



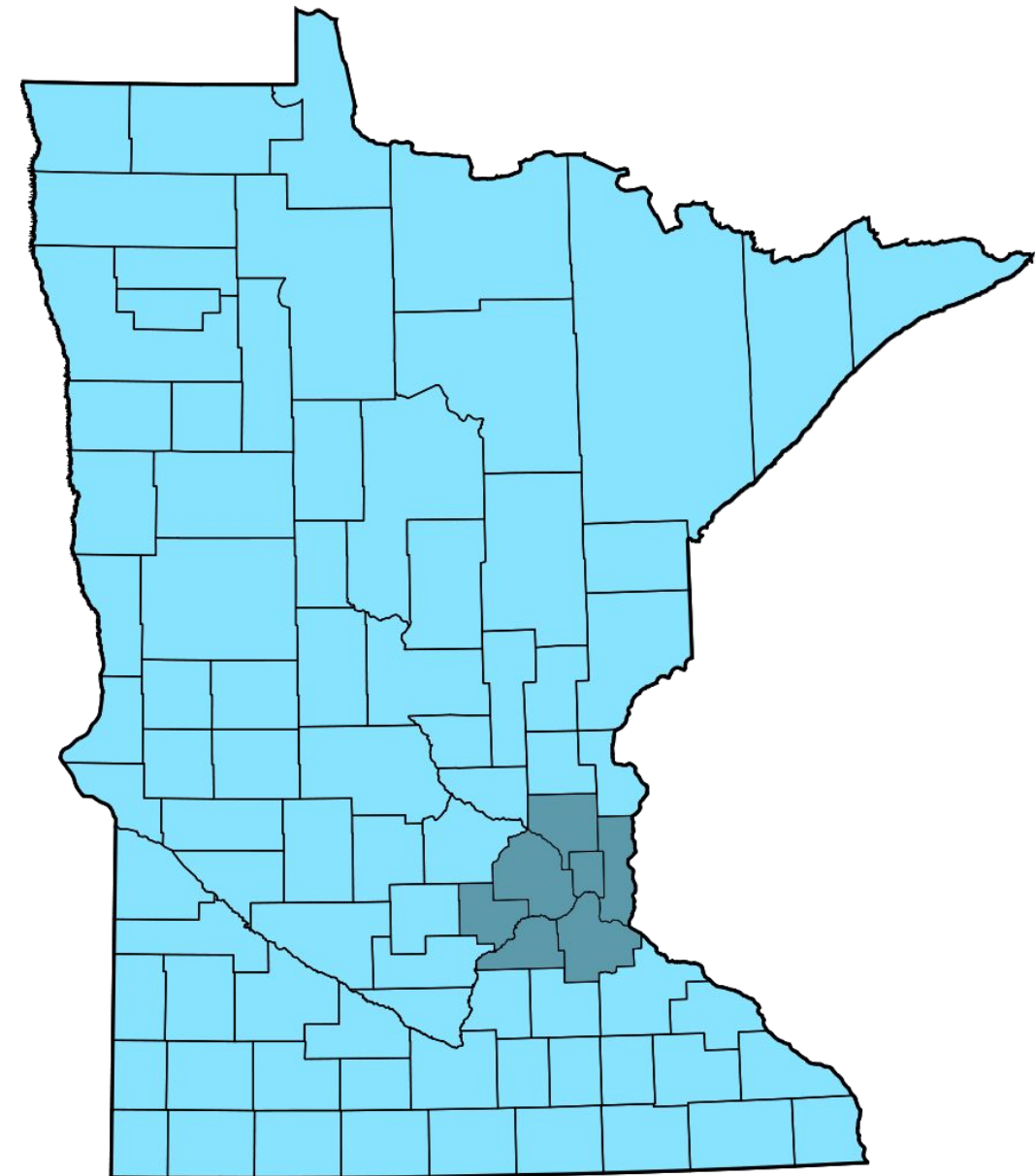
Updating Regional Water Supply Policy and Plans in the Twin Cities Metropolitan Area, MN



Twin Cities metro region

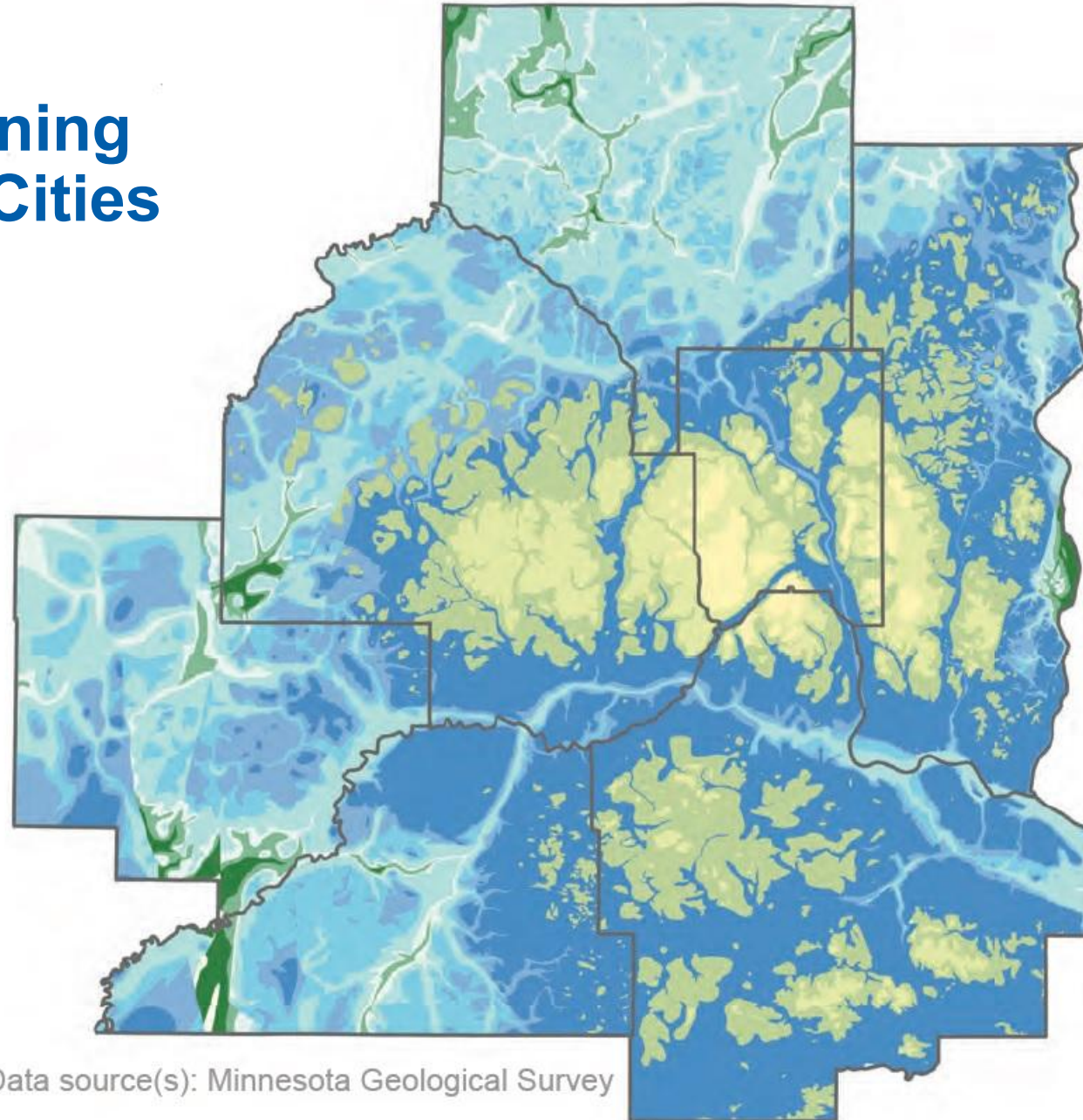
Every single person and community makes up the fabric and essence of this region.

- 7 counties
- 182 cities and townships
- More than 3 million residents
- Native people from 11 federally recognized Minnesota tribes and many other tribal communities
- Growing diversity representing wide-ranging racial and ethnic people, with about 300 languages spoken at home



Existing conditions: water supply considerations across the region

Water Supply Planning Atlas for the Twin Cities Metropolitan Area



Data source(s): Minnesota Geological Survey

<https://metro council.org/Wastewater-Water/Planning/Water-Supply-Planning/Basics/Atlas.aspx>

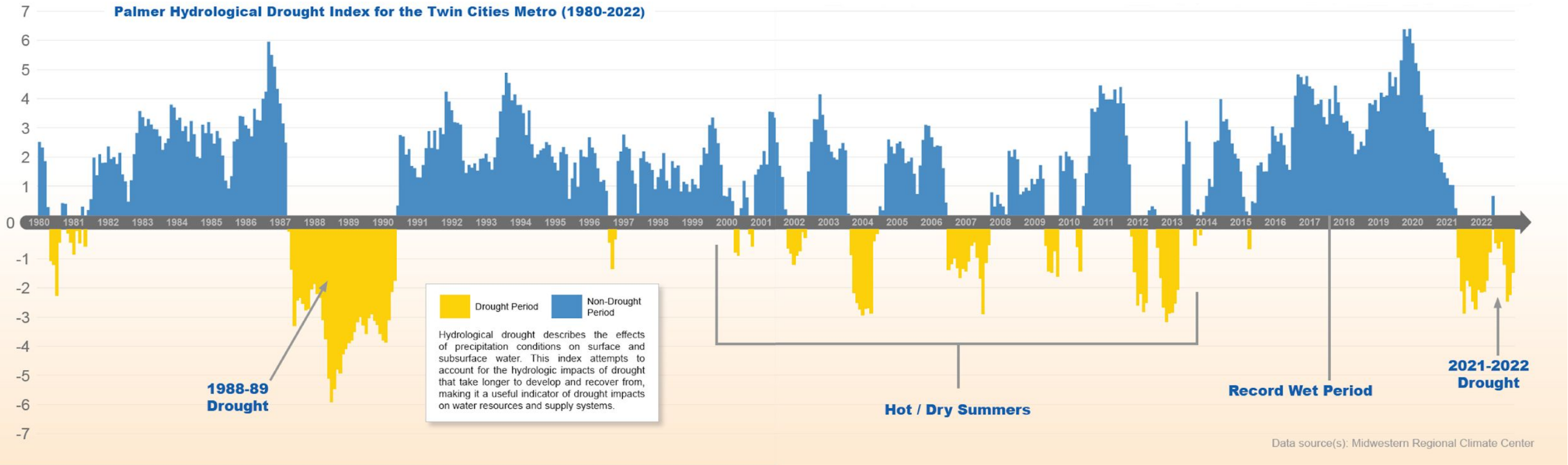
Bedrock Geology

Groundwater aquifers are often used as the source for public water supplies, as well as industrial, commercial, and agricultural uses outside of the urban center. Private drinking water wells are usually in shallow sediments deposited when continental ice sheets retreated 18,000 years ago.

The Prairie du Chien and Jordan bedrock aquifers are highly productive water sources and cover much of the Central, East and Southern portions of the metro. In the Western and Northern part of the metro, communities rely on a combination of deeper Tunnel City and Wonewoc bedrock aquifers and shallow sandy (sedimentary) aquifers. The deepest wells pull water from the Mt. Simon aquifer, whose water has been dated to be 6,000 - 30,000 years old.

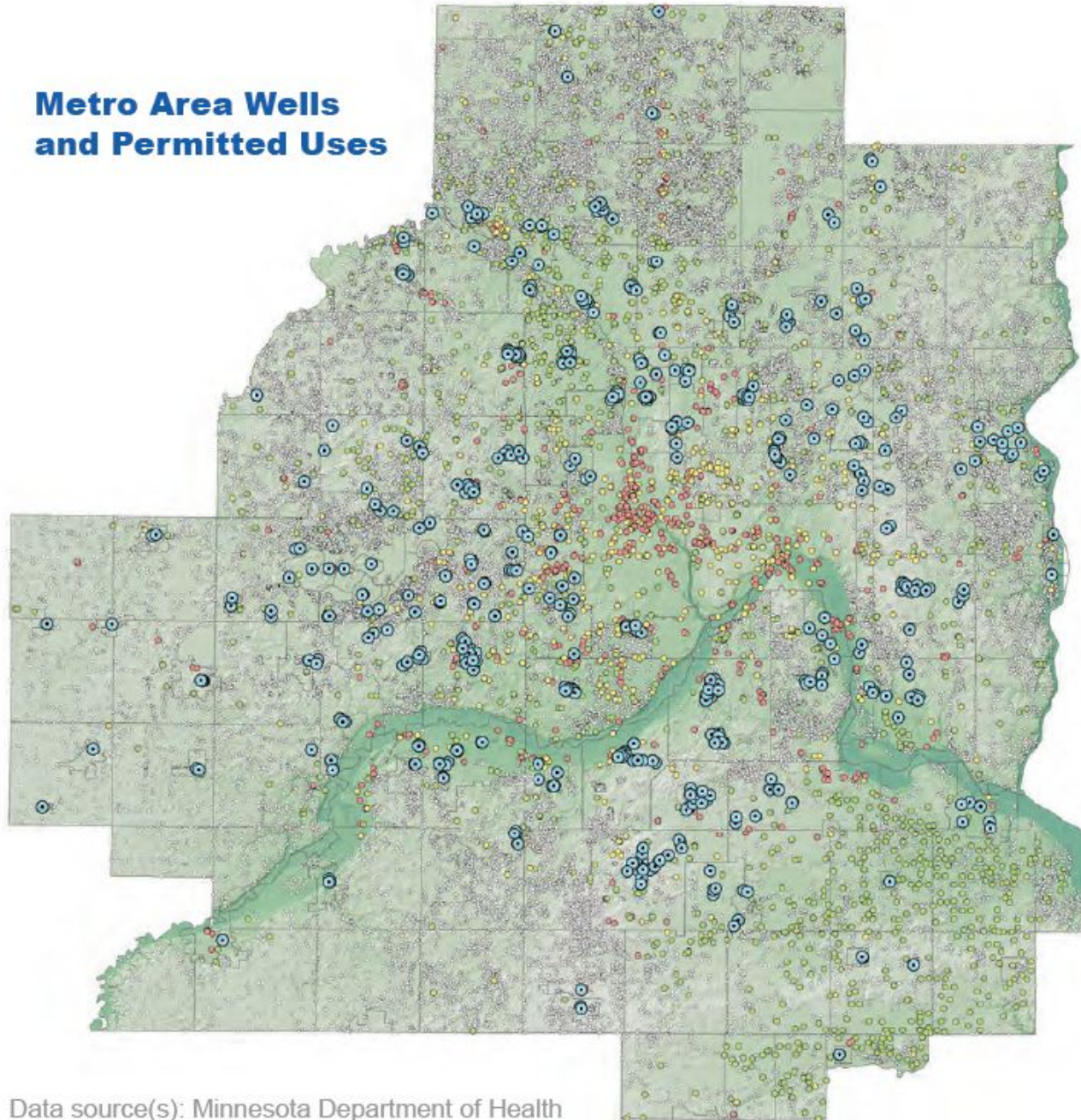


Swings in climate



Wells and water use

**Metro Area Wells
and Permitted Uses**



- Municipal Water Supply Well
- Irrigation Well
- Commercial Well
- Industrial Well
- Domestic Well

Data source(s):
Minnesota Department of Health

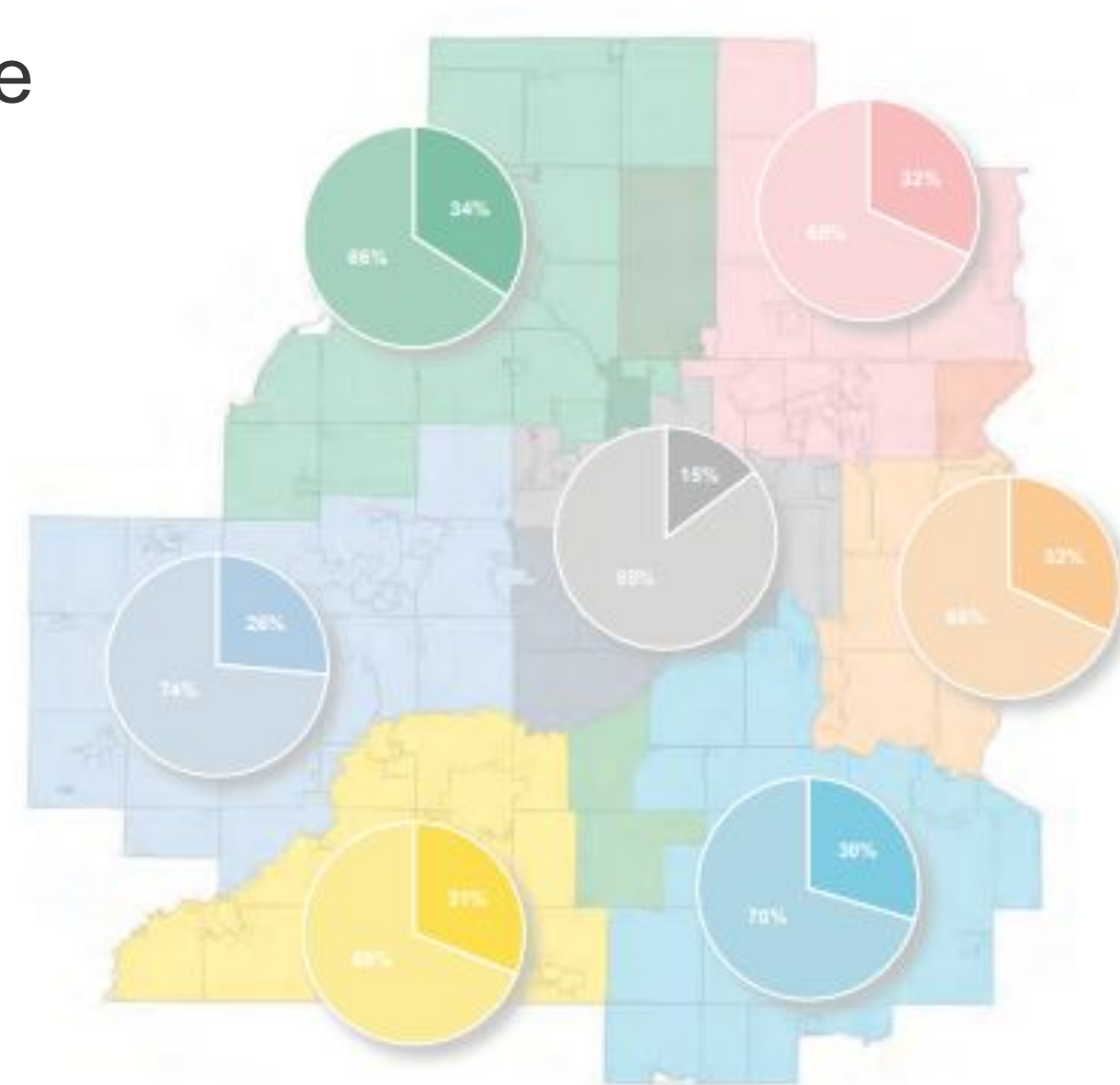
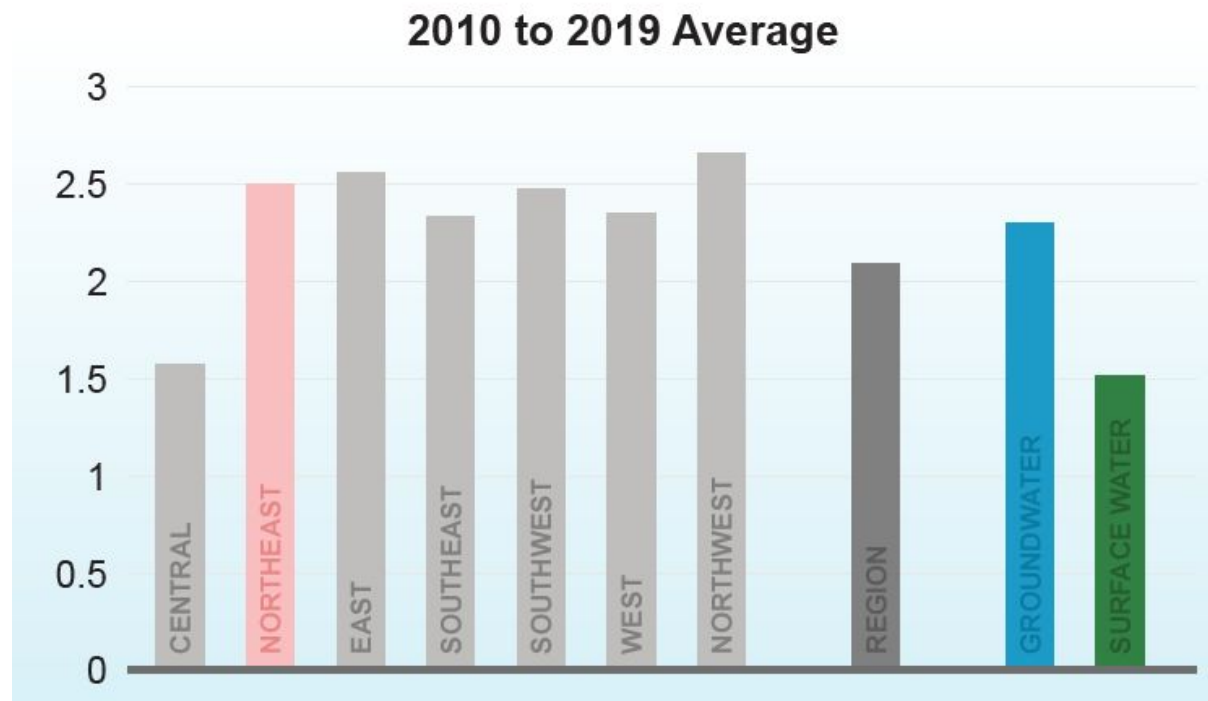
Water use

- 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

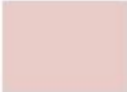








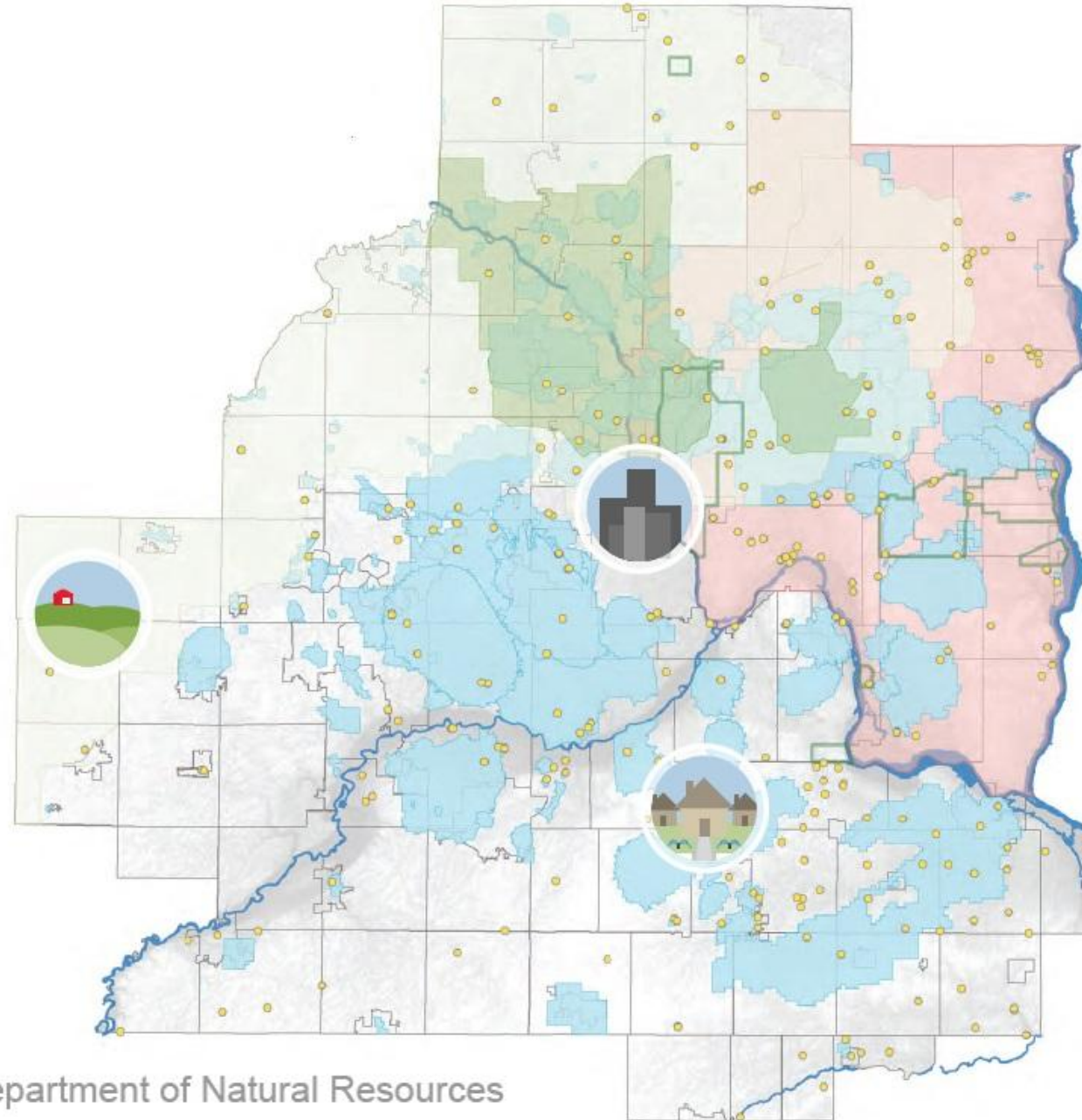
Indoor versus outdoor water use

- 25% of water use is outdoor use
- Over 2 times more water used in the summer versus winter



Source water protection

-  Northeast Groundwater Management Area
-  Groundwater DWSMA
-  Surface Water DWSMA - Priority Area A
-  Surface Water DWSMA - Priority Area B
-  Special Well Construction and Boring Area
-  DNR Monitoring Well
-  Major River



Data source(s): Minnesota Department of Health, Minnesota Department of Natural Resources

Land use

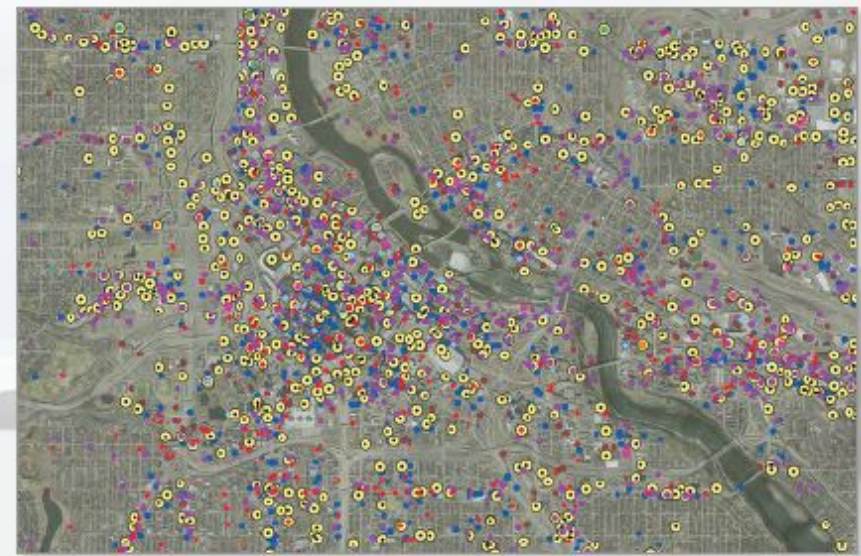
Potential water contaminants depend on how land is developed and used, and what human activities or industries are present.

MPCA's What's In My Neighborhood application identifies potential contamination sources for water and air.

URBAN



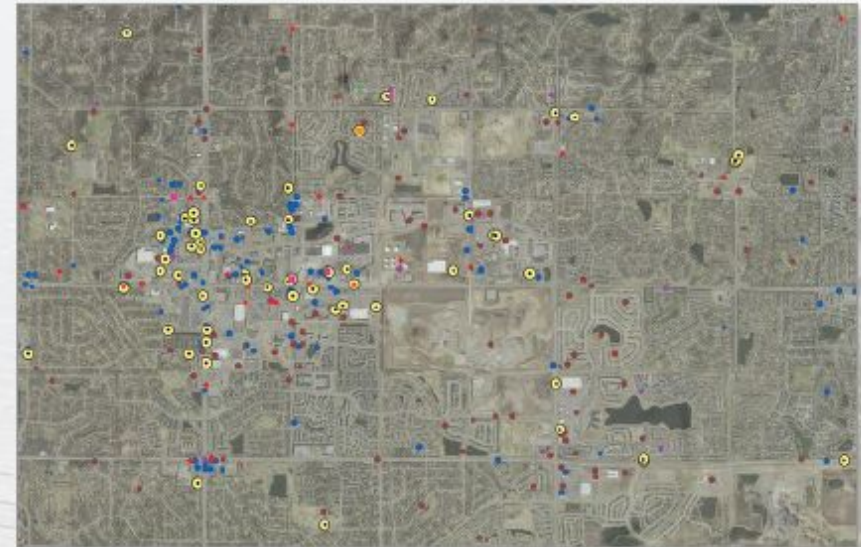
The most developed areas of our metro, with many industrial and commercial sites, often have the most potential sources of contamination. These areas also tend to have more active investigation and cleanup sites than others.



SUBURBAN



Contamination risk in more moderately developed areas tends to be concentrated where commercial and industrial land uses are present. As more rural areas develop and land uses shift from agricultural to industrial, commercial, and residential uses, the types of potential water pollutants also change.



RURAL



Smaller towns and agricultural communities in less developed areas face unique water contamination challenges. Pollution from local industrial or agricultural sources can make their way into drinking and recreational waters. As in other areas, economic vitality and best management practices are important considerations when addressing water sustainability challenges.

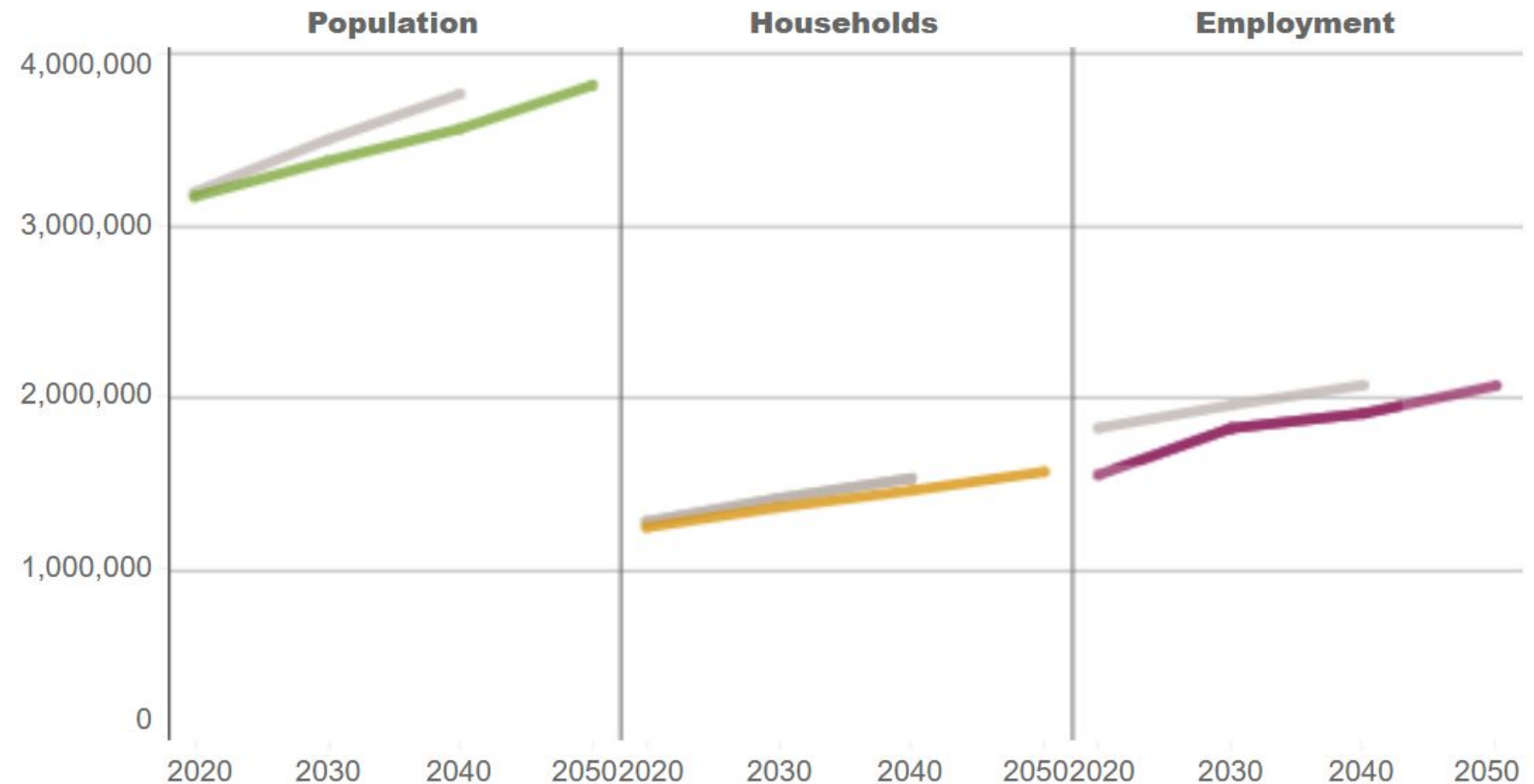


Emerging changes: The region is growing

Draft forecasts

Some changes expected based on input during public comment period.

[https://metro council.org/Data-and-Maps/Research-and-Data/Thrive-2040-Forecasts/Proposed-Local-Forecasts-to-2050-\(1\).aspx](https://metro council.org/Data-and-Maps/Research-and-Data/Thrive-2040-Forecasts/Proposed-Local-Forecasts-to-2050-(1).aspx)



View forecast data as

Chart

Imagine 2050
Thrive MSP 2040

Regional Planning Cycle



Imagine 2050

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

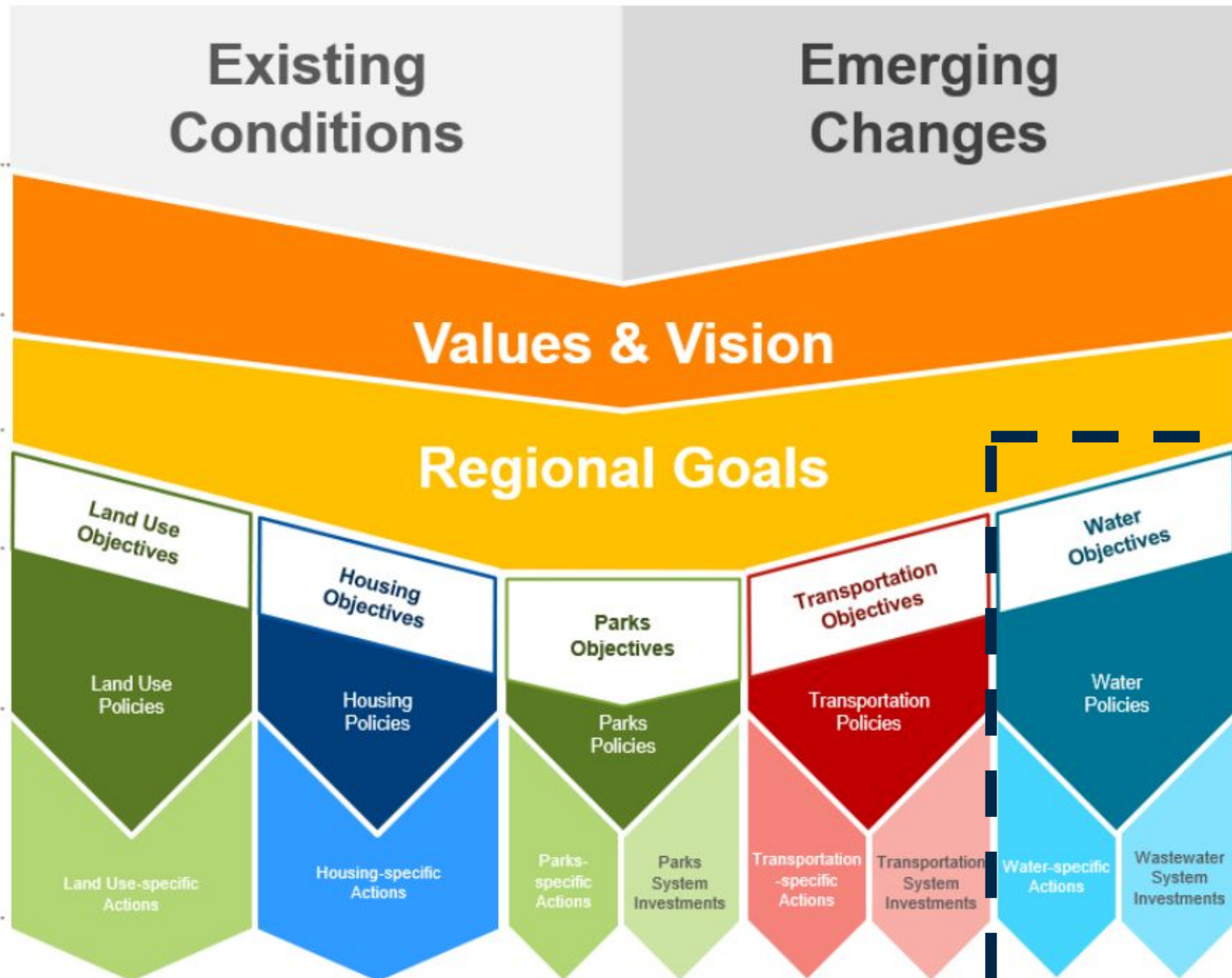
Our shared values reflect the **core beliefs** that guide how we work toward the vision of **what we want to achieve**.

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**.



Input from people across the region

- Draft content based on input from hundreds of people
- Formal public comment period from August 15 to October 7, 2024
 - 1,200 comments on Imagine 2050 as a whole
 - 500 people and organizations
 - Over 110 comments on Water Policy Plan
(<https://metro council.org/Council-Meetings/Committees/Water-Supply-Advisory-Committee/2024/10-22-2024/Info-3b-High-level-summary.aspx>)
 - Over 50 on water supply and the Metro Area Water Supply Plan
(<https://metro council.org/Council-Meetings/Committees/Water-Supply-Advisory-Committee/2024/10-22-2024/Info-3c-Public-comments-responses.aspx>)

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

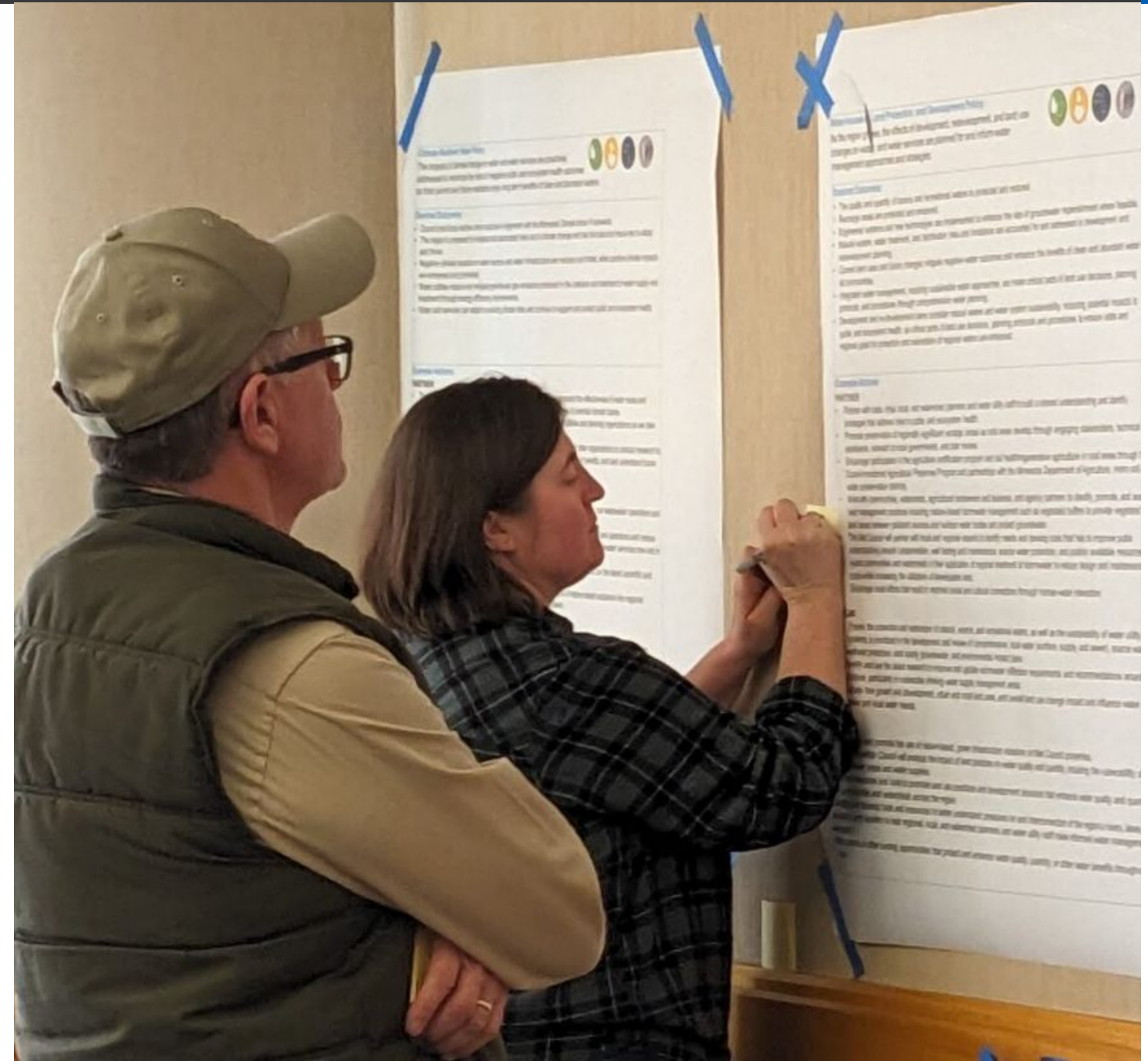
2050 Water Policy Plan Update Advisory Group

(<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 available online

<https://metro council.org/Council-Meetings/Committees/Water-Supply-Advisory-Committee.aspx>

RECOMMENDATIONS FOR
WATER SUPPLY PLANNING IN THE METRO AREA



METROPOLITAN AREA WATER SUPPLY ADVISORY COMMITTEE

FEBRUARY, 2022

Subregional input to water supply planning

Building shared understanding of the following at a subregional level:

Context and current conditions

Definition of success

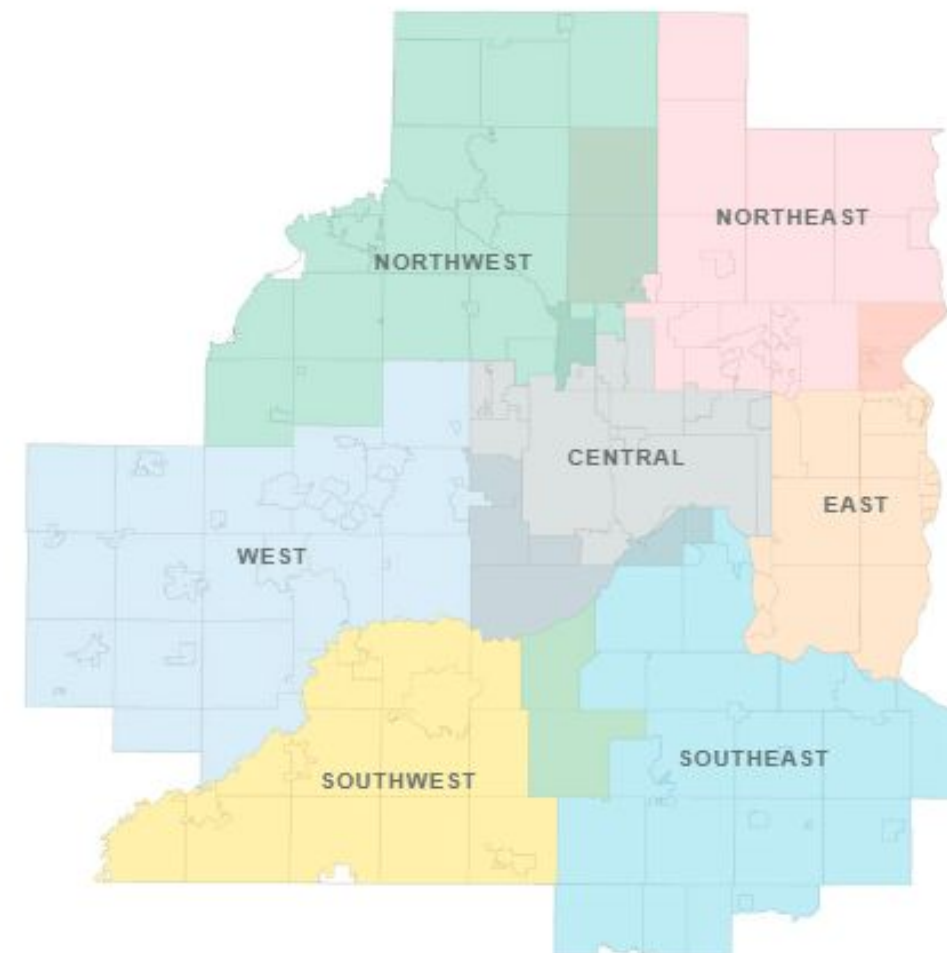
Issues and barriers

Strategies to address them

- Practices
- Policies
- Partnerships

Timeline/sequencing

Resources needed to sustain effort towards success over time



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

- Draft being revised based on public comments and input from advisory committees
- Adoption of the final document is expected in February 2025
- Guidance to local organizations regarding local plan updates in September 2025
 - Developing System Statements for each county, city, and township
 - Updating planning assistance resources in the Local Planning Handbook
 - Launching an engagement and training program for local planners
- Ongoing technical assistance programs and projects

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>



Try water efficient and low-input landscapes

Grow Easy Peasy Lawns

Try Low-Maintenance Grasses



Fescue grass at Minnesota Governor's Residence, St. Paul

Most Minnesota lawns are planted with Kentucky bluegrass which requires lots of water, fertilizer and mowing to look good. For a terrific looking, easy lawn, try growing fescues. Fine fescue grows slowly. Tall fescue's roots grow deep and stay green even after drought. Mow less, water less!



Results after 60-day drought trial



To learn more, visit:
extension.umn.edu/turfgrass

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

<https://metro council.org/Wastewater-Water/Planning/Water-Supply-Planning/Projects/CONSERVATION-EFFICIENCY/Twin-Cities-Lawn-Irrigation-Efficiency-Study.aspx>



Build capacity and share knowledge



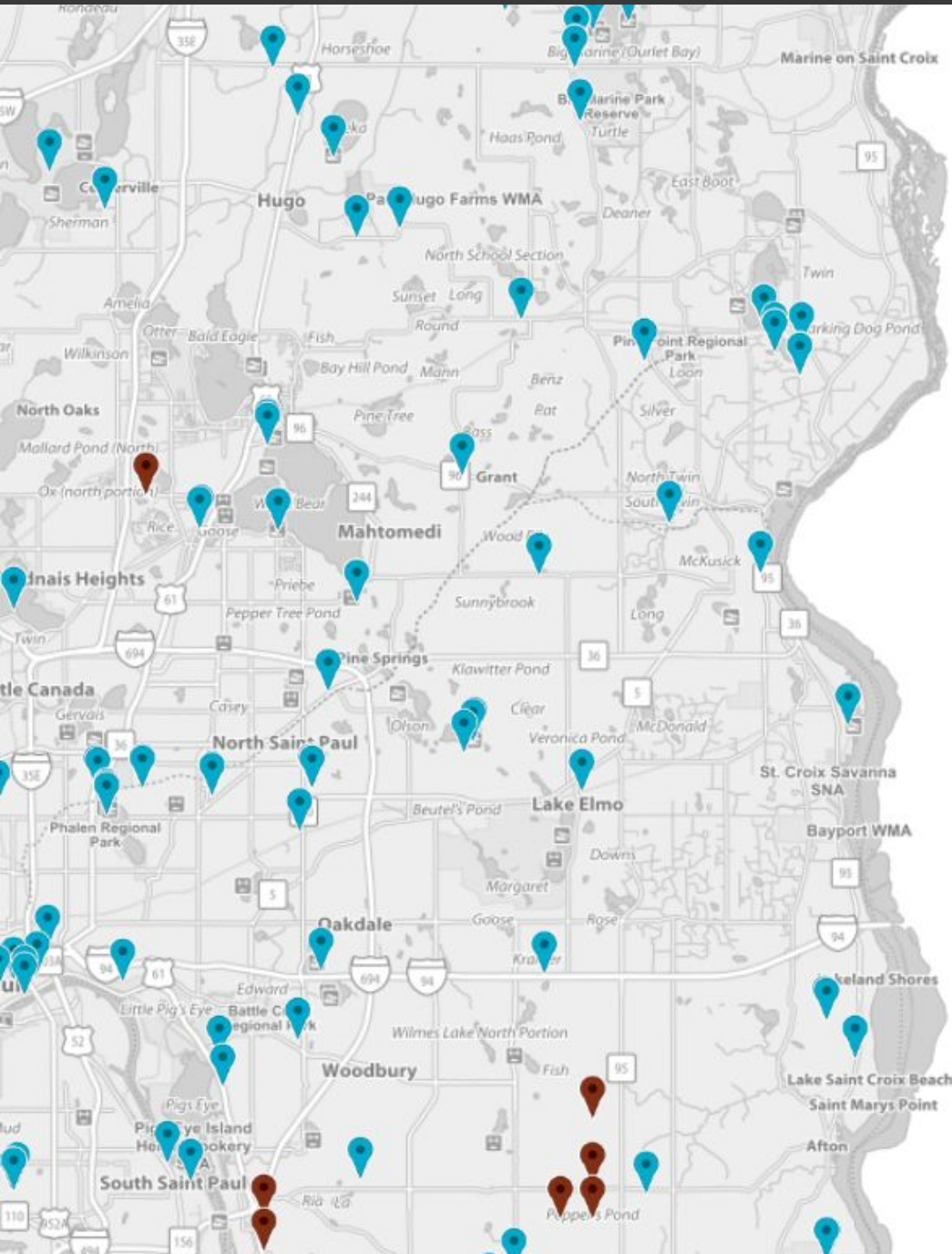
MnTAP water efficiency intern program

- Launched in 2012 supported by the Metropolitan Council
- 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!

<http://www.mntap.umn.edu/interns/>



Pay attention to water levels



MN DNR cooperative groundwater monitoring network

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

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

Know your water quality

Show 10 entries

Search

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

Maureen Hoffman, Greg Johnson, Jen Kader, Jen Kostrzewski, Lanya Ross, Judy Sventek

Wastewater system plan

Walter Atkins, Kyle Colvin, Emma de Villa, Adam Gordon, Rene Heflin, Emily Schon, Megan Wilson

Water Supply Planning Atlas

John Clark, Henry McCarthy



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