2050 Water Policy Plan – NE Metro GWMA Meeting

METROPOLITAN COUNCIL

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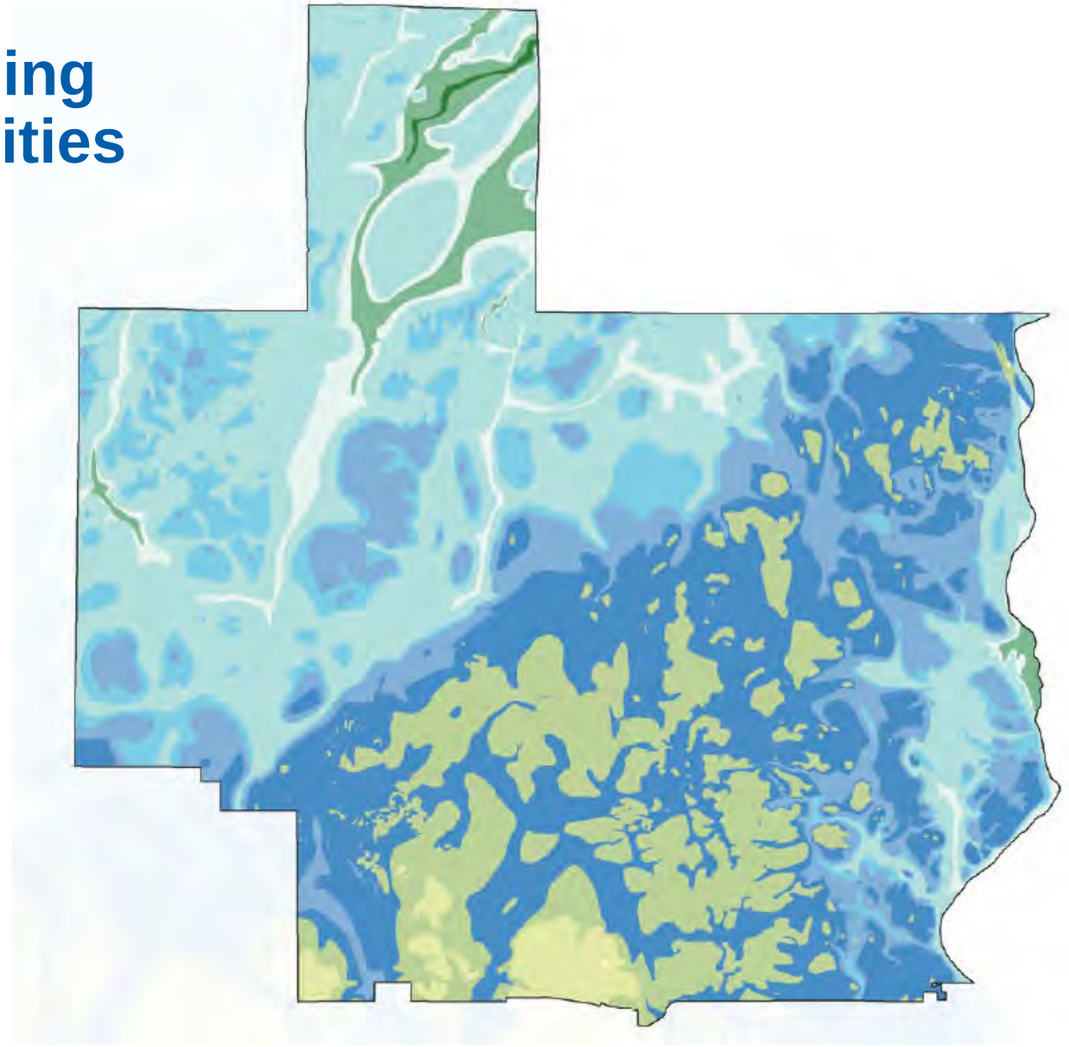
metrocouncil.org

Some water supply considerations across the region and in the northeast

Water Supply Planning Atlas for the Twin Cities Metropolitan Area

https://metrocouncil.metctest.state.mn.us/Wastewater-Water/Planning/Water-Supply-Planning/Basics/Atlas.aspx



Bedrock Geology

Most drinking water in this area is sourced from the Prairie du Chien and Jordan aquifers. In this part of the metro, bedrock aquifers tend to be closer to the surface than in other areas, making them convenient and cheaper sources of drinking water. However, because drinking water sources are often shallow, contamination and pumping impacts on surface waters can be a concern. Where the Decorah Shale and Platteville and Glenwood formations are present, underlying aquifers are less vulnerable to contaminants.

A major groundwater divide crosses this subregion. The divide runs north to south from approximately the east side of White Bear Lake, through Hugo and Scandia to Chisago County. Water on the east side of the divide drains to the St. Croix River, while water on the west side drains to the Mississippi River.

Data source(s): Minnesota Geological Survey

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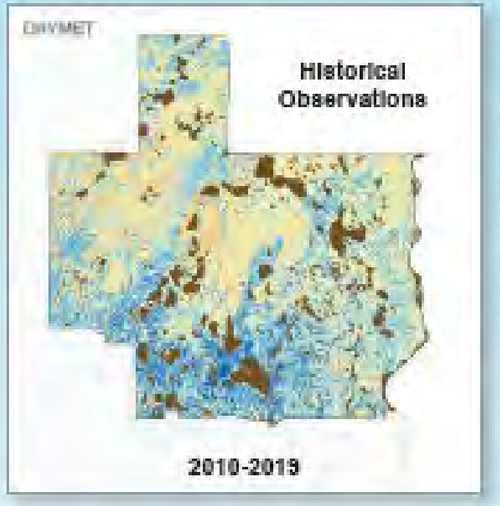
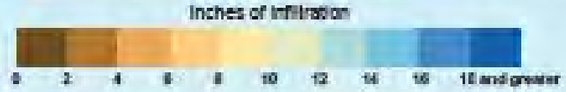
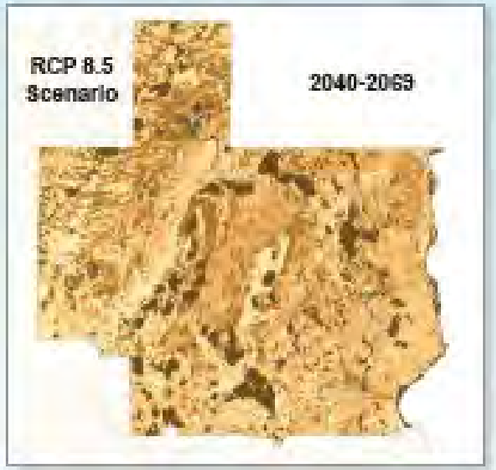
Swings in climate



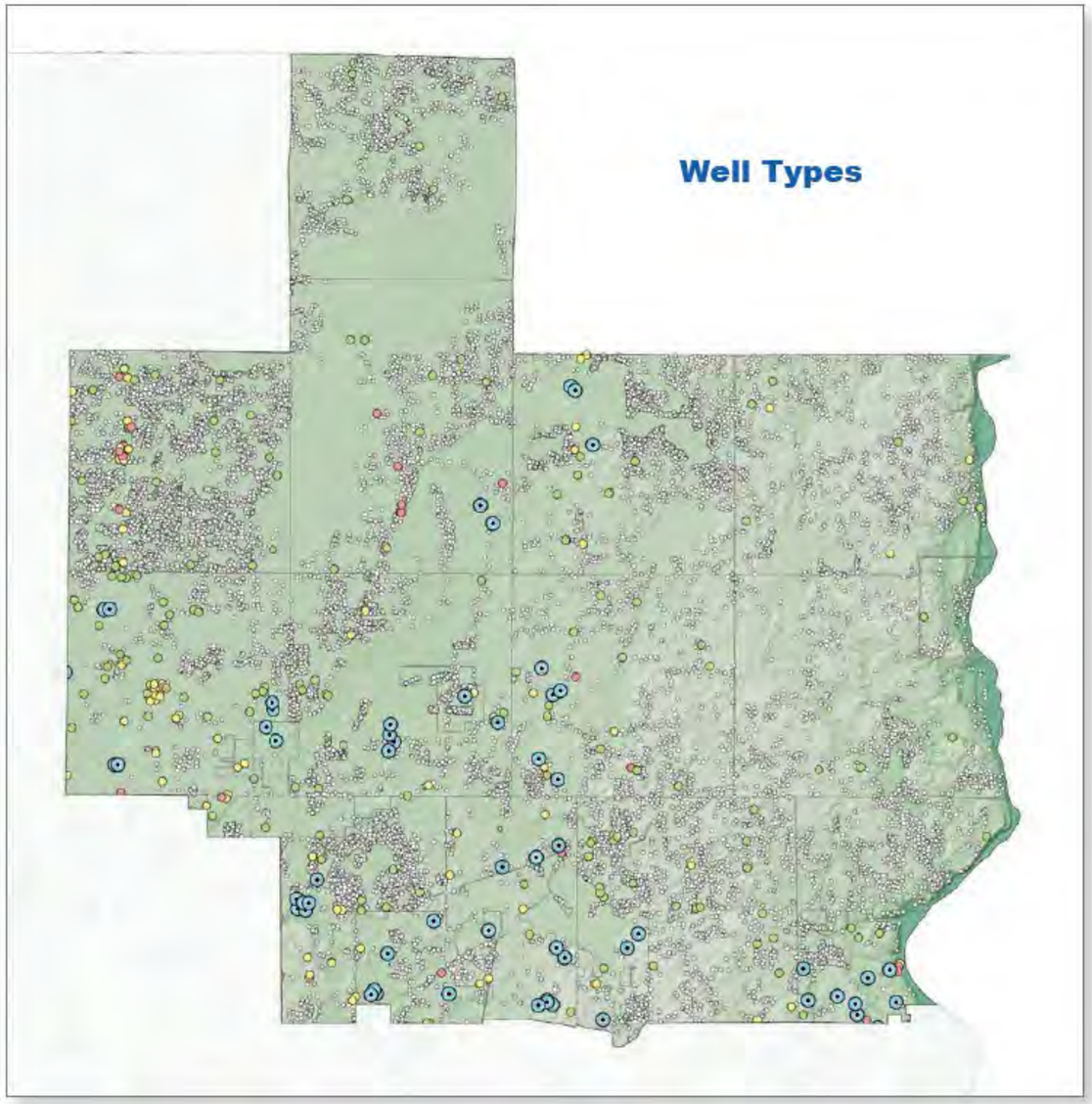
Climate Change Impacts Future Groundwater Recharge Estimates

The water that's able to infiltrate the ground to recharge the groundwater system during any single precipitation event is dependent on many factors including the amount of impervious surface, previous weather trends, and soil conditions. More precipitation does not necessarily mean there will be more groundwater. As growing seasons extend, precipitation becomes less frequent, or rain falls primarily during intense storm events, less water could make it into the ground. Recently, global climate models were used to estimate future weather conditions in the metro region. Modeling of the water available to recharge groundwater aquifers under these future climate scenarios generally shows that recharge would be lower in most places in the future.





Wells and water use in the East Metro subregion



Water use

- Peaked in mid- to late 2000s
- Previous 20 years showed consistent increases coinciding with population growth and development
- In the 2010s efficiency and wetter summers likely led to reduction in demand despite adding homes and businesses
- Recent droughts and growth resulting in significant increase
- 2010-2019 residential demand @ 79 gallons per person per day, total demand 116 gallons per person per day

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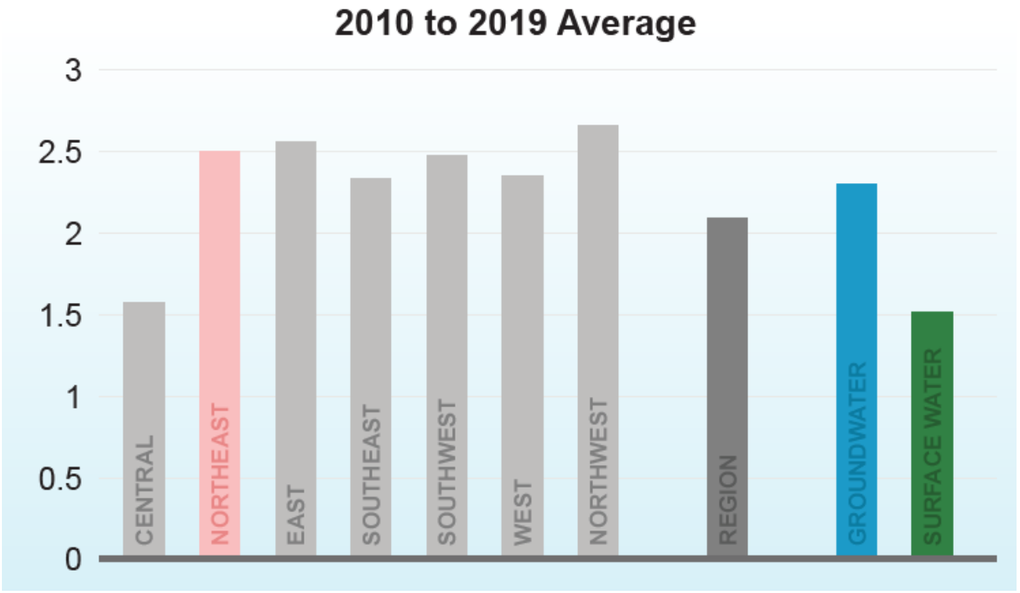
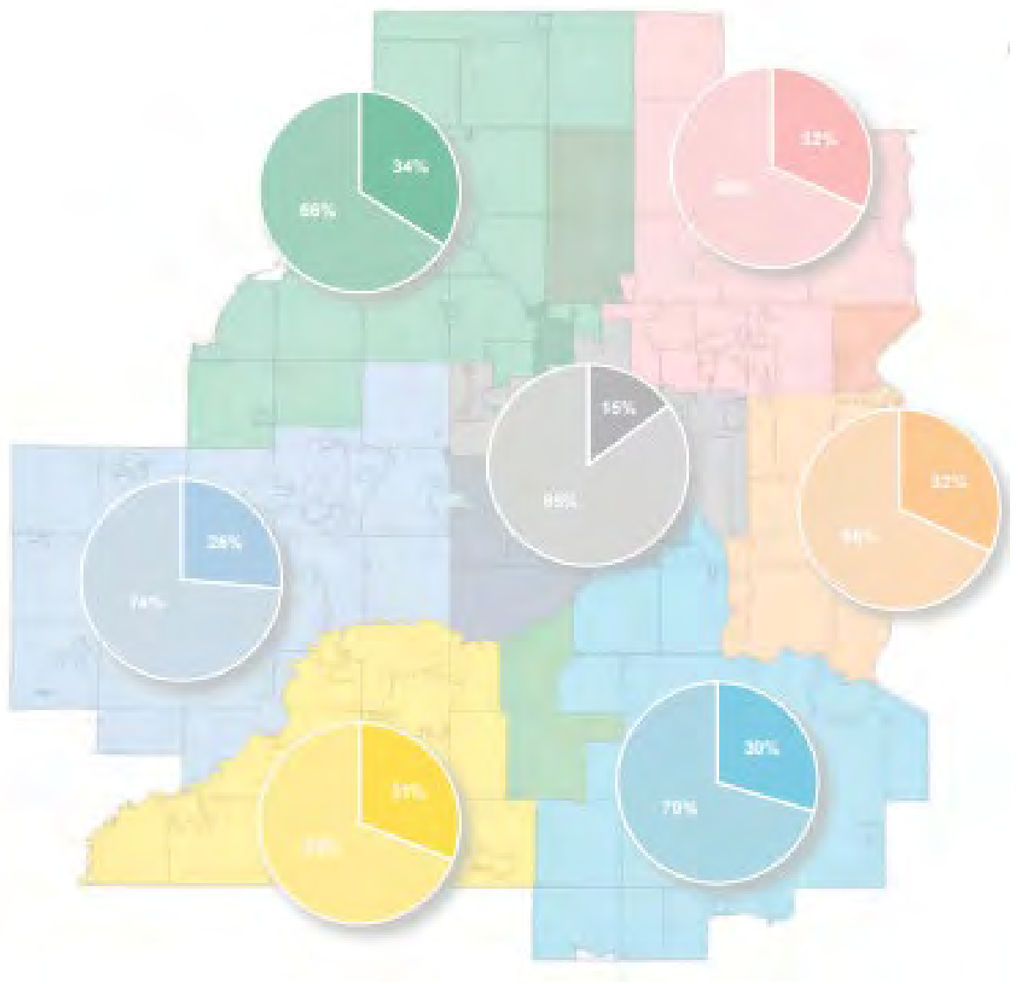
Indoor versus outdoor water use

Northeast subregion

- 32% of water use is outdoor use
- Over 2 times more water used in the summer versus winter





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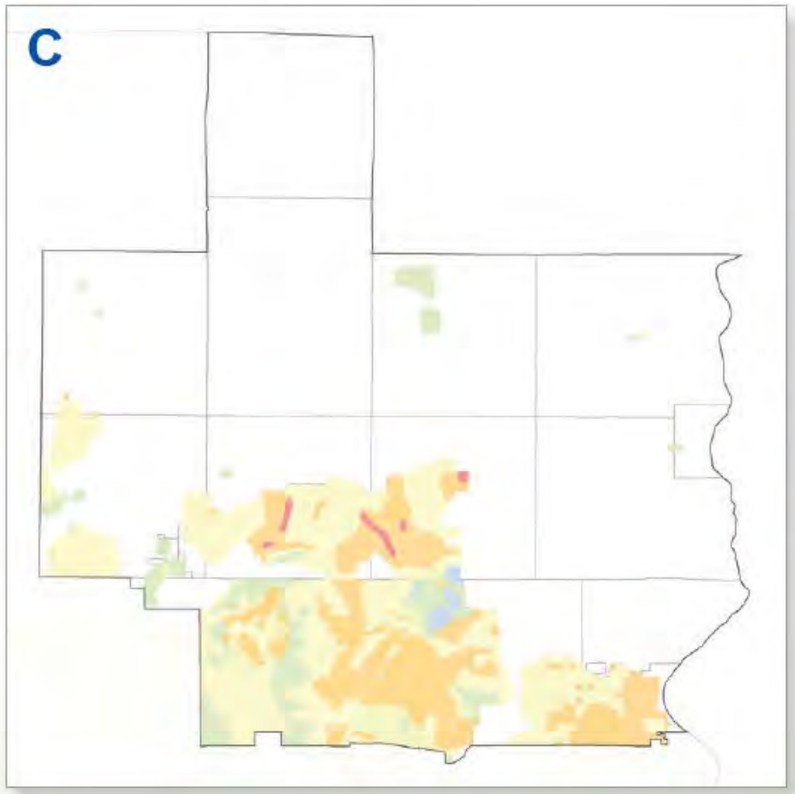
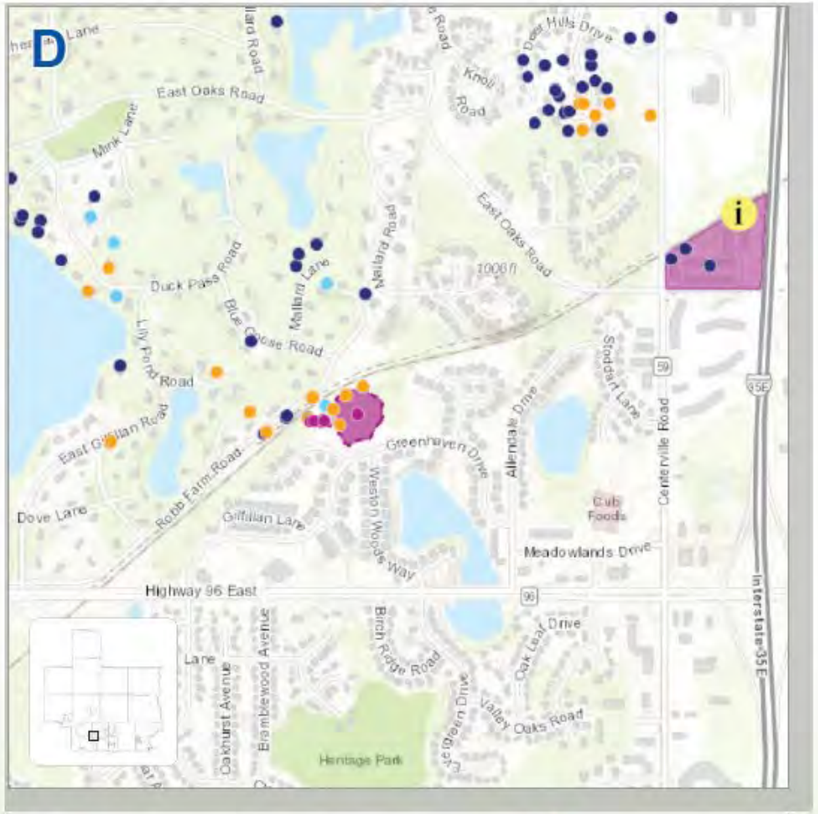
Source water protection considerations





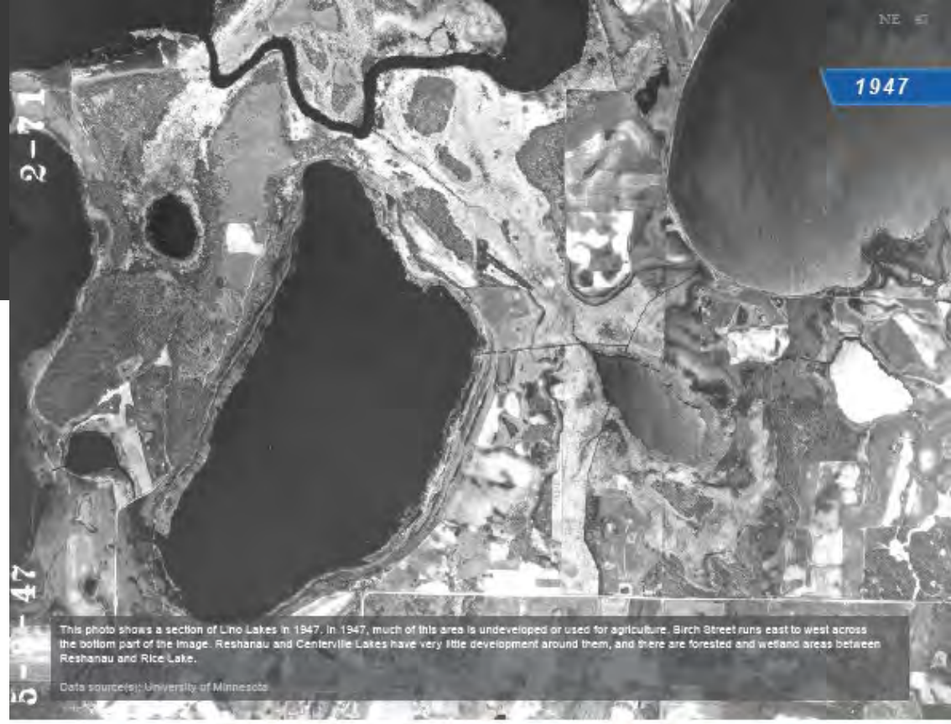
Very High
High
Moderate
Low
Very Low

Well - Contamination above health-based guidance
Well - Contamination below health-based guidance
Well - Contamination not detected
Well - No data from last five years
Insufficient groundwater sampling data
Potential source area
High confidence
Low confidence
Groundwater area of concern

Land use changes

- The upper photo shows a section of Lino Lakes in 1947. In 1947, much of this area is undeveloped or used for agriculture. Birch Street runs east to west across the bottom part of the image. Reshanau and Centerville Lakes have very little development around them, and there are forested and wetland areas between Reshanau and Rice Lake.

- By 2016, significant changes had been made to this landscape. Reshanau Lake is more developed on its east side and has a golf course on its west side. The channel of Rice Creek that connects George Watch Lake to Rice Lake appears to have been altered during the construction of the golf course.



Regional Planning Cycle

Imagine 2050

Our work reflects the region's existing conditions and emerging changes

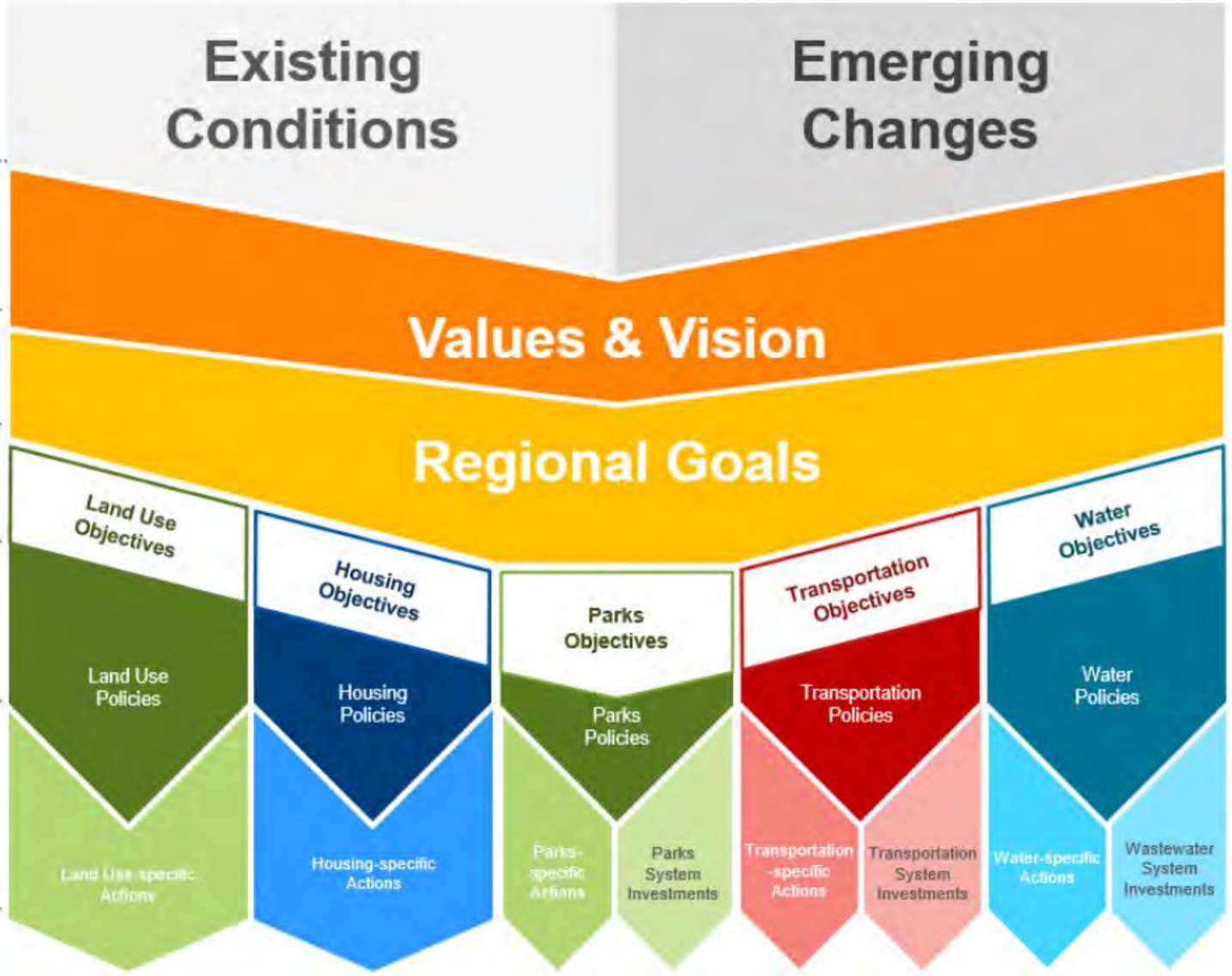
Our shared values reflect **the core beliefs** that guide how we work toward the vision of **what we want to achieve.**

The goals express **desired end states** for the region, to successfully achieve the vision.

The objectives articulate **achievable results** that advance regional goals through areas of Council responsibility.

Policies set the **intent and approach to regional issues** that will help achieve goals and objectives – policies clarify expectations for both Council and partners.

Policies are implemented through **specific actions by the Council and partners.**.



IMAGINE 2050

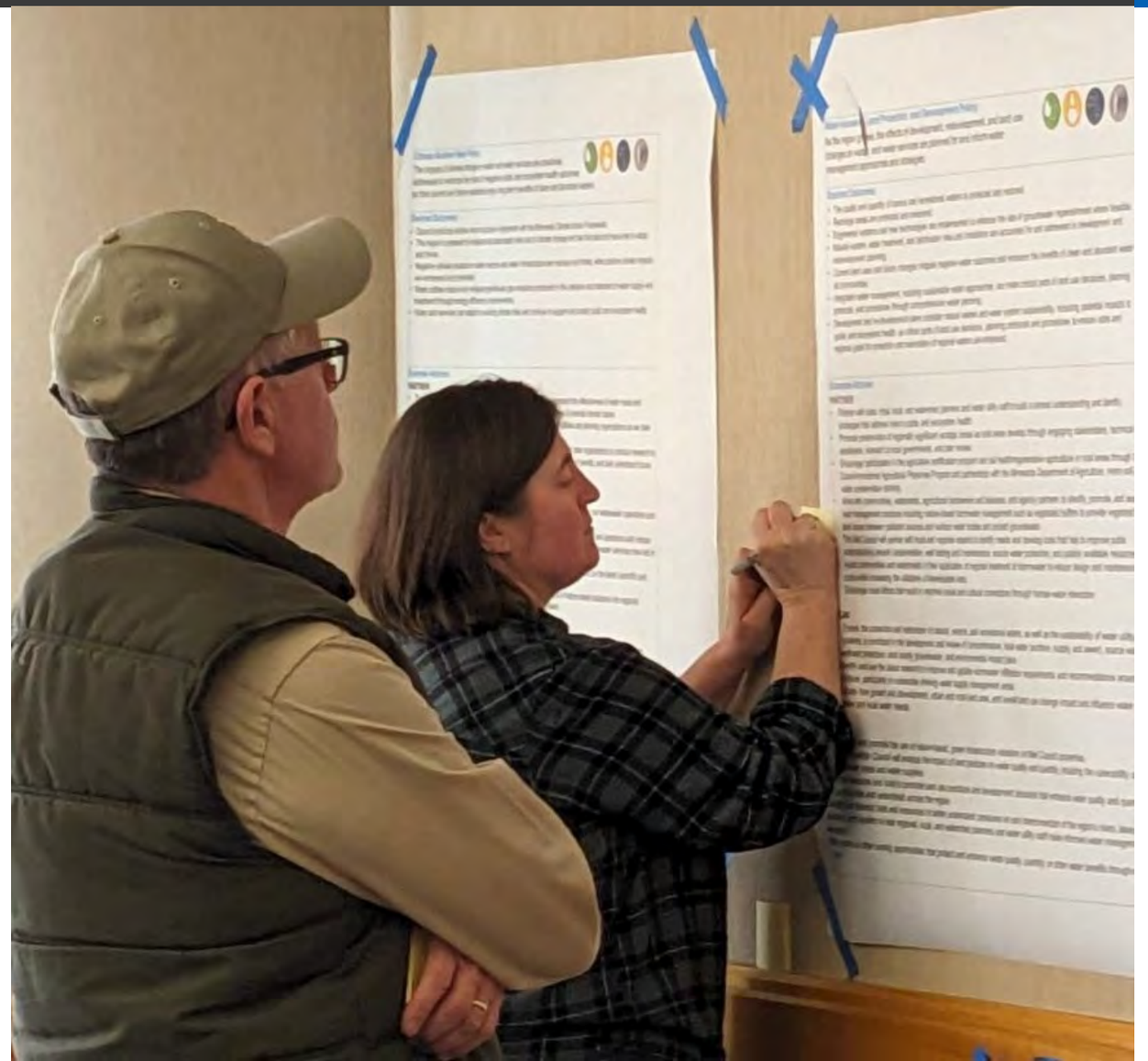
Metropolitan Council

Input from people across the region

- Draft based on input from hundreds of people across the region
- 1,200 comments received from 500 organizations and individuals during formal public comment period from August 15 to October 7, 2024
  - Over 110 comments on Water Policy Plan (https://metrocouncil.org/Council-Meetings/Committees/Water-Supply-Advisory-Committee/2024/10-22-2024/Info-3b-High-level-summary.aspx)
  - Over 50 detailed comments related to water supply and the Metro Area Water Supply Plan (https://metrocouncil.org/Council-Meetings/Committees/Water-Supply-Advisory-Committee/2024/10-22-2024/Info-3c-Public-comments-responses.aspx)
- Draft revised based on public comments and input from multiple advisory committees
- Adoption of final document is expected in February 2025

A wide range of early input shaped the draft Water Policy Plan

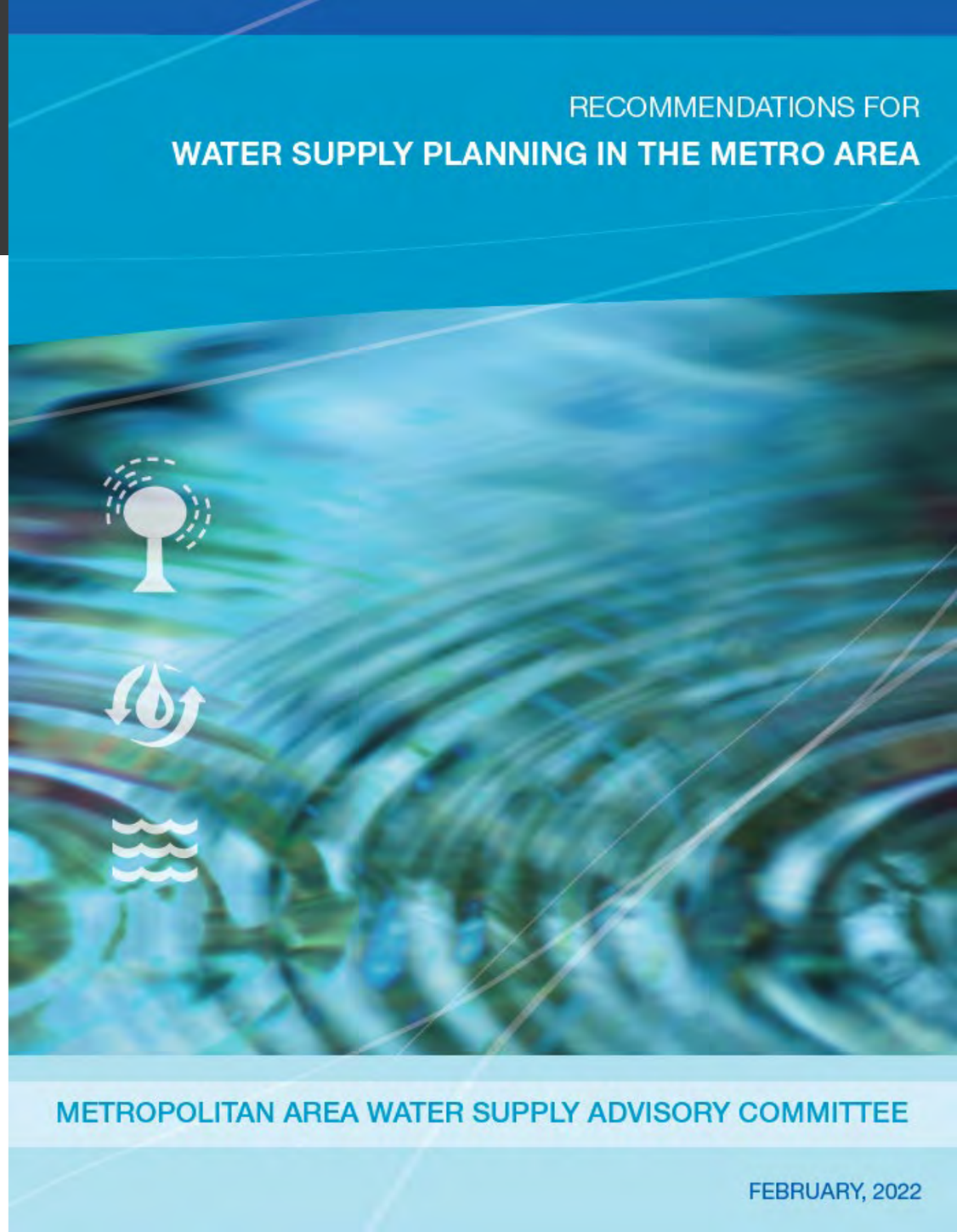
- 2050 Water Policy Plan Update Advisory Group (https://metrocouncil.org/Council-Meetings/Work-Groups/2050-Water-Policy-Plan-Update-Advisory-Group.aspx)
- Metro Area Water Supply Policy and Technical Advisory Committees (https://metrocouncil.org/Council-Meetings/Committees/Water-Supply-Advisory-Committee.aspx)
- Subregional engagement



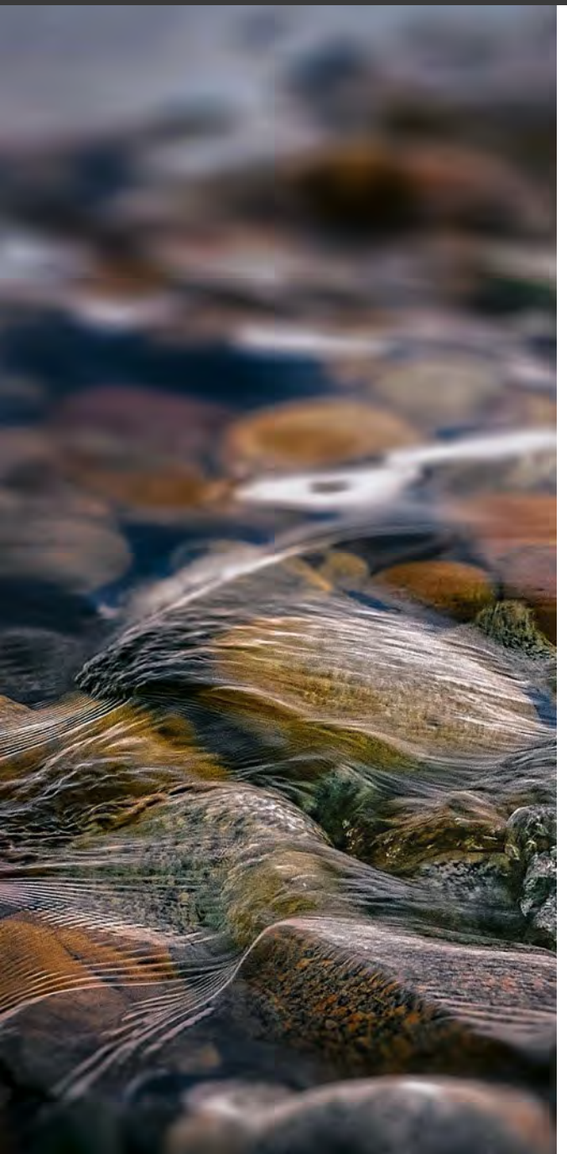
2022 MAWSAC recommendations

Summary, full report, and other committee work on MAWSAC's webpage:

https://metrocouncil.org/Council-Meetings/Committees/Water-Supply-Advisory-Committee.aspx



Subregional input to water supply planning



Building shared understanding of the following at a subregional level:

Context and current conditions

Definition of success

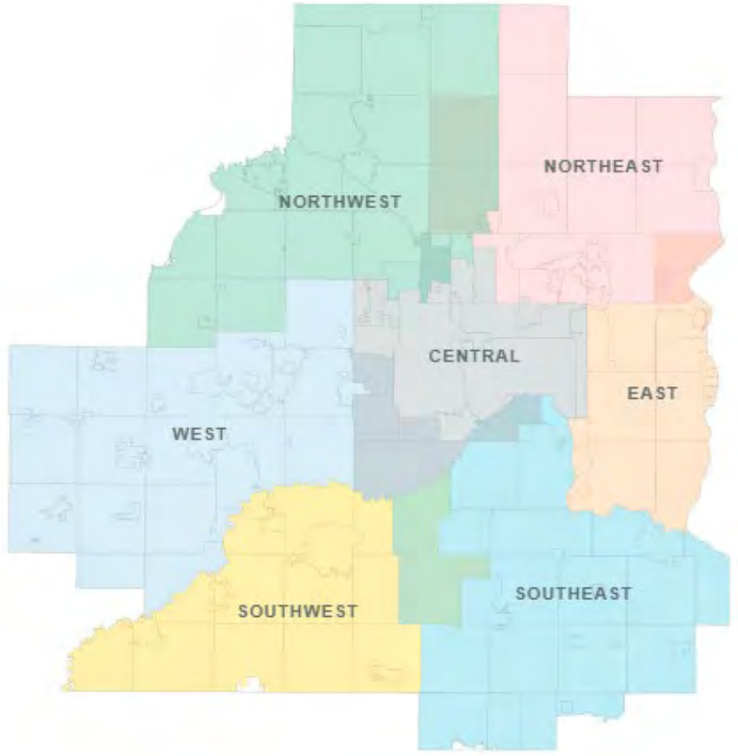
Issues and barriers

Strategies to address them

- Practices
- Policies
- Partnerships

Timeline/sequencing

Resources needed to sustain effort towards success over time



See the subregional action plans included in the Metro Area Water Supply Plan for details

Imagine 2050 Vision

A prosperous, equitable, and resilient region with **abundant opportunities for all to live, work, play, and thrive.**

Grounded in community engagement to address critical issues: **climate, equity, resiliency, natural systems, safety, and public health.**

Regional goals

- Equitable and inclusive communities
- Healthy and safe communities
- Dynamic and resilient region
- Leadership in addressing climate change
- Protection and restoration of natural systems

Water objectives

CLIMATE: The region's waters and water services are protected from and made resilient to the ongoing and future effects of climate change.

INVESTMENTS: Water protection, planning, management, and infrastructure investments are optimized to ensure public and ecosystem health are fully protected now and for future generations.

HEALTH: Natural waters, source waters, water services, and infrastructure are managed, restored, and enhanced to protect public and ecosystem health that ensures a high quality of life in the region.

EQUITY: The benefits of clean and abundant water and water services are defined by local needs and environmental context, accessible, and justly shared by all residents and communities.

Water policies

- Integrated Water
- Water-Centered Growth and Development
- Water Equity
- Climate Change
- Conservation and Sustainability
- Water Reuse
- Pollution Prevention and Contaminant Management
- Water Monitoring, Data, and Assessment
- Regional Wastewater Service Area
- Regional Wastewater Operations and Finance
- Inflow and Infiltration
- Water Sector Workforce Development

Next steps

- Developing System Statements for each county, city, and township (September)
- Updating planning assistance resources in the Local Planning Handbook (September)
- Launching an engagement and training program for local planners (September)
- Technical assistance programs and projects (Ongoing)

Promote water efficient devices

Metropolitan Council Water Efficiency Grant Program continues!

Program activity from July 1, 2022 through June 30, 2023:

WaterSense				Energy Star	
Toilets Replaced	Irrigation Controllers Replaced	Irrigation Spray Sprinkler Bodies Replaced	Irrigation System Audit Conducted	Clothes Washers Replaced	Residential Dishwashers Replaced
1,149	1,038	95	113	567	487

Learn more about the program: https://metrocouncil.org/getattachment/Council-Meetings/Committees/Environment-Committee/2023/November-14,-2023/Agenda/Info-Item-Water-Efficiency-Grant-Program.pdf.aspx?lang=en-US

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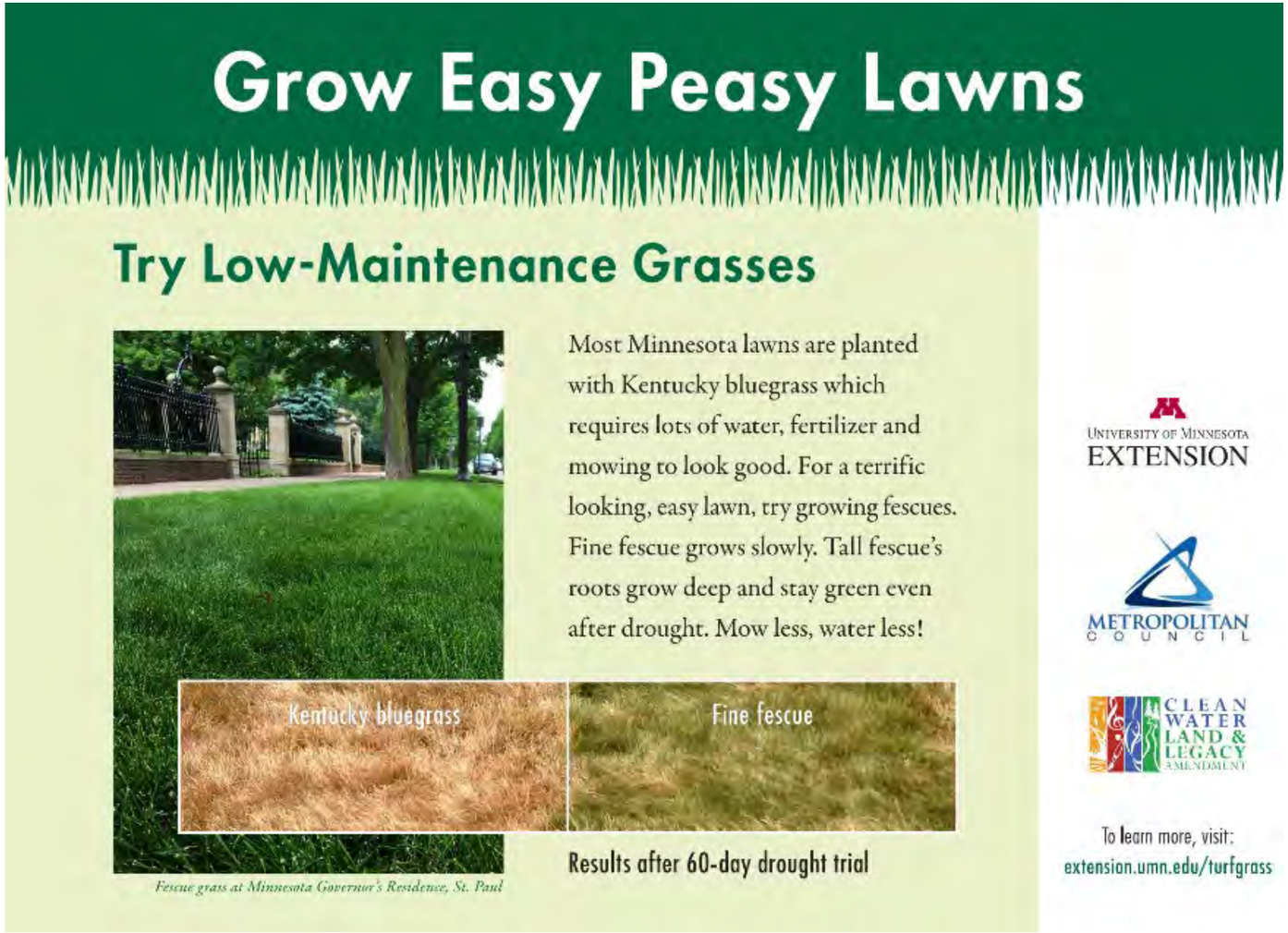
Try water efficient and low-input landscapes



Turfgrass research and outreach resources are available through the Metropolitan Council Lawn Irrigation Efficiency Study and the U of MN Turfgrass Science Program.

Clean Water Land & Legacy Amendment

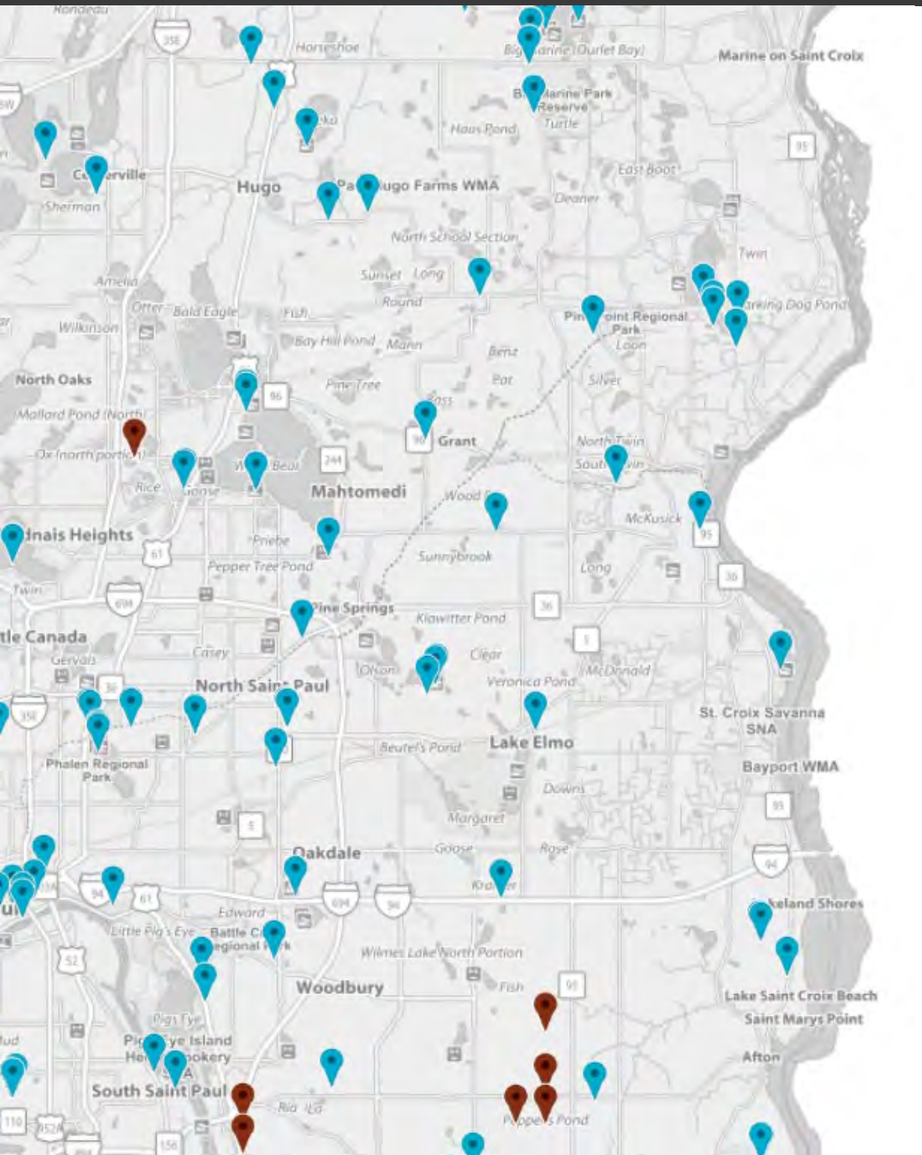
Build capacity and share knowledge

MnTAP water efficiency intern program

- Launched in 2012
- Student interns placed in metro area organizations
- Between 2013 and 2022, 44 projects made 253 recommendations
- As of 2022, the intern recommendations that were implemented save over 150 million gallons/year and over $1.5 million/year
- Still going strong!

Learn more about the internship program on the MnTAP website at http://www.mntap.umn.edu/interns/

Pay attention to water levels



MN DNR cooperative groundwater monitoring network

https://www.dnr.state.mn.us/waters/cgm/index.html

- Location
- Aquifer
- Link to MDH well log report
- Download time series data

Know your water quality

Show 10 entries Searc

Analyte Code	Year	System Id	City Served	County Served	Population Served
Arsenic	2022	1820001	Bayport	Washington	2,700
Arsenic	2022	1820002	Bayport	Washington	2,150
Arsenic	2022	1820004	Cottage Grove	Washington	39,712
Arsenic	2022	1820005	Forest Lake	Washington	11,276
Arsenic	2022	1820006	Forest Lake	Washington	330
Arsenic	2022	1820034	Hastings	Washington	140
Arsenic	2022	1820007	Hugo	Washington	12,047

MDH Drinking water quality database

Public water supply system information:

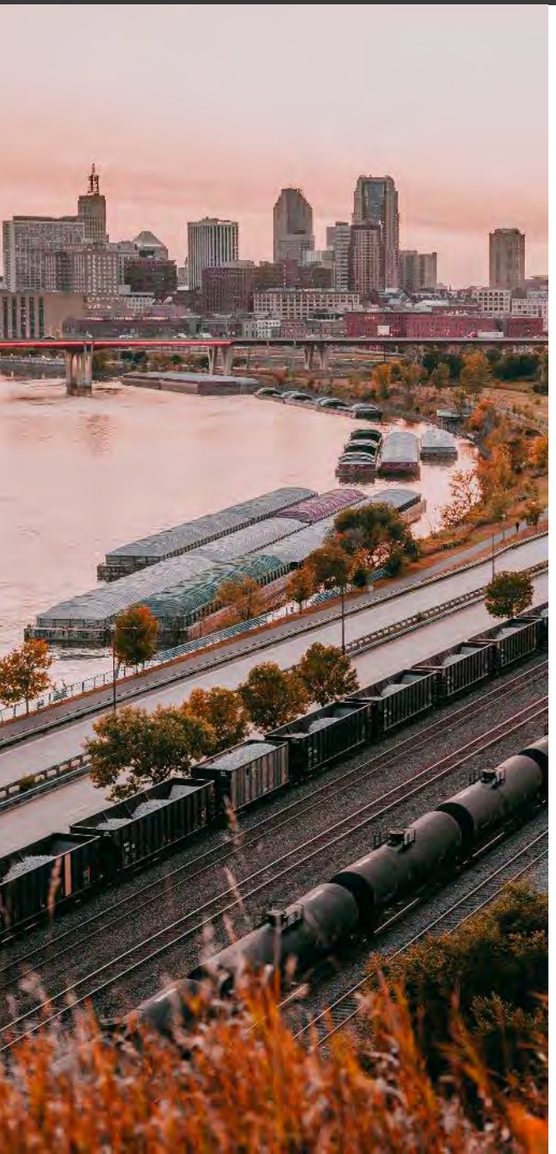
- https://data.web.health.state.mn.us/drinkingwater_query

Washington County water tests

Private well testing available:

- https://www.co.washington.mn.us/637/Water-Tests

Learn more



Authoring team

Water policies

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Metro area water supply plan

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Wastewater system plan

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