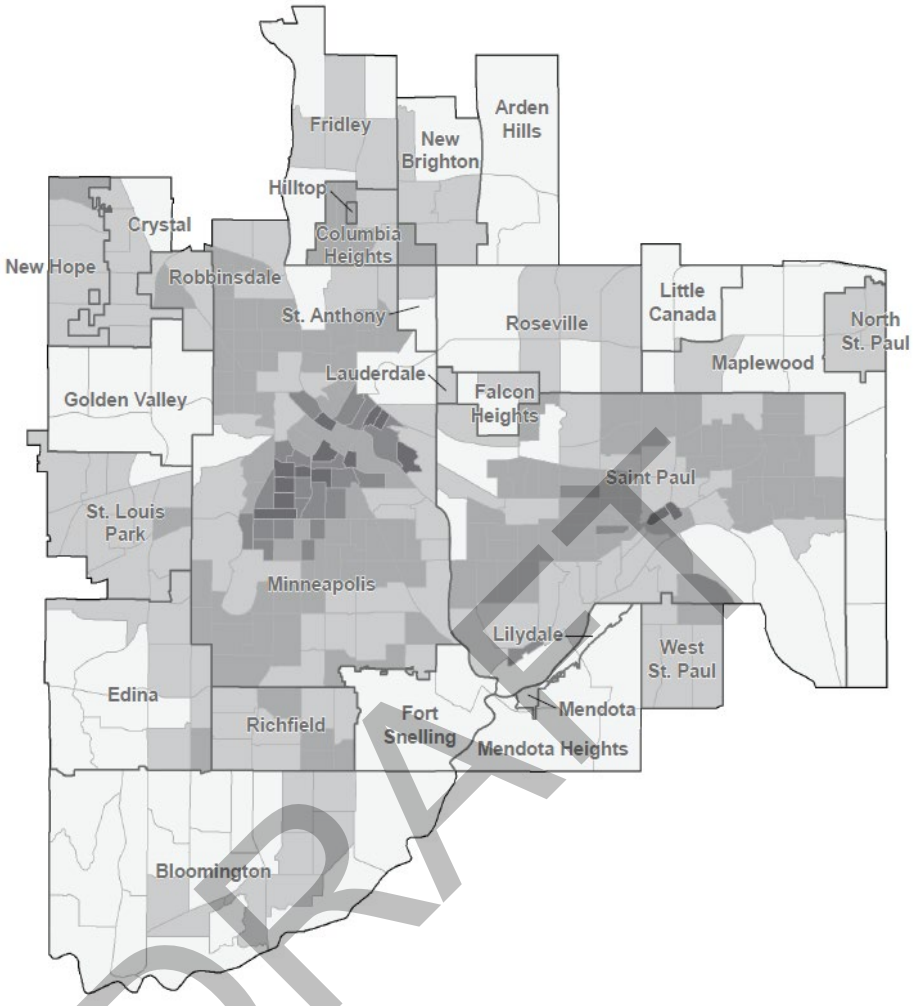
Central Metro subregion chapter and action plan



Water supply planning context and current conditions

Everything that happens on land impacts water, and water is all connected.

The Central Metro subregion group includes the cities of Minneapolis and Saint Paul, the communities served by those municipal systems and other surrounding communities. These communities are in the urban center of the region. This is the most highly developed part of the metro and the most densely populated.

The Central Metro subregion is unique among the seven subregions, in that the Mississippi River is the primary drinking water source for most communities. Some communities such as Bloomington use a combination of groundwater and surface water to provide water, while others such as New Brighton rely primarily on groundwater, but may utilize a connection to the Minneapolis or the Saint Paul system during an emergency or as needs dictate. Some communities use groundwater as their only source of drinking water. Few residents in this part of the metro receive their drinking water from private (domestic) wells. However, there's a greater concentration of wells for industrial or commercial purposes here than in other parts of the region. Additionally, 23 of the 27 communities in the Central Metro subregion overlap with or are adjacent to land that has been identified as a Drinking Water Supply Management Area.

With the region as a whole expected to grow by more than 650,000 people between 2020 and 2050, the Central metro subregion will continue to see growth. Preliminary estimates, which are being evaluated with community input through spring of 2024, suggest that approximately 221,000 more people, 87,000 more households, and 194,000 new jobs will be added to the area by 2050 compared to 2020.

Over the past two decades, communities have continued to grow, but overall water use has generally declined since the late 1980s when water use peaked. However, density is likely to increase to accommodate estimated growth through development and redevelopment. To deliver service to more homes and businesses, communities may need new infrastructure like additional wells and new service lines. Expansion of water supply systems comes at a cost and is not without financial, social, or environmental risk. To be sustainable, communities and the region must maximize current infrastructure investments and consider how growth, land use changes, climate impacts, inequity, and other challenges stress water resources and supply systems.

Beyond quantity, several quality-related items are also of concern in the Central Metro subregion:

- Increased impervious cover
- Source water protection (which requires collaboration with communities well beyond the 7-county metropolitan planning region for surface water-sourced communities)
- Legacy contamination
- Emerging contaminants such as PFAS and chloride
- Continued pursuit of water reuse

While management of water supply is ultimately a local responsibility, we know there is value in working together on water supply projects. Current partnerships are a testament to that. Water is all connected, and it does not follow jurisdictional boundaries—the work must acknowledge that as well.

Our water is facing threats from familiar and new contaminants including PFAS, nutrients, and chloride. We will support technical work/research to produce good information about water supplies so that our decision-makers and the public can make timely, informed choices about actions that impact our shared water supplies.

The Central Metro chapter of the Water Supply Planning Atlas contains more details in the description of current challenges.

Stakeholder-defined vision of success for water supply planning in the Central Metro subregion
Water supply planning for the Central Metro subregion is successful if the following outcomes are produced or conditions are met in the long term:

- Increase in collaboration for information sharing, education, and data
- Increase efficiency in operations
- Sustainable water availability and reliability of infrastructure for anticipated population growth are key considerations in development of Met Council growth plans
- Enforce source water protection and have diversity of source water
- Adequate funding for infrastructure
- Improve public engagement
- Focus on public health
    - Health guidance for new contaminants

    - Eliminate lead in homes, including water service lines, private home plumbing and lead paint
- Plan is useful
- Have a culture shift around non-essential water use to change behaviors, such as lawn irrigation
- Water rate affordability
- Education that our drinking water is safe

Issues and opportunities

Stakeholder engagement we conducted in the Central Metro subregion in 2023-2024 identified several issues and opportunities related to water supply planning. They are listed here in alphabetical order.

Agency coordination

Communication, data sharing, transparency, coordination, efficiency, and general partnership between and with agencies should be enhanced.

Asset management and investment

There is an overall lack of funding for water supply, including to maintain, grow, and expand infrastructure. Funding for water supply and asset management can be better coordinated and secured through many efforts including:

- Adoption of improved asset management strategies
- Work to secure long-term funding for compliance issues
- Leverage existing funding sources
- Have grants from different levels of government to support this work
- Work with agencies to have maintenance score higher on grant applications
- Focus on infrastructure investment and sustainability
- Engage with and educate local elected officials on the importance of this work, and to lobby to secure funding

Communication

- Communication needs to be proactive, targeted and tailored to specific audiences, and across platforms. At the same time, it needs to be coordinated and consistent.
- Communication of scientific information needs to be relatable, and contain the “why”, “what”, and “how” to inspire both understanding and action at household and policy-making levels.
- Increase the extent to which water supply is valued and prioritized by the public through intentional cultivation and strategic communications.

Data and technology

There is an overall lack of data, and the data that exists can be hard to find and access. A subregion-wide database informed by use monitoring/modeling and for cities to share well and aquifer pumping data should be developed. Additionally, new technology is being developed, but underutilized. The Central Metro subregion should utilize and explore new technology and tools in their work, such as artificial intelligence.

Education and engagement

Education and engagement are key to achieving success in all water supply work. Education and engagement efforts need to interact with diverse audiences including schools, politicians, the public, and public and private partners. Education and engagement should focus on:

- The importance of source water protection
- Water quality and quantity
- The cultural value of water
- Water conservation and efficiency
- Prevention is cheaper than remediation
- Building trust in the safety of drinking water throughout the Central Metro subregion that is currently lacking due to cultural barriers and lack of trust in the government.

Planning
Water management strategies (stormwater, groundwater, surface water, land use, etc.) should be aligned to achieve effective planning and to help align goals and policies with their resources. Currently, stakeholders feel there are multiple competing priorities and poor prioritization. Additionally, the Central Metro subregion is the densest of the seven subregions and is expected to see an increase in population in the next 10 years. Growth impacts water supply and sewer, and questions on how best to handle this remain. Better planning in the Central Metro subregion could look like:

- Locals have more control and say in regional planning
- A comprehensive plan that is representative of the group needs
- Align regional growth to be more sustainable and water wise
- Develop intercity wellhead protection plans and water supply plans—common problems often have common solutions

Water conservation and efficiency
Conservation and efficient water use support sustainable water supplies. Minnesota is projected to experience more drought events, and water suppliers must consider the ability of their water source(s) to meet higher water demands during such events. Education on conservation, specifically changing public ideas around lawns and irrigation and changing from traditional turf grass to either pollinator friendly lawns and less water-intensive turfgrass has been identified as a priority for the Central Metro subregion.

Additionally, conservation efforts need to be able to keep pace with increasing population, and an accepted balance of ground and surface water sources for the region should be considered. Plans and policies should encourage and incentivize redevelopment in the urban core, protecting important recharge areas outside the core.

Water quality
Existing contaminants need to be addressed before they enter groundwaters and surface waters and begin to prepare to respond to contaminants of emerging concern while working to reduce confusion and conflict between statutes and regulations. Currently, Central Metro subregion stakeholders feel that statutory regulations are constantly changing and increasing as the list of contaminants continues to grow. Additionally, they note experiencing the following constraints:

- As detection limits get lower and regulations get stricter, there needs to be an increase in funding to address them
- There are too many standards and regulations, and they are unclear
- PFAS treatment and disposal costs need to be considered
- The discussion of PFAS without concrete science has been negatively impacting public trust

Workforce
There is a need to address workforce concerns, including staffing shortages, the lack of necessary funding for staff, turnover, and ability to attract and retain staff, and conversely, onboarding staff without enough mentors or supervisors.

Other focus areas for consideration
Finally, these focus areas were not heard during the Central Metro subregion's first workshop but were heard across several other subregions and included for discussion at the Central Metro subregion's second workshop.

- Reuse: Support use of reuse to reduce water demand.
- Chloride: Pursue limited liability legislation and support best practices to reduce chloride contamination from road salt and water softeners.
- Source water protection: Enhance source water and wellhead protection efforts for both known and emerging contaminants.
- Climate change: Climate change needs to be factored into future planning for water use as well as resilience to extremes and climate impacts.

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

Affordability
- There will be equitable access to safe, affordable water for all.
- Terms like affordability will be defined.
- We will understand how to balance affordability with rates and act to do so.
- The general public understands the value of water.

Asset management and investment
- Assets will be in place to reliably service needs of each community.
- Government will invest in additional assets to address changing standards.
- Assets will be planned for and replaced before end of life.

Data and Technology
- There will be a central database for water system information, including water quality testing results that is publicly accessible, regulatory agencies, and public water systems.

Education and engagement
- Communication will be coordinated in terms of content and actions between communities.
- There will be consistent messaging regarding source water protection, water quality, conservation water reuse (irrigation), cultural value of water, cultural barriers, lack of trust, and that contamination prevention is less costly than removal.
- Young people will speak intelligently about water, water use, water resources, etc. with continued levels of complexity so that they can shape future commentary. This should drive workforce as a secondary effect.

- Additionally, to help shape and influence belief in public water, community engagement needs to target lower income areas and non-native Minnesotans that have come to the state.

Planning

- Water availability, quality, and sustainability will be the first step to inform land use, development, population growth, transportation, etc.
- Built-out communities need to evaluate for capacity and growth and the ability to provide water to such growth with infrastructure expansion and redundancy
- There will be more consistent guidance for contaminants of emerging concern (CECs), to plan for expanded future treatment

Water conservation and efficiency

- We will move away from Kentucky bluegrass lawns
- We will be maintaining current water consumption levels or minimizing rate of increase (per person)
- Rules that facilitate and promote water conservation and efficiency will be adjusted/implemented
- Research to implement will be advanced – household level, community level, commercial, and industrial

Water quality

- Water supplies will meet current and future health guidance standards
- We will know how to prevent contaminants of emerging concern from entering water supply
- There will be chemical reviews prior to use regarding disposal to water or soil discharge

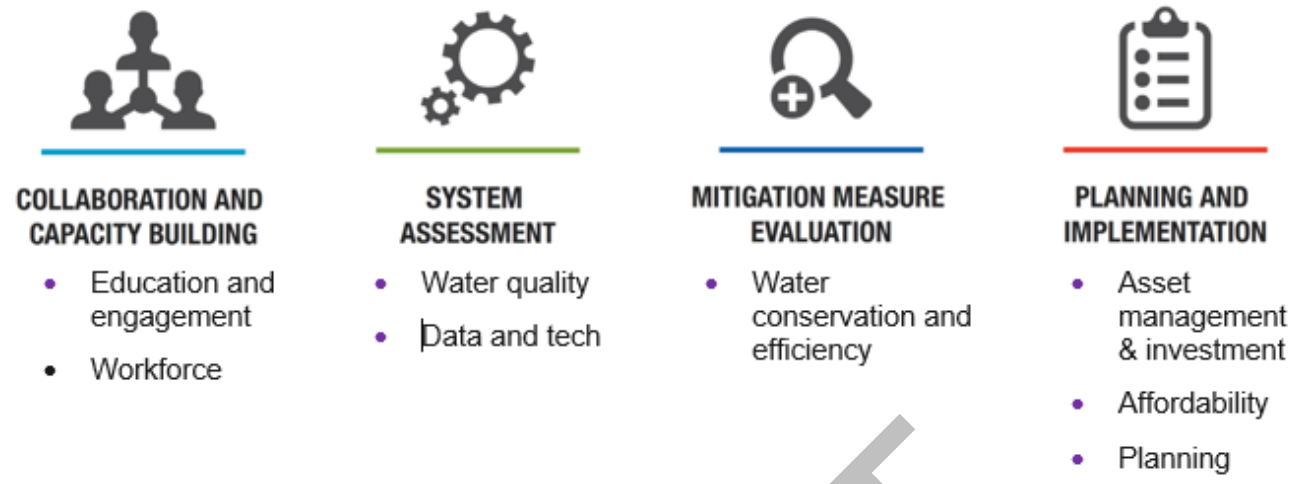
Workforce

- Utilities will be fully staffed
- There will be skilled applicant pools
- There will be a more representative work force

It should be noted that, as a part of the discussion, communication and agency coordination 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 requested to be incorporated into action plans to address priority focus areas.

The following pages reflect an action plan drafted by participants in a subregional water supply planning workshop series. We expect 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 late 2023. 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 1).

Figure 1. The framework for action to achieve MAWSAC goals includes four general steps. Central Metro subregion focus areas generally fall across the framework steps.



Actions to support success

Table 1. Subregional water supply stakeholders proposed several actions to work 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 possible 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.

ACTION	RELATED 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	
COLLABORATION AND CAPACITY BUILDING								
Convene a communications committee with utility representatives that will explore different ways to connect and engage, including with diverse audiences and children.	Education & Engagement		X	X				Met Council and LGUs
Perform outreach and engagement with the public through community groups, attending festivals, etc.	Education & Engagement							Met Council, LGUs, state agencies, counties, community organizations
Education campaign to shift public perception that MN has unlimited supply of water.	Education, Planning	Conservation & Sustainability	X					Regional agencies
Education campaign on what affordability is and how to overcome barriers.	Education, Affordability	Conservation & Sustainability	X					
Create and implement education and engagement for diverse audiences around actions they can take to conserve water and why.	Education, Water Conservation & Efficiency	Conservation & Sustainability	X					Grade schools, colleges, and state agencies
Increase education-based programs like WETT and WUTT and relationship with St. Paul College.	Education, Workforce	Water Sector Workforce						
Increase outreach to high schools, and the public about jobs in the field through outreach at job fairs, tech schools, and encouraging schools to offer trade classes.	Education, Workforce	Water Sector Workforce	X					Utilities and Met Council, Engineering associations, state agencies, and cities
Offer site visit to water treatment plants community colleges.	Education, Workforce	Water Sector Workforce						Cities and agencies with facilities
Utilize internships, and similar programs to jumpstart careers in the industry at a younger age.	Workforce	Water Sector Workforce						Utilities
SYSTEM ASSESSMENT								
The state agencies convene a team to create a database clearinghouse that houses water quality data, provides management and analysis, and the ability to transfer data for stakeholder analysis.	Data & Technology	Monitoring/Data/ Assessment		X				MDH, MPCA, DNR, MNIT
Continue to convene subregion to work with state agencies on creation of data clearinghouse and the prioritization of tech improvements.	Data & Technology	Monitoring/Data/ Assessment	X	X				Public water supplies Agency commissioners
Research water treatment methods that have a high confidence to handle unknown, emerging contaminants, then identify and prioritize most at risk communities.	Water Quality, Planning	Pollution Prevention	X					MDH
Conduct proactive sampling and health studies for contaminants of emerging concern	Water Quality	Pollution Prevention	X					MDH
Create a program for surveillance and testing of new contaminants in drinking water and wastewater.	Water Quality	Pollution Prevention	X					
Increase upstream water quality monitoring for surface water intakes.	Water Quality	Pollution Prevention		X				MDH, MPCA, Watersheds, USGS
Creation of policies and leverage of funding to reduce non-point source pollution and contamination	Water Quality	Pollution Prevention						MPCA, MDA, and Met Council
Identify best available technologies and provide region-specific life cycle cost estimates for new treatment technologies to handle emerging contaminants.	Water Quality	Conservation & Sustainability, Pollution Prevention		X				MDH and suppliers
Perform a review of infiltration requirements and change if needed to provide better protection.	Water Quality, Planning	Integrated Water Management	X					MPCA, MCES, DNR, and MDH
MITIGATION MEASURE EVALUATION								
Collect water supply data to inform our current state and to help inform what will be feasible in the next 10, 20 years, and beyond.	Water Conservation & Efficiency	Monitoring/Data/ Assessment		X				Water utilities, water users, state agencies, and academia
Work with state agencies to advocate for reuse and to limit the barriers to implementations.	Water Conservation & Efficiency	Reuse	X					

Create different actions and priorities for irrigation and personal/household use.	Water Conservation & Efficiency	Conservation & Sustainability	X	X				DNR MDH
Pass ordinances to mandate low flow appliances in new developments.	Water Conservation & Efficiency	Conservation & Sustainability	X					Cities and state agencies
Met Council to continue providing water efficiency grants.	Water Conservation & Efficiency	Conservation & Sustainability	X	X				Met Council and MPCA
Pass ordinances to require native and drought-tolerant landscaping on new and redevelopments.	Water Conservation & Efficiency	Conservation & Sustainability	X					Cities and state agencies
PLANNING AND IMPLEMENTATION								
Work to leverage and make funds available to make necessary upgrades, improvements, and replacements.	Asset Management & Investment, Affordability	Conservation & Sustainability	X					Cities
Create education tools to engage decisions makers and the community on asset management	Asset Management & Investment, Affordability	Conservation & Sustainability	X					City engineers/public works directors
Asset replacement planning/CIP to project expenditures and likely rate changes	Asset Management & Investment, Affordability	Conservation & Sustainability	X					City councils
Convene a team to standardize asset management platforms – identifying needs, deficiencies, and high-risk assets.	Asset Management & Investment, Affordability	Conservation & Sustainability		X				MDH and MPCA
Work with Met Council to create growth and land use policy that is supported by infrastructure, water supply, and wastewater treatment capacity.	Planning	Integrated Water	X	X				Met Council, LGUs, and DNR
Work with the legislature to take pressure of metro to grow by encouraging growth in regional centers: Mankato, Moorhead, Duluth, Rochester, Worthington, etc.	Planning							State – Legislature planning
Met Council integrate water resource planning into local planning assistance decision making.	Planning	Integrated Water	X					Met Council and DNR
Convene the subregion and define what affordability means, identify barriers to achieving affordability and how to overcome them.	Affordability	Conservation & Sustainability	X	X				Met Council
Work to identify and leverage a source of funding to help water producers negotiate the changing regulations.	Affordability, Water Quality	Conservation & Sustainability, Pollution Prevention	X					State agencies/EPA/Met Council
Incorporate review of groundwater impacts into stormwater management design and develop guidance for how stormwater practices impact groundwater.	Water Quality, Planning	Integrated Water	X					MPCA, Met Council, MDH, and watersheds
Work with state and locals to strengthen protections for surface source water	Water Quality, Planning	Pollution Prevention	X					MPCA and Met Council
Prioritize water treatment systems that need new or modified systems for funding.	Water Quality, Affordability, Asset Management	Pollution Prevention		X				MDH
Perform a rigorous review of existing land practices and their potential for contamination of ground or surface water, and regulations to protect against contamination from occurring.	Water Quality, Planning	Pollution Prevention		X				Met Council, MPCA, MDA, DNR, and MDH