Overview of Draft Metro Area Water Supply Plan, a part of the 2050 Water Policy Plan

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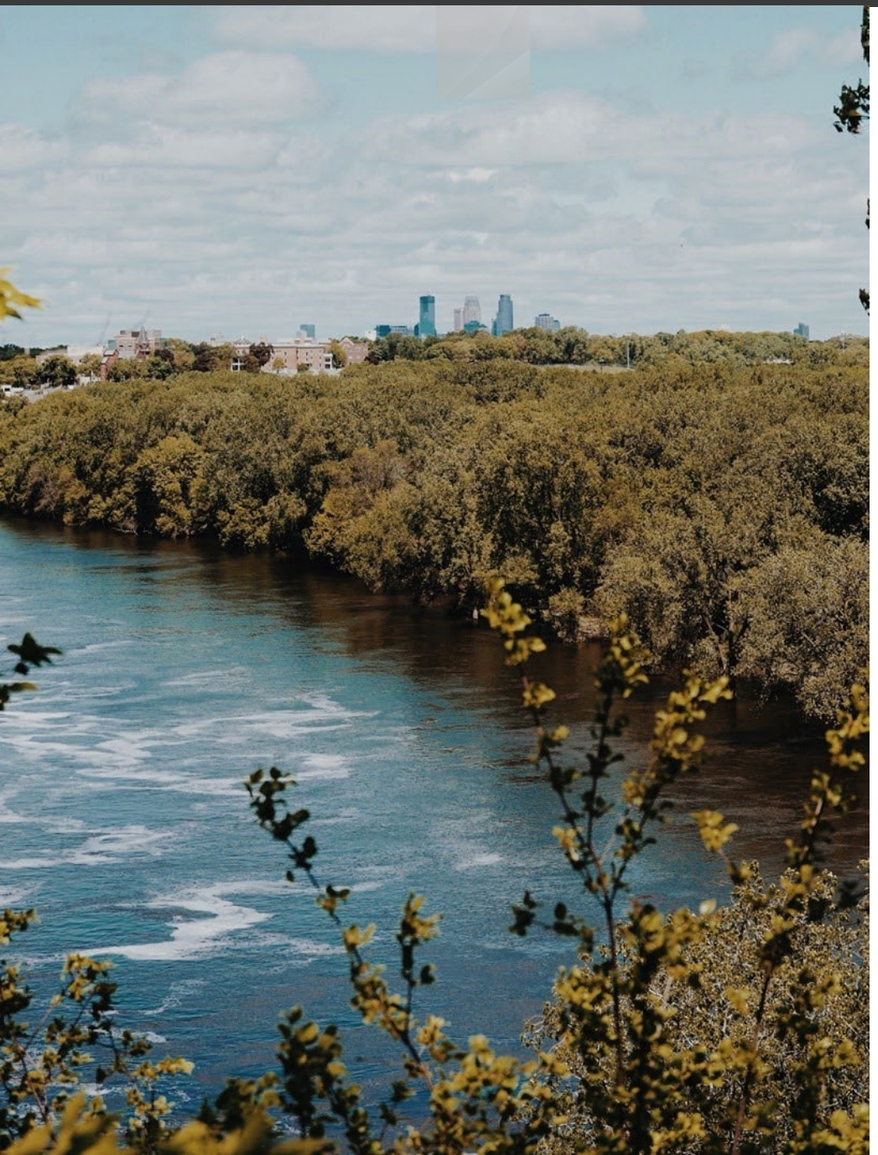
May 15, 2024

METROPOLITAN COUNCIL

Purpose



Prepare for MAWSAC action on July 10

MAWSAC and TAC review draft plan content

- What changes needed?
- What should TAC explore further and report back to MAWSAC?

Start to explore what technical assistance would best support local plan updates and implementation

Contents

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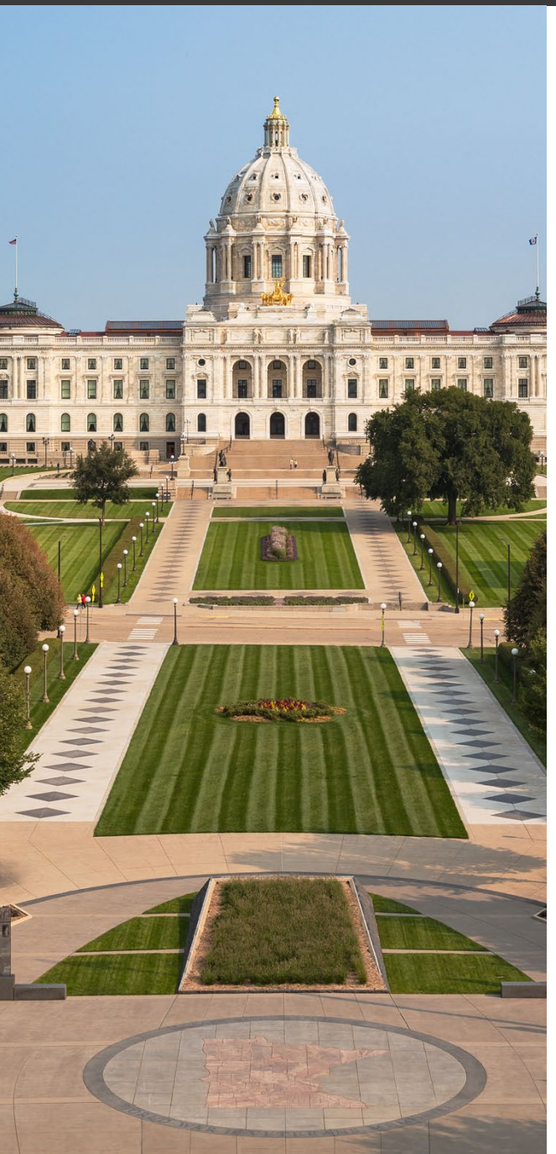
Statutory requirements for metro area water supply planning



Minnesota Statute 473.1565

The Metropolitan Council must carry out planning activities addressing the water supply needs of the metropolitan area

A. Provide technical information

B. Make recommendations about roles, streamlining, and funding

C. Develop a metropolitan area water supply plan that:

- **Provides guidance for local water supply systems and future regional investments**
- **Emphasizes conservation, interjurisdictional cooperation, and long-term sustainability**
- **Addresses the reliability, security, and cost-effectiveness of the metropolitan area water supply and its local and subregional components**

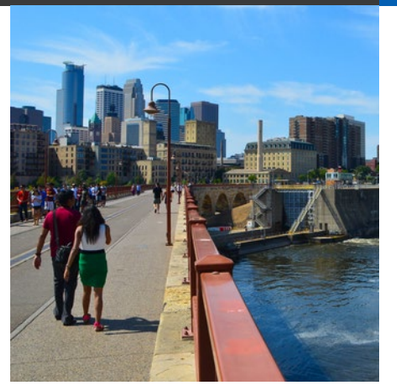
The plan must be prepared in cooperation with and subject to the approval of MAWSAC. TAC will inform MAWSAC.

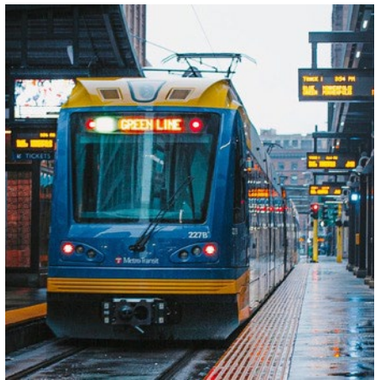
The Council must consider the work and recommendations of MAWSAC when it prepares its regional development framework.

The Metro Area Water Supply Plan is supported by the Water Policy Plan

Water Policy Plan Purpose

- Met Council is developing the 2050 Water Policy Plan, which **focuses on ensuring sustainable water resources in the region**. It is a part of and informed by the Regional Development Guide.
- The WPP provides a **framework for integrative water planning** (wastewater, water supply, and water resources) the Metro Area Water Supply Plan, and the Wastewater System Plan.
- It contains water **policies, strategies, and actions** for both the Met Council and our 180+ local governments within the seven-county region.
- WPP policies **will commit the Council** to take action in the areas of long-range visioning and planning, regional system investments, facility management, technical assistance, research and assessment, and partnerships.





Key roles in regional water supply planning

Met Council *Plan for water supply*	MAWSAC *Assist the Council with water supply planning*	TAC *Inform MAWSAC (technical)*
Regional Development Guide Develops and approves the plan	**Regional Development Guide** Recommends water supply-related content (ex: vision, goals)	**Regional Development Guide** Recommends water supply-related content (ex: vision, goals)
Water Resources Policy Plan Develops and approves the plan	**Water Resources Policy Plan** Involved with the development of water supply-related content (policy focus)	**Water Resources Policy Plan** Involved with the development of water supply-related content (technical focus)
Metro Area Water Supply Plan Adopts the plan and collaborates to support its implementation *The Council is NOT a water supplier or regulatory agency. We do not consider water supply a regional system.*	**Metro Area Water Supply Plan** Approves the plan and recommends Met Council adoption	**Metro Area Water Supply Plan** Recommends MAWSAC approve the plan

Metro Area Water Supply Plan draft content

Part 1
Desired Outcomes

- Rational approach to regional water supply planning
- Regional desired outcomes with 2050 water supplies and regional goals in mind

Part 2
Regional Commitments

- Connection to regional policies in the Water Policy Plan with more detail around water supply-related actions

Part 3
Subregional Info

- Subregional information related to water, land use, and other factors
- Key water supply issues, risks and opportunities identified by stakeholders
- Implementation needs (high-level)

Part 4
Regional Dashboard Measures

- Regional summary of information that provides context for water supply planning, describes the current state of sustainable water supply practices, and supports the development of measurable and trackable regional targets

Where draft content comes from

Front matter	Ongoing input from MAWSAC, TAC, WAG and Met Council staff
Desired outcomes	Input from MAWSAC (Aug 2023), revised to support subregional input (Fall 2023 & Winter 2024)
Regional commitments	2022 MAWSAC report, revised to support input from subregional and TAC and MAWSAC engagement in 2024
Dashboard measures	March 2023 subregional workshop, MAWSAC/TAC input at meetings, input from Council research experts
Subregional chapters	Subregional engagement in late 2023 and early 2024
Appx: Water demand	MAWSAC and TAC input to method applied to forecasts (Oct 2023, Jan 2024), input from Council research experts
Appx: Local plan review	Ongoing collaboration with DNR and MDH, input from subregional stakeholders (Feb 2024) and Council staff

MAWSAC/TAC input received after March and April 2024 meetings

Annika Bankston (MAWSAC) review of Central subregional chapter

- Suggested revisions to introductory “Definition of success”
- Regarding “Asset Management and Investment” it would be helpful to be specific about sources of funding that can be leveraged or secured.
- Suggested revision to the “System Assessment” action to “plan for need to upsize current water treatment plants…” to better reflect investment needs: “Identify best available technologies and provide region-specific life cycle cost estimates for new treatment technologies to handle emerging contaminants”
- Recommend replacing “pollinator friendly” with “drought resistant”

Jeff Berg (MAWSAC) review of East and Southeast subregional chapters

- No major changes needed for public review

Valerie Neppl (MAWSAC) review of subregional chapters

- No major changes needed for public review

What successful water supply planning looks like (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. Communities and their water supply are resilient to climate change and other impacts, because there is sufficient funding and other resources for water supply --infrastructure, staff, new technology, etc.

- *Water Quality.* Communities have the resources they need to provide clean, safe water for everyone. A shared process is developed that allows communities, water utilities, and regulators to understand and respond in a more coordinated and effective way to both contaminants of emerging concern and existing contamination.

What successful water supply planning looks like (2)

- *Land Use and Water Supply Connections.* Public water suppliers, land use planners, and developers have tools, funding and authority to work together – supported by aligned agency directions – so that growth is responsible and supported by reliable and adequate water supply. Development is done in ways that balance communities' economic needs while protecting the quantity and quality of source waters that are vital to the region's communities.

- *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.

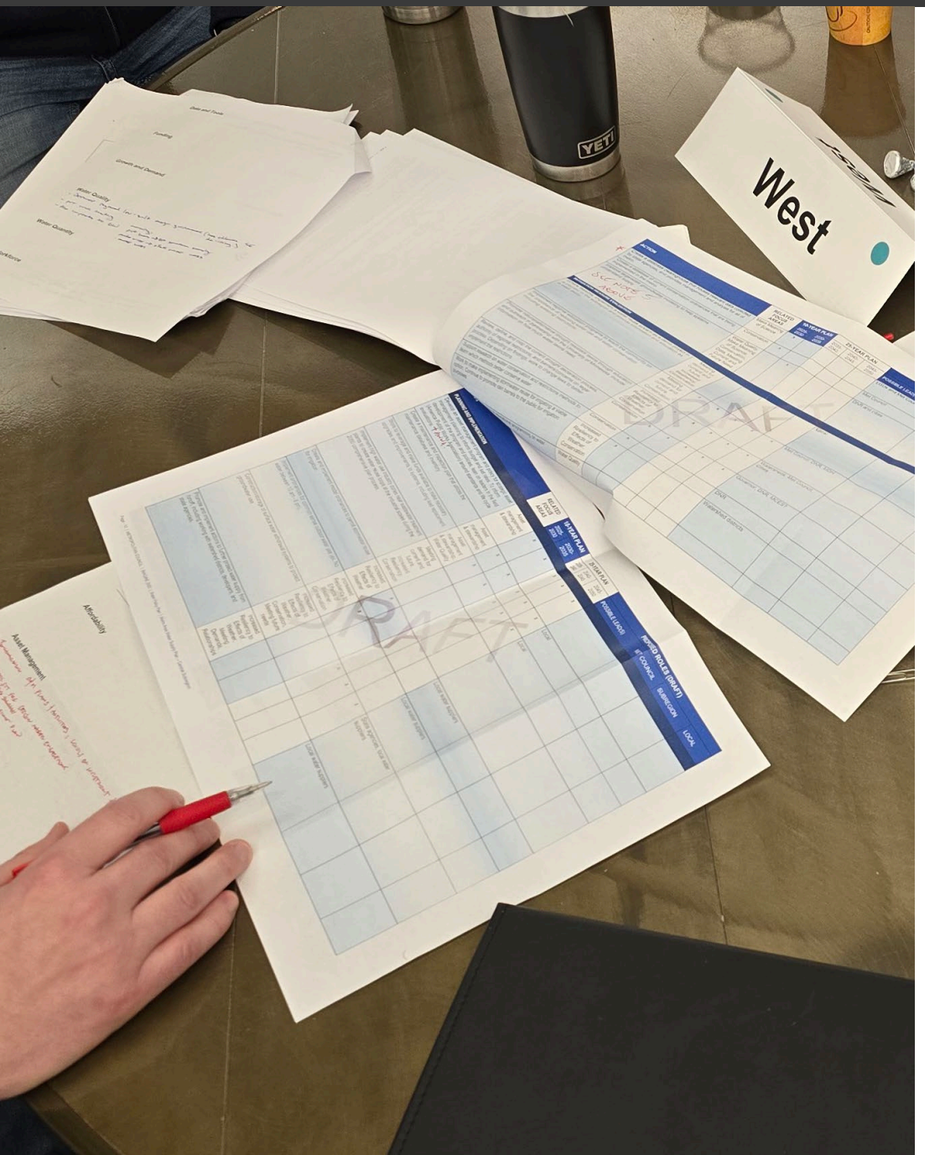
What successful water supply planning looks like (3)

- *Sustainable Water Quantity.* Communities and water agencies understand the sustainable limits of groundwater and surface water sources and make plans that sustain an adequate supply - for people, the economy, the function of local ecosystems. Agency directions are aligned and support local plans to supply demand that exceeds sustainable withdrawal rates using the most feasible combination of alternative groundwater or surface water sources, conservation, reclaimed wastewater and stormwater reuse.

To achieve success, stakeholders identified the following as necessary conditions:

- All the voices are heard as community plans are made and implemented
- Public trust and understanding are enhanced, and a culture shift has occurred
- Collaborative and proactive approaches are taken within and across communities
- The policy framework is streamlined and improved
- State and regional support for planning and plan implementation is increased

Regional commitments to support success



- Convene leaders (MAWSAC, TAC, others)
- Convening technical work groups for plans and projects
- Public outreach and awareness campaign
- Inter-organizational trainings (ex: asset management)
- Legislative initiatives
- Monitoring, data, and assessment for water supply
- Technical studies of mitigation measures
- Convene subregional groups to support local water supply planning and implementation
- Technical assistance (guidance and incentives)
- Support frameworks for inter-agency coordination
- Advocate for increased state and federal funding
- Collaboration on emergency response planning
- Tracking performance

“Water Supply Planning” involves more than water suppliers

- **Met Council** – support for collaborative long-range planning and implementation
- **Communities** – plan for local (re)development and related water supply, in the context of changing neighbors’ redevelopment and state and federal regulations
- **State agencies** – coordinated update and promotion of regulatory guidance, incentives, and info
- **Counties** – plan for water resources and guide land use, in the context of different local needs
- **Watershed organizations** –plan for and implement strategies to protect both ground and surface water resources
- **Soil and Water Conservation Districts** - build local capacity to plan for water resources
- **Non-municipal well owners** – develop, maintain, and use wells for a range of purposes
- **Federal and tribes**
- **Professional and nonprofit organizations**
- **Academics**
- **Farmers**
- **Water drinkers and other users—all of us**

Subregional asks of Met Council

- Research
- Technical assistance
- Financial assistance
- Convening for governmental collaboration
    - Agencies
    - Subregions
    - Water supply and land use planning
- Lobbying
- Coordinating messaging (education, workforce)
- Demonstration

Connecting regional goals, the WPP, the MWSP, and local water supply plans

Regional Goal	Our region is dynamic and resilient
Water Policy Plan	
Objective	The region's water, ecosystems, water services, and infrastructure are resilient to current and future climate challenges.
Policy	Integrated water
Action	Provide technical information to watershed organizations, city planners, and local water providers on practices to use and incorporate into their operations or planning efforts that protect water quality and quantity
Metro Area Water Supply Plan	
Regional approach	Met Council will develop and provide technical assistance (guidance and incentives) to local partners to advance progress on local plan implementation that aligns with regional water supply priorities such as model ordinances for water reuse and water efficient landscaping and low flow appliances in new developments, model cost structures, expanding Met Council incentives for water efficiency beyond 2024 programming.
Subregional approach	*From the Southwest:* Support building and development codes that prioritize water efficiency, such as ordinances to permit stormwater reuse for irrigation
Local Plans	
Local plan content	Reference adopted ordinances to support demand reduction
Dashboard Measures	Water use over time (region, subregion, local)

Regional context

Setting	Challenges	Opportunities	Roles	Measures
Recognizing key elements of the region's 'waterscape' helps identify upstream issues and opportunities, downstream consequences and benefits, and relationships among water stakeholders and agencies. It is useful to keep all these elements in mind in conversations about water supply policy and planning	Everything that happens on land impacts water, and all water is connected. Recognizing the upstream and downstream connections among water supply hazards helps to identify the biggest risks and focus monitoring and mitigation measures.	Successful water supply planning includes supporting opportunities throughout the region's 'waterscape' to implement practices to monitor, protect, and restore natural and built water resources.	Everyone – agencies, business, individuals – has a responsibility for ensuring sustainable water supply planning. Collaborative actions are needed at the individual level, the local government level, the regional level, and the state and federal levels.	Regional indicators provide context and build our shared understanding of past and current conditions. Tracking these indicators helps guide the regional water supply planning work and assess progress.

Considering measures to track regional progress

For all = what investments, actions, outcomes?	**Collaborate and build capacity**	**Assess the region's water supplies**	**Evaluate hazards and risks**	**Evaluate mitigation measures**
Climate	Subregional work group activity Technical assistance for local planners	Minneapolis/St. Paul climate	Drought monitor River monitor (flood)	Community awareness of drought and flood conditions (web hits) Local controls for water conservation (ordinances, rates, etc.) Mutual aid agreements and interconnections Tree canopy
Landscapes and sources	Subregional work group activity Technical assistance for local planners	Land use and associated contaminants # of building permits (density/distribution) Groundwater quality (MPCA, MDA) Surface water quality Sustainable limit of sources (use MC estimate?) Recharge estimates Groundwater levels	Land use change that increases contaminants in DWMSAs Widespread gw declines and near sensitive resources Well interference, conflicts Emerging sw & gw quality issues, trends Increased # priority waters on the impaired waters list Impervious surfaces limit recharge, increase runoff	Local controls for source water protection and conservation Source water protection BMP grants in metro DWMSAs Acres and practices in the Agricultural Preserves program Contaminant site clean up through Tax Base Revitalization Account
Local water supply infrastructure	Number of community rate payer assistance programs Customer confidence and satisfaction (Survey?) Interconnections and mutual aide agreements Number of licensed water operators Subregional work group activity Technical assistance for local planners	Firm capacity of existing infrastructure (MDH) Miles of pipe installed/replaced (how to document?) Current treatment in place (MDH) Number public and private wells drilled (MWI)	Firm capacity versus future demand PWS water quality violations Age of infrastructure(how to document?) Unused wells in DWSMAs	Interconnections and mutual aide agreements for resilient supply Funding awarded for treatment, addressing lead Reuse infrastructure (how to document?) Number of unused wells sealed (MWI)
Water users	Customer confidence and satisfaction (Survey?) Number of licensed water operators Subregional work group activity Technical assistance for local planners	Residential, industrial, business use (current and future) Total Per capita water use Total water use of gw versus sw sources Water rates	Well interference Ratio of indoor versus outdoor water use or max day pumping Use compared to capacity and to estimated sustainable limits	Water efficiency grants/activities funded (grant program reporting) Local controls for water conservation (ordinances, rates, etc.) Setting and tracking progress against regional goal (ex: 90 gpcd)
Local wastewater infrastructure	Number of licensed wastewater operators Subregional work group activity Technical assistance for local planners	I & I estimates (MCES data)	Wastewater spills; actions leading to MPCA permit enforcement	Funding awarded for treatment
Regional wastewater infrastructure	Task forces established with local stakeholders Subregional work group activity Technical assistance for local planners	Volume of water treated at regional facilities (MCES data) Regional system condition (MCES data)	Wastewater spills; actions leading to MPCA permit enforcement	Volume of water recharging groundwater (MCES data)

IMAGINE 2050

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Local plan expectations and support

How to best support different community water supply situations?

1. Independent municipal systems with a permit – 87 communities
2. Municipal system with permit supplying neighbor(s) – 10 communities
3. Municipal system with permit + purchasing from neighbor(s) – 4 communities
4. Municipal system purchasing from neighbor(s) – 13 communities
5. Neighbor(s) provide municipal service and source – 8 communities
6. Neighbor(s) provide a limited amount water – 2 communities
7. Non-municipal wells – 61 communities
8. Non-municipal wells, but planning for a municipal system – 1 community

Water demand projections (1/2)

Method

Total Annual Water Demand (Year) =

Projected Municipal Water Use = [Projected Water Service Population]
x [2013-2022 Average Total Per Capita Water Use]
with a Variable Range (+/-10 and +/-20%)
+
Projected Private High Capacity Water Use = [2022 Total Water Use]
x [2013-2022 Average Annual Percent Increase Water Use] x Years
with a Variable Range (+/-10 and +/-20%)

Water demand projections (2/2)

Variable range analysis

Use a variable range of +/-10% when looking at the combined metro region water use as a whole.

Use a variable range of +/-20% when thinking about water use for individual communities to account for extreme weather patterns and rapid and unforeseen industrial, residential, and commercial growth for water system planning and adjusting water utility rates.

Collaborative planning

Resources and other support Met Council can provide

- Continuation of subregional engagement
  - Topic-based meetings to explore specific challenges in more detail
  - Multi-community planning workshops in advance of 2028
- PlanIt workshops
  - Focused workshops for challenges or opportunities with region-wide relevance
  - Examples of past workshops: https://metrocouncil.org/Handbook/PlanIt/Workshops.aspx
- Site visits to support project-based peer-to-peer learning
- Compilations of model ordinances, best practices, case studies etc.

Examples of ordinances, local controls

We don’t need to reinvent the wheel

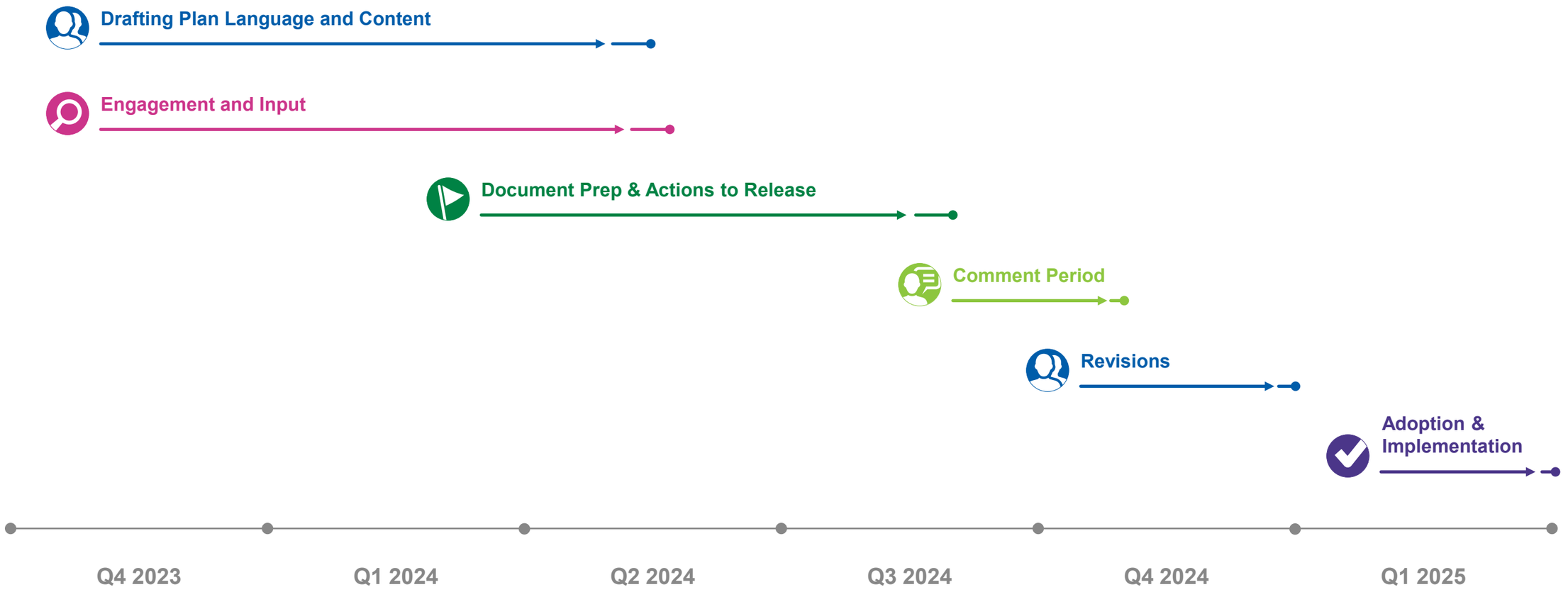
Summer intern:

- Review current state of local ordinances and programs to assess communities’:
  - Authority to issue water deficiency orders or other water supply emergency declarations
  - Required water efficiency practices such as watering restrictions or landscaping
  - Ability to support more resilient and voluntary landscaping practices
  - Restriction or promotion of using private wells or connections to neighbors
  - Zoning requirements related to source water protection
  - Support structures of prioritizing for environmental justice and water equity
- Research model ordinances and venues for communicating about them.
  - Identify examples of model ordinances or programs
  - Identify successful ways of promoting them

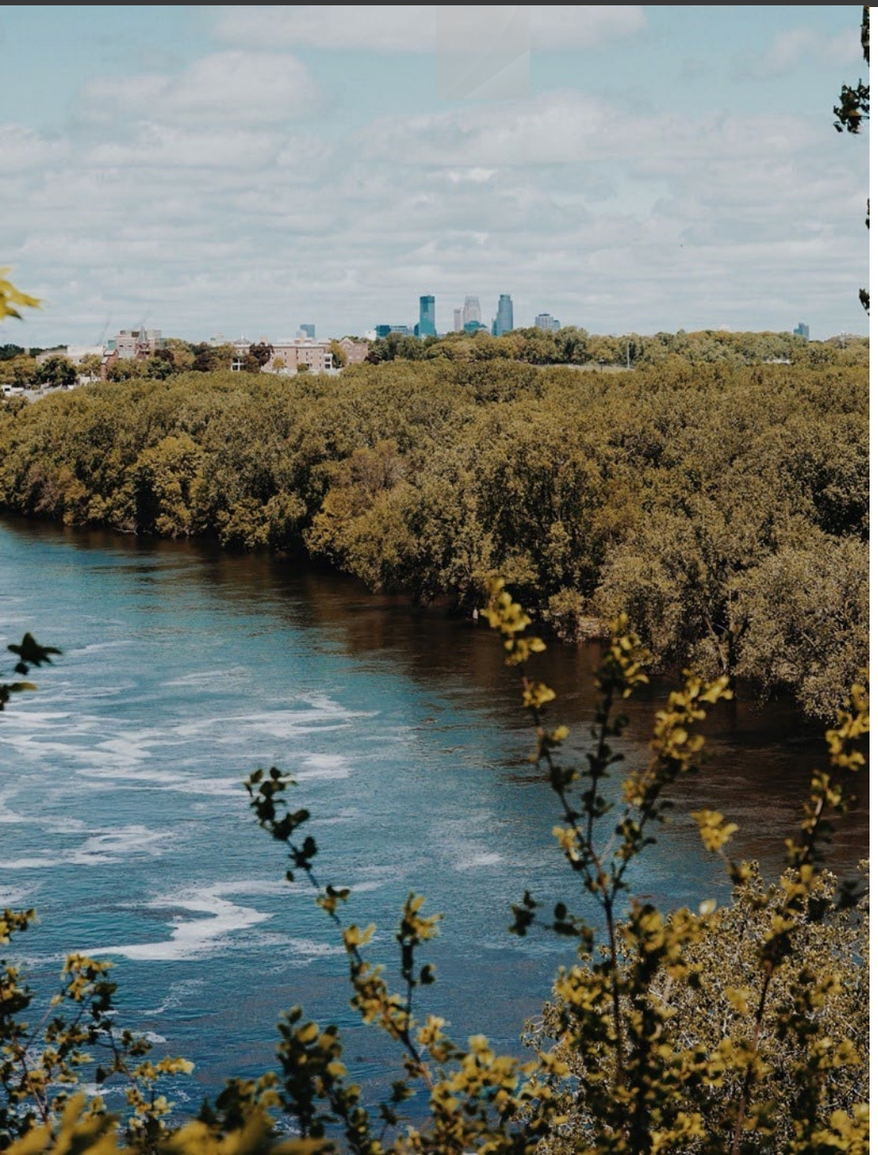
Tentative upcoming committee actions

June 18, 2024	TAC recommends that MAWSAC supports the release of the draft MWSP with the 2050 WPP for public comment
July 10, 2024	MAWSAC recommends that the Met Council Environment Committee supports the release of the draft MWSP with the 2050 WPP for public comment
July 23, 2024	Met Council Environment Committee recommends that the full Council releases the draft 2050 WPP (with the draft MWSP) and the rest of Imagine 2050 for public comment
August 15, 2024	Met Council releases the complete Imagine 2050 for public comment
October 7, 2024	*Public comment period closes. A public hearing is tentatively planned for late September.*
October 23, 2024	TAC and MAWSAC review public comments and advise on responses

WPP timeline



Recap



Committee input to draft plan content and next steps

MAWSAC and TAC review draft plan content

- What changes needed?
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Start to explore what technical assistance would best support local plan updates and implementation

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