtain information on our stormwater infrastructure, you may contact either the MS4 Engineer, Jason Swenson at 651-234-7539 [jason.swenson@state.mn.us](mailto:jason.swenson@state.mn.us) or the MS4 Asset Management Specialist, Adam Schramka, at 651-234-7544 or [adam.schramka@state.mn.us](mailto:adam.schramka@state.mn.us).

Thank you for including MnDOT in your plan review, and we welcome opportunities to collaborate in the future. Feel free to reach out to me at 651-775-5915 [katherine.kowalczyk@state.mn.us](mailto:katherine.kowalczyk@state.mn.us) with questions or concerns over these comments.

Respectfully,

Katie Kowalczyk, PE  
MnDOT Metro Water Resources Engineer

Cc: Ryan Rupp and Jason Swenson

February 13, 2024

Dawn Tanner  
VLAWMO Program Development Coordinator  
800 East County Road E  
Vadnais Heights, MN 5512

RE: Vadnais Lake Area Watershed Management Organization (VLAWMO) 60-Day Priority Concerns Request

Dear Dawn Tanner:

The Minnesota Pollution Control Agency (MPCA) appreciates the opportunity to provide input at the outset of the Local Water Plan Process in the Vadnais Lake Area Watershed Management Organization (WMO) located within the Mississippi River – Twin Cities Watershed. The MPCA has developed technical information, reports, total maximum daily load (TMDL) studies, tools, and potential strategies for the protection and restoration of waterbodies that may be useful for inclusion in a local water plan.

**We recommend:**

- Incorporating and implementing strategies and goals from completed TMDL's and implementation plans.
- Determine quantitative accounting of efforts and reductions you hope/intend to accomplish over the 10-year plan cycle relative to water quality targets.
- Identify geographic priority areas and implementation to match those prioritized waters.

**Priority issues**

The MPCA has identified several strategic goals including:

- Assist local partners to accelerate targeted reductions for identified priority impaired waters.
- Assist to develop strategies to protect priority waters that are meeting water quality goals.
- Reduce chloride to surface and ground water.
- Incorporate environmental justice into planning.
- Increase community and environmental resilience to climate change.

**Links to reports and pertinent information can be found at:**

- Mississippi River – Twin Cities Watershed TMDL page with TMDL's and Implementation reports
  - There is a section at the bottom of the page for Vadnais Lake Area WMO as well as basin-wide projects at the top of the page.
  - [Mississippi River - Twin Cities Watershed: TMDL projects | Minnesota Pollution Control Agency \(state.mn.us\)](#)
- Point Source Phosphorus Mapping Tool: Provides summaries of annual phosphorus loads and flow volumes discharged from National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) permitted facilities since 2005. The Phosphorus loads and flow volumes link on the page will take you to the mapping tool.
  - <https://www.pca.state.mn.us/water/phosphorus-loads-and-flow-volumes>

- Minnesota Nutrient Reduction Strategy – Includes reduction strategies and a 5-year progress report.
  - <https://www.pca.state.mn.us/water/nutrient-reduction-strategy#nutrient-strategy-718f1971>
- Minnesota Stormwater Manual
  - [https://stormwater.pca.state.mn.us/index.php?title=Main\\_Page](https://stormwater.pca.state.mn.us/index.php?title=Main_Page)
- Mississippi River-Twin Cities Watershed monitoring reports
  - [Mississippi River - Twin Cities | Minnesota Pollution Control Agency \(state.mn.us\)](#)
- MPCA funding options
  - [Grants, loans, and contracts | Minnesota Pollution Control Agency \(state.mn.us\)](#) .
  - [Wastewater and stormwater financial assistance | Minnesota Pollution Control Agency \(state.mn.us\)](#)

### **Background information:**

Table 1 through 3 summarize the status of waters within the VLAWMO subwatershed boundary:

- 10 impairments are identified in the 2022 EPA approved 303(d) impaired waters list.
  - 7 have approved TMDL plans.
  - The MPCA recognizes that the boundaries of the WMO may be adjusting, and West Vadnais may be moving out of the WMO boundary.
- 1 lake has been de-listed.
- 1 lake is meeting standard but is just under the standard.

### **Chloride Reduction**

While VLAWMO currently does not have any chloride impairments, recognizing the chloride sources and using preventative measures may help keep waters off the impaired waters list.

The major sources of chloride around the state include application of chloride-based salts for winter maintenance activities, residential and commercial water softening, and agricultural inputs.

Chloride reduction at the source is key to protecting water quality, as there are currently no known economically feasible remediation strategies to remove chloride once it enters the environment.

- The MPCA maintains resources (technical, educational, and financial) that may be of use to local partners in designing ways to reduce chloride.
  - <https://www.pca.state.mn.us/water/statewide-chloride-resources>.

### **Environmental Justice**

The MPCA has resources to assist in identifying areas with environmental justice concerns:

- [Understanding environmental justice in Minnesota \(arcgis.com\)](#)
- [MPCA and environmental justice | Minnesota Pollution Control Agency \(state.mn.us\)](#)

### Climate Change

Planning should incorporate changing weather patterns to help our communities be prepared for extreme weather events. Planning can include items such as: requesting infrastructure be built for increased rainfalls or having collaborative discussions about what to do in the event of a major disaster.

- <https://www.pca.state.mn.us/air/climate-resilient-communities>
- [Climate adaptation resources | Minnesota Pollution Control Agency \(state.mn.us\)](#)

**Table 1. Impaired Lakes and Streams in VALWMO boundaries**

Water body name	Water body type	Year Listed	AUID	Affected designated use	Pollutant or stressor	EPA category	Year TMDL plan approved
Unnamed (Tamarack)	Lake	2014	<a href="#">62-0022-00</a>	Aquatic Recreation	Nutrients	5	
West Vadnais*	Lake	2014	<a href="#">62-0038-02</a>	Aquatic Recreation	Nutrients	5	
Pleasant	Lake	2014	<a href="#">62-0046-00</a>	Aquatic Recreation	Nutrients	5	
Unnamed creek (Lambert Creek)	Stream	2008	<a href="#">07010206-801</a>	Aquatic Recreation	Fecal coliform	4A	2014
Gilfillan	Lake	2010	<a href="#">62-0027-00</a>	Aquatic Recreation	Nutrients	4A	2014
Wilkinson	Lake	2010	<a href="#">62-0043-00</a>	Aquatic Recreation	Nutrients	4A	2014
Unnamed	Lake	2010	<a href="#">62-0126-00</a>	Aquatic Recreation	Nutrients	4A	2014
Sucker	Lake	1998	<a href="#">62-0028-00</a>	Aquatic Consumption	Mercury in fish tissue	4A	2007
East Vadnais	Lake	1998	<a href="#">62-0038-01</a>	Aquatic Consumption	Mercury in fish tissue	4A	2008
Pleasant	Lake	2002	<a href="#">62-0046-00</a>	Aquatic Consumption	Mercury in fish tissue	4A	2008

\*With adjustments to watershed boundaries – may be moving outside of VLAWMO jurisdiction.

**Table 2 Delisted waters.**

Water body name	Water body type	Year added to List	Delist year	AUID	Pollutant or stressor
Gem	Lake	2010	2018	<a href="#">62-0037-00</a>	Nutrients

**Table 3 Barely meeting standards.**

Water body name	Water body type	AUID
Charley	Lake	62-0062-00

Dawn Tanner  
Page 4  
February 13, 2024

We look forward to partnering with the Vadnais Lake Area WMO in the continued development of your local water plan. The MPCA is aware of the many efforts underway in the Mississippi River-Twin Cities Watershed. We hope to continue to work in cooperation with local governments in the watershed. If we may be of further assistance, please contact me, Amy Timm, at 651-757-2632.

Thank you again for the opportunity to provide our comments toward the development of your local water plan.

Sincerely,

A handwritten signature in black ink that reads "Amy Timm". The signature is written in a cursive, flowing style.

*This document has been electronically signed.*

Amy Timm  
Environmental Specialist  
Watershed Division

AT:jdf