Metro Area Water Supply Plan

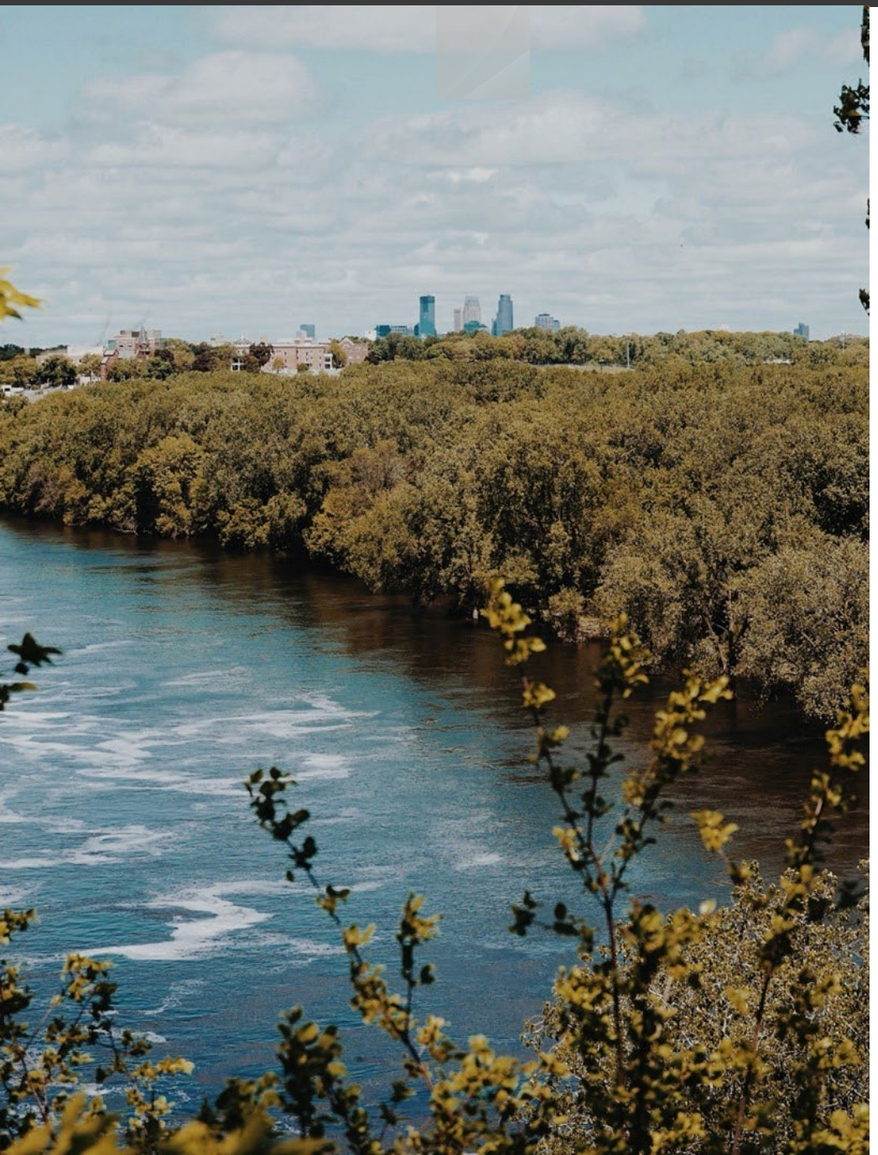
Current status and proposed revisions to support release for public comment

METROPOLITAN COUNCIL

Metro Area Water Supply Advisory Committee | July 10, 2024

Lanya Ross, Claudia Guillot-Wallace, Greg Johnson, Jen Kader

Purpose



Support release for public comment

Consider changes based on issues identified at the May 15, 2024 joint MAWSAC-TAC meeting, by email after that meeting, and discussed by TAC on June 18, 2024:

- Definitions of key water supply planning terms
- Definition of water supply sustainability
- ‘SMART’ goals
- Editorial changes

Approve draft Metro Water Supply Plan release for public comment and recommend that the Met Council Environment Committee recommend its release with the 2050 Water Policy Plan for public comment.

MAWSAC and TAC comments shared with staff prior to this meeting

Valerie Neppl (MAWSAC)

Include a map of water supply system types. Update/improve figures. Include performance measures related to the impact of current programs.

Ellen Considine (MAWSAC)

Revisions to Water Policy Plan content to enhance discussion of water services in the ecosystem services categories and better recognizes water conservation and water use and permitting. Encouragement to expand desired outcomes of Workforce policy to include cultivating a welcoming work culture that attracts and incentivizes diverse candidate pools

Scott Anderson (TAC)

Revise action in the West Metro subregion plan to discuss PFAS treatment more broadly instead of specifying carbon filters or exploring a class action suit. There should not be any reference to lawsuits or legal action at the city-level, as this will be very specific to individual communities with unknown outcomes. Potential local legal remedies should not be considered as alternatives in a regional planning document.

Changes between joint MAWSAC-TAC meeting on May 15, 2024 and TAC meeting on June 18, 2024

New content added:

- Funding
- Introduction to subregional action plans
- Version 1 demand projections

Editorial changes throughout

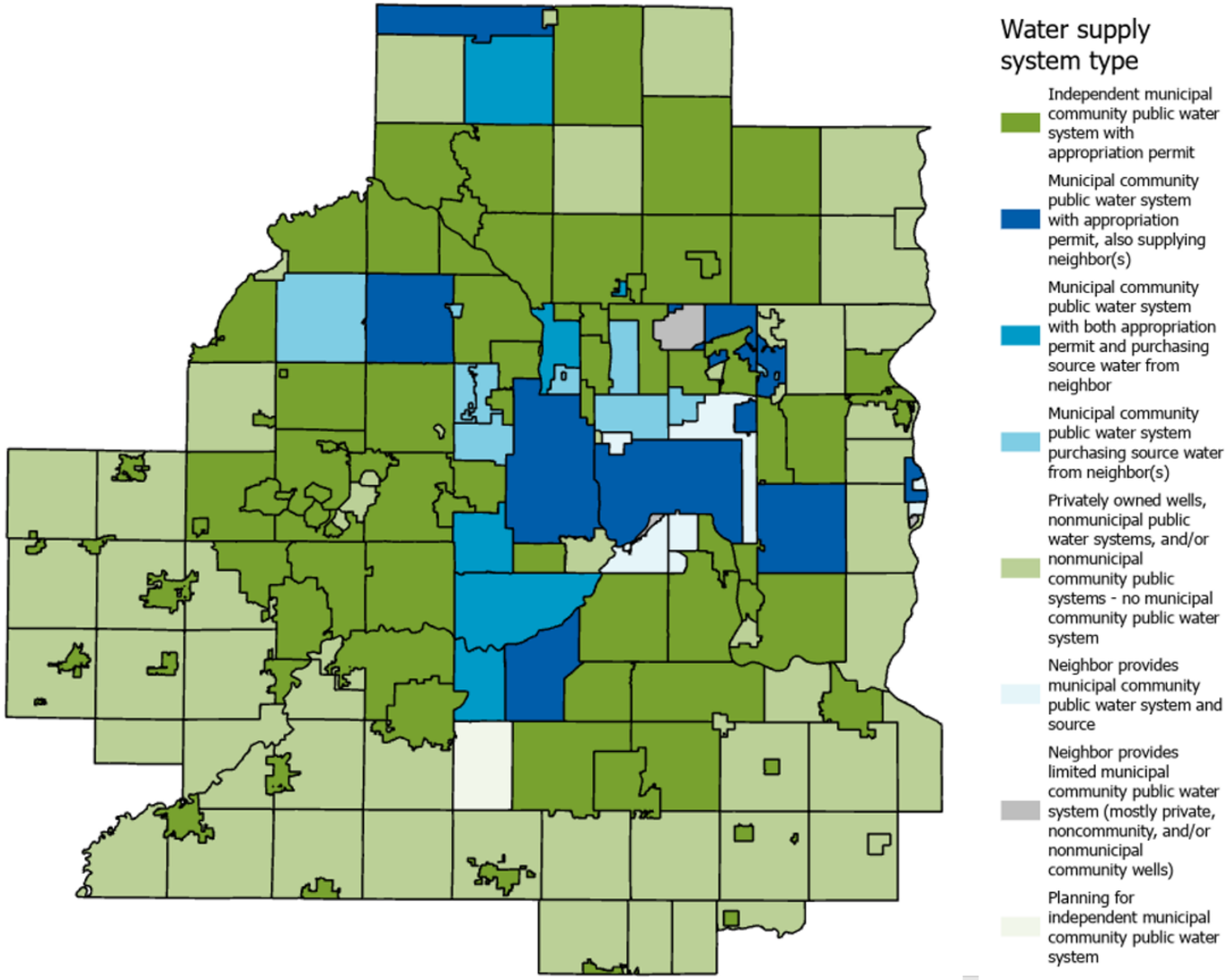
TAC-recommended revisions in response to May joint meeting:

- Definition of water supply sustainability
- 'SMART' goals for definitions of success
- Definitions for key water supply terms

COMMITTEE REVIEW OF CHANGES

New content

- Funding
- Introduction to subregional action plan chapters
- Map of water supply system types (right)



Water supply sustainability definition

TAC-recommended revision:

Water use is sustainable when the use does not harm ecosystems, degrade water quality and quantity, or compromise the ability of future generations to meet their water resource requirements.

The region's water supply may be considered sustainable when:

- Water use does not exceed the estimated limits of available sources, taking into account:
  - Impacts to aquifer levels (such as reducing water levels beyond the reach of public water supplies and privately-owned wells),
  - Impacts to surface waters, including diversions of groundwater that affect them, to maintain flows and water levels, and
  - Impacts to groundwater flow directions in areas where groundwater contamination has, or may, result in risks to public health.
- Planned land use and related water demand is consistent with long-term design capacity for water supply infrastructure, when that design capacity is based on sustainable sources.
- Individual water use supports sustainability and appropriate mechanisms are in-place to limit or forego nonessential water use during emergencies.
- Risk to infrastructure and public health is managed through ongoing assessment and investment.

Water Supply Infrastructure ‘SMART’ goals

TAC-recommended revision:

Public water suppliers can act quickly, be well informed about their decisions, and equitably address aging infrastructure, contamination, changing water availability, 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 such as infrastructure, staff, new technology, etc.

Within the next ten years:

- **All communities have incorporated local controls to enhance water supply infrastructure resilience into local comprehensive planning and implementation.**
- **All public water suppliers have identified and have access to alternative short- and long-term water sources in case of disruption or limitations of their primary sources.**
- **Public and privately-owned water system owners collaborate more frequently with each other and agencies on asset management planning, emergency response, efficiency programs, source water protection, and other needs.**
- **Capital planning includes a minimum 10-year spending projections and factor in lifecycle estimates for major capital assets.**
- **Treatment and distribution infrastructure renewal is maintained with identified budgets and revenue sources.**

Water Quality ‘SMART’ goals

TAC recommendation

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.

- **Water suppliers continue to meet water quality standards.**
- **There is an increase in investment for public water suppliers and privately-owned well users to treat water.**

Land Use and Water Supply Connections ‘SMART’ goal

TAC recommendation

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.

- **All communities have incorporated water efficiency and source water protection actions into their comprehensive plan updates and local implementation, so that water suppliers can support "more with less".**

Understanding and Managing Groundwater and Surface Water Interactions ‘SMART’ goals

TAC recommendation

Water resource managers, community planners, and leaders understand how groundwater and surface water interact and how those interactions impact water supply sustainability.

- **We understand as a region where water supply-related challenges from groundwater-surface water interaction take place.**
- **Groundwater and surface water source interactions are adequately monitored using digital sensors and artificial intelligence (AI) across the region, and data inform impact analyses.**
- **There is an increase in the number of local controls or practices adopted by communities to mitigate water supply-related challenges posed by groundwater and surface water interactions.**

Sustainable Water Quantity ‘SMART’ goals

TAC recommendation

Communities and water agencies have a common understanding of the sustainable limits of groundwater and surface water sources and work together to collectively make plans that sustain an adequate supply – for people, the economy, and 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.

- **As a region, the average indoor and outdoor water use per person declines.**
- **There is an increase in the number of water reuse installations, leading to a corresponding decrease in drinking water use for non-essential purposes.**
- **The percentage of acres of new and redevelopment that incorporate turf grass alternatives increases.**

Changes from TAC input on June 18, 2024 and in follow-up survey (3)

Shared definitions of key water supply planning terms

Water supply system terms use MDH definitions, with the addition of **privately-owned wells** (including wells used for residential, business, ag, and other purposes)

Terms used in water demand projection methodology:

- **Water pumped** – water withdrawn (pumped) from sources
- **Population served** – number of people who are served by the community's public water supply system. Includes the number of people in the community who are connected to the public water supply system, as well as people in neighboring communities who use water supplied by the community's public water supply system. It should not include residents in the community who are not connected to the public water supply system or get their water or get their water from a neighboring water supply system.

Appendix: Reflecting work of '3 Plans' effort in plan review expectations

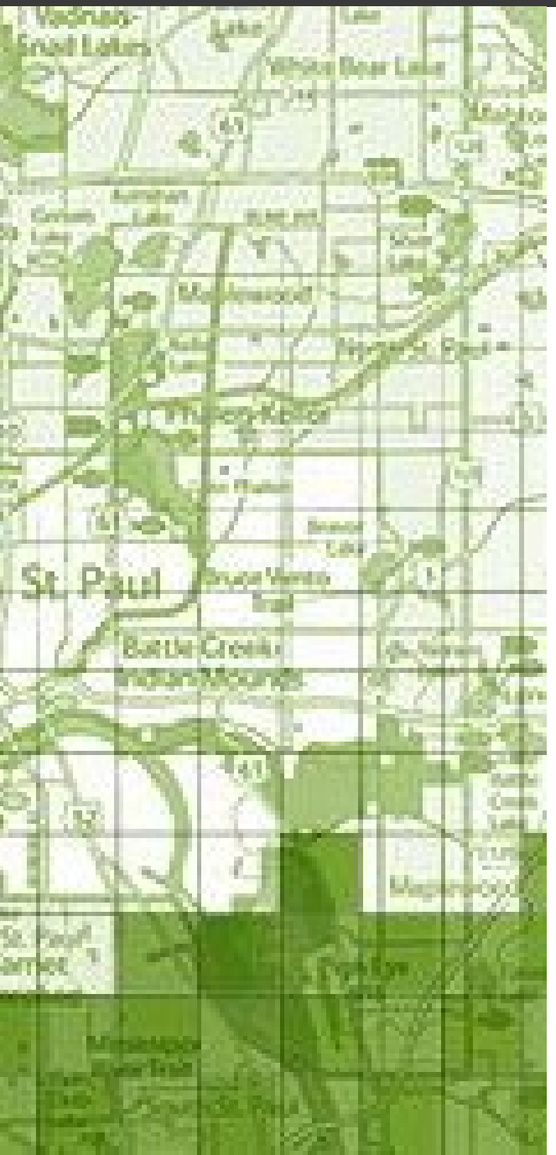
Plan expectations address water supply plan requirements of Minnesota statutes, sections 473.859 and 103G.261 and Minnesota administrative rules 4720.5280

While expectations are similar to those in the last round of plan updates, **supporting guidance** is being designed more collaboratively with more detail and clarity

Suggested plan elements strengthen connections between comprehensive planning and source water protection planning, with protections for privately-owned wells

Agency commitments to provide more **technical assistance** early in the process, leveraging subregional engagement and resources like Met Council's Local Planning Assistance programming

Summer intern update: Met Council guidance for local plan updates and review

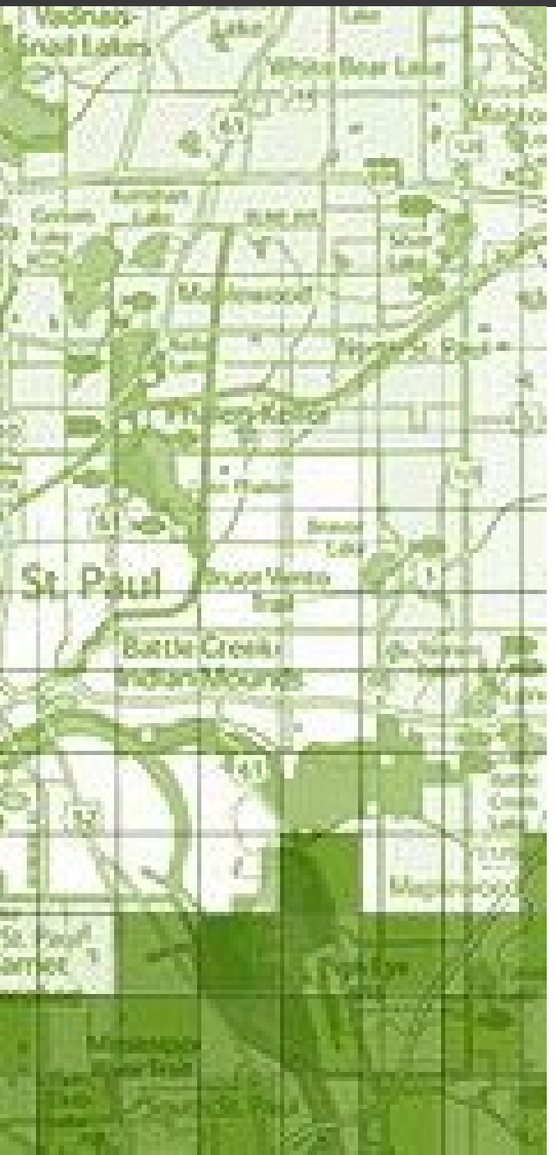


Examples of local controls to support water efficiency

Purpose: Support local actions that advance our shared goal of having clean water for future generations.

Audience: Communities who are seeking guidance surrounding water supply, planning and policy as they update local comprehensive plans and related water supply plans.

Summer intern update: Met Council guidance for local plan updates and review (cont.)



Examples of local controls to support water efficiency

Method:

- For each community designation in each county, we will review local controls and add examples to an Excel database.
- Review MN local water supply plan templates for water supply planning controls and identify possible existing gaps within these controls.
- Conduct literature review and research into local, statewide, and national guidance on good local controls including model ordinances.

Deliverables:

- Excel database of local controls examples
- Report summarizing findings and descripting methodology
- Graphics (maps, graphs)

Appendix: Water Demand Projections – Version 1

Purpose: Support Regional and Subregional Planning

The Met Council water demand projections are intended to:

1. Provide guidance for communities as they develop content for the water supply plan section of their comprehensive plan.
2. Help Met Council planners and policy makers, state agencies, and community planners to plan for future growth and address regional issues. These projections can help us understand where future water demand might bump up against, or exceed existing capacity - or where there is plenty of capacity to support growth.
3. Provide subregional and regional water demand data for Met Council's groundwater modeling projects, surface water analyses, and other studies.
4. Compare wastewater discharge volumes from each community to wintertime water use.
5. Estimate projected water use for each of Met Council's wastewater treatment plant sewersheds.
6. Review impacts from employment water demands.

Local Water Demand Projection Method

Total Annual Water Pumped (Year) =

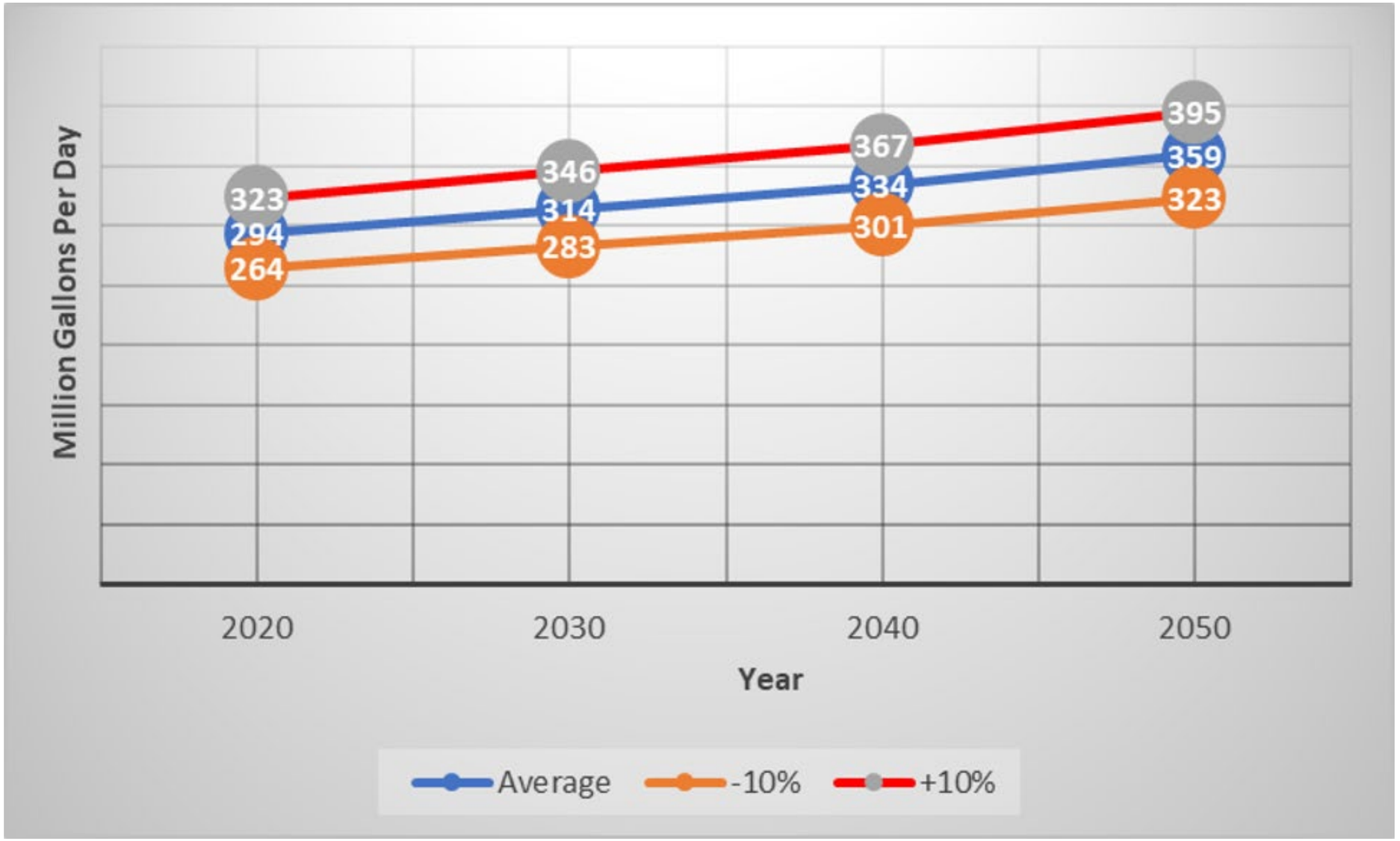
Projected Municipal Water Pumped = [Projected Population Served]
x [2013-2022 Average Total Water Pumped Per Person Per Day]
with a Variable Range (+/-10 and +/-20%)
+
Projected Private High Capacity Water Use = [2022 Total Water Pumped]
x [2013-2022 Average Annual Percent Increase Water Use] x Years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

Projected Municipal Water Pumped by Community – Version 1

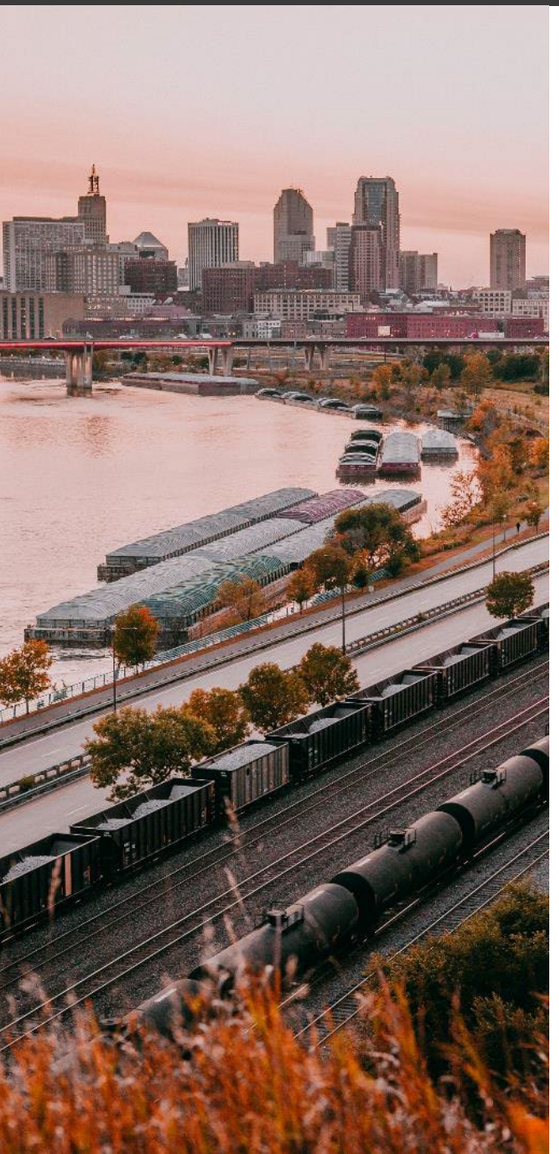
2030, 2040, and 2050 Municipal Water Demand Projections - Version 1

	2013-2022 Average Individual Community TGPCD	2030 Projected Service Population	2030 Projected Avg. Daily Water Use (Million Gallons/Day)	-10%	+10%	-20%	+20%	2040 Projected Service Population	2040 Projected Avg. Daily Water Use (Million Gallons/Day)	-10%	+10%	-20%	+20%	2050 Projected Service Population	2050 Projected Avg. Daily Water Use (Million Gallons/Day)	-10%	+10%	-20%	+20%
Andover	127.19	23,711	3.016	2.714	3.317	2.413	3.619	25,091	3.191	2.872	3.510	2.553	3.830	27,287	3.471	3.124	3.818	2.777	4.165
Anoka	123.50	21,732	2.684	2.416	2.952	2.147	3.221	22,146	2.735	2.462	3.009	2.188	3.282	23,422	2.893	2.603	3.182	2.314	3.471
Apple Valley	112.12	56,040	6.283	5.655	6.912	5.027	7.540	58,180	6.523	5.871	7.175	5.219	7.828	60,351	6.767	6.090	7.443	5.413	8.120
Bayport	114.64	2,559	0.293	0.264	0.323	0.235	0.352	2,795	0.320	0.288	0.352	0.256	0.385	3,000	0.344	0.310	0.378	0.275	0.413
Belle Plaine	91.59	8,630	0.790	0.711	0.869	0.632	0.948	10,139	0.929	0.836	1.021	0.743	1.114	14,127	1.294	1.164	1.423	1.035	1.553
Bloomington	103.69	72,247	7.491	6.742	8.240	5.993	8.990	76,420	7.924	7.132	8.716	6.339	9.509	86,358	8.955	8.059	9.850	7.164	10.745
Brooklyn Center	94.46	30,241	2.857	2.571	3.142	2.285	3.428	31,752	2.999	2.699	3.299	2.400	3.599	32,891	3.107	2.796	3.418	2.486	3.728
Brooklyn Park	103.91	84,112	8.740	7.866	9.614	6.992	10.488	87,458	9.088	8.179	9.997	7.270	10.905	91,295	9.486	8.538	10.435	7.589	11.384
Burnsville	141.30	66,605	9.411	8.470	10.353	7.529	11.294	70,310	9.935	8.941	10.928	7.948	11.922	75,200	10.626	9.563	11.688	8.501	12.751
Carver	86.82	5,951	0.517	0.465	0.568	0.413	0.620	7,236	0.628	0.565	0.691	0.503	0.754	11,065	0.961	0.865	1.057	0.769	1.153
Centerville	70.78	4,434	0.314	0.282	0.345	0.251	0.377	4,701	0.333	0.299	0.366	0.266	0.399	5,058	0.358	0.322	0.394	0.286	0.430
Champlin	98.34	24,451	2.405	2.164	2.645	1.924	2.885	25,021	2.461	2.215	2.707	1.968	2.953	24,894	2.448	2.203	2.693	1.958	2.938
Chanhassen	107.44	28,231	3.033	2.730	3.336	2.426	3.640	29,992	3.222	2.900	3.545	2.578	3.867	31,990	3.437	3.093	3.781	2.750	4.124
Chaska	112.47	28,544	3.210	2.889	3.531	2.568	3.852	31,034	3.490	3.141	3.839	2.792	4.188	35,938	4.042	3.638	4.446	3.233	4.850
Circle Pines	80.63	5,140	0.414	0.373	0.456	0.332	0.497	5,429	0.438	0.394	0.482	0.350	0.525	5,700	0.460	0.414	0.506	0.368	0.552
Cologne	77.51	2,231	0.173	0.156	0.190	0.138	0.208	2,702	0.209	0.189	0.230	0.168	0.251	3,432	0.266	0.239	0.293	0.213	0.319
Columbus	100.00	632	0.055	0.050	0.061	0.044	0.066	1,109	0.055	0.050	0.061	0.044	0.066	1,666	0.055	0.050	0.061	0.044	0.066
Coon Rapids	106.60	66,049	7.041	6.336	7.745	5.632	8.449	70,738	7.540	6.786	8.294	6.032	9.048	76,659	8.172	7.354	8.989	6.537	9.806
Cottage Grove	93.91	40,070	3.763	3.387	4.139	3.010	4.515	43,105	4.048	3.643	4.453	3.238	4.857	49,259	4.626	4.163	5.088	3.701	5.551
Dayton	61.15	7,485	0.458	0.412	0.503	0.366	0.549	9,094	0.556	0.500	0.612	0.445	0.667	12,253	0.749	0.674	0.824	0.599	0.899
Eagan	118.21	74,798	8.842	7.958	9.726	7.073	10.610	77,329	9.141	8.227	10.055	7.313	10.969	81,266	9.606	8.646	10.567	7.685	11.528
Eden Prairie	113.13	69,010	7.807	7.027	8.588	6.246	9.369	73,171	8.278	7.450	9.106	6.622	9.934	78,285	8.857	7.971	9.742	7.085	10.628
Edina	119.60	61,853	7.398	6.658	8.138	5.918	8.877	63,474	7.592	6.832	8.351	6.073	9.110	66,302	7.930	7.137	8.723	6.344	9.516
Elko New Market	63.09	5,843	0.369	0.332	0.406	0.295	0.442	8,658	0.546	0.492	0.601	0.437	0.656	11,481	0.724	0.652	0.797	0.580	0.869
Empire Township	99.28	2,691	0.267	0.240	0.294	0.214	0.321	3,271	0.325	0.292	0.357	0.260	0.390	3,860	0.383	0.345	0.422	0.307	0.460
Excelsior	122.88	2,075	0.255	0.229	0.280	0.204	0.306	2,315	0.284	0.256	0.313	0.228	0.341	2,656	0.326	0.294	0.359	0.261	0.392
Farmington	85.19	23,726	2.021	1.819	2.223	1.617	2.425	25,212	2.148	1.933	2.363	1.718	2.577	28,580	2.435	2.191	2.678	1.948	2.922
Forest Lake	111.09	14,497	1.611	1.449	1.772	1.288	1.933	16,792	1.865	1.679	2.052	1.492	2.239	20,266	2.251	2.026	2.477	1.801	2.702
Fridley	94.21	29,661	2.794	2.515	3.074	2.236	3.353	30,731	2.895	2.606	3.185	2.316	3.474	32,376	3.050	2.745	3.355	2.440	3.660
Greenfield	121.04	668	0.081	0.073	0.089	0.065	0.097	954	0.115	0.104	0.127	0.092	0.139	1,286	0.156	0.140	0.171	0.125	0.187
Hamburg	58.44	587	0.034	0.031	0.038	0.027	0.041	605	0.035	0.032	0.039	0.028	0.042	613	0.036	0.032	0.039	0.029	0.043
Hampton	66.06	706	0.047	0.042	0.051	0.037	0.056	745	0.049	0.044	0.054	0.039	0.059	783	0.052	0.047	0.057	0.041	0.062
Hastings	102.93	25,905	2.666	2.400	2.933	2.133	3.200	26,985	2.778	2.500	3.055	2.222	3.333	28,280	2.911	2.620	3.202	2.329	3.493
Hopkins	108.23	21,442	2.321	2.089	2.553	1.857	2.785	23,567	2.551	2.296	2.806	2.041	3.061	25,477	2.757	2.482	3.033	2.206	3.309

Projected Municipal Water Pumped by Region – Version 1

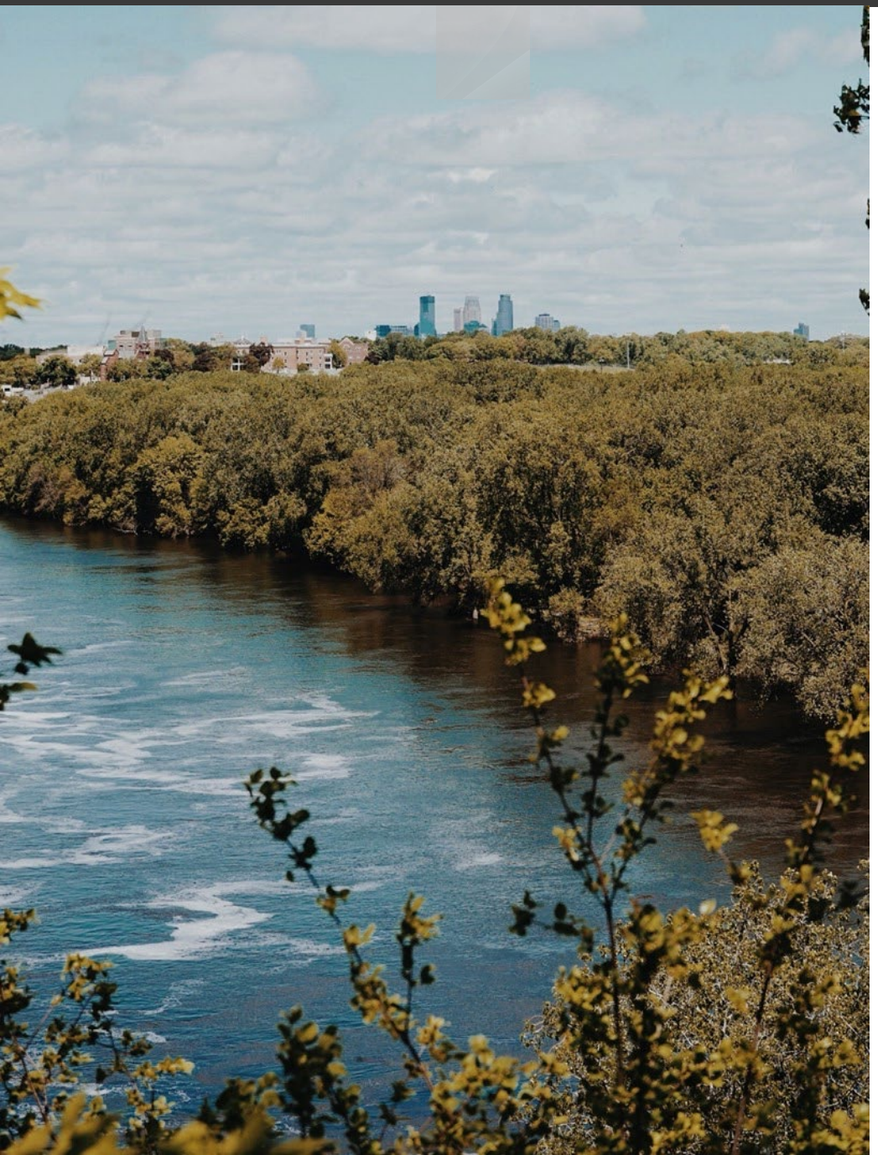


Changes discussed today



- Editorial changes
- Revised definition of water supply sustainability to be incorporated, as discussed by MAWSAC, into Metro Area Water Supply Plan and Water Policy Plan
- Incorporation of SMART goals, as discussed by MAWSAC, into the Metro Area Water Supply Plan
- Shared definitions for key water supply planning terms to be incorporated, as discussed by MAWSAC, throughout Metro Area Water Supply plan and Water Policy Plan
- Water demand projections, version 1 to be included as appendix to the Metro Area Water Supply Plan and Water Policy Plan
- Local plan expectations, also to be included as appendix

Action requested



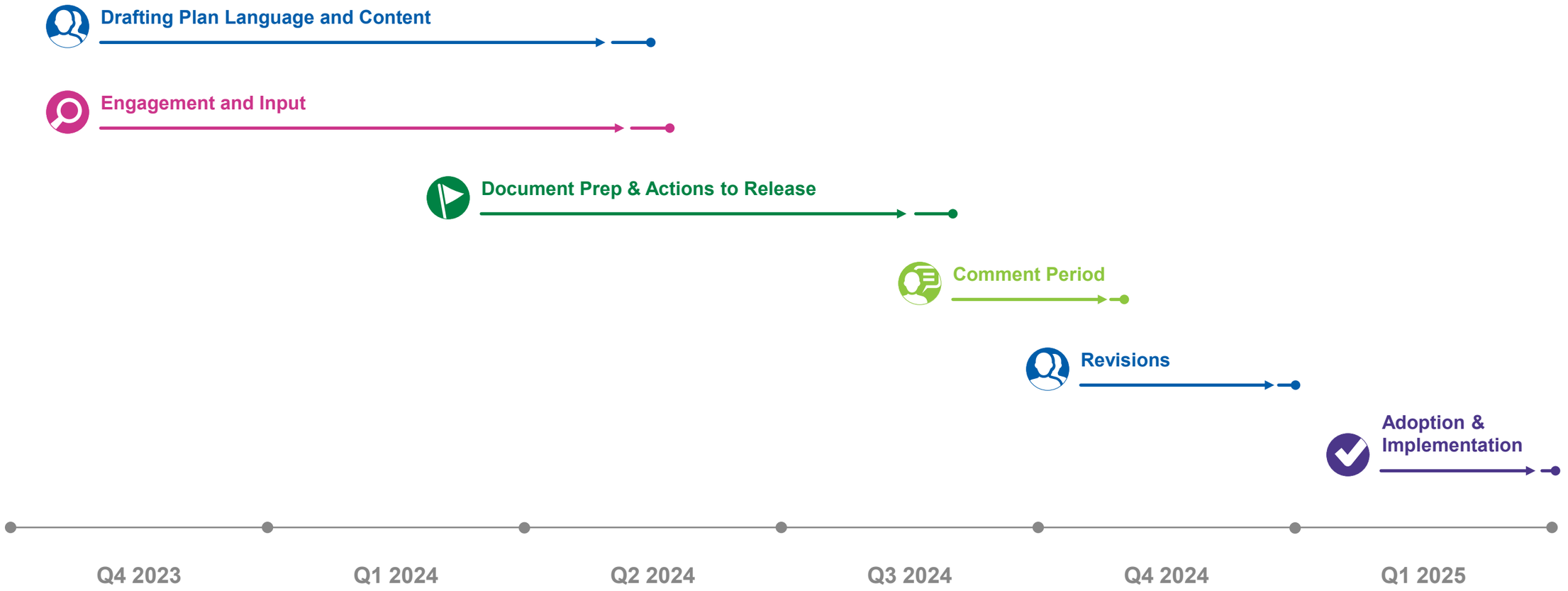
MAWSAC approval

MAWSAC supports the release of the draft Metro Area Water Supply Plan with the 2050 Water Policy Plan for public comment

Tentative upcoming committee actions

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
December 11, 2024	Approve revised MWSP based on public comments and recommend Council adoption.

WPP timeline



Lanya Ross

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METROPOLITAN COUNCIL