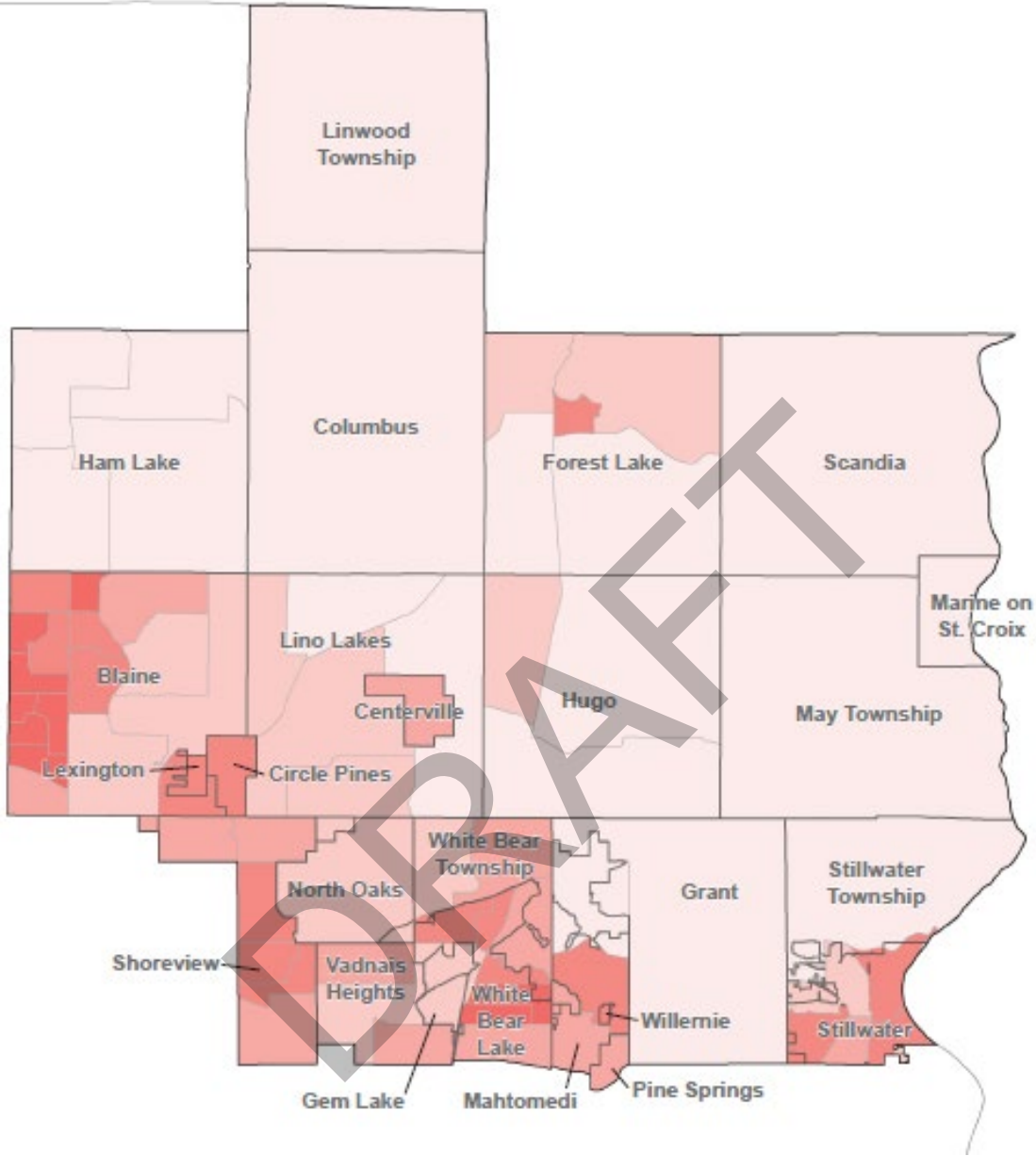


# Northeast Metro subregion chapter and action plan



### *Water supply planning context and current conditions*

Everything that happens on land impacts water, and water is all connected. Communities rely on sufficient, reliable, and safe water supply for health, prosperity, and the function of local ecosystems. This is not a given but is paramount.

Communities in the Northeast Metro subregion are exclusively sourced by groundwater, mostly from the Prairie du Chien and Jordan aquifers. Most communities in this subregion operate public water supply systems that provide residents and businesses with water, but some communities do not have public water supply systems. In these communities, which are often more rural, residents get water from privately owned and operated wells. Additionally, 25 of the 27 communities in the Northeast Metro subregion overlap with or are adjacent to land that has been identified as a Drinking Water Supply Management Area.

Northeast Metro subregion communities have some unique water resource limitations and associated water supply sustainability challenges. These include increasing water demand from a growing population, shallow aquifers connected to surface waters, the presence of a major groundwater divide, shifting climate trends, and legacy contamination. Communities and state regulators continue to collaborate on solutions to ensure water resources are protected and community needs are met, while use restrictions have been put in place by state regulators.

Overall water use peaked in the mid-to-late-2000s. Since then, communities have continued to grow, but overall water use has been slightly less. Increases in efficiency and wetter summers have likely led to this demand reduction. However, recent droughts and growth have led to a significant increase in water use, and concerns about groundwater and lake level drawdown—and what that means for future water supply and development—are significant in this subregion. Increased impervious land cover, contaminants of emerging concern, groundwater and surface water interaction, and other quality concerns are also prevalent in the region.

With the region as a whole expected to grow by more than 650,000 people between 2020 and 2050, the Northeast Metro subregion will also continue to see growth. Preliminary estimates, which are being evaluated with community input through spring of 2024, suggest that approximately 59,000 more people, 28,000 more households, and 36,000 new jobs will be added to the area by 2050 compared to 2020.

Climate change also has the potential to amplify the impacts that extreme heat, drought, an extended growing season, and flooding can have on water supply. New issues resulting from human impacts continue to emerge that have the potential to further influence the quality and quantity of water available for drinking water supply. With existing supply constraints and challenges, as well as a forecast of continued growth, now is the time to thoughtfully and collaboratively plan to ensure a safe and sustainable water supply—for individual communities, ecosystems, the region, and future generations.

The [Northeast Metro chapter of the Water Supply Planning Atlas](#) contains more details in the description of current conditions and challenges.

### *Stakeholder-defined vision of success for water supply planning in the Northeast Metro subregion*

Water supply planning for the Northeast Metro subregion is successful if the following outcomes are produced in the long term:

- Water supply is clean, affordable, and sustainable for humans and ecosystems
- There is regional sustainability and coordination with local control

- Growth and resource protection are balanced
- Source water is protected

The following conditions are needed to successfully achieve those goals in the Northeast Metro subregion:

- Increased culture of stewardship
- Increased trust of water and the water system
- A streamlined and improved policy framework
- Increased state and regional support for planning and plan implementation
- Decisions are scientifically and financially sound
- Current and emerging contaminants are understood and addressed

### *Issues and opportunities*

In the Northeast Metro subregion, several issues and opportunities exist related to water supply planning, as identified through the stakeholder engagement done in 2023-2024. They are listed here in alphabetical order.

### **Changing behaviors and social norms**

Humans impact the environment around them, and we all have a role to play to minimize that impact. Yet, people don't always know, understand, and agree that water supply is something they can and should do something about. Compounding this is a need for a shifting of social norms. For example, the inertia of expectations and desire for things like green lawns will take effort and time to overcome. The education and outreach approach must be customized to specific audiences (different cities, ages, cultural backgrounds, private vs public well, levels of decision-making authority, etc.) to make the information relatable and help promote behavior and policy change. That said, a coordinated education initiative across communities with shared resources (such as mobile units) and tools could reduce cost and increase consistency in messaging. Achieving this will require more funding than is currently dedicated to outreach and education initiatives, and funding for something like this could also be used statewide.

### **Contamination**

Various sources of human-made or mobilized contaminants are impacting water supply – both in terms of what is available and the cost of treatment and remediation. Specifically, these include fertilizers and herbicides, subsurface sewage treatment systems, chloride, PFAS, TCE, pharmaceuticals, nanomaterials/compounds, disinfection byproducts, other contaminants of emerging concern, selenium, and manganese. Research, education, monitoring, testing, technological innovation, enhanced rules and enforcement are needed. This includes implementation of the [PFAS Blueprint](#).

### **Funding**

As it stands, the cost for water does not reflect the true cost of accessing, treating, and distributing water or maintaining that infrastructure. Yet further changes spurred by quality and quantity challenges require new investments. Sustainable, consistent, long-term source of reliable funding for water quality and quantity initiatives. This could be state and federal funding to support local and regional goals, adjusted and tiered rate structures and policy tools to better reflect the true cost of water, as well as incentives and grants to support further work.

### **Governmental coordination**

Operating in silos creates challenges, as water flows across jurisdictional boundaries, multiple communities tap the same water supply, and the management of water is distributed across agencies though all water is connected.

### **Agency coordination**

Generally speaking, continuing to work towards regional/state planning for water supply with common ground for all agencies is desired. Specifically, stakeholders are interested in seeing increased coordination and consistency between agencies, a streamlining of efforts, and an increase in understanding of the impacts of requirements (and the timing of those requirements) on local offices. Additionally, coordination within agencies is also desired. For the Met Council, there is opportunity at this time to ensure alignment and tie-ins between regional planning guidance and system statements.

### **Jurisdictional coordination**

Working across community boundaries provides has many benefits:

- Provides the opportunity to reduce costs to individual communities in planning
- Reduces instances where neighboring plans conflict with each other
- Provides space for regional considerations and to share best practices or lessons learned, address the needs of multiple types of water systems, more broadly protect source water, and identify innovative opportunities and legislative priorities that meet the goals and needs of multiple communities.

### **Integrated water management**

There is benefit in pursuing an integrated approach to water supply management. But this requires rethinking who is in the room and their roles, including water suppliers and regulators, but also community development and land use planners, natural resource managers, watershed organizations, and counties. It also requires an integration of surface water and groundwater perspectives, increased agency cooperation, and a willingness to develop customized solutions that can achieve multiple benefits.

### **Managing for uncertainty**

It can be challenging to plan for a future with so much uncertainty, including knowing what kinds of growth you'll actually get, the impacts of climate change, or the outcomes of consequential, pending decisions that need to be made.

### **Policy change**

Policy can be used to improve water quality and quantity conditions, but misapplied or reactive, it can also create burdensome requirements and restrictions that hinder the ability to pursue desired, sound actions. The region needs policy changes that create a legislative framework to support action with consistent (yet flexible) regulation, as well as tools to increase compliance. Achieving these changes will require political will, decision-maker understanding of water supply, and a willingness to collaborate.

### **Private well user support**

Private well owners need more education and financial resources to maintain their systems and understand their local groundwater picture, but there are questions about where those resources should come from.

### **Water quantity**

Quantity of groundwater is of major concern, especially in light of the White Bear Lake comprehensive planning effort that focuses on ongoing questions about the future of groundwater availability to support water resources as well as growth in that area. While the Metro Area Water Supply Plan update and the White Bear Lake Area Comprehensive Plan each have their own predetermined purposes, statutory drivers, and timelines, there are actions that can be taken now to stretch groundwater supply:

- **Conservation.** Efforts systematically rolled out to address high-volume users (residential and non-residential, occupant owned or rental) with monitoring to help target outreach to support smart conservation.
- **Reuse.** Reuse can further increase efficiency by using water more than once, or using stormwater for non-potable purposes, though this would require policy change and clarity.
- **Recharge.** Considering wastewater as a resource can support recharge.

### **Workforce**

Communities are experiencing workforce-related challenges. There are not enough staff or ability to fund their roles currently, and retirements create concern around loss of institutional knowledge and qualified staff. There is a need to increase technical capacity and knowledge of water quantity and quality among new water supply staff. In addition to addressing these workforce challenges, there is also a variety of technical, scientific, education, and funding assistance that is needed to support communities to respond to and understand the nature of various challenges. Increasing internal staff while also increasing access to regional assistance can reduce the burden of plan implementation and system management experienced by local staff. Specific requests in this category include: ability to model aquifer volumes, shared educational materials, assistance in obtaining funding for infrastructure needs, and resources for risk communication.

### *Prioritized focus areas and action plan*

As part of the engagement process, stakeholders identified the following priorities from the focus areas for the Northeast Metro subregion. Stakeholder-identified statements for what success looks like in 10 years are also included for each.

### **Governmental collaboration**

#### **Agencies**

- Shared data
- Not having overlapping work efforts between different agencies and communities

#### **Jurisdictions**

- Limited conflicting plans
- Consider scale of planning at aquifer level

#### **Integrated water management**

- Having conversations about cost/benefit
- Sensible rules and regulations for organizations dealing with water resources
- Awareness among local governments about land use planning impacts to water resources
- Reducing complexity of local government involvement in decisions related to water resources
- More thoughtful coordination among agencies to integrate resource concerns/improvements

### **Changing behaviors and social norms**

- Widespread acceptance (industry, business) of alternative land cover and related practices (for example, planting native or drought-tolerant species that then require less irrigation)
- Greater household awareness of water use and implementation of conservation practices
- Coordinated or standardized best management practices/conservation measures for the metro (and beyond)
- Coordinated/shared outreach and education resources for communities

- Regional agency for education
  - Uniform messaging
  - Removes the fear of a local government using a “cowboy approach”

### **Contamination**

- Safe and clean drinking water from tap in both public and private spaces
- Expanded program for discovering and managing emergent contaminants that works collaboratively with other agencies
- Surveillance, remediation, prevention and funding for each
- Continued tracking of trends, such as road salt usage

### **Funding**

- Money for continued research/data collection
- Thoughtful allocation of costs
- Focus on priorities / competing interest

### **Water quantity**

#### **Conservation**

- Residential gallons per person per day in cities is on a downward trend while peaking factors are reduced to below two times the January use
- Conservation planning is proactive and not reactionary
- Focus on finding biggest cost-effective actions and develop grant program for adoption
- Groundwater appropriation fees should cover costs for groundwater management

#### **Reuse**

- Every community has the option to have a water reuse plan for irrigation
- Supported by agencies/jurisdictions – legislation/law
- Community understanding – education about use and water quality
- Saving water (drinking) – targets for amount-saved goals
- Stormwater
- Wastewater
- Recycled water
- Less-potable solutions

#### **Recharge**

- Some percentage (to be determined) of water successfully recharged into aquifers

### **Water availability**

*Note: This topic was added by the group in the second subregional workshop to include growth and demand as well as quality-induced pressures on supply.*

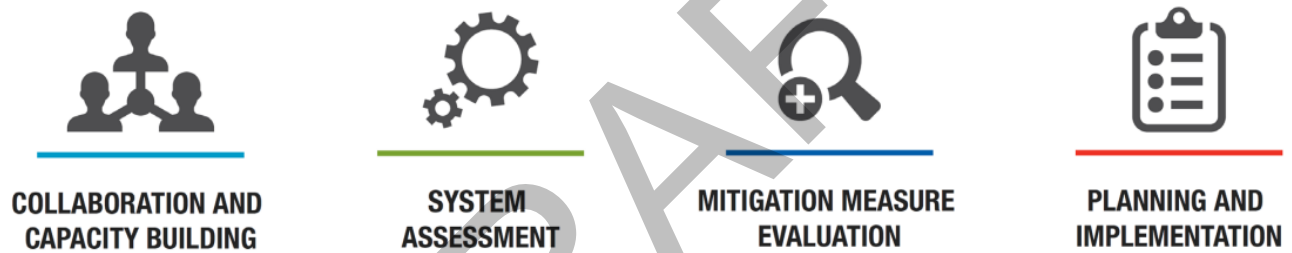
- Identified solution, acquired funding, started to implement projects.
- Reliable clean water source, sustainable.
- Make decision on whether we have to change – if we do, then solutions and move to projects

It should be noted that, as a part of the discussion, the following focus areas were identified as “implementation considerations,” in that they would be needed (either as a strategy or something to manage for) in order to support success for any of the other focus areas. As such, these were incorporated into action plans to address priority focus areas:

- Workforce
- Managing for uncertainty
- Policy change
- (Funding)
- (Changing behaviors and social norms)

The following pages reflect the action plan developed by participants to address the priority focus areas. It is possible and expected that actions not reflected here may emerge as important steps needed to be taken in subsequent years. This list, therefore, is a reflection of what was being considered in early 2024. The list has been organized according to the Metro Area Water Supply Advisory Committee’s 2022 proposed framework to achieve progress on regional goals (figure 11).

Figure 1. The framework for action to achieve MAWSAC goals includes four general steps. Northeast Metro subregion actions generally fall across the framework steps, as can be seen in the action tables beginning on the next page.





*Actions to support success*

Specific actions steps have been identified for each of the focus areas. While they primarily focus on work needed over the next 10 years, some actions are expected to be ongoing over the next 25 years or more.

Table 1. Subregional water supply stakeholders identified several actions to focus on over the next 10 years (and in some cases, 25 years) to set the subregion up for long-term success in the priority focus areas discussed in this chapter. The action plan includes proposed roles for leads, Met Council, subregional groups, and local entities. This action plan is intended as a high-level, long-term, collaborative planning tool. The details may change as collaboration gets underway and on resource availability.

ACTIONS	SUBREGIONAL FOCUS AREAS	CONNECTED REGIONAL WPP POLICY	10-YEAR PLAN		25-YEAR PLAN			POSSIBLE INVOLVED PARTIES LEAD(S)
			2025-2030	2030-2035	2035-2040	2040-2045	2045-2050	
<b>COLLABORATION AND CAPACITY BUILDING</b>								
Increase collaboration among agencies for proactive engagement on issues	Agency coordination	Integrated Water						
Increase communication from agencies to LGUs with the intent of reducing surprises	Agency coordination							
Coordinate data requests, reporting, and requirements for LGUs among agencies	Agency coordination	Monitoring/Data/Assessment						DNR, Metro Sewer/water use reporting
Increase staff level coordination across agencies	Agency coordination	Integrated Water						
Determine where or under what circumstances multi-jurisdictional planning and collaboration is needed, and then engage in collaborative planning to establish common goals	Jurisdictional coordination							Met Council, County
Connect Homeowners Associations to educational programs	Changing behaviors and social norms	Conservation & Sustainability, Pollution Prevention						UMN Extension
Develop large scale, coordinated education and outreach efforts for both water quality and quantity to increase consistency of messaging and take advantage of economies of scale	Changing behaviors and social norms, jurisdictional coordination	Conservation & Sustainability, Pollution Prevention	x	x				DNR, Local public health, Met Council, MDH
Collaborate with schools for education and plantings	Changing behaviors and social norms	Conservation & Sustainability, Pollution Prevention						LGUs, DNR, schools
Advocate at the legislature for metro and state-wide funding for treatment needs (public water supply and private wells)	Contamination	Pollution Prevention						
Provide more technical and IT support to develop tools to monitor for or respond to contamination issues	Contamination	Pollution Prevention, Monitoring/Data/Assessment						Met Council
Establish memorandums of agreement between LGUs to support collaboration	Jurisdictional coordination							LGUs in certain areas
Establish standard regulations between watersheds and other agencies, including clarification of DWSMA guidance, while allowing for site-specific flexibility for infiltration	Integrated water management, Recharge	Integrated Water, Conservation & Sustainability	x	x				BWSR, watershed districts, LGUs, MDH
Share data between communities	Jurisdictional coordination							
Promote dual uses of recreation areas for recharge and reuse	Recharge	Conservation & Sustainability, Reuse						DNR
<b>SYSTEM ASSESSMENT</b>								



ACTIONS	SUBREGIONAL FOCUS AREAS	CONNECTED REGIONAL WPP POLICY	10-YEAR PLAN		25-YEAR PLAN			POSSIBLE INVOLVED PARTIES
			2025-2030	2030-2035	2035-2040	2040-2045	2045-2050	LEAD(S)
Identify available solutions to ensure sustainable water for the future, as well as the funding source or mechanisms to pay for their design and implementation	Water availability	Conservation & Sustainability						MDH, DNR, Legislature
Develop a central tracking tool for water supply system information (GIS and otherwise) that are viewable in a browser	Agency coordination	Monitoring/Data/Assessment			x	x	x	Met Council
Create a regional contaminant database with tools and information for residents to better understand contaminants	Contamination	Pollution Prevention						Met Council, MDH
Increase funding available for testing and monitoring at the state level	Contamination	Pollution Prevention						MDH, MDA, MPCA
Identify funding and education for municipalities regarding reuse	Climate change, Reuse	Reuse						
Target funding to priority issues	Funding							
Determine needed chemistry for injection of water	Recharge	Pollution Prevention						Met Council, Land use planners, City planners
Define terminology such as “recharge”, “protection”, and “prevention” to ensure consistency and understanding	Recharge	Conservation & Sustainability						MPCA, MGS, DNR
Conduct a localized study to understand where injected recharge or designed infiltration make the most sense	Recharge	Conservation & Sustainability						
Determine whether a change in source of water is needed	Water availability	Conservation & Sustainability						MCES, DNR
<b>MITIGATION MEASURE EVALUATION</b>								
Use best available technology to calculate permits (and provide grants to upgrade)	Conservation	Conservation & Sustainability						DNR
Identify most cost effective actions for conservation and develop grant programs to incentivize adoption	Conservation	Conservation & Sustainability	x	x				DNR with help from UMN Extension, legislature, MDA?
Establish criteria to be reviewed before installing infiltration BMPs	Recharge	Integrated Water, Pollution Prevention						MPCA, MDH, watersheds
<b>PLANNING AND IMPLEMENTATION</b>								
Cities lead by example with installing alternative cover	Changing behaviors and social norms	Conservation & Sustainability						Cities
Provide programs to incentivize private and commercial entities to lead by example	Changing behaviors and social norms	Pollution Prevention, Conservation & Sustainability						Met Council, businesses, lawns to legumes, watersheds
Establish an incentive program for native plantings have city ordinances reflect native planting and conservation goals, and develop a guidance toolkit for maintenance of native plantings	Changing behaviors and social norms	Conservation & Sustainability						UMN Extension
Pass limited liability legislation complete with a secure funding source for outreach and education	Changing behaviors and social norms	Pollution Prevention						
Generate revenue for water user education through conservation rates	Changing behaviors and social norms	Conservation & Sustainability						
Develop a toolkit for technical and financial assistance for large volume users	Conservation	Conservation & Sustainability						
Update DNR appropriations permits process to reflect conservation actions	Conservation	Conservation & Sustainability						
Pass legislation to increase appropriation fees to more adequately cover the cost of groundwater management	Conservation	Conservation & Sustainability						

ACTIONS	SUBREGIONAL FOCUS AREAS	CONNECTED REGIONAL WPP POLICY	10-YEAR PLAN		25-YEAR PLAN			POSSIBLE INVOLVED PARTIES
			2025-2030	2030-2035	2035-2040	2040-2045	2045-2050	LEAD(S)
Establish a grant program for public water suppliers to perform system audits and make repairs	Conservation	Conservation & Sustainability						
Engage in ambient groundwater monitoring	Contamination	Pollution Prevention	x	x	x	x	x	MPCA
Engage in ambient monitoring for drinking water	Contamination	Pollution Prevention						MDH
Establish supplemental funding for water systems to help manage changing rates	Contamination	Pollution Prevention						Met Council, Legislature
Provide education for private well users on well maintenance, testing, and treatment	Contamination	Pollution Prevention	x					MDH
Provide funding for pre-treatment upgrades to old and new plows to reduce chloride use	Contamination	Pollution Prevention						State, cities, county
Promote municipal water quality as safer and cheaper than purchased bottled water	Contamination	Pollution Prevention						
Develop a northeast metro subregional supply plan	Integrated water management	Conservation & Sustainability, Integrated Water						
Pass legislation to allow MN to have groundwater injection control	Recharge	Conservation & Sustainability						MPCA, DNR, Met Council, EPA
Establish decentralized wastewater treatment and use treated discharge for recharge or reuse	Recharge	Conservation & Sustainability, Reuse						
Increase ability to use graywater for recharge	Recharge	Reuse						
Explore options to maintain shallow groundwater levels during construction dewatering through nearby injection of pumped water	Recharge	Conservation & Sustainability, Reuse						
Establish water reuse plans for cities	Reuse	Reuse	x	x				LGUs, partnerships
For greywater, increase educational funding for municipalities/residents	Climate change, Reuse	Reuse						
Create and implement model ordinances to permit stormwater reuse for irrigation	Climate change, Reuse	Reuse						
Provide guidance and incentives for water reuse, including for less-potable uses	Reuse	Reuse	x	x				MDH
Provide public education about water reuse	Reuse	Reuse	x					UMN Extension
Design and construct projects that have been evaluated to show they will support sustainable water use	Water availability	Conservation & Sustainability		x	x	x	x	Water suppliers, DNR