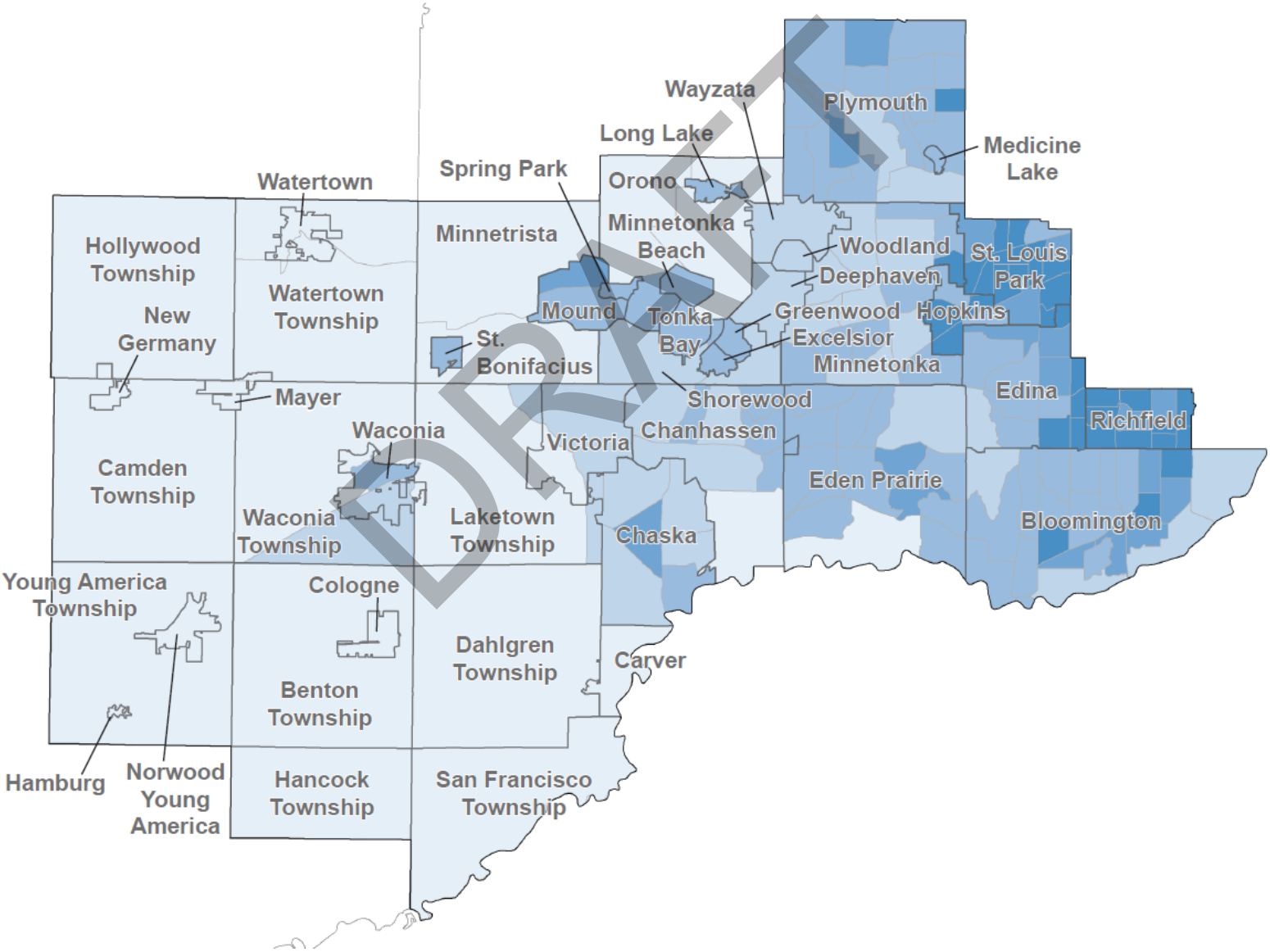
WEST METRO SUBREGIONAL WATER SUPPLY PLANNING CONSIDERATIONS

A CHAPTER OF THE METRO AREA WATER SUPPLY PLAN

SECOND DRAFT – MARCH 2024



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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 600,000 people by 2050, it is safe to say that the West Metro will see growth. Preliminary estimates suggest that approximately 150,000 more people, 72,000 more households, and 122,000 new jobs will be added to the area.

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

As growth in the West Metro occurs under a climate continuing to change, alongside continual emergence of new impairments and risks, it is important to plan and collaborate to ensure there is sufficient, reliable, and safe water supply for people, the economy, and the function of local ecosystems.

Communities in the West Metro rely on sufficient, reliable, and safe water supply for health and prosperity – now and for future generations; it is a fundamental human right. Safe water supply is also necessary to the function of local ecosystems, although the needs of these ecosystems vary depending on location and aquifer connections. The water supply industry is likely to continue to encounter new impairments and other outside risks to a sustainable water supply.

Definition of success for water supply planning in the west metro

Water supply planning in the West Metro is successful if it achieves these shared goals:

- The quality and quantity of source waters is protected
- Water is conserved and used efficiently
- Water supplies support public health and safety for everyone
- Responsible growth is supported by reliable and adequate local supplies

The following are needed to successfully achieve those goals in the West Metro:

- Public trust and buy-in from Minnesota's water agencies in planning, implementation and enforcement
- Shared, aligned policies and goals across communities and between local, regional, and state organizations
- Consistency across systems, including public communications
- Understanding that every city is different in its needs and how implementation happens

Issues and opportunities

In the West Metro, there are several issues and related opportunities related to water supply planning. For example:

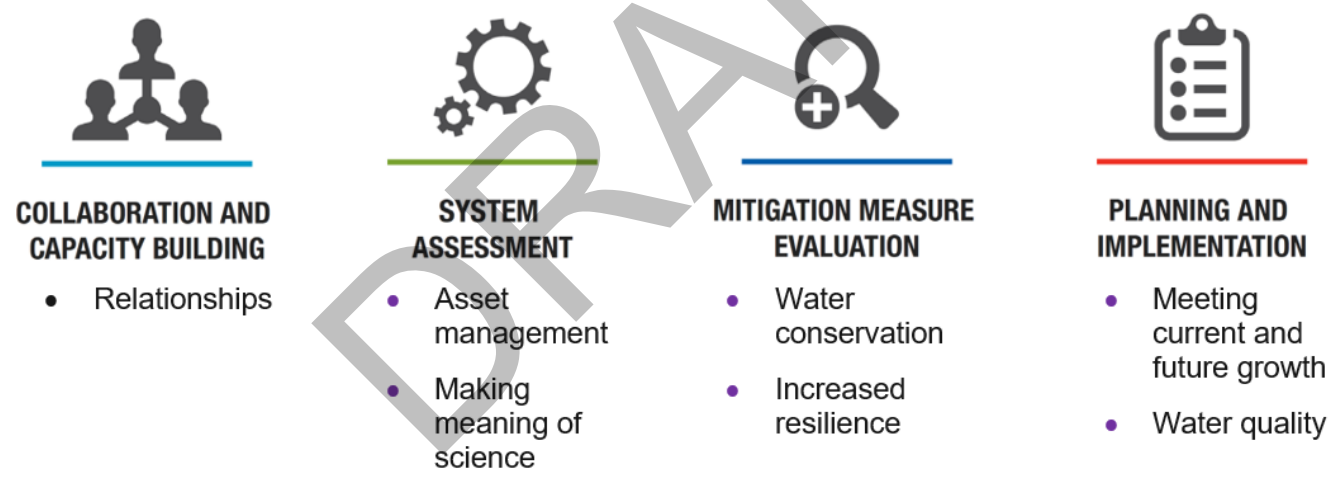
- To address the challenge of cost and affordability, there may be opportunities to expand funding sources, explore how development can help pay for the water supply to support it, and to leverage new technologies.

- To address the challenge of PFAS, there are opportunities to use carbon filters or to explore a class action suit.
- To address the challenge of public buy-in, there are opportunities for daily contact with communities and for strong emergency response.
- To address the challenge of making meaning of science at a system scale, there are opportunities to provide technical assistance, joint planning, leverage industry standards, and lowering barriers to test water.
- To address the challenge of stewardship of expensive infrastructure, there are opportunities for asset management, ISO 55000, IAM, and securing reliable funding.
- Opportunity to investigate new funding sources, approaches to water rates.

Prioritized focus areas and action plan

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, reflects what was being considered in late 2023. They have been roughly 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.



Relationships among water supply managers and planners

Without a unified comprehensive plan and water supply plan that realistically includes the often unforeseen or incompletely described water supply needs, communities will ultimately face challenges or conflicts in priorities between public works and community development goals.

If work in this area is successful, in 10-years' time:

- Water supply stakeholders share a collaborative and mutual goal towards sustainability and water quality. There are clearly defined roles for agencies (DNR, MPCA, MDH, Met Council).
- There is a better tie between water supply and growth/land use chapters of comprehensive plans.

- There is a central program/software/website for suppliers to enter information and allow agencies to pull the information that they need (instead of suppliers submitting the same information to 2-5 agencies)

Asset management and stewardship by public water systems

The life cycle of water infrastructure is multi-generational, and successful management depends on workforce culture and business practices that are long-term focused. Asset management is a high priority for public water suppliers in the west metro because asset management and how growth plays out limit new infrastructure.

If work in this area is successful, in 10-years' time:

- A state-side asset management program or policy helps identify critical water supply infrastructure that has high risk needs.
- Local water suppliers have less need for peak capacity infrastructure because people conserve more (demand planning and demand control).
- We know what we have, what condition it is in, and what needs to be done next to keep the system running long into the future.
- Policies and procedures are in place serving as a formal asset management plan.

Making meaning of science

A shared understanding of water supply conditions, based on data collected at all levels, supports policies and regional planning that results in the protection of the resource and the public.

If work in this area is successful, in 10-years' time:

- There is a metro-wide dashboard/database managed by MCES to directly inform regulatory reports (i.e. WINS survey, DNR appropriation permits, MDH, Homeland Security, MPCA, FEMA emergency response plan, etc.).
- People with a wide variety of perspectives and expertise work together to collect and share data (different geographies; state, regional and local levels; practitioners and public).
- Objective, reliable, and understandable data is collected (quantity, sustainability, resilience, meets local needs, public safety, stewardship).
- Information collected is usable.
- This data guides and informs policy for resource management, development, and land use .
- There is communication and sharing of the data (accessibility, uniform database)

Water conservation

Water is a finite resource, and efficient use can help minimize the need for new investment in water supply infrastructure and protect natural resources which can be impacted by water levels.

If this strategy is successful, in 10-years' time:

- There will be regional watering restrictions.
- Per capita water use will be reduced.
- Existing permit pumping limits will be consistently enforced.
- Use of grey water will increase.

Increased resiliency to the effects of extreme weather, drought, flooding

The combination of extreme weather conditions and water demand (primarily from groundwater sources) requires coordination of ordinances, education, and enforcement to ensure adequate water supply during these times.

If work in this area is successful, in 10-years' time:

- Groundwater withdrawals for non-potable use are minimized.
- In 10 years, there are less identified contaminants in the water supply.
- There is more reuse.
- There are fewer instances of water use restrictions than today.
- There may be increased surface water use/storage.
- Ther is less irrigation across the board.

Meeting demand for current needs and future growth

Strong partnerships are needed to create and support a consistent and streamlined approach to meeting growth demand objectives, recognizing any limits on water availability and based on a foundation of local water quality health.

If work in this area is successful, in 10-years' time:

- The planning process will be improved by starting with a focus on local water health, then getting input from regulators, then working on planning/land use, then development. A consistent and streamlined approach to meeting growth demand objectives, based on a foundation of healthy water supply, will be created.
- Cities will not have to be the heavy hand, because residents will make better choices.
- There will be a better educated population.

Water quality

Protecting water from contamination from existing and emerging contaminants protects public health and keeps costs low. Note: Includes agricultural contamination in surface waters, groundwater, and private wells – water used for drinking, recreation, and other purposes.

If work in this area is successful, in 10-years' time:

- MDH, MPCA, DNR, and MDH are making progress to correct issues with contaminated groundwater and surface water.
- The scale of water quality treatment for groundwater and surface water is expanded to include small treatment plants and private well users (particularly to address contaminants of emerging concern).
- Contaminants don't continue to get worse.
- Water suppliers are able to meet federal and state guidelines and regulations.
- The public trusts that water suppliers are distributing good quality water.
- Nitrate applications are limited to reduce nitrate pollution.

The following resources are included in action plans for the priority focus areas above:

Financial support for water supply systems

Funding should be a focus because proper funding for the management of a public water supply system is critical. A priority for funding should be how to fund changing regulations and emerging contaminants.

Communication and education

Clean water is a finite resource, and everyone plays a role in protecting it. When people understand their water sources, how they impact it, and how their utilities work to keep it safe, they are more likely to trust their water suppliers. Utilities which consistently earn and maintain the public trust over time will more effectively respond to future needs such as unregulated contaminants, because the public will feel the utility is making good decisions in the public's interest.

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 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										
1	Convene regular workshops/meeting with stakeholders to define mutual goals, info sharing, community building, and networking. Goals should include state-wide sustainability goals. Continue to hold meetings to discuss and check in on progress and info share. Have a dedicated facilitator to document meeting information, plan and coordinate meetings and establish meeting topics, etc.	Asset management & stewardship, Relationships Among Water Managers, Planners, Water Quality	x	x	x	x	x	Local, state, watersheds			
2	Support workforce retention through succession planning and knowledge transfer	Asset management & stewardship	x	x	x	x	x				
3	Build partnerships between local water supply utilities, regulatory agencies, and future growth entities (planning/land use, developers, etc.) so that land use planning and development is informed and based on water supply planning.	Meeting Demand for Current and Future, Relationships						Public utilities, agencies,			
4	Coordinate funds and subregion to work with professional organizations and lobbyists to work with the legislature.	Conservation	x					Met Council			
5	Convene a focus group with representatives from every regulatory agency and LGUs to define data overlaps, gaps, and refinement. Provide resources to provide uniform data gathering and reporting including urban vs rural data collection, regional contact, and funding and support equipment, and increase lab testing capacity. Consider a west metro groundwater model (process, ___ Twin) of our shared aquifer and process to keep up to date. This could be a "stress test" model for drought conditions.	Make Meaning of Science, Water Quality	x	x	x	x	x	Met Council and LGUs			
6	Work with the state so that before new water quality rules are made, tools/plans are made available including financial/plans/info. Labs need to be able to test new required levels.	Water Quality						Local			
7	Build up state-level capacity to enforce regulations	Water Quality						MDA, MPCA, DNR			
	SYSTEM ASSESSMENT										

	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
8	**CHANGE THE TONE (More Collaboration/Loss Mandates):** Create and improve asset management systems to include the maintenance database and inventory, GIS model of systems, an accurate water model, or forecasting future needs and costs, to inform current condition of infrastructure, maintain infrastructure, and funding decisions. • Benchmark operations and maintenance (O&M) plans and activities, level of investment, and staffing levels	Asset management & stewardship	x					Local, West Metro Working Group	Gather information on pros and cons of different asset management systems.		
9	Create data collection standards across state agencies that are easy to implement for local water suppliers.	Make Meaning of Science	x					Met Council and MDH			
10	**Create a database clearinghouse that houses relevant data collected by state agencies, and provides management and analysis for all of metro.** Agencies would be able to pull annual data from this clearinghouse versus cities submitting the same information to multiple agencies	**Make Meaning of Science**	**x**					**LGUs and Met Council**			
11	Create a database of current conservation ordinances that are being implemented in the metro.	Conservation	x					Met Council			
12	Improve large-scale groundwater modeling to help systems understand supply. Like 5 above: Consider a west metro groundwater model (process, ___ Twin) of our shared aquifer and process to keep up to date. This could be a "stress test" model for drought conditions.	Water Quality, Make Meaning of Science, Conservation, Data, Meeting Current and Future Need		x				DNR and cities			
	MITIGATION MEASURE EVALUATION										
13	Where feasible, implement a water reuse system as a demo project in a city(ies) in the subregion and provide information and education as a case study.	Meeting demand for current and future, Increased Resiliency, Conservation						Local			
14	Implement regional education programs to teach the community on the importance of reducing water use and water conservation including watering restrictions.	Meeting demand for current and future, Conservation	x	x	x	x	x	Met Council, DNR, MDH			
15	Promote natural/alternative drought resistant lawns through education and outreach in partnership with the University of Minnesota. Include information on how much water lawns need.	Increased Resiliency to Effects of Weather, Conservation	x	x	x	x	x	Watersheds, Met Council, Cities			

	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
16	**Review, define, and map the current drought declaration process, authority of regional restrictions, and barriers/concerns on legal process. Depending on findings, work to change laws to better implement the restrictions.**	**Conservation**	**x**	**x**	**x**	**x**	**x**	**Governor, DNR, MCES?**			
17	Support research on water conservation and restrictions methods to learn which methods better conserve water.	Conservation	x					DNR			
18	Work to make implementing stormwater reuse for irrigating a viable option. Continue to promote rain barrels to the public for irrigation purposes.	Increased Resiliency to Effects of Weather, Conservation	x					Watershed districts			
19	Provide regional/subregional educational programming on water quality at all levels	Water Quality									
	PLANNING AND IMPLEMENTATION								P		
20	Develop an asset management program and policy for strategic asset management planning to inform budget and set rates. To inform development of the program and policies, lean on leaders in the field (America Public Works Association) around standards and life cycle evaluations.	Asset management & stewardship	x	x	x	x	x	AWWA			
21	Create a maintenance and inspection plan that utilizes the maintenance database and inventory.	Asset management & stewardship	x	x	x	x	x	Local			
22	Work to leverage and make funds available to make necessary upgrades and improvements to systems, including lead replacement.	Asset management & stewardship, Water Quality	x	x	x	x	x	Local			
23	Implement high water use industry zones near wastewater treatment plants to create water reuse loops at the industrial scales during the 2050 comprehensive plan process.	Meeting demand for current and future, Increased Resiliency, Conservation									
24	Create and implement model ordinances to permit stormwater reuse for irrigation	Increased Resiliency to Effects of Weather	x					Local water suppliers			
25	Implement ordinances for common sense outdoor water use (ex. No water between 10 am - 6 pm).	Increased Resiliency to Effects of Weather, Conservation	x					Local water suppliers			

	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
26	**Question if this should be included:** Construction/storage of surface water withdrawal systems to protect groundwater use	Increased Resiliency to Effects of Weather, Conservation, Meeting future needs			x	x	x	State agencies, local water suppliers			
27	Promote and implement actions to further protect water supply from runoff, including working with watershed districts, developers, and state agencies.	Increased Resiliency to Effects of Weather, Meeting Demands, Relationships						Local water suppliers			
28	Create a water conservation plan for the region with simple and effective actions.	Conservation	x					DNR and cities			
29	Work with the state to revise the State Drought Plan.	Conservation		x				DNR			
30	Develop and/or recommend consistent tiers between suppliers (example: tier 1 from 0-10,000; tier 2 from 10 000-40,000; tier 3 over 40,000)	Conservation									

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. Nine people from the west metro subregion 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 West subregion

On August 4, 2023, a kick-off meeting was held with core team members to scope an engagement approach in the west metro.

Core team members included:

- Leslie Yetka, City of Minnetonka
- Charley Howley, City of Chanhassen
- Ross Bintner, City of Edina

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 west 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 December 19th, 2023, the first workshop for the west 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:

- Leslie Yetka
- Rick Wahlen
- Robert Ellis
- Ross Bintner
- Scott Anderson
- Mike Kuno
- Tom Pletcher
- Matt Morreim
- Butch Lupkes
- Matt Haefner
- Chuck Allen
- Lane Braaten
- Doug Bode
- Tim Kieffer
- Enia Sneigowski
- Abbie Browen
- Laura Oakden
- Gary Peters
- Kyle Kuntz
- Dave Shoges
- Raya Esmaeili
- MacKenzie Young-Walter

After the first workshop, a survey was sent to all workshop invitees to ask them to share more 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. This gave people who couldn't attend the workshop an opportunity to share ideas. Three people responded.

On January 11, 2024, a second workshop for the west metro was held to focus on crafting shared descriptions and goals for focus areas identified at the first workshop and from the survey. In small groups rotated through multiple topics each, revising and adding to the ideas of the group who discussed the topic before them.

Attendees who signed in:

- Leslie Yetka
- John Zimmerman
- Robert Ellis
- Mike Kelly
- Dave Goergen
- Anneka Munsell
- Ross Bintner
- Ryan Prich
- Eric Klingbeil
- Kyle Kuntz
- Matt Haefner
- Nick Johnson
- Doug Bode
- Nat Hood
- Brad Scheib
- Jay Hall
- Austin Holm
- Matt Merreim
- Russ Lupkes
- Philp Solseng
- Laura Oakdean
- Abbie Browen
- Kirill Maloylo
- Gary Peters
- Tom Pletcher
- Mike Kuno
- Dave Shofes
- Tim Amundsen
- Julie Wischneck
- Jessica Wilson
- Charley Howley

On January 30, 2024, a third workshop for the west metro was held to focus on drafting action plans for priority focus areas identified at the second workshop. In small groups, participants filled out action plan worksheets for the focus areas identified at the second workshop. 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:

- Philp Solseng
- Jack Gleason
- Ross Bintner
- Robert Ellis
- Russ Lupkes
- Abbie Browen
- Doug Bode
- Lane Braaten
- Dave Goergen
- Anneka Munsell
- Matt Haefner
- Tim Amundsen
- Mike Kuno
- Kirill Maloylo
- Mark Onhen
- Chuck Allen
- Jay Hall
- Austin Holm
- Charley Howley

Workshop photos

Figure 2. Workshop 1 for the west metro water supply group was hosted by the City of Minnetonka and held at the Minnetonka Community Center.

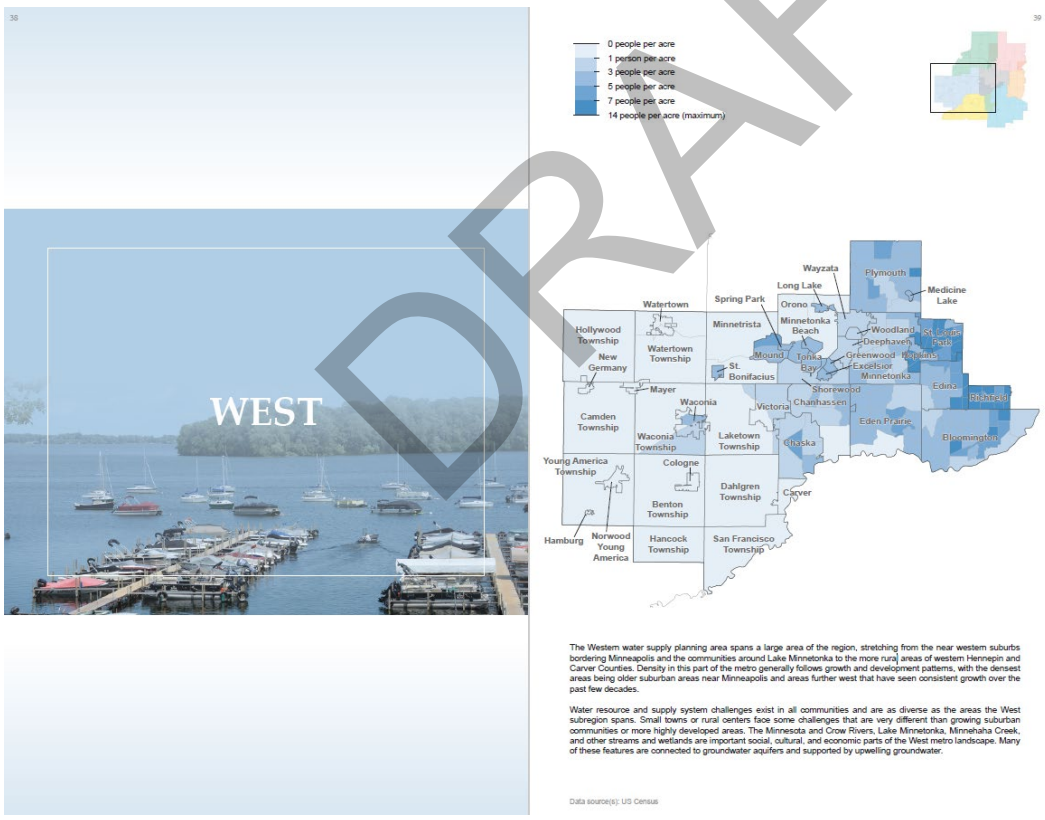


Figure 3. The West chapter of the recently-released Water Supply Planning Atlas for the Twin Cities Metropolitan Area provided subregional water supply information and context to support group discussion.

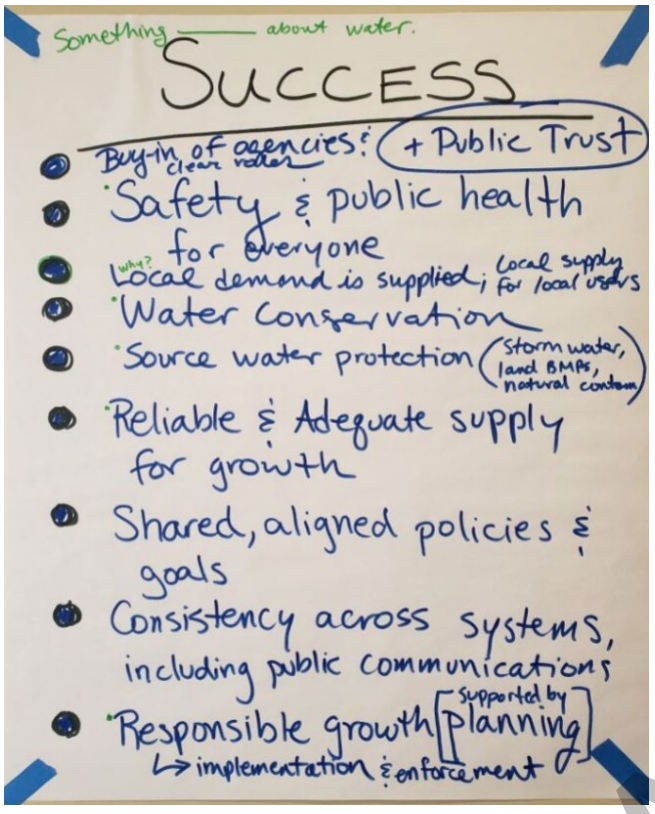


Figure 4. At Workshop 1, the west metro water supply group discussed what a successful water supply planning effort would look like.

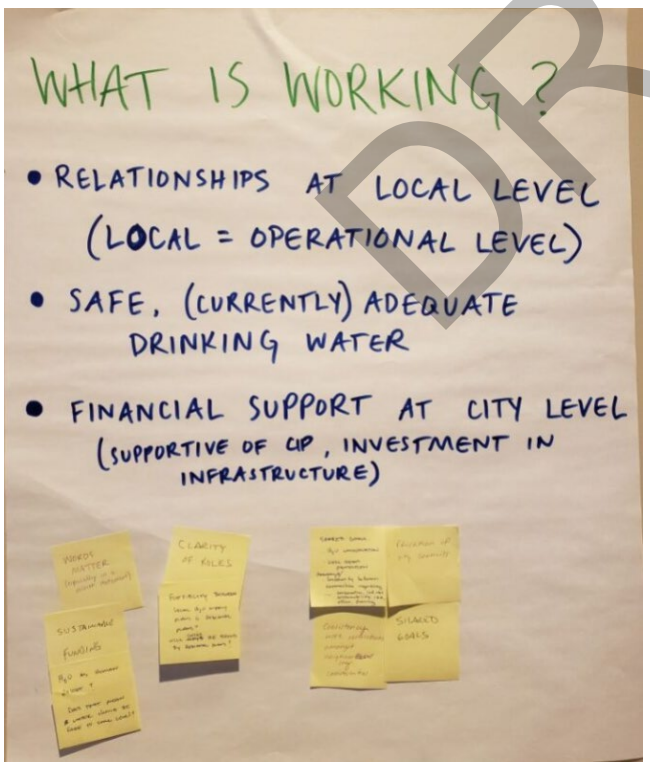


Figure 5. At Workshop 1, the west metro water supply group discussed what is already working well for success.

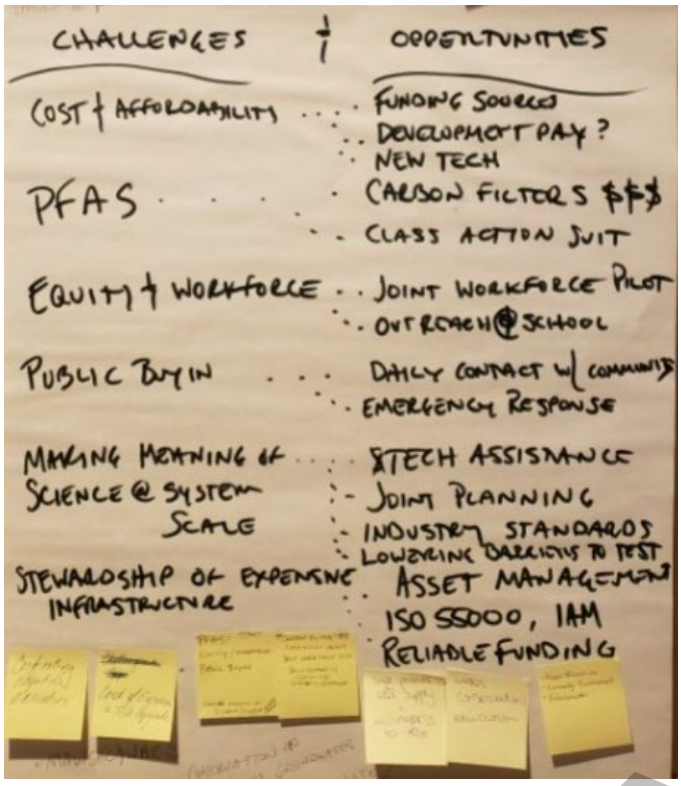


Figure 6. At Workshop 1, the west metro water supply group discussed water supply planning challenges and opportunities.

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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