Information Item

Metropolitan Area Water Supply Technical Advisory Committee (TAC)

Meeting Date: August 16, 2022

Topic

Draft content for chapter one of the updated master water supply plan - draft regional water supply vision, goals and objectives to support planning.

District(s), Member(s):	All
Policy/Legal Reference:	Minnesota Statute 473.1565
Staff Prepared/Presented:	Ali Elhassan, Manager, Water Supply Planning, 651-602-1066; Lanya Ross, Environmental Analyst, Water Supply Planning, 651-602-1803
Division/Department:	Environmental Services

Background

MAWSAC is responsible for guiding and approving a metropolitan area master water supply plan, with input from the Technical Advisory Committee (TAC). The plan provides guidance for local water supply systems and future regional investments; emphasizes conservation, interjurisdictional cooperation, and long-term sustainability; and addresses reliability, security, and cost-effectiveness of the metropolitan area water supply system and its local and subregional components.

The Twin Cities metropolitan area master water supply plan provides a framework for sustainable long-term water supply planning at the regional and local level in a way that:

- Recognizes local control and responsibility for water supply systems
- Is developed in cooperation and consultation with local regional, and state partners
- Protects critical habitat and water resources over the long term
- Meets regional needs for a reliable, secure water supply
- Highlights the benefits of integrated planning for stormwater, wastewater, and water supply
- Emphasizes and supports conservation and inter-jurisdictional cooperation
- Provides guidance by identifying key challenges and available approaches

The plan provides guidance to help communities take the most proactive, cost-effective approach to long-term planning and permitting to ensure plentiful, safe, and affordable water that supports the prosperity and livability of the region for future generations.

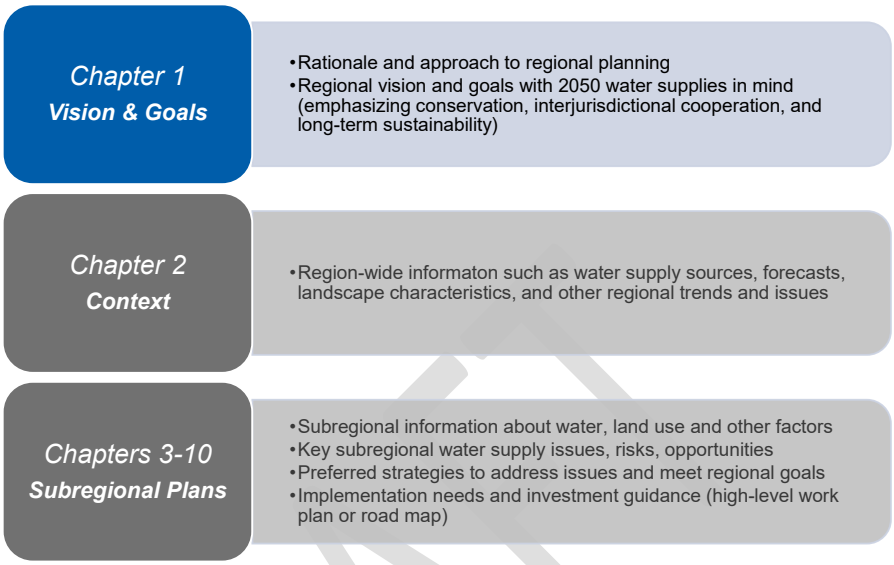
The updated master water supply plan will reflect 2022 MAWSAC recommendations

The Twin Cities master water supply plan was first developed in 2010 and updated in 2015 in connection with the regional development guide and water resources policy plan. It is being updated again as part of the decadal update of the regional development guide.

MAWSAC, in its 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 updated master water supply plan is expected to include three key components

This information item focuses on the first chapter: Vision & Goals.



Request to committee members: Review proposed content for chapter one of the updated master water supply plan

TAC will be asked to recommend that MAWSAC endorse content for chapter one of the master water supply plan in December 2022.

Committee members are asked to review the draft content (pages 4-9 this document).

Share any changes needed in order for you and/or your organization to support this content with Metropolitan Council before October 15, 2022.

a) Is any content missing? If so, what should be added?

b) Is any information incorrect? If so, please provide correction.

c) What questions do you have?

Council staff will use input and work with communications staff to finalize a draft of chapter one, which will be shared back with TAC and MAWSAC for final review.

Proposed table of contents for master water supply plan chapter 1: vision and goals

This page summarizes the proposed content for chapter one of the updated master water supply plan. The full content is found on the pages that follow (pages 4-9).

1.1 Rationale for and approach to regional water supply planning

- Rationale for regional water supply planning
- Benefits of the regional water supply planning process
- How this plan relates to other regional and local plans

1.2 Key components of the region's water supply system

1.3 High-level roles of the Council and its partners

- Private water supply (well) owners
- Communities/public water suppliers
- Metropolitan Council
- State water agencies
- Counties
- Soil and water conservation districts
- Watershed management organizations
- Minnesota Legislature

1.4 Shared values (principles)

1.5 Vision for the region's water supplies

1.6 Regional goals for water supply

- Water supply infrastructure
- Water quality
- Land use and water supply connections
- Understanding and managing groundwater and surface water interactions

1.7 Regional objectives

- Collaboration is enhanced and capacity is increased
- The region's water supply system and its subregional components is assessed
- Mitigation measures are evaluated
- Practices to reduce risk are planned for and implemented

1.1 Rationale for and approach to regional water supply planning

Rationale for regional water supply planning

The Twin Cities seven-county metropolitan area is home to three million people, over half of Minnesota's population. Securing residents' safe and plentiful water – while protecting the region's diverse water resources – requires coordinated, interdisciplinary and ongoing effort.

Although the seven-county region is relatively water-rich, the region's steady population growth, increased groundwater pumping, changing land use, naturally occurring and man-made pollutants, and variable weather and climate are challenging some communities' ability to meet current and future water demand.

Bringing together the many different and changing facets of water supply into a regional picture is outside the scope of any one community, yet it is necessary to adequately plan for the region's growth and economic development.

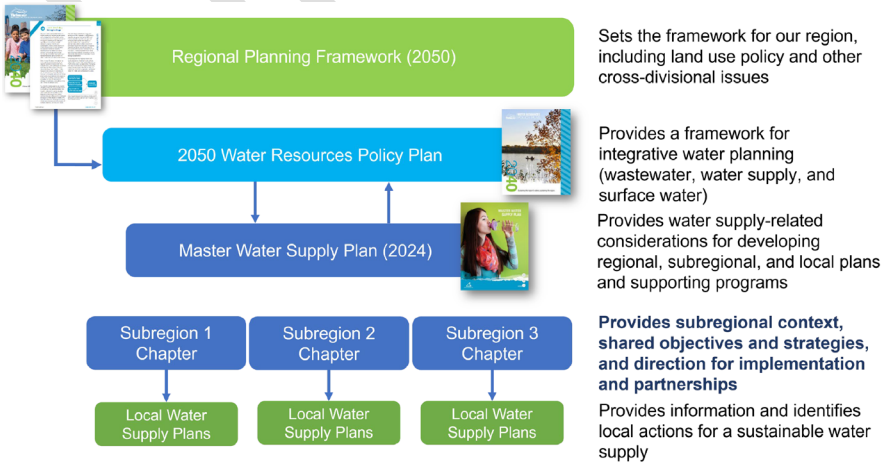
The Metropolitan Council recognizes the responsibility and authority of local water suppliers to provide water. A regional perspective is also important, because the effects of local water supply decisions do not stop at community boundaries. Communities often share the same or interconnected water supply sources, and the cumulative impact of decisions made by individual communities can be significant. The Metropolitan Council forecasts that the region will add about 824,000 residents over the next 25 years. A pressing concern is the impact that future development might have on the reliability and availability of the region's water supplies. The development of this plan is not motivated by widespread water shortages or crises. Rather, this plan is a response to the recognized benefits of developing and maintaining a plan that supports current and future populations without adverse impact to natural and economic resources.

Benefits of the regional water supply planning process

The process to develop and implement the metropolitan master water supply plan supports communities to take the most proactive, cost-effective approach to long term planning and water supply permitting to ensure plentiful, safe, and affordable water for future generations.

How this plan relates to other regional and local plans

The master water supply plan is informed by the 2050 regional planning framework and water resources policy plan. It more specifically provides water supply-related considerations for developing regional, subregional and local plans and supporting programs. It provides high-level vision and goals as well as subregional recommendations to inform local water supply plan and comprehensive plan updates.



1.2 Key components of the region's water supply system

As illustrated by figure 1, the ultimate source of water for the region is the precipitation that falls locally and in upstream watersheds.

The amount and quality of water that we are able to pump from our surface water and groundwater sources is controlled by the environment that the precipitation moves through to reach those pumps. In our region, we have a range of urban, suburban, and rural communities – all with different surface water resources, soils and geology, and land use patterns.

Private wells serve parts of many communities, but local public water supply infrastructure serves the bulk of the region and includes the surface water intakes, wells, and any interconnections; treatment; storage; and distribution pipes that provide safe water. Private homes and businesses may use private wells or connect to a community water supply system.

It is the people and businesses in those communities who pay for the water supply infrastructure, using it for a wide range of purposes. Clean water is critical for everyone to function. The same people and businesses also pay to dispose of the water once it has been used.

Local wastewater infrastructure collects used water and conveys it to a regional system. Private homes and businesses may use private septic or connect to a community wastewater system.

Regional wastewater treatment reclaims water to meet state and federal water quality standards. Then is discharged back into the environment, sometimes cleaner than the water it is being put back into. From there, water flows downstream to other users and eventually to the Gulf of Mexico.

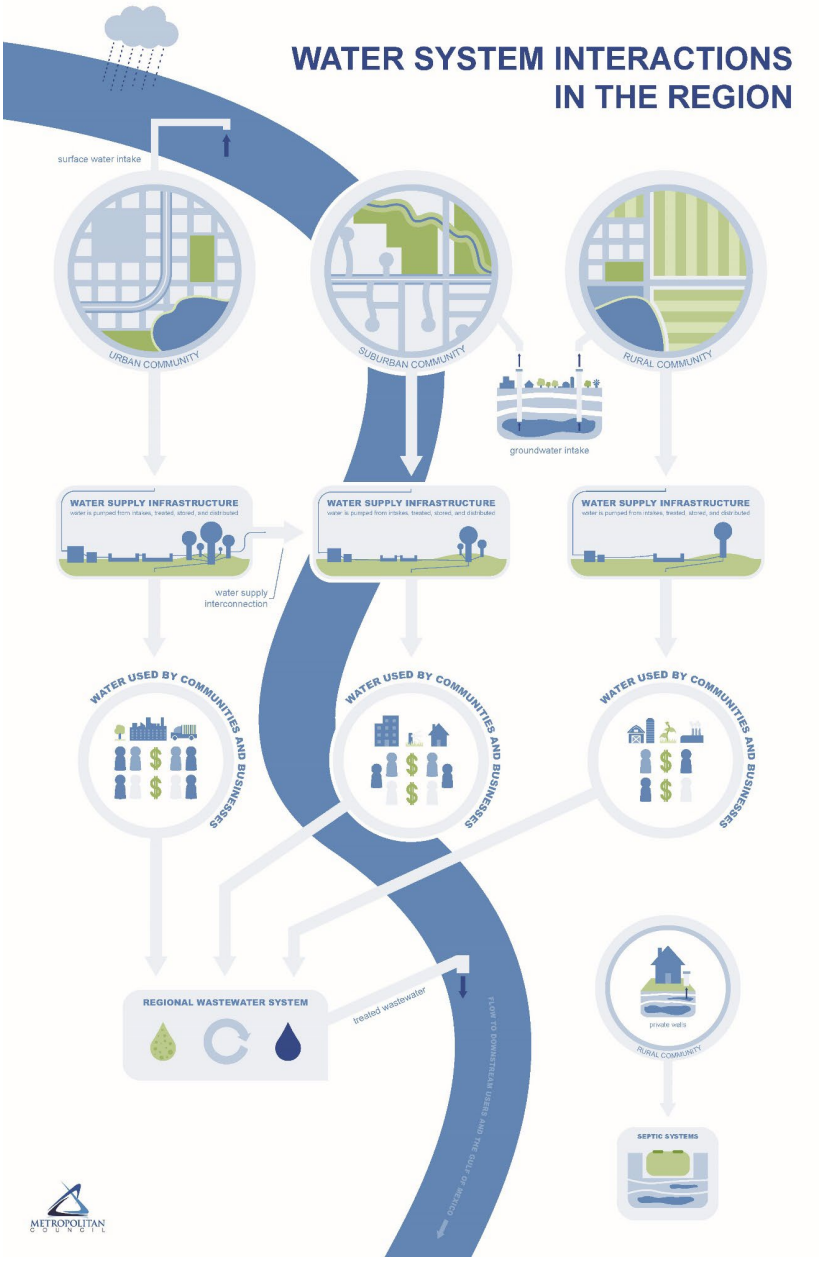
The Water Supply Atlas (in development) provides more detailed information about the water supply conditions across the region.

1.3 High-level roles of the Council and its partners

Everyone – agencies, business, individuals – has a responsibility for ensuring sustainable water supply planning. Collaborative actions are needed at the individual level, the community level, the regional level, and the state and federal level.

- *Private Water Supply (Well) Owners* develop, maintain and use wells for domestic and commercial purposes.
- *Communities/Public Water Suppliers* provide water to customers in compliance with Safe Drinking Water Act standards; set rates to support systems; develop and maintain infrastructure; monitor drinking water quality and quantity; ensure emergency procedures are in place; develop and enforce demand-reduction measures; plan for land use, water supply and capital improvements; and may regulate water use and well drilling.
- *Metropolitan Council,* as the regional policy-making body, planning agency, and provider of essential services, brings stakeholders together to set regional strategy and provide essential regional services. It provides planning support and direction, operates the state's largest wastewater treatment system, and provides regional water monitoring.
- *State water agencies* as regulators have a role incentivizing public and private sectors to improve service. They collect and analyze water information; assess water supply risks (quantity and quality); develop standards and rules; license professions impacting drinking water; regulate water use, water well construction and sealing, and land use activities; develop best management practices; approve local plans and permits; administer funding programs; and provide technical assistance and training.
- *Counties* have authority to prepare and adopt groundwater plans and guide land use that includes zoning, shoreland, and mining operations.
- *Soil and Water Conservation Districts* may, if the authority is delegated by the county, prepare and adopt county groundwater plans, set priorities, address issues, and build local capacity for the protection and management of groundwater.
- *Watershed Management Organizations* work to conserve the natural resources of the state by land use planning, flood control, and other conservation projects.
- *Minnesota Legislature* provides policy direction and, in some cases, directs funding.

Figure 1. Illustration of key components of the region's water supply system, from source through use and reclamation to discharge back into the environment.



1.4 Shared values (principles)

Whether public or private, all water supplies are drawn from an essential natural resource that is shared by the entire region.

The present and future challenge of providing citizens with an adequate, safe supply of water extends across community boundaries. The contributions of all participants—utilities, communities, environmental groups, and others—have value in how communities manage water.

MAWSAC's seven principles guide how the Council and its partners approach work to achieve sustainable water supplies for the region:

1. Water supply planning is an integral component of long-term regional and local comprehensive planning.
2. An understanding of the region's long-term water supply availability and demand is necessary to identify a specific community's or subregion's water sources.
3. All hydrologic system components, naturally occurring and human-built, must be carefully evaluated when planning water infrastructure.
4. The quality of the region's water is a critical component of water supply planning.
5. Interjurisdictional cooperation is a viable option for managing short-term water supply disruptions and for sustainably meeting long-term water supply needs.
6. Regional and local cost-effectiveness and fair cost-sharing are considered when identifying water supply options.
7. Wise use of water supplies is critical to ensuring adequate supplies for future generations.

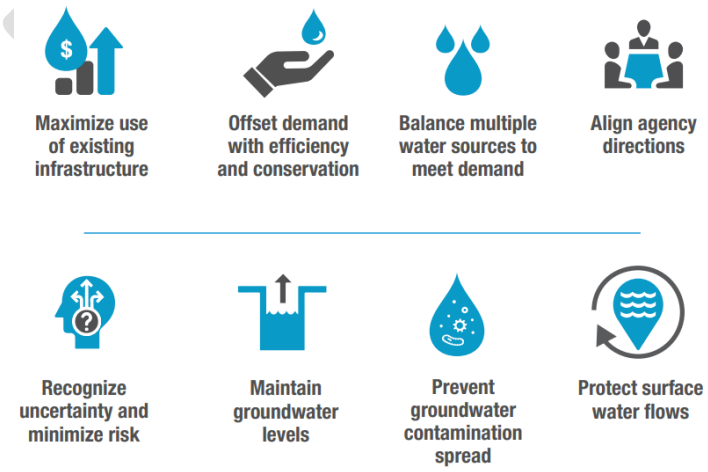
1.5 Vision for the region's water supplies

Sustainable water supply for the entire region now and in the future means:

- All people have access to clean, safe, affordable water and wastewater services.
- All water and wastewater systems have sufficient funding to provide affordable services.
- All communities share in the economic, social, and environmental benefits of investment in water systems.

Sustainable water supply practices:

Commented [RL1]: How can and should these be measured both as a region and in different subregions?



1.6 Regional goals for water supply

1. *Water Supply Infrastructure.* Communities can act quickly, thoughtfully, and equitably to address aging infrastructure, contamination, changing groundwater conditions, changing water demand, and financial challenges.
2. *Water Quality.* Communities have the resources they need to provide a safe water supply. A shared process is developed that allows communities, water utilities, and regulators to respond in a more coordinated and effective way to both contaminants of emerging concern and existing contamination.
3. *Land Use and Water Supply Connections.* Public water suppliers, land use planners, and developers have tools and are empowered to work together to guide and support development in ways that balance communities' economic needs while protecting the quantity and quality of source waters that are vital to the region's communities.
4. *Understand and Manage Groundwater and Surface Water Interactions.* Water resource managers, community planners, and leaders understand how groundwater and surface water interact and how those interactions impact water supply sustainability.

Commented [RL2]: How can and should these be measured both as a region and in different subregions?

1.7 Regional objectives

The following objectives are achievable results that can advance the goals above. Benchmarks can be set and tracked for the region and by subregion, to keep attention and resources focused on planned work and adapt to improve outcomes. A culture of continuous improvement increases the likelihood that plan updates incorporate lessons learned, knowledge is being shared among staff, and procedures are effective and up to date.

Commented [RL3]: How can and should these be measured both as a region and in different subregions?

Collaboration is enhanced and capacity is increased

- Leaders are engaged through MAWSAC, TAC, subregional work groups and other venues
- Technical experts are connected to plan and project scoping and deliverables
- Capacity is increased through outreach, training, and career development opportunities

The region's water supply system and its subregional components is assessed

- The region's water supply system is documented at a multi-community scale and information gaps are filled
- Technical studies provide up-to-date information about water supply hazards across the region
- Subregional and local supply plans include an evaluation of water supply risks, based on known hazards

Mitigation measures are evaluated

- Existing and potential mitigation measures for priority risks are identified and evaluated through technical studies
- Risks are reassessed and prioritized risks, after taking into consideration the effectiveness of mitigation measures.

Practices to reduce risk are planned for and implemented

- Work is guided by subregional water supply groups, consistent with regional policies and state regulation
- Technical assistance by Council and partners is targeted to support MAWSAC and subregional goals
- Coordinated plan for emergency response linked to increased funding, to better prepare for the unexpected
- Updated comprehensive plans, budgets, and monitoring programs to support both economical growth and the implementation of risk reductions practices

Potential appendices

- Summary of the process to develop and update the master water supply plan, including stakeholder engagement
- Technical appendices