Setting the (Water) Table

Information on the sources, uses, demand and pricing of the water in the metro area

Lanya Ross, Environmental Analyst, Water Supply Planning

Metropolitan Council

Council of Metropolitan Area Leagues of Women Voters

October 16, 2021

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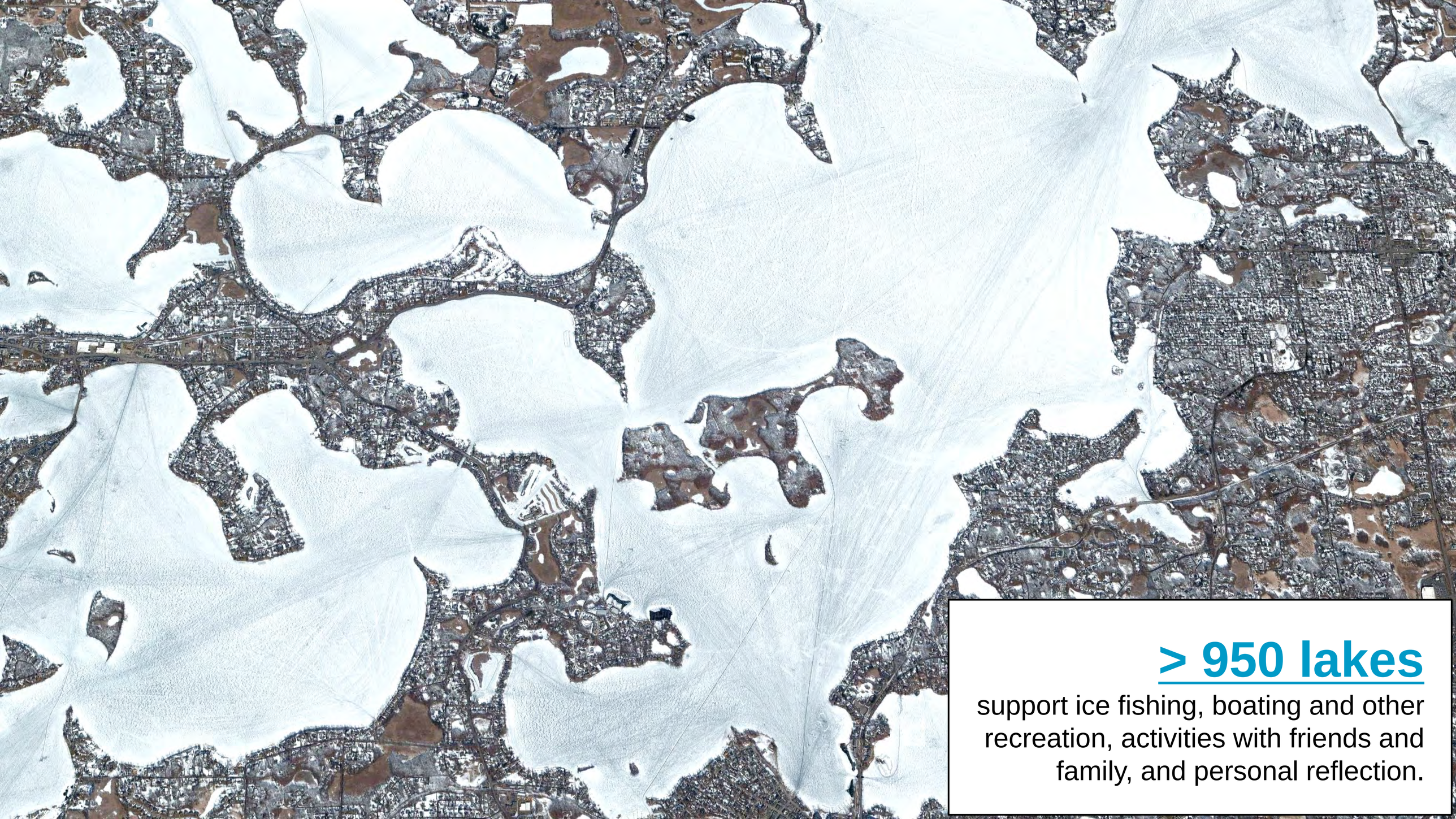
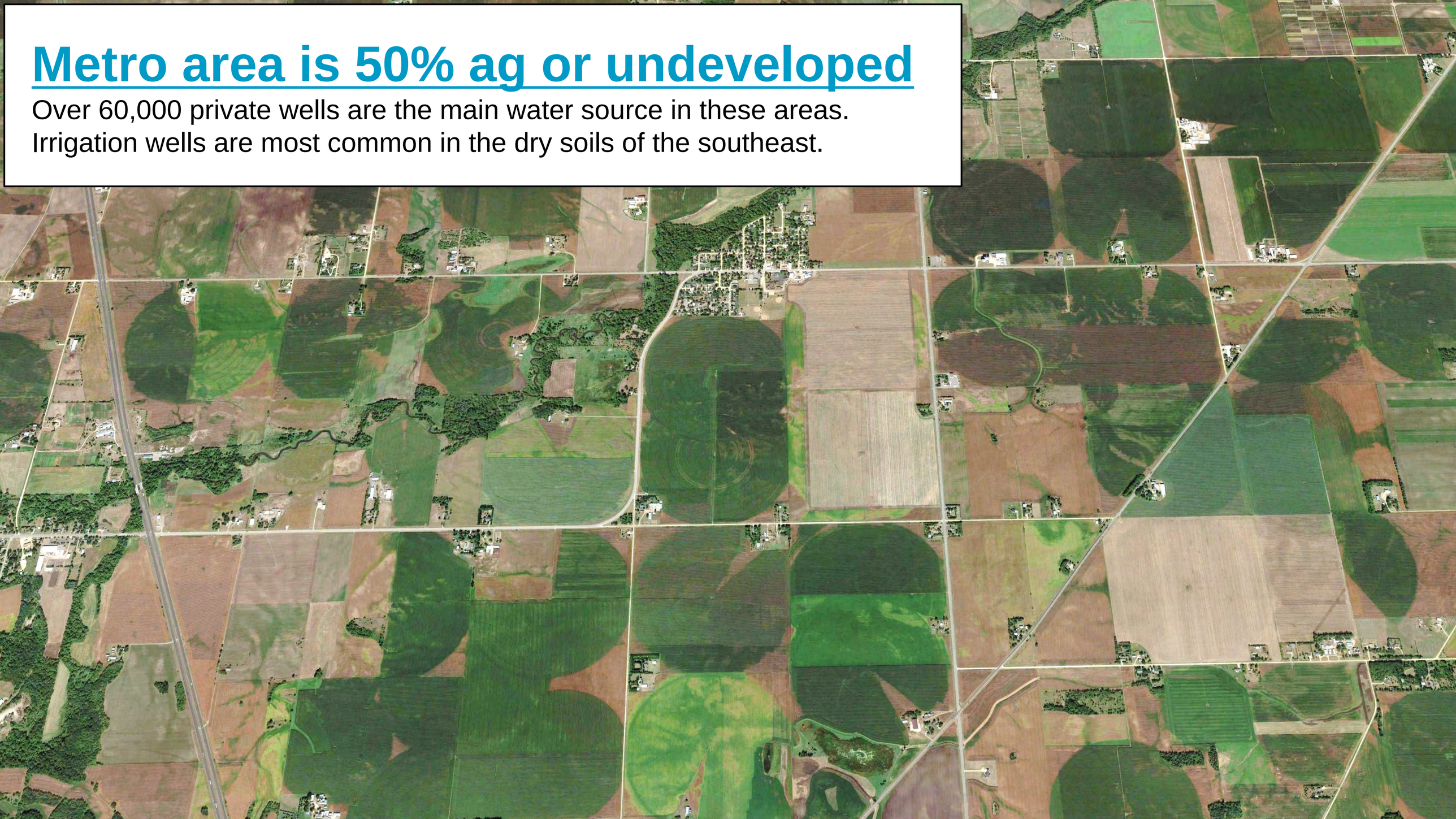


> 950 lakes

support ice fishing, boating and other recreation, activities with friends and family, and personal reflection.

Metro area is 50% ag or undeveloped

Over 60,000 private wells are the main water source in these areas.
Irrigation wells are most common in the dry soils of the southeast.



> 3 million tons of grain

are one of the commodities shipped down the Mississippi River in 2019.

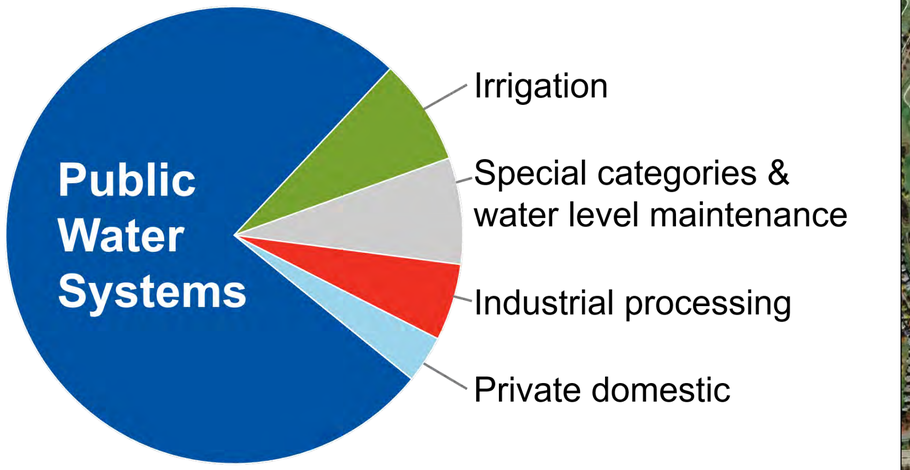
63 million park visitors

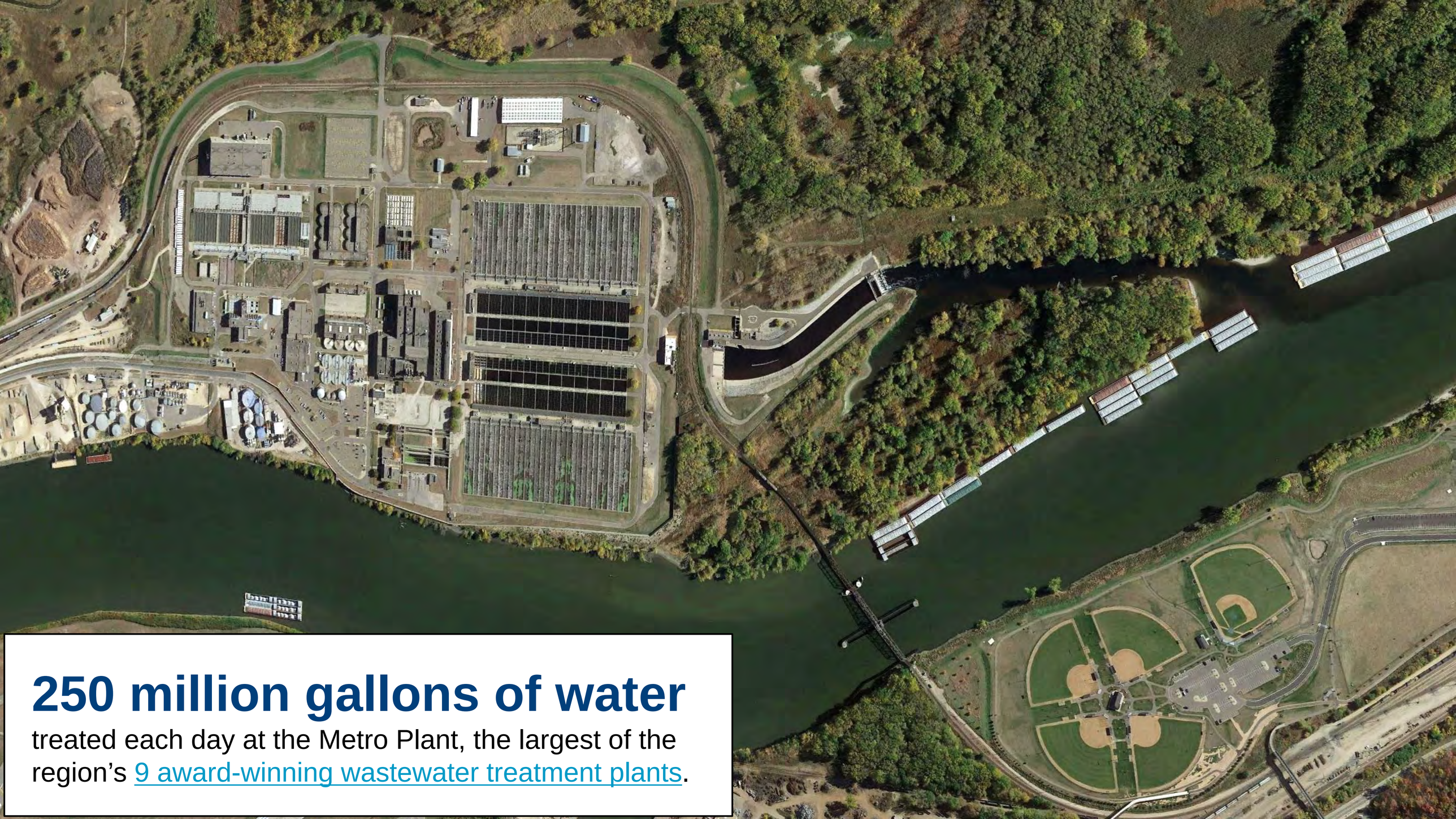
to the regional park system annually.

Routine monitoring

verifies that the water coming out of our taps is safe to drink. Results at: https://data.web.health.state.mn.us/drinkingwater.

Metro water uses





250 million gallons of water

treated each day at the Metro Plant, the largest of the region's 9 award-winning wastewater treatment plants.

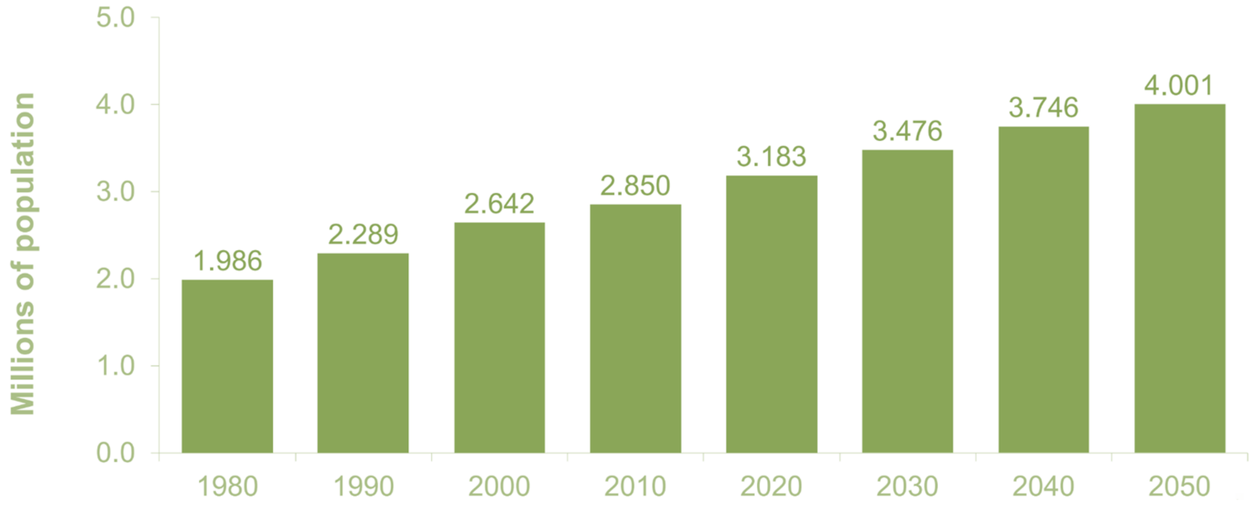
Water sustains us and helps us grow

3 million people in 2020

1.7 million jobs in 2020

100 gallons per person per day

Population growth: 4 million in 2050



We might need to use 100 million more gallons of water each day in 2050.

Learn more about long-range forecasts on the Metropolitan Council website.

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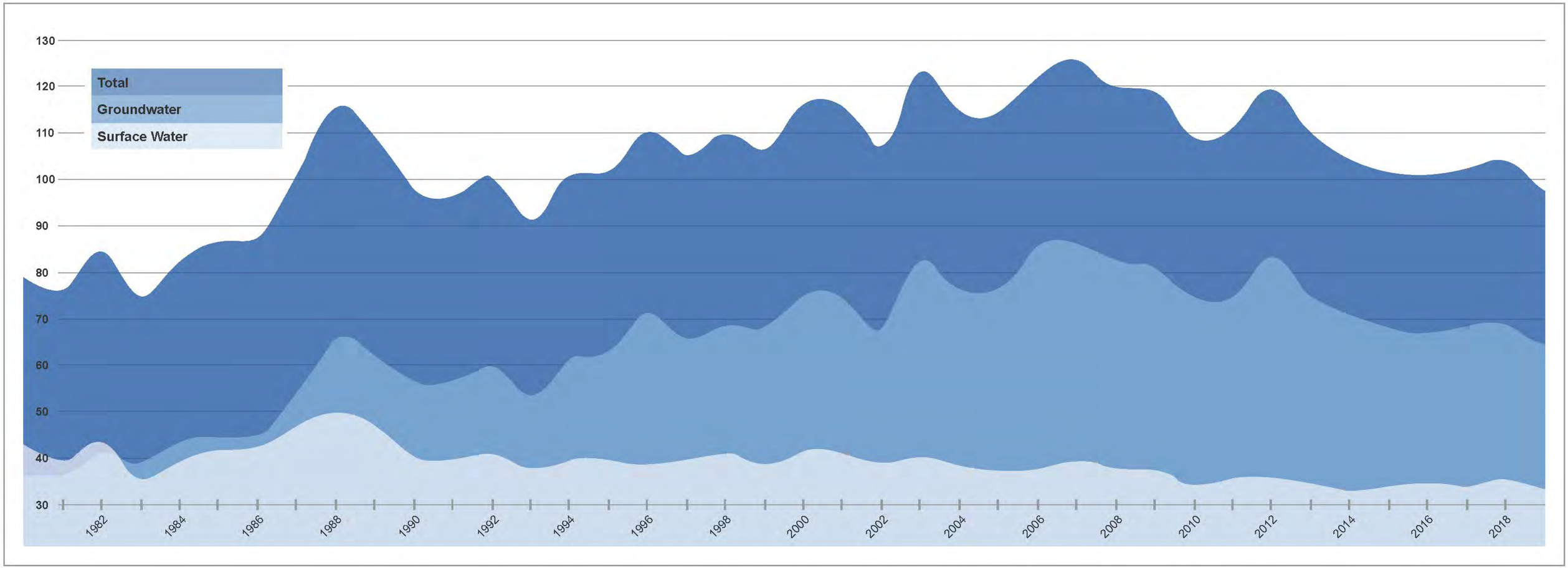
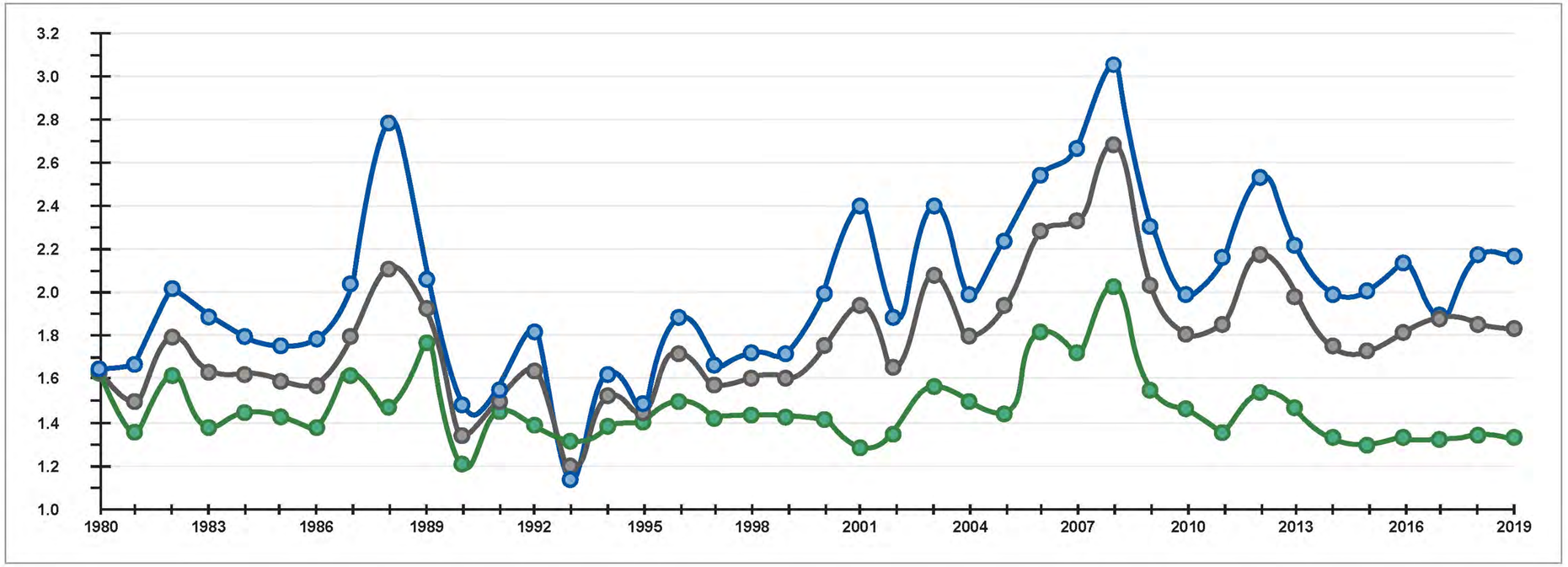
Water use trends: Annual water public by public suppliers (billions of gallons)



Water use trends: Summer versus winter demand ratios



Groundwater

Total

Surface Water

In Minnesota we use more water during the summer than the winter. We're outdoors more, enjoying the warm weather after long winters. However, outdoor water use can be high particularly during periods of drought and can stress aquifers and surface waters. During some years, outdoor water use accounts for about 20% all water use.

The need to meet peak water demand during the summer months has led to more water supply infrastructure in some communities. Increasing efficiency, employing sound use and conservation practices, and maintaining residential and commercial infrastructure can help to limit or delay the need for more wells, and save dollars.

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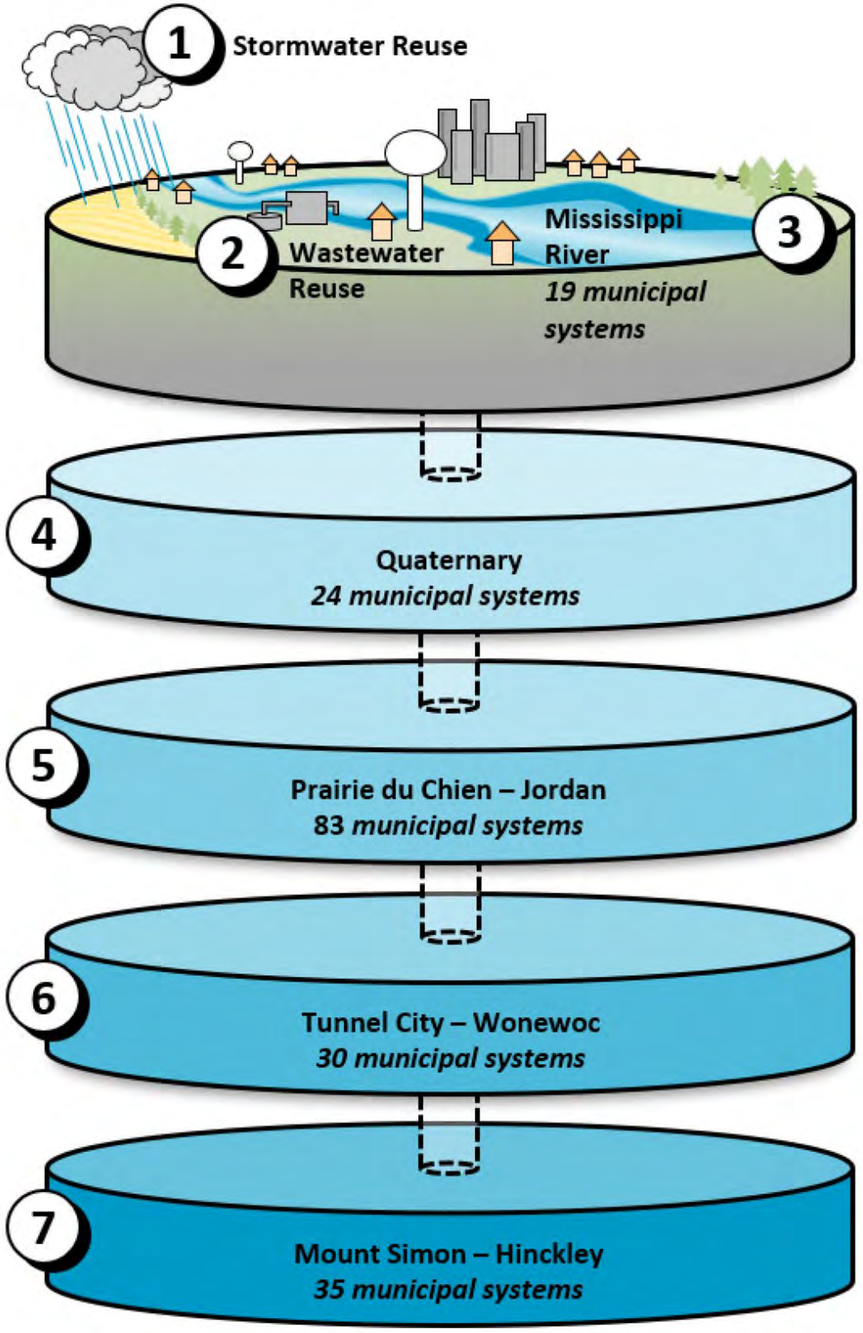

Metro water supply source considerations

- **Access to the source** – not all sources are equally available or productive
- **Seasonal and climate variability** of the supply – frozen winters and drought impact supply
- **Recharge rates** – some aquifers replenish more quickly than others
- **Nearby competing demands**
- **Vulnerability to contamination**
- **Regulated withdrawal limits and treatment requirements** – to protect public and environmental health
- **Funding challenges**

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Cities plan to invest in their water supply infrastructure to continue to provide residents with clean, plentiful an affordable water.

105 municipal systems

2 Mississippi River intakes

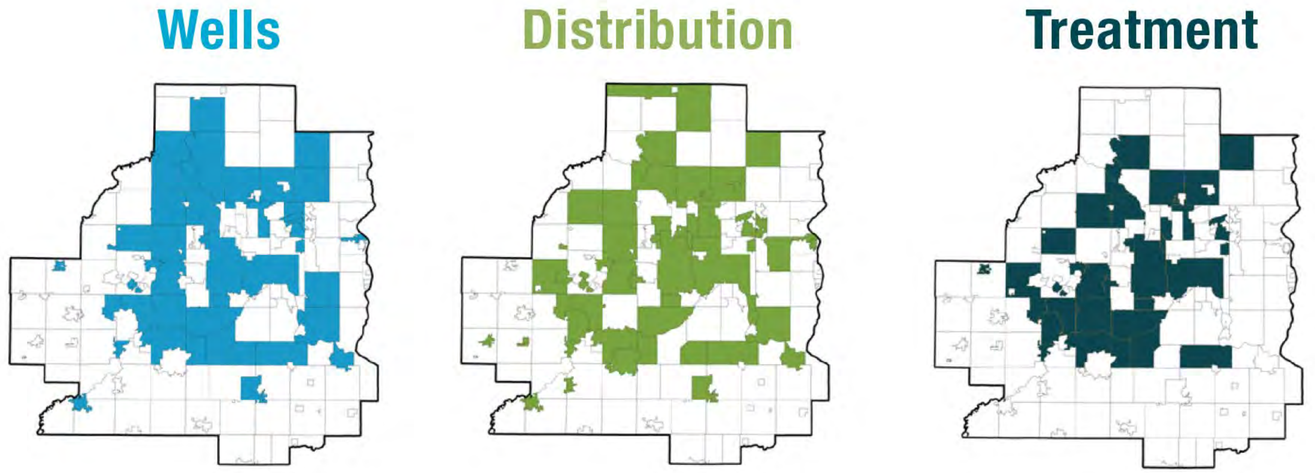
800 groundwater wells

10,000 miles distribution pipe

Private Wells

60,000 provide residential drinking water

5,000 support businesses and organizations



By 2040

more than 50 communities plan to drill new municipal wells

more than 60 communities plan to improve and/or expand their distribution systems

more than 35 communities plan to enhance their water supply treatment processes

Consider the Public Facilities Authority:
2021 Estimated Funding Needs Report to the Legislature.

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Water rates

All revenues from customers are used to cover costs incurred by the City in providing the utility services.

The water rates cover the cost of operating the City's water system, including water treatment, water meter replacements and well rehabilitation.

The water rates also pay for construction costs associated with replacing or upgrading aging utilities infrastructure and related debt payments.

Metropolitan Council tool to compare water rates across the metro area:

https://metrocouncil.org/Wastewater-Water/Planning/Water-Supply-Planning/Grants/Water-Rates.aspx

2016 report: Twin Cities Regional Water Billing Analysis

1,500 square miles designated source water protection areas

Watershed contributing to Minneapolis and St. Paul intakes on the Mississippi River

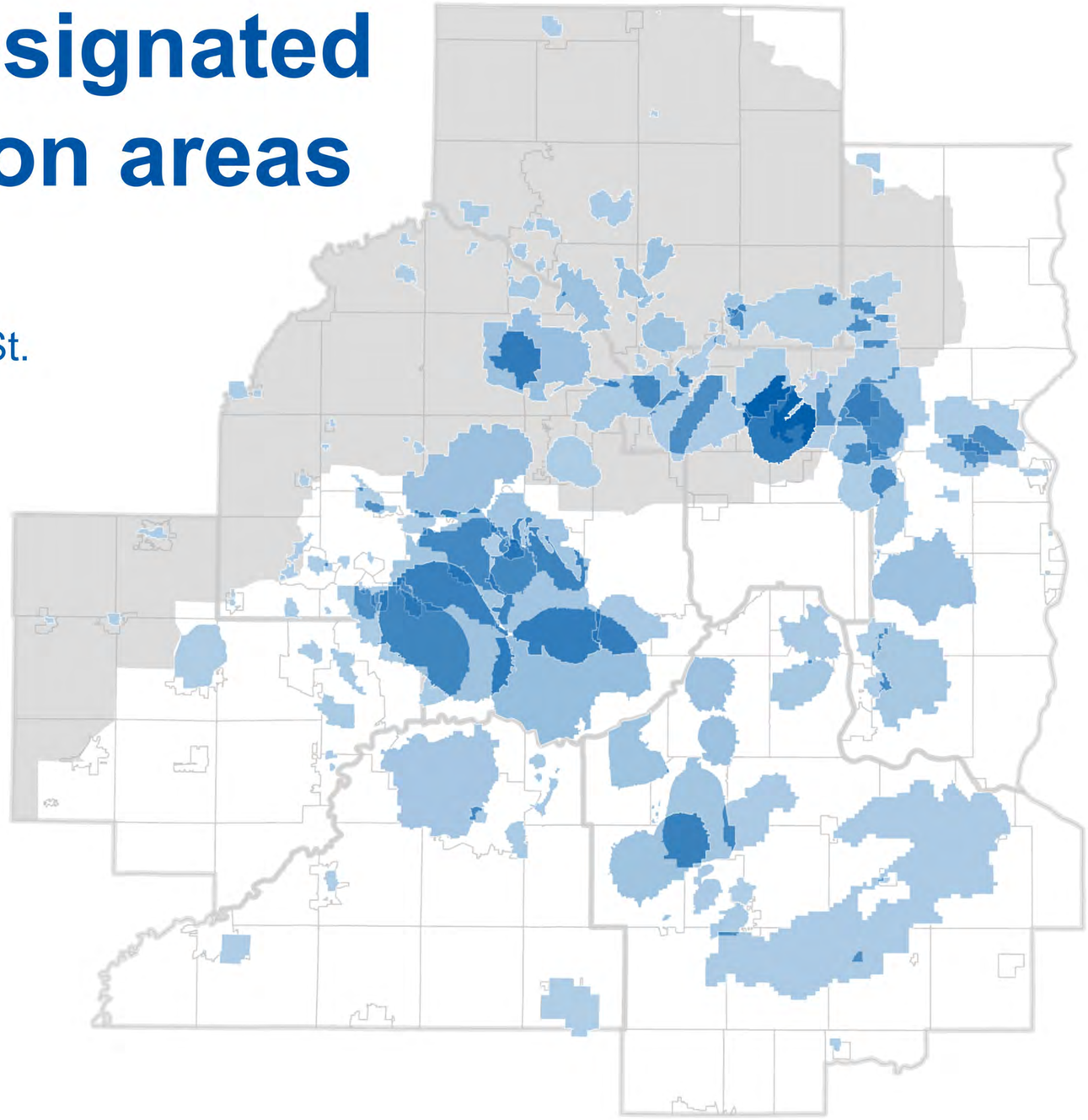
POPULATION WITHIN POLYGON

461,565

Some areas contribute groundwater to water supply systems serving more than 400,000 people (St. Paul and its overlapping areas)

0

Other areas contribute to populations as small as 203 people (East Bethel)



“Don’t make it yucky

and leave some for the fish.”

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MnTAP water efficiency intern program

- Launched in 2012
- Student interns placed in metro area organizations
- Between 2013 and 2017, 20 projects made 159 recommendations
- As of 2018, the intern recommendations that were implemented save 87 million gallons/year and $486,000/year
- Still going strong!

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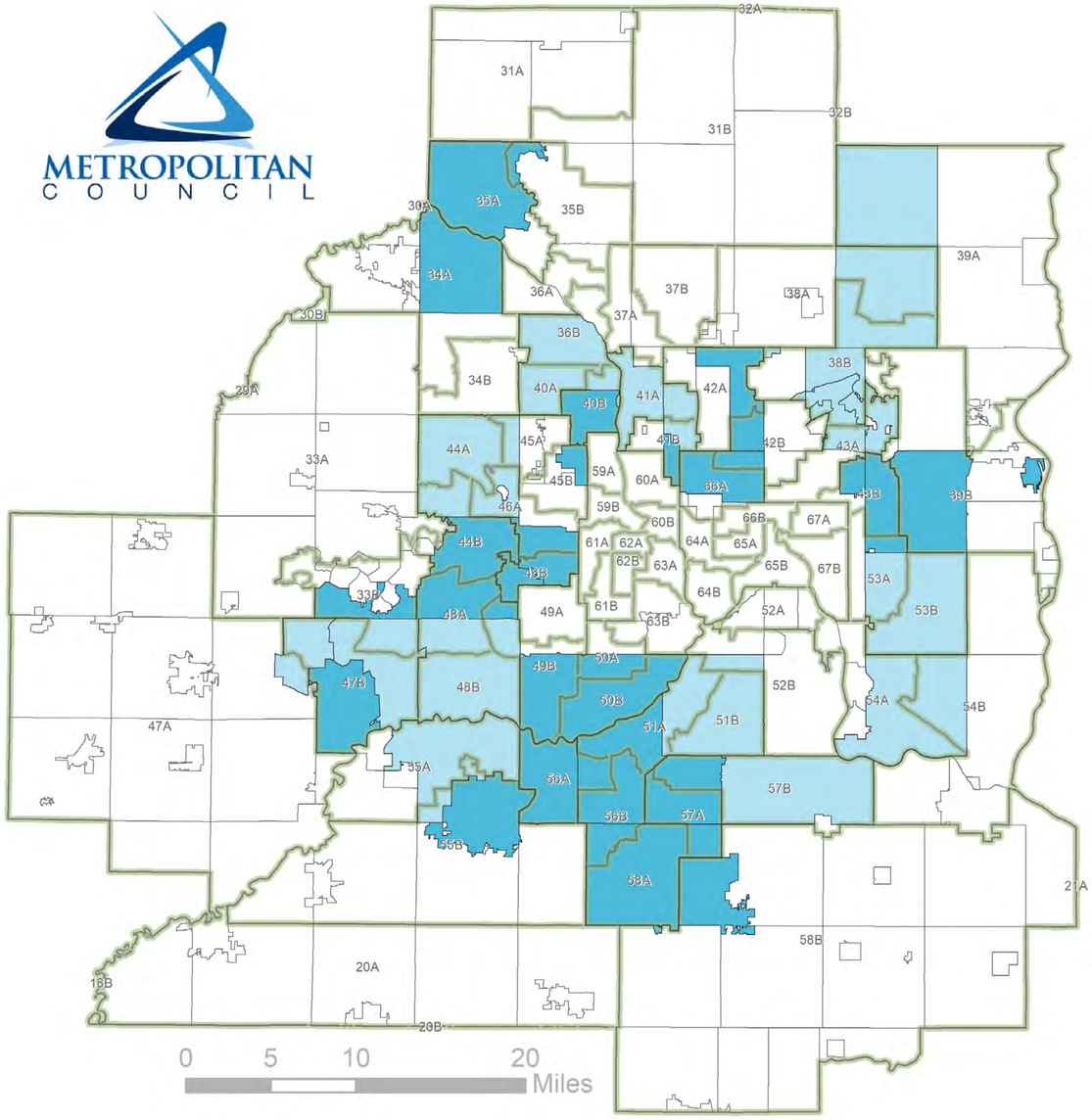
Water efficiency grant program

2015-2017:

- **19 communities** established local water efficiency programs
- **4,510 devices** replaced
- **52 million gallons** of water saved annually

2019-2022:

- **40 communities**



Participating Communities

Apple Valley
Bayport
Bloomington
Brooklyn Center
Brooklyn Park
Burnsville
Chanhassen
Chaska
Cottage Grove
Dayton
Eagan
Eden Prairie
Farmington
Forest Lake
Fridley
Hopkins
Hugo
Lake Elmo
Lakeville
Mahtomedi
Minnetonka
New Brighton
North St. Paul
Oakdale
Plymouth
Prior Lake
Ramsey
Robbinsdale
Rosemount
Roseville
Savage
Shakopee
Shoreview
Shorewood
St. Louis Park
St. Anthony
Victoria
White Bear Lake
White Bear Twp.
Woodbury

Turfgrass research and outreach

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

Thank you!

For more information:

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