Metropolitan Planning Council
Drinking Water 1-2-3 Academy

Working Together to Advance Water Supply Planning in Minnesota

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Water Supply Planning Manager
September 2019

METROPOLITAN COUNCIL

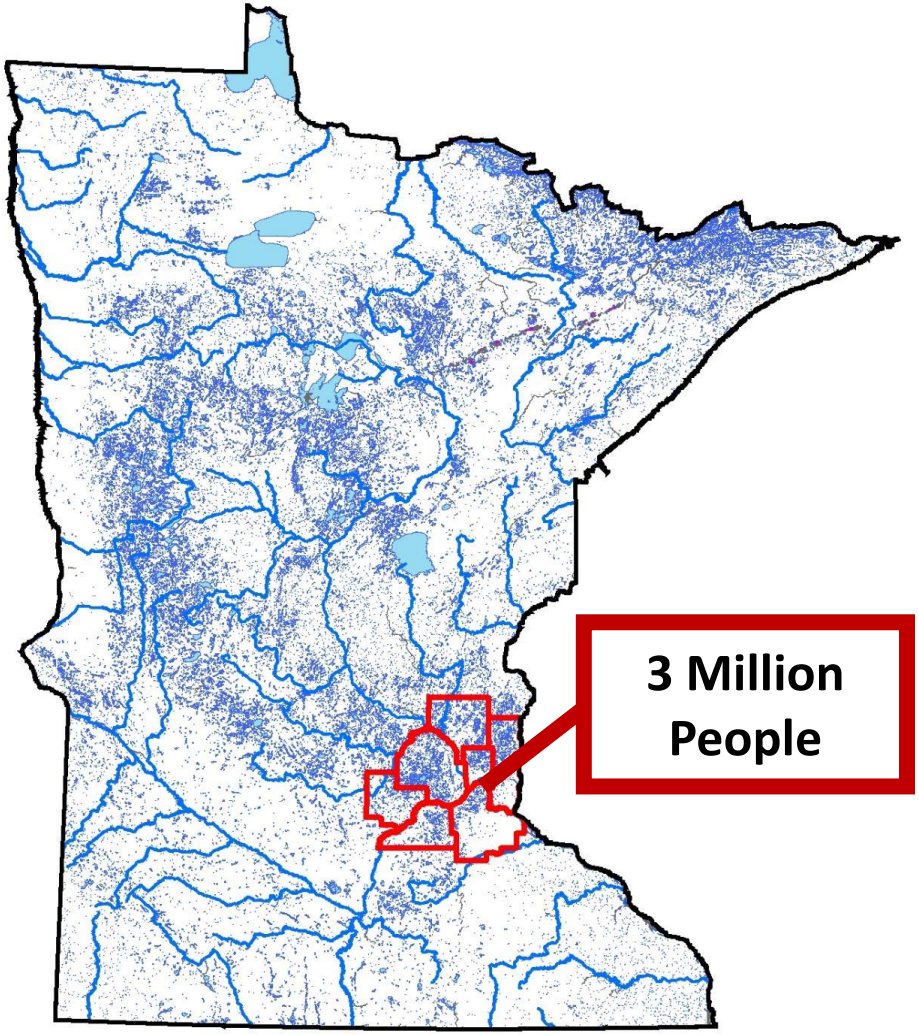
Metropolitan Council

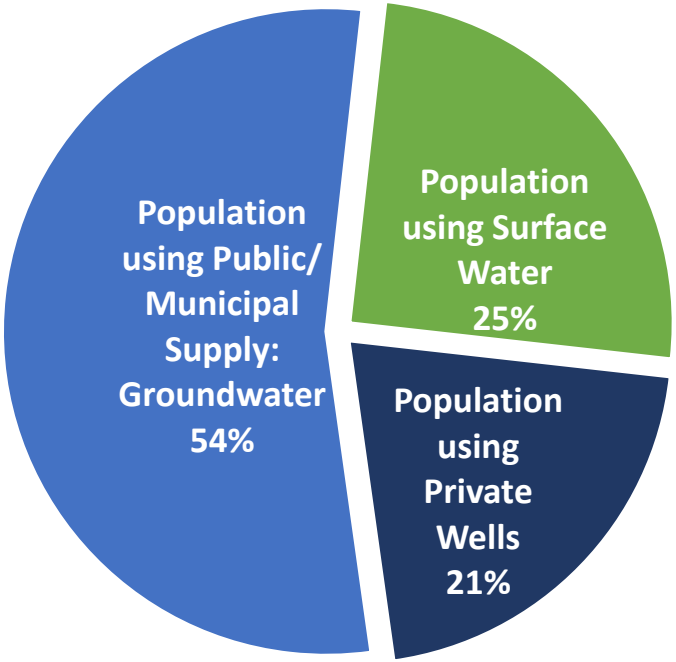


The Council's mission is to foster efficient and economic growth for a prosperous region.

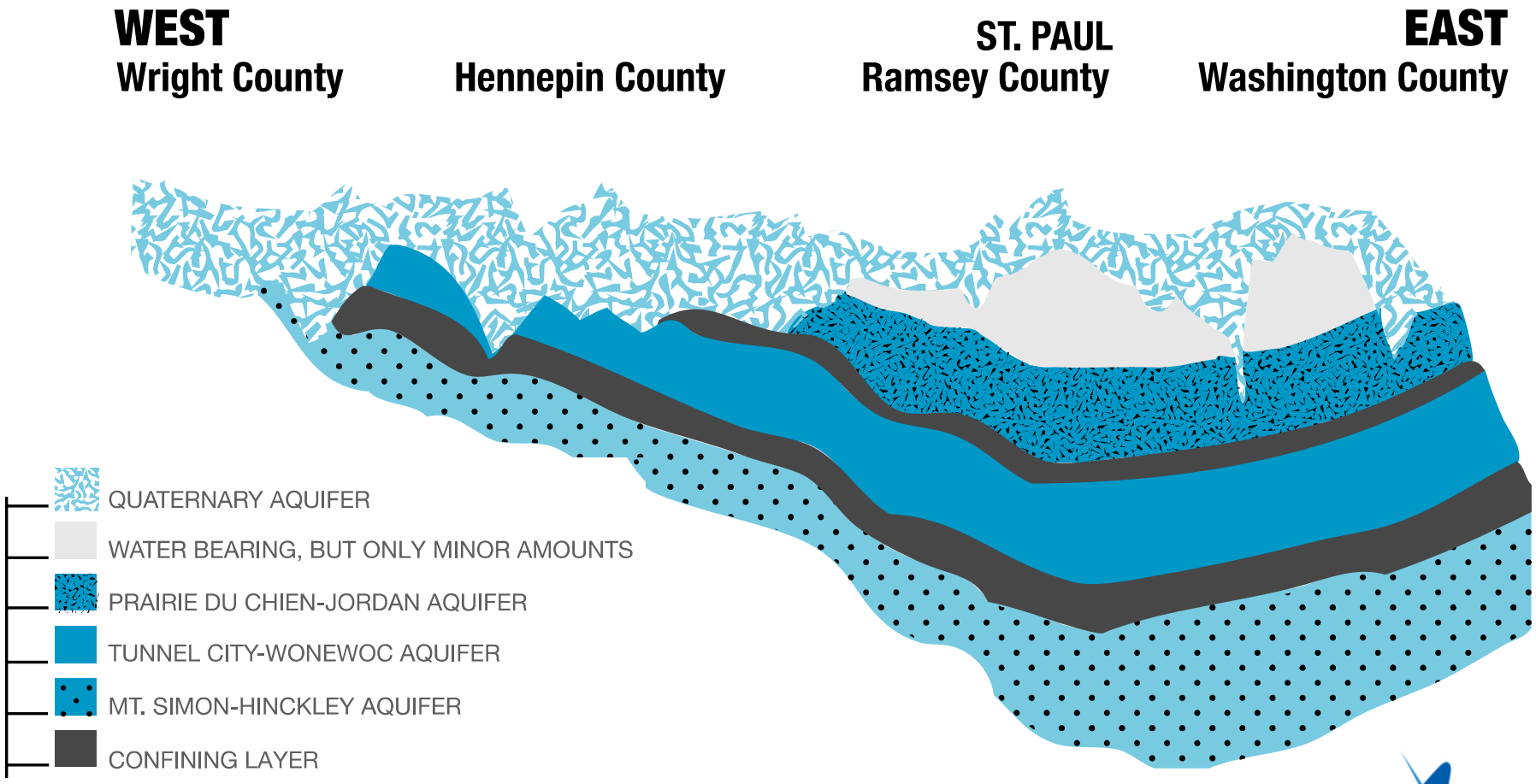
- Transportation
- Wastewater collection & treatment
- Planning & development
- Parks
- Housing

Minnesota:
Land of 10,000 Lakes!





Aquifers of the Twin Cities Metro Area



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Major Rivers of the Twin Cities Metropolitan Area

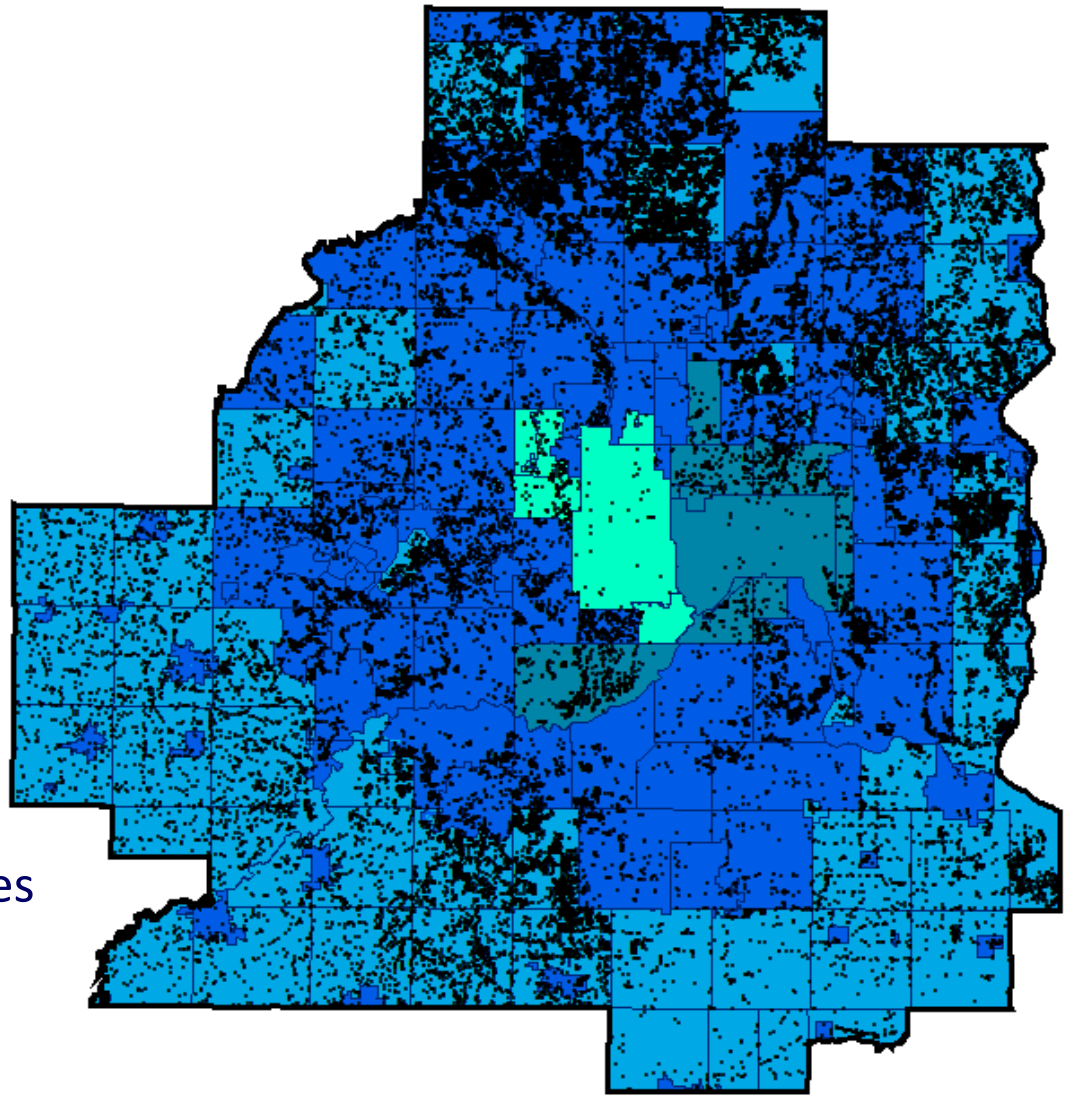
Mississippi

St. Croix

Minnesota

Water Supply Sources of the Twin Cities Metro Area

- 186 Cities and townships
- 100^{+} Water utilities



Groundwater: private wells

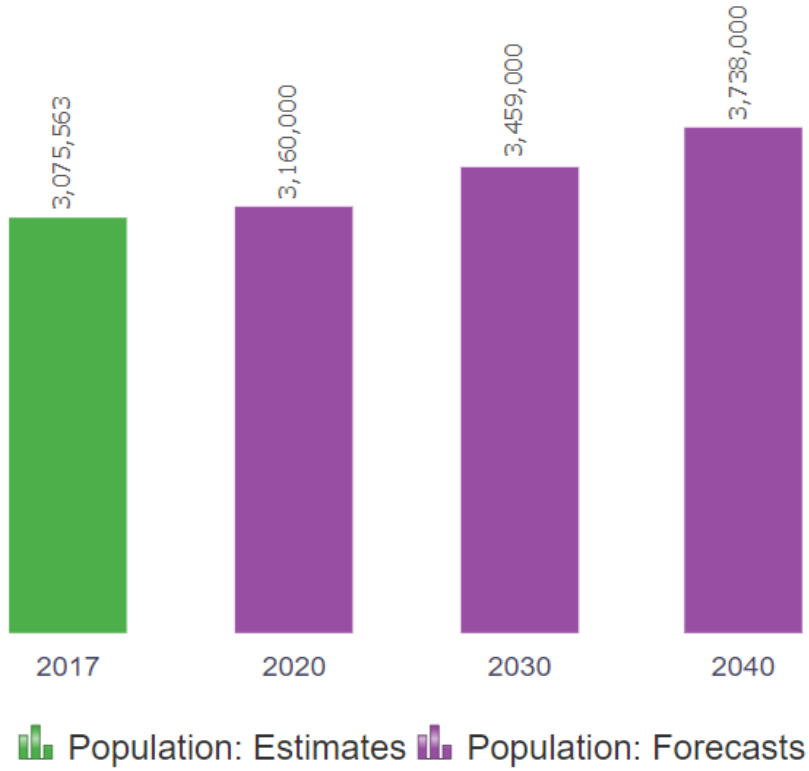
Groundwater: municipal wells

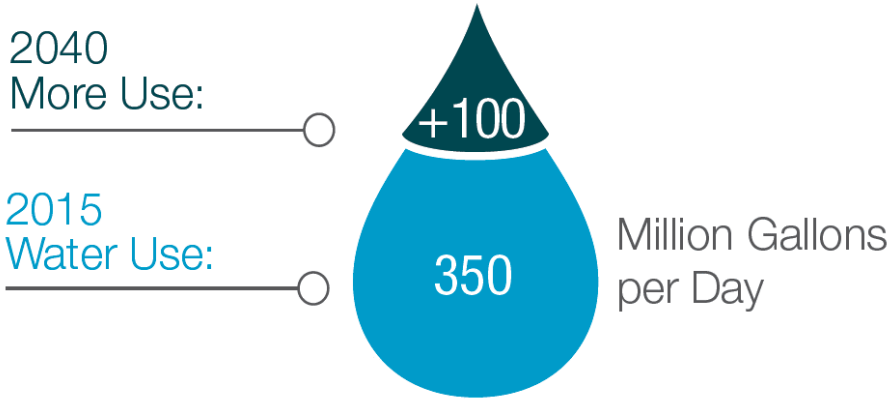
Groundwater + Surface water: municipal wells, intakes

Surface water: municipal intakes

Private (domestic) well

Growing Population Increases Municipal Water Use





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Planning Responsibilities

Thrive MSP 2040

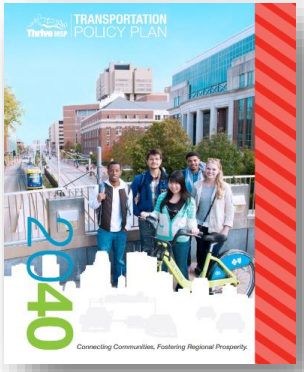
Land Use

Housing

Water Resources

Wastewater System Plan

Master Water Supply Plan



Transportation

Parks

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Water Supply Planning

❑ Council Role

- Develop a regional plan led by local input
- Maintain a database of technical information
- Assist communities in developing local water supply plans
- Identify approaches for emerging issues.

- **NOT Regulator and NOT Supplier**

❑ Advisory committee

- Metro Area Water supply Advisory Committee
- Technical Advisory Committee

❑ Purpose

- Assist and Guide Council water supply planning
- Approve Regional Water Supply Plan

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Regional Modeling Question:

What are the cumulative aquifer impacts of long-term planned growth & water demand in the Twin Cities metropolitan area?

Water Demand (Past & Projected)

Climate

Well Information

Contaminant Plumes

Water Levels

Land Cover

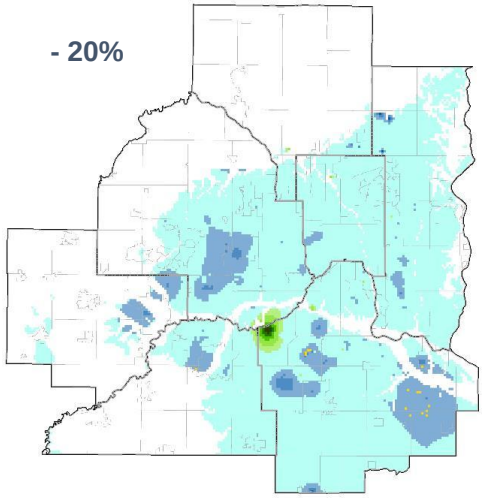
Infiltration & Recharge

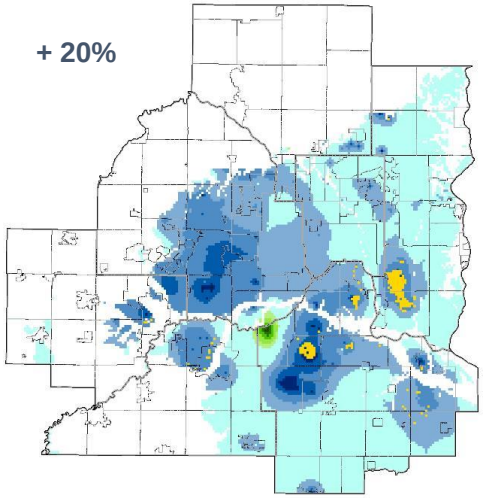
Aquifer Properties

Baseflow

And more…

Metro Model 3: Exploring Multiple Scenarios



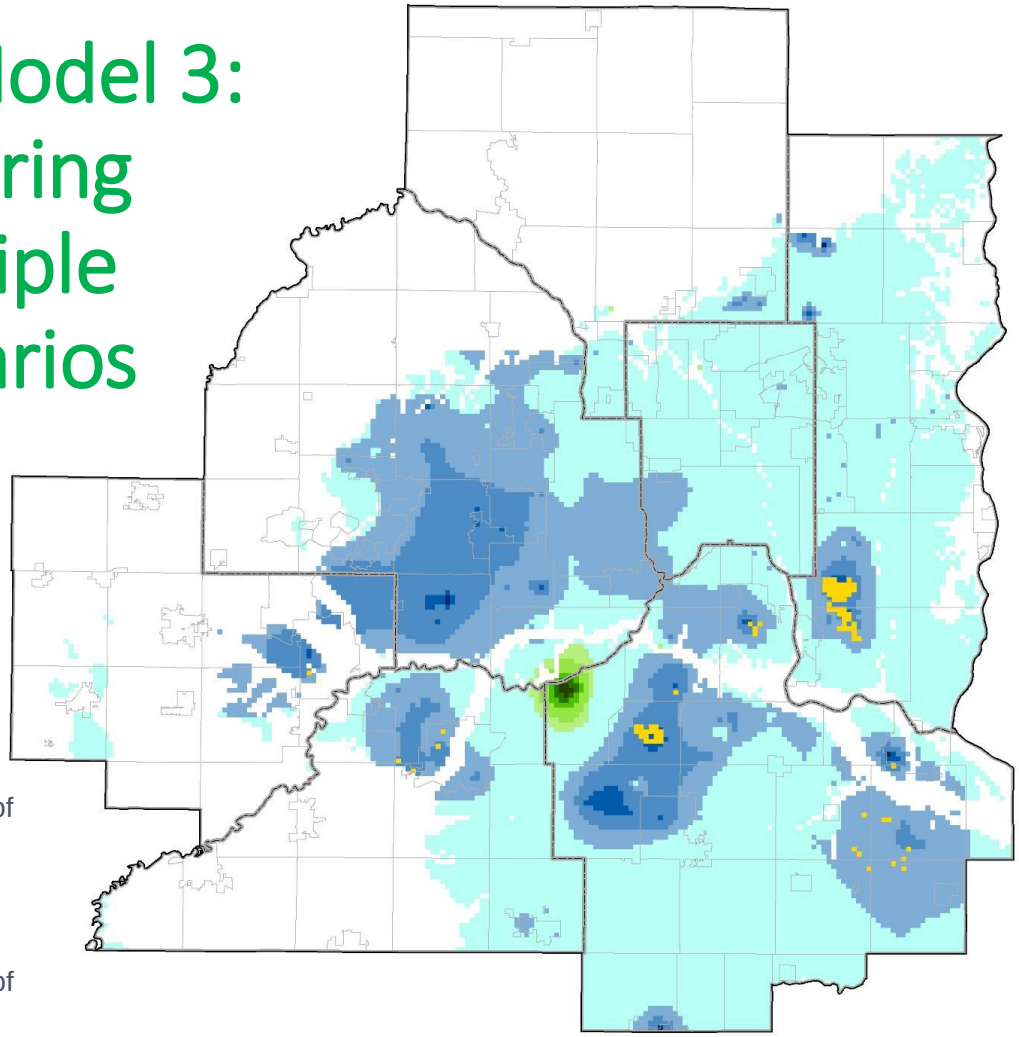


Aquifer change under projected 2040 groundwater pumping:

Over 40 feet of rebound

No change

Over 40 feet of decline



Source; 2015 Master Water Supply Plan

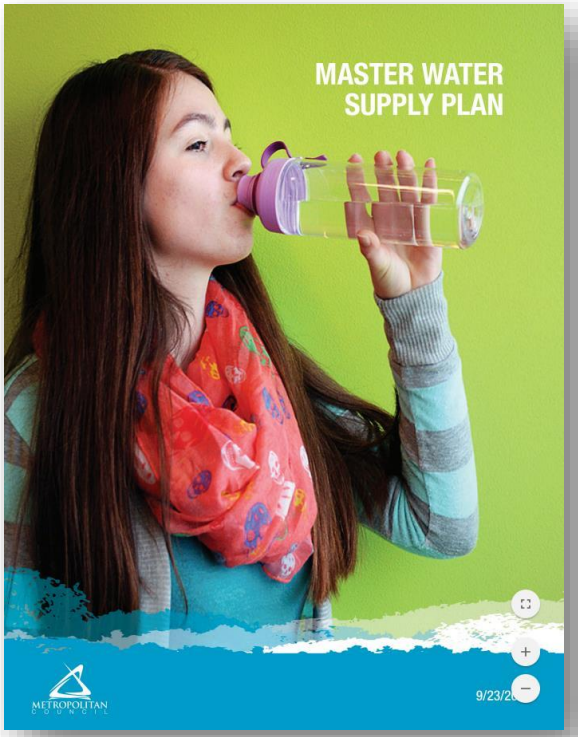
2015 Master Water Supply Plan

Desired Outcomes

- Increased **collaboration**
- Improved **planning** & plan **implementation**
- **Sustainable approaches** are implemented
- **Source** waters are **protected**
- Water **conservation**

Strategies

- Facilitate Collaboration
- Support for local planning & implementation
- Technical studies
- Conservation & reuse
- Investments

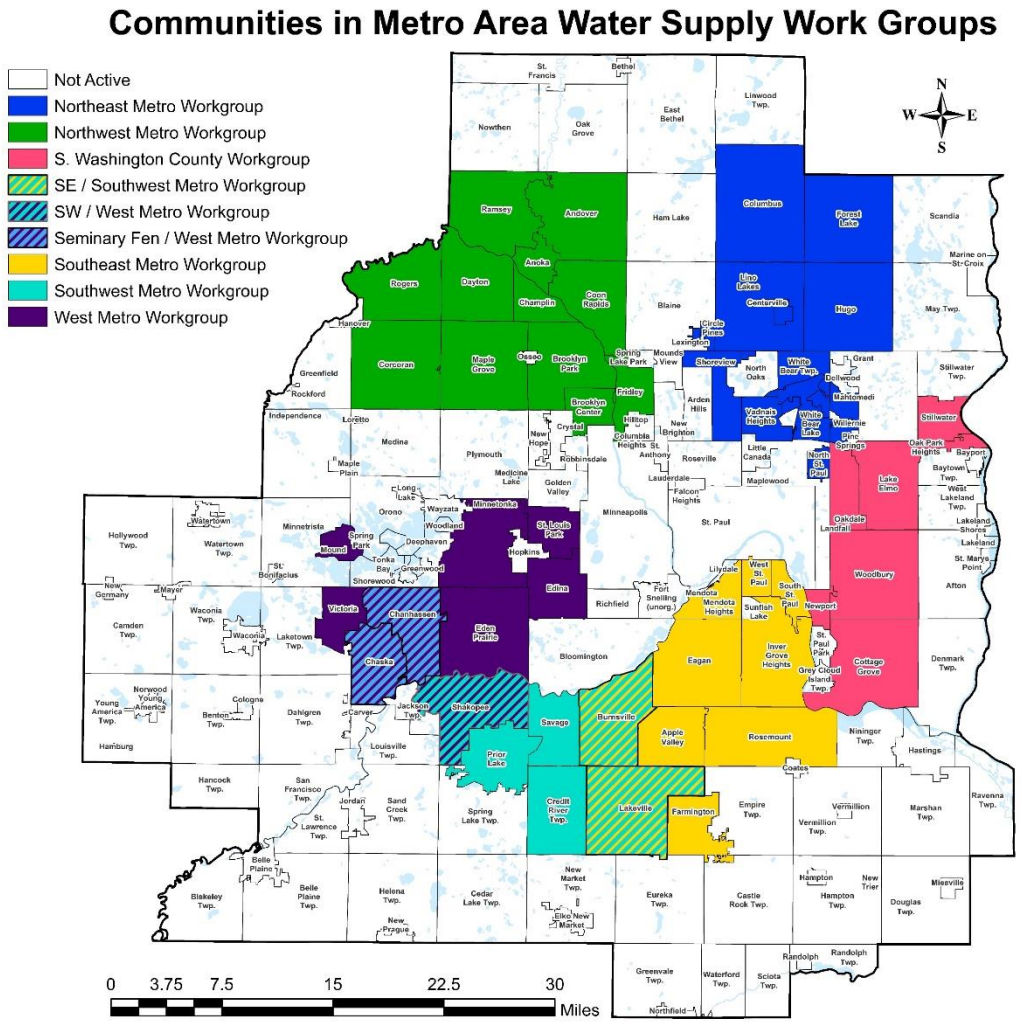


Collaboration: Water Supply Sub-Regional Workgroups

Effective Platform for Collaboration

"Groundwater doesn't know community boundaries. We can have a greater impact if we work together on water supply sustainability."

Russ Matthys, Public Work Director, Eagan
Member of Southeast Work group



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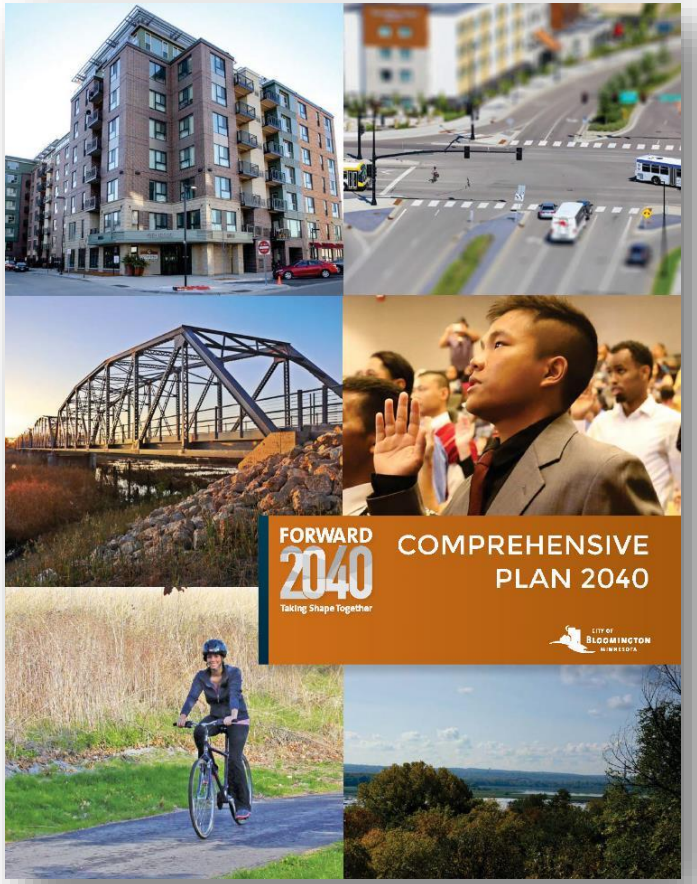
Bloomington Comprehensive Plan 2040

GOAL 1: Dependably and affordably provide a high-quality public water supply

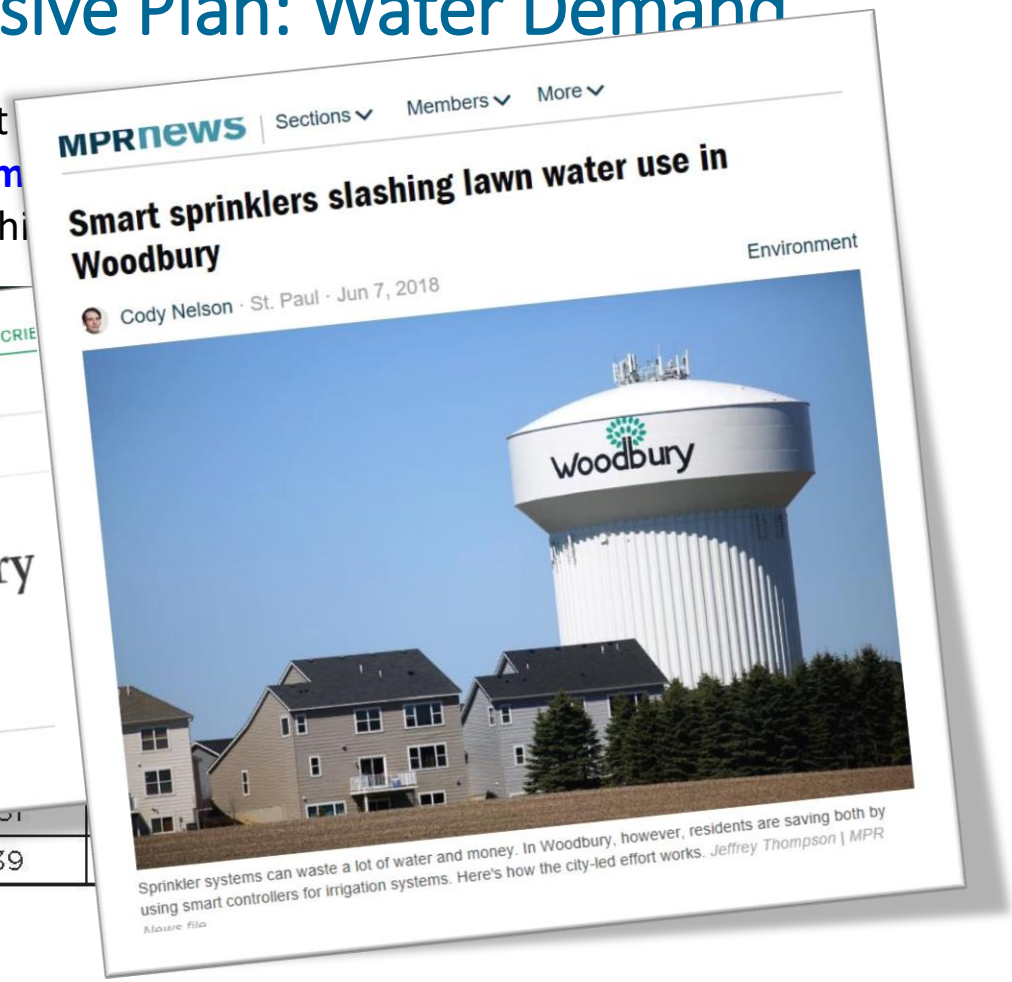
STRATEGY 1.1: Protect the quality and quantity of the groundwater supply

ACTION: **Encourage the continued development of a metropolitan groundwater model**, as a tool to define aquifers and aquifer recharge areas and as a basis for aquifer protection and management.



Woodbury Comprehensive Plan: Water Demand

"For this analysis, it should be noted that
through 2040, the **average and maximum**
due to a reduced per capita usage over thi



Council grants help growing communities use water more efficiently

$500,000 Water Efficiency Grants

4,510 TOTAL DEVICES REPLACED

52 million gallons SAVED ANNUALLY

2,380 toilets

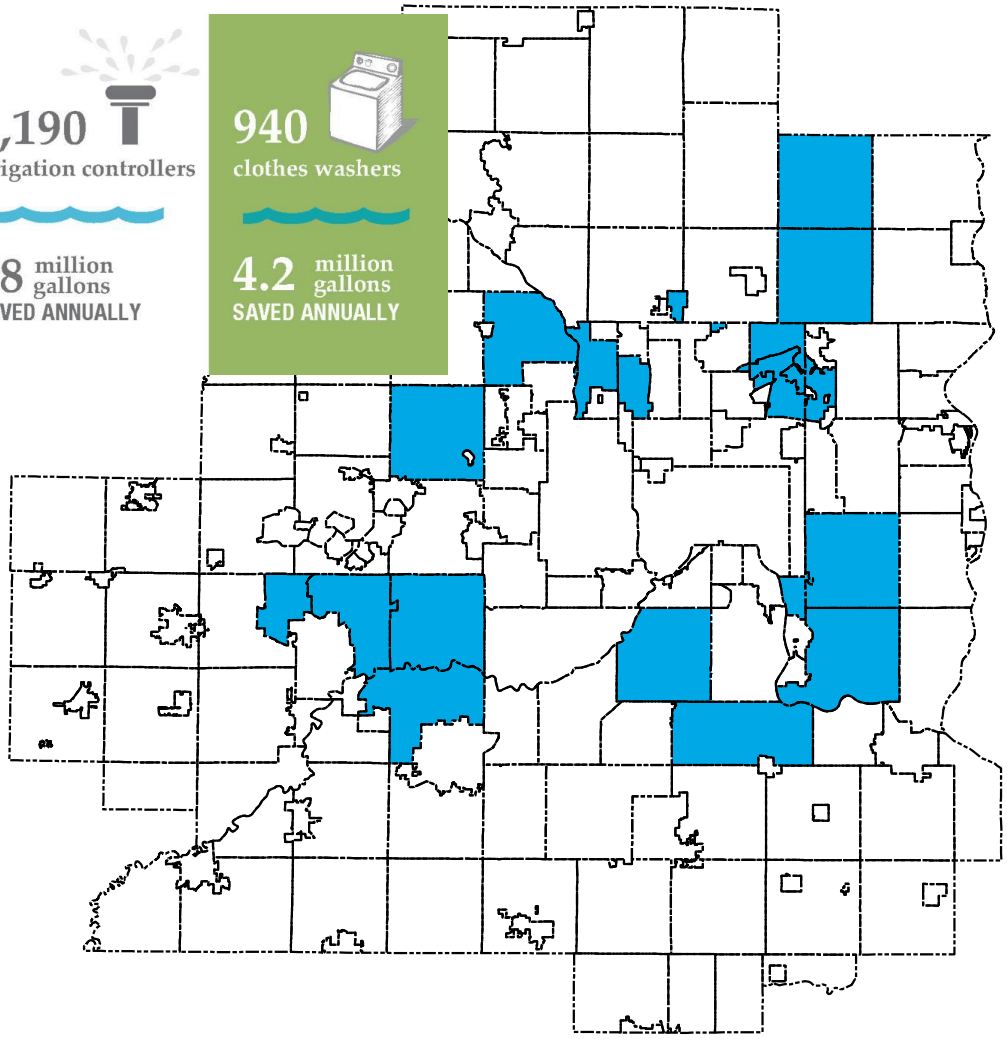
29.8 million gallons SAVED ANNUALLY

1,190 irrigation controllers

18 million gallons SAVED ANNUALLY

940 clothes washers

4.2 million gallons SAVED ANNUALLY



19 Communities

- High growth
- Groundwater source

CLEAN WATER LAND & LEGACY AMENDMENT

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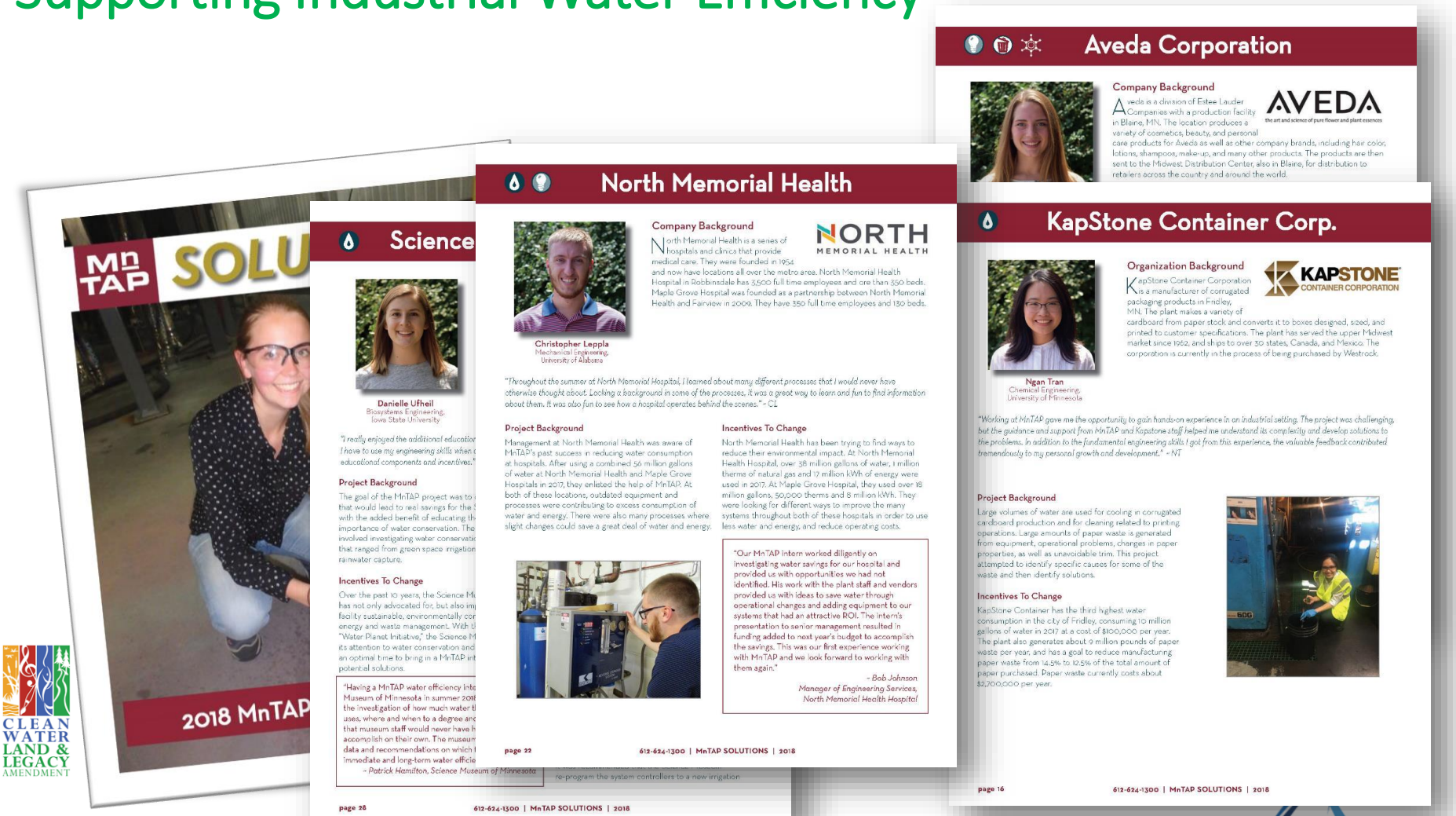
MN Technical Assistance Program: Supporting Industrial Water Efficiency



CLEAN WATER LAND & LEGACY AMENDMENT

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2018 Met Council is a Partner and a Resource

Convene, Facilitate and Provide Technical and Financial Support

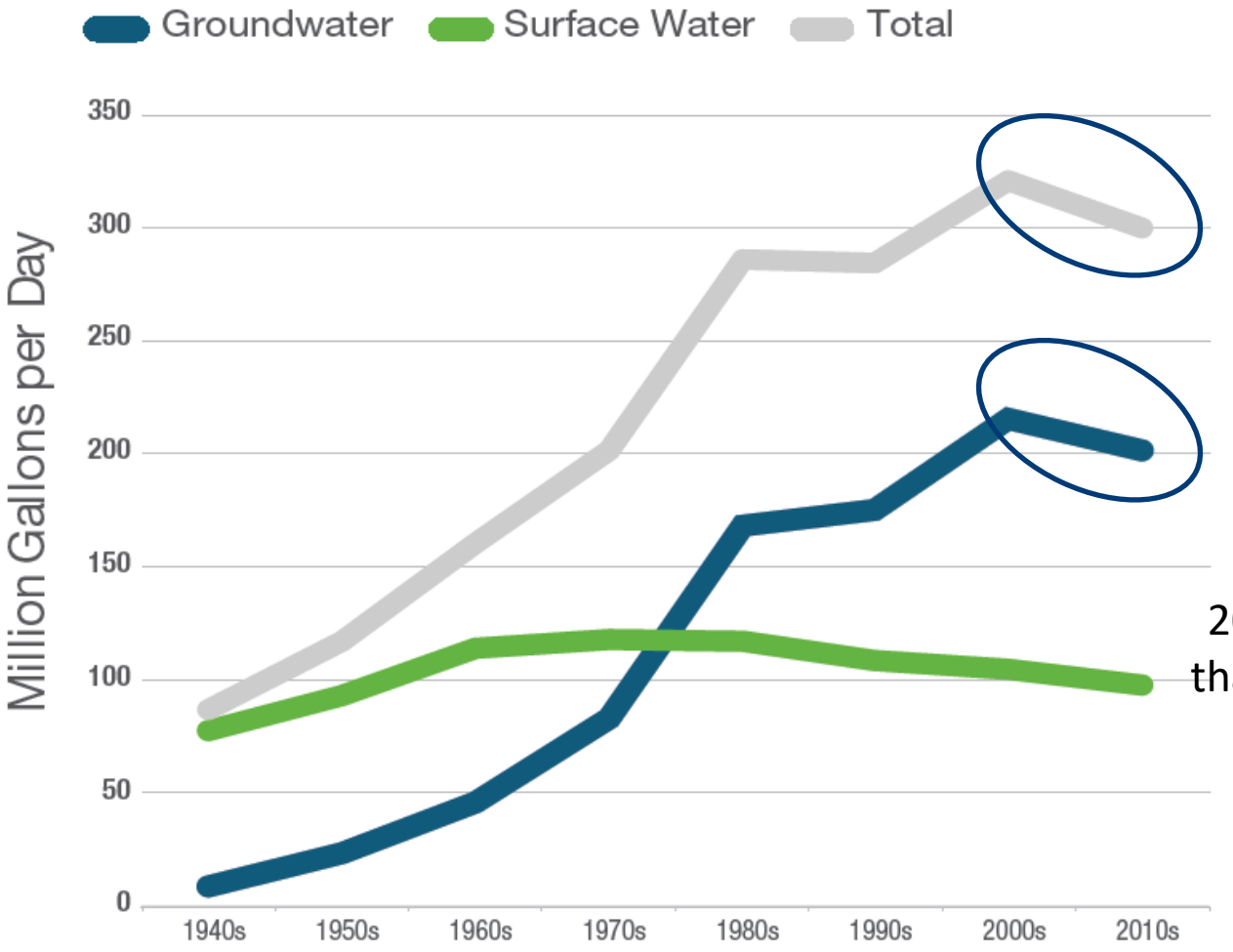
"The Metropolitan Council plays a valuable facilitating role in the discussions and provides a regional perspective for the group. Council funding of the study was important because it isn't always easy to get local city councils to commit funds to something that reaches beyond their borders" **Steve Albrecht**

What We Have Learned

Working together to achieve better results

- Collaborations
  - Engage stakeholders early
- Partnerships
  - Facilitate relationships building
- Learning from each other
  - Understand other's perspectives

Are we heading in the right direction?



Groundwater Use
2011-2015 average is less than 2007-2010 average by **17 MGD**

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Questions

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