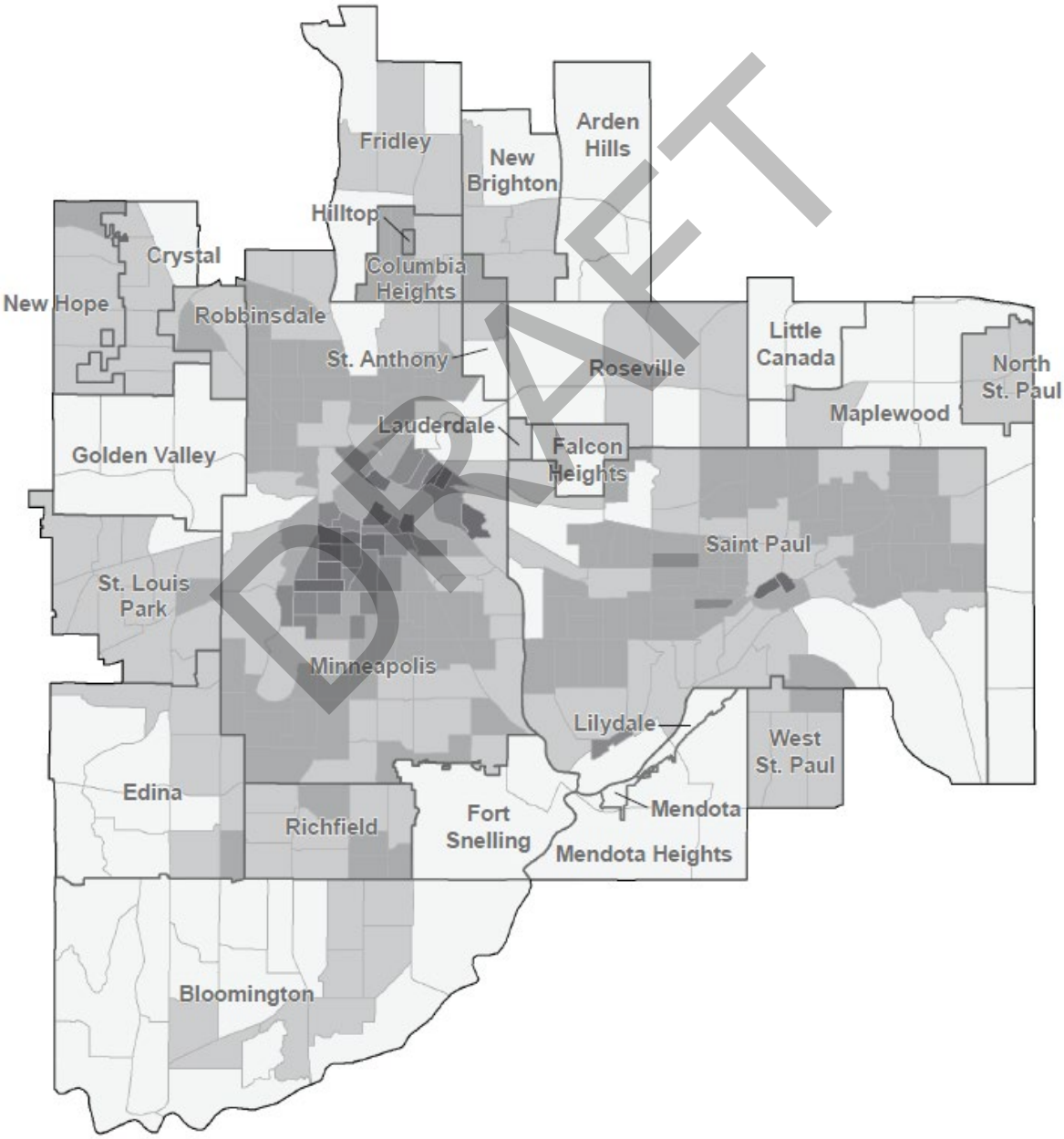
CENTRAL METRO SUBREGIONAL WATER SUPPLY PLANNING CONSIDERATIONS

A CHAPTER OF THE METRO AREA WATER SUPPLY PLAN

SECOND DRAFT – MARCH 2024



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Water supply planning context and current conditions

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

With the region as a whole expected to grow by more than 650,000 people between 2020 and 2050, the Central Subregion will 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.

Quality and quantity challenges already exist. See the Central Subregion chapter of the Water Supply Planning Atlas for examples. Additionally, climate change serves as a risk multiplier, amplifying the impacts that drought and flooding can have on water supply.

In the central metro, collaboration on water supply planning is important because:

While management of water supply is ultimately a local responsibility, we know there is value in working together on water supply projects. Water is all connected, and it does not follow jurisdictional boundaries. Current partnerships and work will need to be recognized and honored while performing this work.

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.

Definition of success for water supply planning in the central metro

In defining what it would tangibly mean if the Central Subregion were to achieve the outcome of a sufficient, reliable, and safe water supply, participants identified the following concepts as central to their consideration:

- Increase in collaboration for information sharing, education, and data
- Increase efficiency in operations and regulations
- Have growth plans by Met Council dictated by sustainable water availability ~~water~~, and have reliable infrastructure for anticipated population growth
- 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
- Plan is useful
- Have a culture shift around water use, ex. reduction in irrigation demand
- Water rate affordability
- Education that our drinking water is safe

Issues and opportunities

Achieving the identified success will require addressing barriers as well as advancing opportunities. In considering the full water supply picture, participants offered their thoughts for what barriers would need

to be addressed or opportunities could be pursued to achieve the identified success. These were summarized into the following focus areas, listed here in alphabetical order.

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

Water Quality
Address existing contaminants 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, the Central Subregion feels that statutory regulations are constantly changing and increasing as the list of contaminants continues to grow. Additionally, they are feeling 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

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 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 Subregion that is currently lacking due to cultural barriers and lack of trust in the government.

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 or alternative less water intensive turf grass has been identified as a priority for the Central 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.

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, participants feel there are multiple competing priorities and poor prioritization. Additionally, the Central Subregion is the densest of the seven subregions and is expected to see an increase in population in the next ten years. Growth impacts water supply and sewer, and there remains questions on how best to handle this. Better planning in the Central 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 water wise
- Develop intercity wellhead protection plan (WHPP) and Water Supply Plans. Common problems often have common solutions.

Several additional topics were identified and approached as implementation considerations:

Communication
1) 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.
2) 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.
3) Increase the extent to which water supply is valued and prioritized by the public through intentional cultivation and strategic communications.

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

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 Subregion's first workshop but were heard across several other subregions and included for discussion at the Central 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.

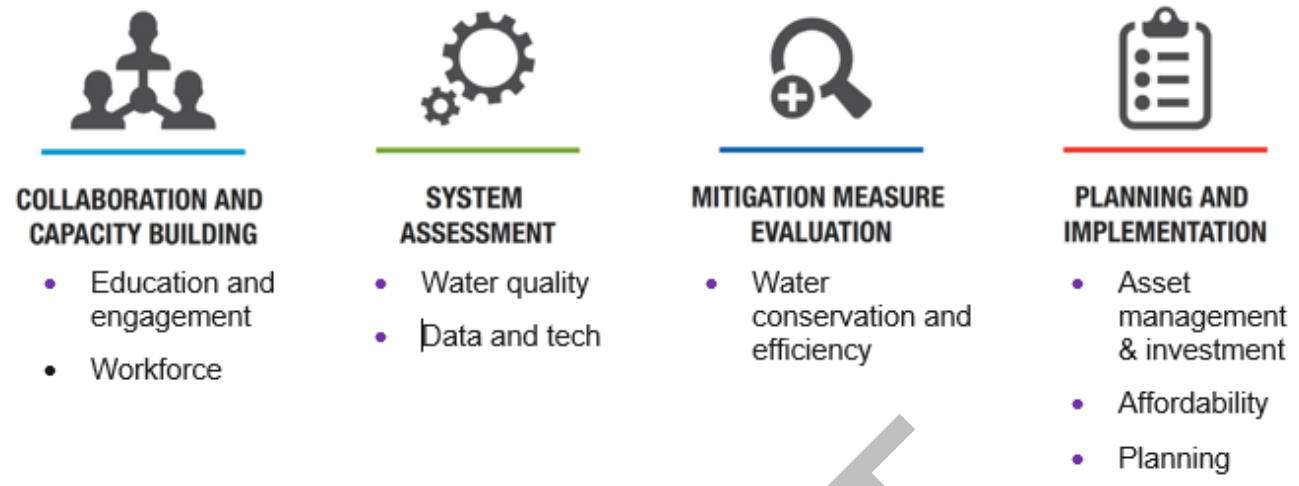
Prioritized focus areas and action plan

In a survey following the first workshop, participants were asked to share which of the focus areas they believed should have the most focused attention from the Central Subregion and Met Council in the next ten years, as well as why. The survey outcomes were shared for discussion at the second workshop, and based on that discussion, participants agreed to the following as the priority focus areas for the Central Subregion. Statements for what success looks like in 10 years, as identified by participants, are also included for each.

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 as action plans to address priority focus areas were developed.

The following pages reflect an action plan drafted by participants in a subregional water supply planning workshop series. 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 late 2023. They have 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 focus areas generally fall across the framework steps.



Education and engagement

If work focusing on education and engagement is successful, in 10-years' time:

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

Data and Technology

If work focusing on data and technology is successful, in 10- years' time:

- 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.

Workforce

If work focusing on workforce is successful, in 10-years' time:

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

Water quality

If work focusing on water quality is successful, in 10-years' time:

- 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

Water conservation and efficiency

If work focusing on water conservation and efficiency is successful, in 10-years' time:

- We will move away from 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

Asset management and investment

If work focusing on asset management and investment is successful, in 10-years' time:

- Assets will be in place to service needs of each community (reliably)
- There will be investment in additional assets from agencies/government, to address changing standards
- There will be planned replacement of assets before end of life

Affordability

If work focusing on water affordability is successful, in 10-years' time:

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

Planning

If work focusing on planning is successful, in 10-years' time:

- Water availability, quality, and sustainability will be the first step to inform land use, development, population growth, transportation, etc.
- In 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

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	10-YEAR PLAN		25-YEAR PLAN			PROPOSED ROLES (DRAFT)			
		2025-2030	2030-2035	2035-2040	2040-2045	2045-2050	POSSIBLE LEAD(S)	MET COUNCIL	SUBREGION	LOCAL
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			
Education campaign to shift public perception that MN has unlimited supply of water.	Education, Planning	X					Regional agencies			
Education campaign on what affordability is and how to overcome barriers.	Education, Affordability	X								
Create and implement education and engagement for diverse audiences around actions they can take to conserve water and why.	Education, Water Conservation & Efficiency	X					Grade schools, colleges, and state agencies			
Increase education-based programs like WETT and WUTT and relationship with St. Paul College.	Education, 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	X					Utilities and Met Council, Engineering associations, state agencies, and cities			
Offer site visit to water treatment plants community colleges.	Education, Workforce						Cities and agencies with facilities			
Utilize internships, and similar programs to jumpstart careers in the industry at a younger age.	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		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	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	X					MDH			
Conduct proactive sampling and health studies for contaminants of emerging concern	Water Quality	X					MDH			

ACTION	RELATED FOCUS AREAS	10-YEAR PLAN		25-YEAR PLAN			PROPOSED ROLES (DRAFT)			
		2025-2030	2030-2035	2035-2040	2040-2045	2045-2050	POSSIBLE LEAD(S)	MET COUNCIL	SUBREGION	LOCAL
Create a program for surveillance and testing of new contaminants in drinking water and wastewater.	Water Quality	X								
Increase upstream water quality monitoring for surface water intakes.	Water Quality		X				MDH, MPCA, Watersheds, USGS			
Creation of policies and leverage of funding to reduce non-point source pollution and contamination	Water Quality						MPCA, MDA, and Met Council			
Plan for need to upsize current water treatment plants by identifying costs required to upsize to handle emerging contaminants.	Water Quality		X				MDH and suppliers			
Perform a review of infiltration requirements and change if needed to provide better protection.	Water Quality, Planning	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		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	X								
Create difference actions and priorities for irrigation and personal/household use.	Water Conservation & Efficiency	X	X				DNR MDH			
Pass ordinances to mandate low flow appliances in new developments.	Water Conservation & Efficiency	X					Cities and state agencies			
Met Council to continue providing water efficiency grants.	Water Conservation & Efficiency	X	X				Met Council and MPCA			
Pass ordinances to require native landscaping on new and redevelopments.	Water Conservation & Efficiency	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	X					Cities			
Create education tools to engage decisions makers and the community on asset management	Asset Management & Investment, Affordability	X					City engineers/public works directors			
Asset replacement planning/CIP to project expenditures and likely rate changes	Asset Management	X					City councils			

ACTION	RELATED FOCUS AREAS	10-YEAR PLAN		25-YEAR PLAN			PROPOSED ROLES (DRAFT)			
		2025-2030	2030-2035	2035-2040	2040-2045	2045-2050	POSSIBLE LEAD(S)	MET COUNCIL	SUBREGION	LOCAL
	& Investment, Affordability									
Convene a team to standardize asset management platforms - identifying needs, deficiencies, and high-risk assets.	Asset Management & Investment, Affordability		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	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	X					Met Council and DNR			
Convene the subregion and define what affordability means, identify barriers to achieving affordability and how to overcome them.	Affordability	X	X				Met Council			
Work to identify and leverage a source of funding to help water producers negotiate the changing regulations.	Affordability, Water Quality	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	X					MPCA, Met Council, MDH, and watersheds			
Work with state and locals to strengthen protections for surface source water	Water Quality, Planning	X					MPCA and Met Council			
Prioritize water treatment systems that need new or modified systems for funding.	Water Quality, Affordability, Asset Management		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		X				Met Council, MPCA, MDA, DNR, and MDH			

Appendix A: Subregional engagement process

Scoping and gaging local support

MAWSAC, in the 2022 report to the Council and MN Legislature, recommended updating the 2050 regional development guide and related policy and system plans (which connect to the master water supply plan) to support MAWSAC goals, customized for subregional and local conditions. The committee also recommended taking a new subregional approach that leverages subregional water supply working groups to inform regional and local policy and plan updates.

On July 19th and September 8th, 2022, the Metro Area Water Supply Advisory (MAWSAC) and their Technical Advisory Committee (TAC) discussed an approach to subregional engagement and potential content for subregional chapters in the updated Metro Area Water Supply Plan. Meeting materials document those discussions and are available on the Council's website:

- July 19, 2022 MAWSAC meeting (agenda, presentation, handout, minutes)
- September 8, 2022 TAC meeting (agenda, presentation, handout, minutes)

On March 15, 2023, Metropolitan Council hosted a workshop for all the metro region's subregional work group participants. Ten people from the central metro attended. The proposed approach for subregional engagement was presented, and workshop participants expressed support for it and shared some water supply priorities in their areas. A summary about the workshop was shared with MAWSAC at their May 9, 2023 meeting and is available on the Council's website (presentation, summary).

Core team of local stakeholders to customize engagement for the Central Subregion

On August 22, 2023, a kick-off meeting was held with core team members to scope an engagement approach in the central metro.

Core team members included:

- Kristin Asher, City of Richfield
- George Kraynick, Minneapolis Water Works
- Patrick Shea, Saint Paul Regional Water Services
- Tina Carstens, Ramsey Washington Metro Watershed District

Outcomes that the core team sought from the engagement process:

- A shared vision for water supply in the subregion for 2050
- A shared understanding of the water supplies available in the central metro
- A list of all issues, with top issues identified (and inclusive of key opportunities)
- Action plans to address priority items
- An understanding of what the Metro Area Water Supply Plan is and how it benefits them

Subregional engagement: Workshops

On January 4, 2024, the first workshop for the central metro was held to introduce the project and the approach to updating the Metro Area Water Supply Plan, share subregional water supply information in the newly developed Water Supply Planning Atlas, and get input about what successful water supply planning should look like, what is already working well, what challenges exist, and what high-level goals do people have for the next ten years.

Attendees who signed in:

- Nathan Gruman, General Mills
- Richard McCoy, Robbinsdale
- Bernie Weber, New Hope
- Nick Macklem, New Hope
- Michael Oxborough, ISD 271
- Brian Noma, MDH
- Anneka Munsell, MDH
- Jack Linehan, Falcon Heights
- Dave Goergen, Edina
- Jim Bodensteiner, Xcel Energy
- Lucas Martin, MDH
- Scott Anderson, Bloomington
- Kristin Asher, Richfield
- Ben Perkey, Crystal
- Tim Kieffer, Golden Valley
- George Kranick, Minneapolis
- Bryan Gruidl, Bloomington

Draft focus areas that emerged from the first workshop were then shared with participants in a survey to identify priorities to work on at the second workshop. Twelve people shared priorities.

On February 9, 2024, a second workshop for the central metro was held to agree on priority focus areas and draft actions plans, building on the focus areas identified at Workshop 1 and priorities from the survey. In small groups, participants filled out action plan worksheets. Groups rotated through three topics each, revising and adding to the ideas of the group who discussed the topic before them.

Attendees who signed in:

- Nathan Gruman, General Mills
- Richard McCoy, Robbinsdale
- Brian Noma, MDH
- Anneka Munsell, MDH
- Dave Goergen, Edina
- Jim Bodensteiner, Xcel Energy
- Chris Heineman, Little Canada
- Eric Volk, New Brighton
- Lucas Martin, MDH
- Scott Anderson, Bloomington
- Kristin Asher, Richfield
- Tim Kieffer, Golden Valley
- Jack Gleason, DNR

After the workshop, staff met with George Kraynick (Minneapolis) and Todd Blomstrom (St. Paul Regional Water) to inform them of the workshops results and to gather their input on the action plans.

Workshop photos

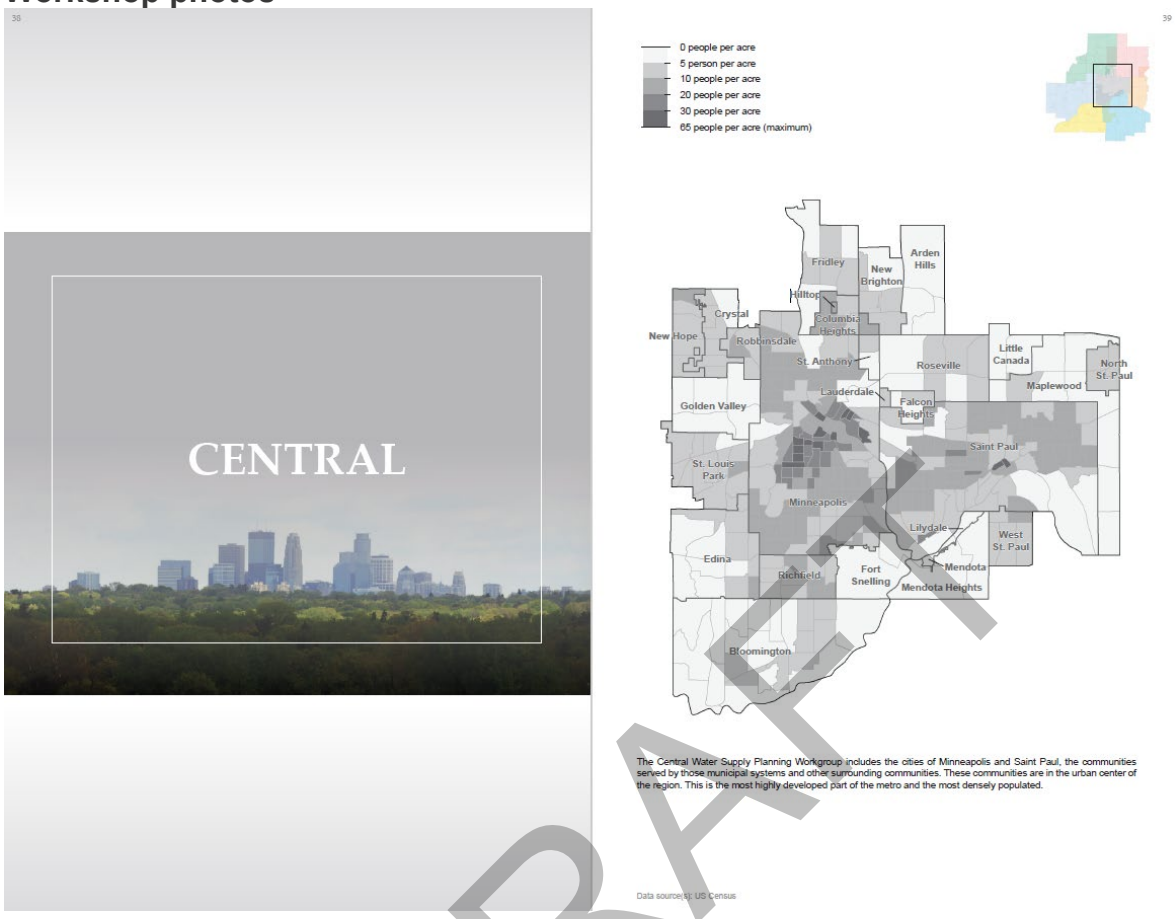


Figure 2. The Central chapter of the recently-released Water Supply Planning Atlas for the Twin Cities Metropolitan Area provided subregional water supply information and context to support group discussion.

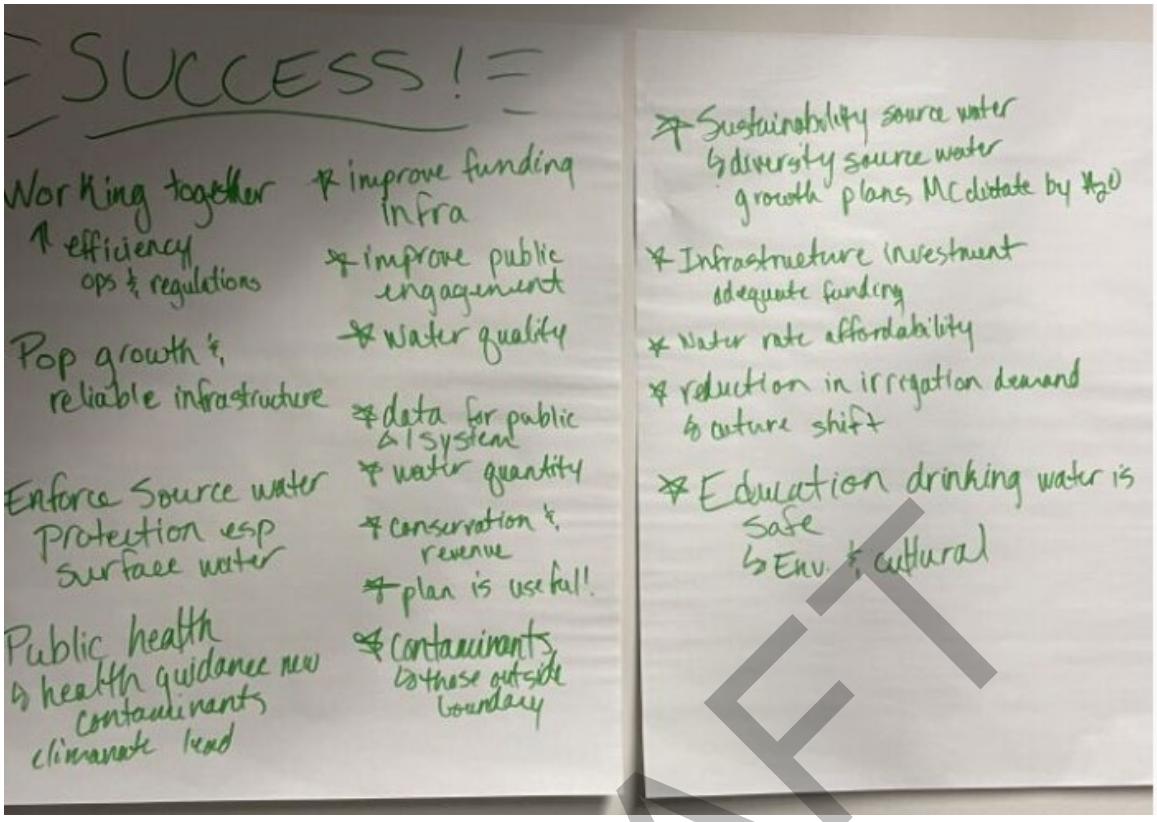


Figure 3. At Workshop 1, the Central Subregion water supply group discussed what a successful water supply planning effort would look like.

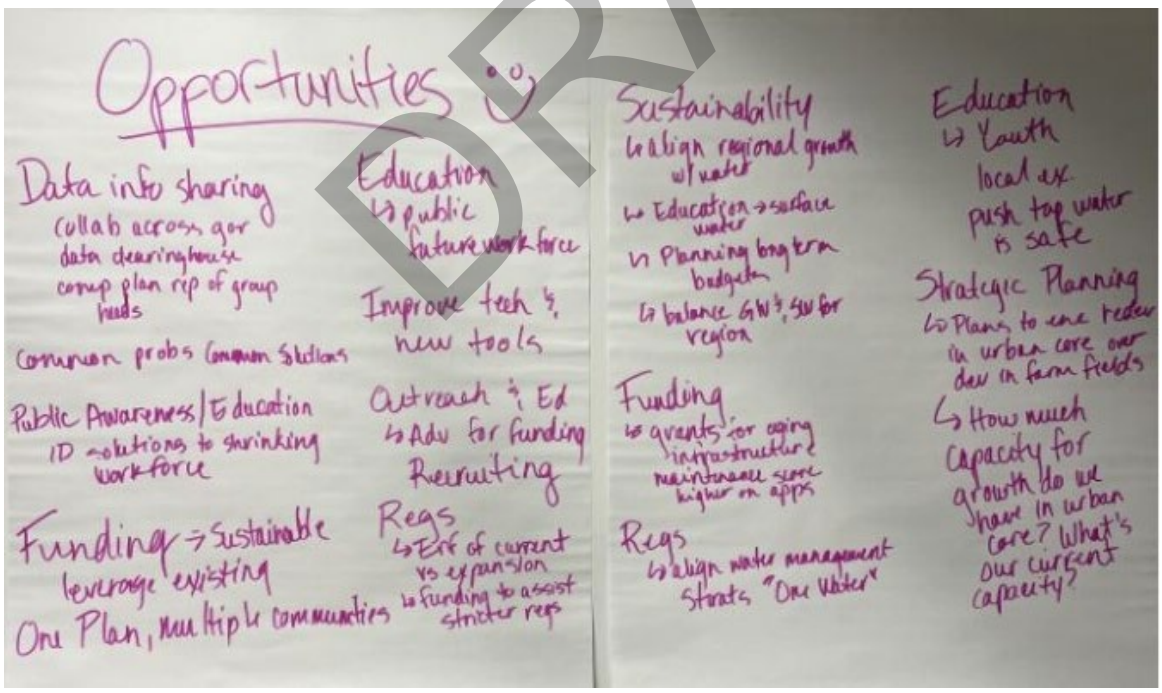


Figure 4. At Workshop 1, the Central Subregion water supply group discussed water supply planning opportunities.

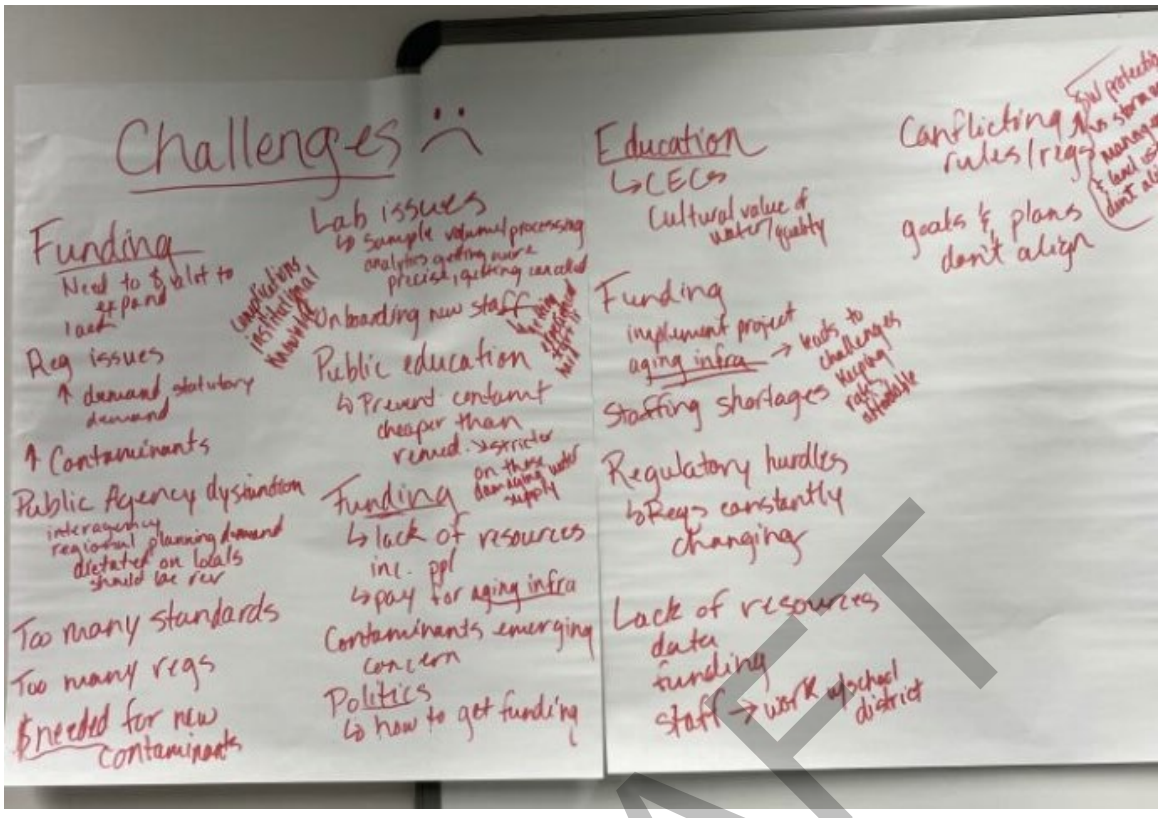


Figure 5. At Workshop 1, the Central Subregion water supply group discussed water supply planning challenges.

Glossary and Initialisms

BWSR: Minnesota Board of Water and Soil Resources

CECs: Contaminants of emerging concern

Data standards: Data standards are documented agreements on representation, format, definition, structuring, tagging, transmission, manipulation, use, and management of data.

DNR: Minnesota Department of Natural Resources

DWSMA: Drinking water supply management area, designated by municipal water suppliers and the Minnesota Department of Health.

EMWREP: East Metro Water Resource Education Program, a partnership of 30 local units of government hosted by the Washington Conservation District.

HOA: Home Owners Association

MC: Metropolitan Council

MDH: Minnesota Department of Health

MIDS: Minimum Impact Design Standards

MPCA: Minnesota Pollution Control Agency

PFAS: Per- and Polyfluorinated Substances

SWCD: Soil and Water Conservation District

WD: Watershed District

WMO: Watershed Management Organization

VOC: Volatile organic compounds are compounds that have a high vapor pressure and a low water solubility.

What other terms should be included to ensure we all mean the same thing?

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