



ES Policy Research Project

Supporting the update of the Water Resources Policy Plan



Our ask of you...

- The Water Resource Policy Plan research papers will be released over the next couple months.

Please visit our website to provide feedback:

<https://metro council.org/Wastewater-Water/Planning/2050-Water-Resources-Policy-Plan.aspx>

- Stay tuned for more info and opportunities to give feedback over the year as we draft the policy plan.

WRPP Research Topics



1. Protecting Source Water Areas
2. Rural Water Concerns
3. Wastewater Concerns
4. Water and Climate
5. Water Availability, Access, and Use
6. Water Quality
7. Water Reuse

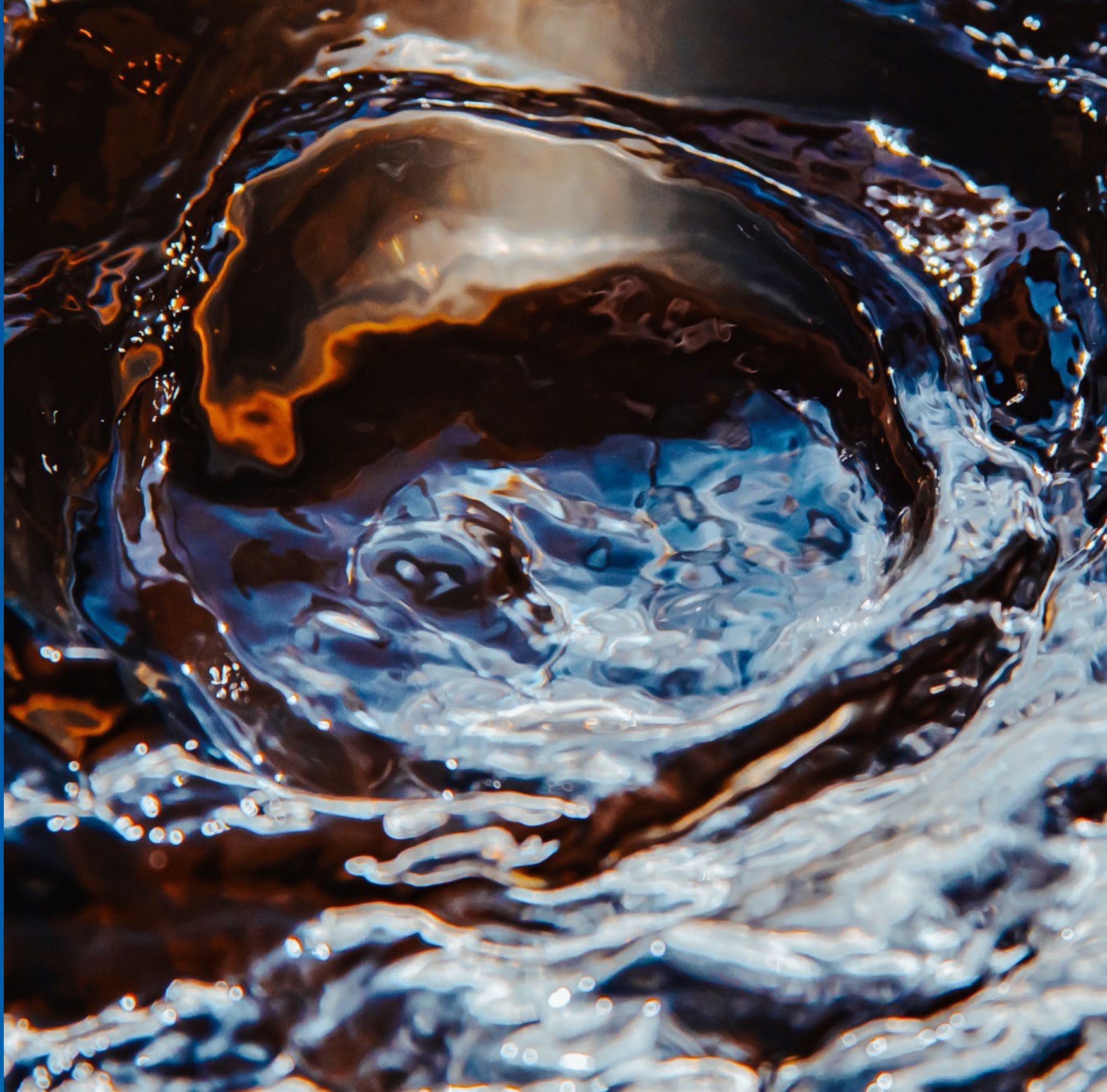
WRPP Research Papers

Contents

- Introduction
- Issue Statement
- Our Role
- Crucial Concerns
- Connections to Current Policy
- Policy/Action Recommendations
- Next Steps



Water Reuse Research Paper



Water Reuse (1/6)



Issue Statement

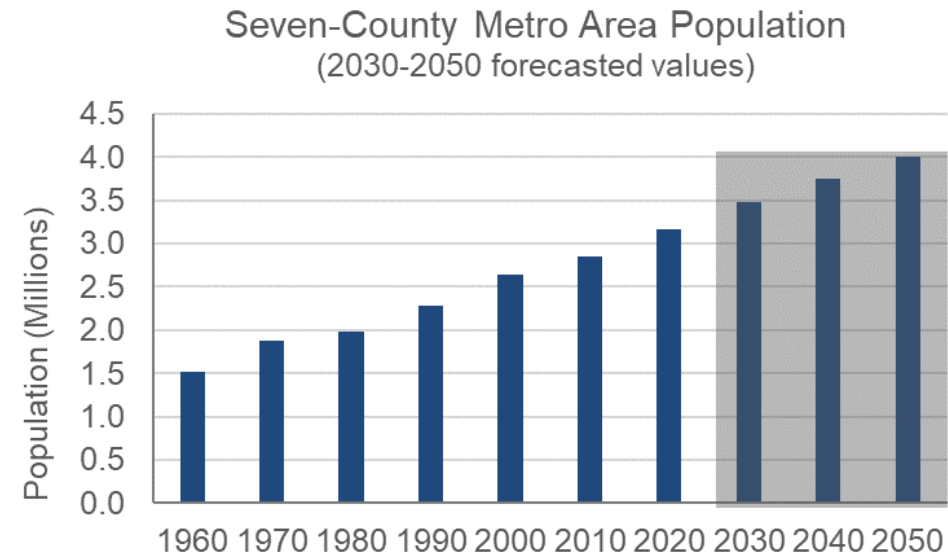
Sustainable water resources are a necessary component of a growing prosperous region. Contamination, potable water demand, regulatory usage limits, and changes in climate may compromise the availability and quality of metro area water resources.

Currently, we lack a clear process to implement reuse in Minnesota that is adequately protective and includes flexible regulatory guidance. A Met Council-, state agency-, and regional stakeholder-developed process is needed to accelerate and expand implementation of water reuse in the region. Strong regional water policies and associated actions are necessary to promote water reuse and set the stage for a future with sustainable water resources in the region.

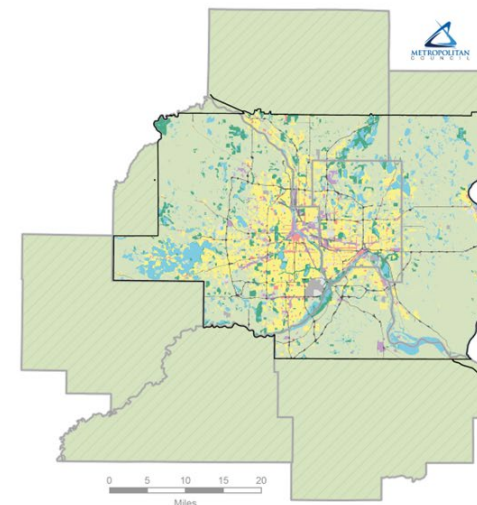
Water Reuse (2/6)

Primary Drivers

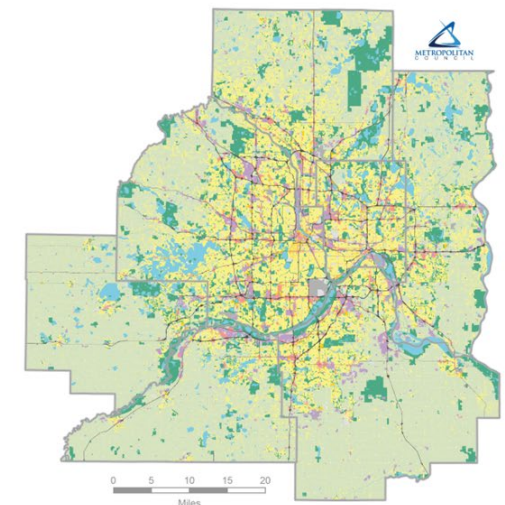
- Population Growth
- Urbanization
- Climate Change
- Increased irrigation
- Increased industry



Metro Area Land Use 1968



Metro Area Land Use 2020



Water Reuse (3/6)

Primary focus

Stormwater

- Lack of clear regulatory guidance
- Public health risks
- Expensive
- Reduces demand on surface/groundwater

Wastewater

- Clear regulatory guidance
- Expensive
- High levels of chloride barrier for reuse
- Other contamination concerns



Water Reuse (4/6)

Recommendation Areas

- Guidance/ regulatory structure development
- Internal application at Council facilities
- Partnerships, grants and other resources promoting regional application



Water Reuse (5/6)



Key Messages

- The metro region needs clear, safe, and consistent stormwater reuse guidance from state agencies to help with broader implementation.
- Wastewater reuse has water quality constraints of the treated effluent for reuse without additional costly treatment.
- Current economic and environmental conditions do not strongly encourage the implementation of water reuse widely across the metro area.
- Hyper-localized drivers may push the need for reuse in specific areas within the metro region.

Water Reuse (6/6)



TAC Feedback

- State agency coordination and guidance are the crucial needs
- Operations, maintenance, and staff training need to be considered when proposing reuse solutions
- Stormwater reuse is hard during droughts -- connections to potable systems are rarely reversed
- More developers are using reuse as a part of LEED certifications or the like
- Matching the location of wastewater treatment facilities with reuse needs will be vital to growing wastewater reuse
- Chloride will always be a problem for both stormwater and wastewater reuse
- Since irrigation is the major driver of demand -- Is there a regional need to reuse water at all or should resources better used in decreasing demand?

Discussion: Water Reuse



What are your thoughts?

- What stood out for you as the major issues or challenges with this topic?
- What stood out for you as key recommendations for addressing address this topic?
- What did you like most about the research paper?
- What questions or concerns are you left with? Anything missing? Anything overemphasized?
- What do you hope this could lead to?

Review Team 1: Scott Anderson, Robert Ellis, Elizabeth Kaufenberg, Kim Larsen, and Matt Saam

Water Availability, Access, and Use Research Paper



Water Availability, Access, & Use (1/6)



Issue Statement

The availability of consistent clean water is crucial to the future of the metro region. Water availability, access, and use are affected by changing and variable sources of water; varying types and quantity of users; shifting user needs; and the methods by which water is returned to the source. Our goal is to improve, support, protect, and enhance access and availability of water for our ecosystems, residents, and business and industrial needs within the region.

The Met Council needs a more comprehensive assessment and water balance of the regional water cycle to better identify water needs and to work with partners to balance those needs to ensure water access and availability.

Water Availability, Access, & Use (2/6)

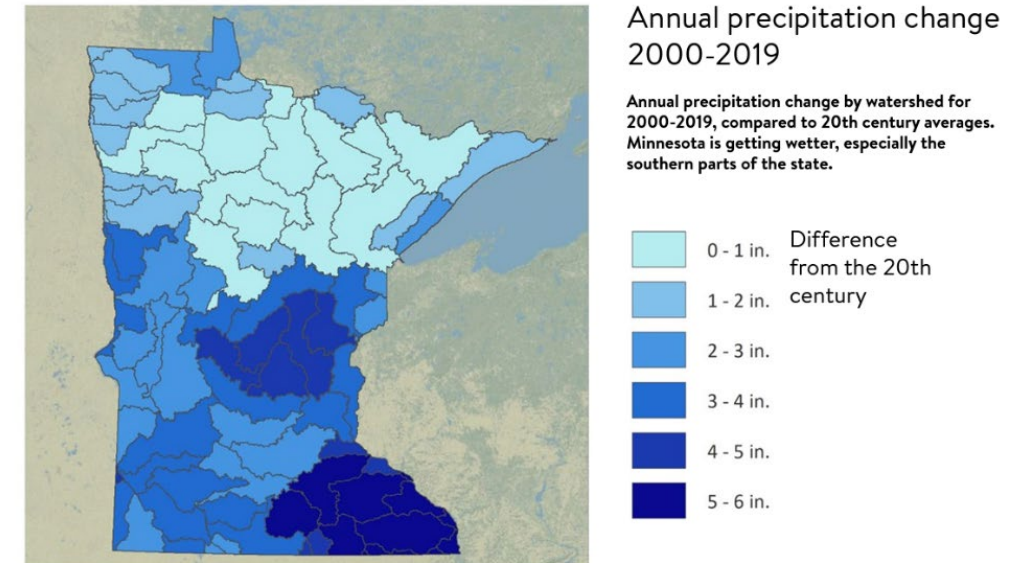
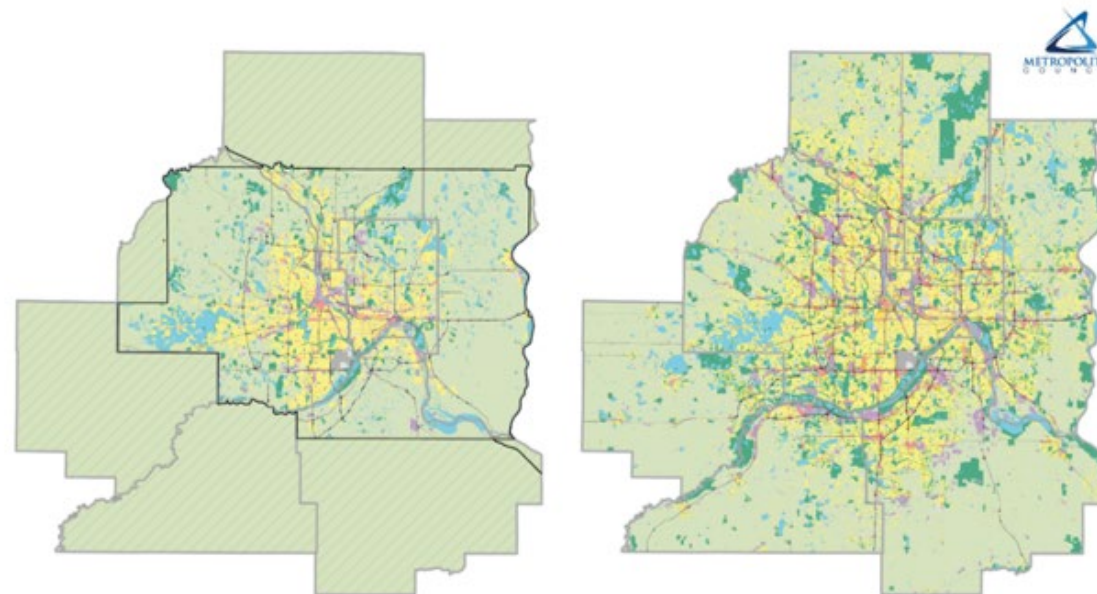
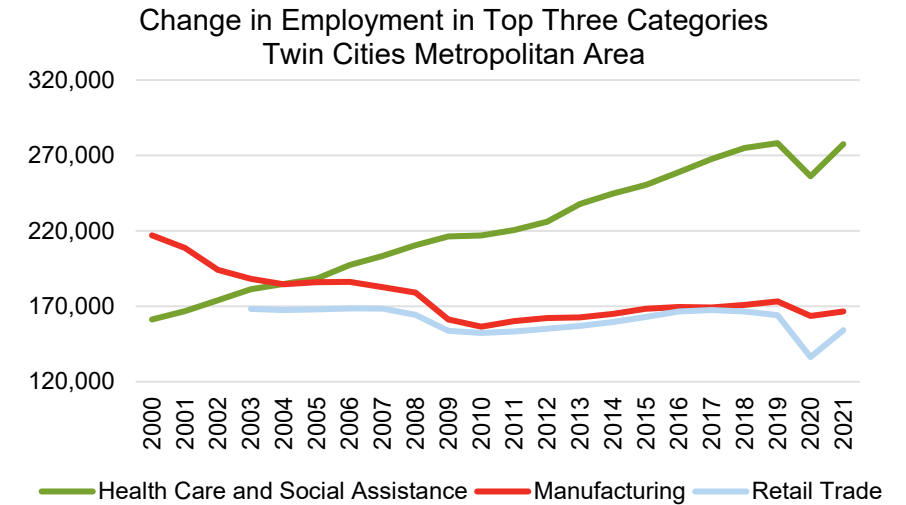
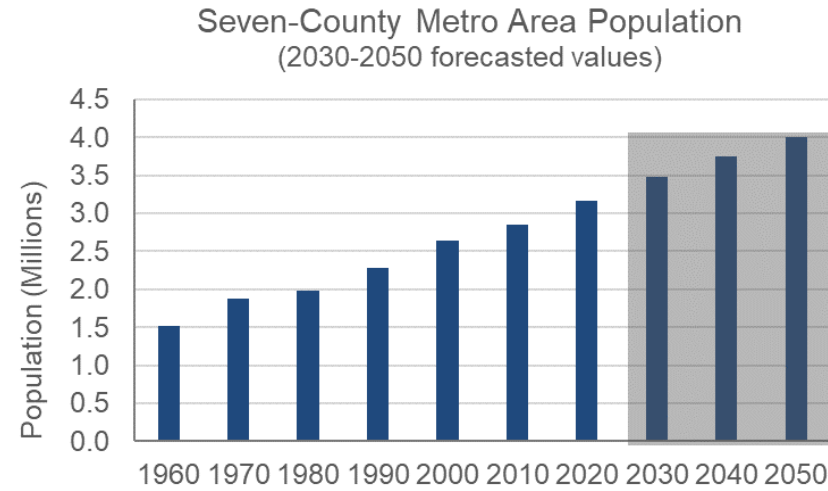
Primary Drivers

Population and Employment Growth

Land Use Change

Current and Future Climate

Current Water Restri



Water Availability, Access, & Use (3/6)

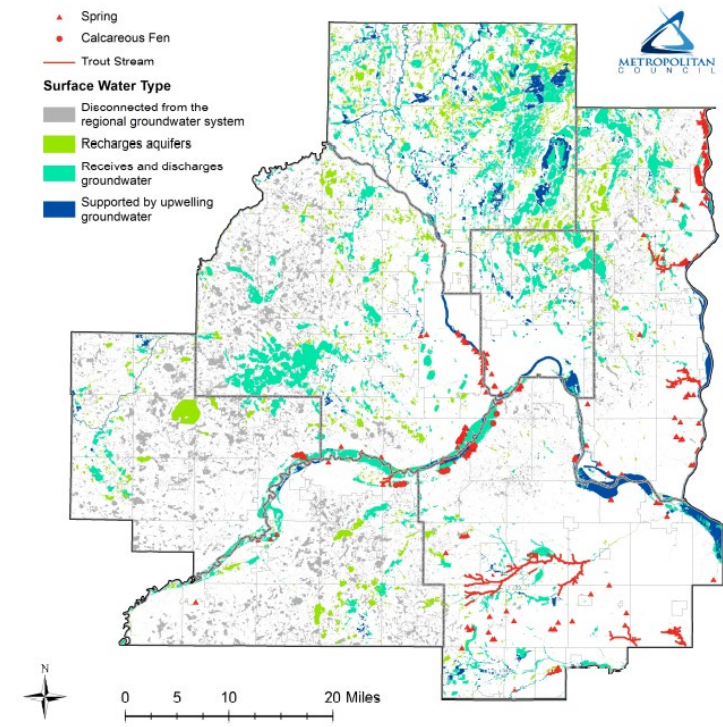
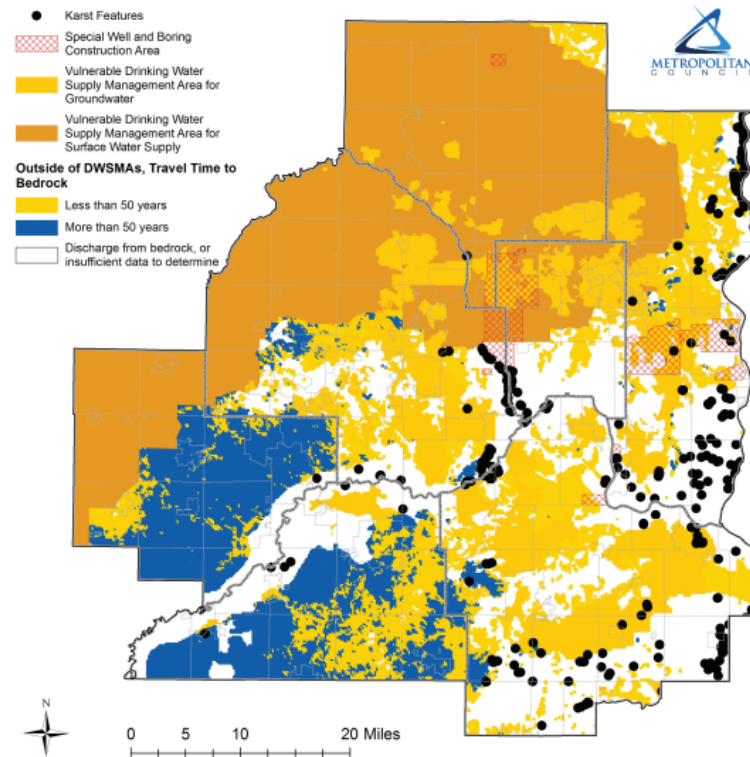
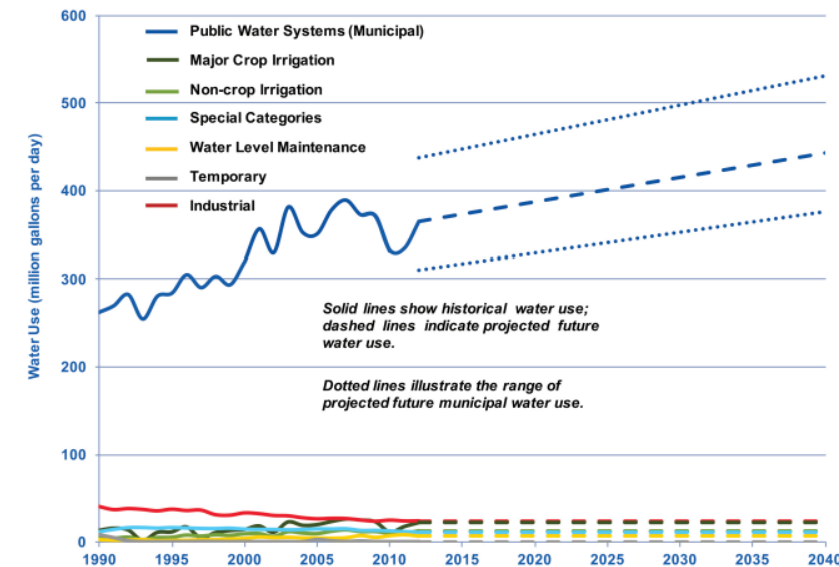
Crucial Concerns

Increasing water demand pressures

Threats to groundwater-dependent water resources

Growing water contamination

Aging Infrastructure



Water Availability, Access, & Use (4/6)

Recommendation Areas

- Integrated planning to support sustainable waters
- Research, data collection and assessments to gain a greater understanding of water availability, uses, and users.
- Technology, behavior, and training to identify and improve regional water management, supply, and treatment.
- Water conservation and reuse are tools to help reduce and augment our water demand.
- Funding, partnerships, and support to build regional water equity, stewardship, and sustainability.



Water Availability, Access, & Use (5/6)

Key Messages

- Sustainable water resources is derived from the combination of availability, accessibility, and use of water.
- Viewing water sources, users, uses, and inputs is a simple, holistic framework to encapsulate the region's complex water needs.
- We must keep in mind the impacts and our responses to natural limitations, social and economical constraints, and regulatory decisions (among others) in our efforts to retain sustainable waters.
- Integrated water planning and cross-sector collaboration is vital to our desired outcome of sustainable water.



Water Availability, Access, Use (6/6)



TAC Feedback

- Exploring areas to be refined or limited to help focus the paper more clearly, including tightening up the definition of ‘sustainability’.
- Clarification on whether water availability meant drinking water availability or global water availability. There is a bias in the paper towards groundwater and it should be more balanced between surface water and groundwater. The table should include the cost between surface water or groundwater.
- Strong support for the information about irrigation and redirecting.
- Distrust of drinking water. It is an issue with some immigrant and local communities that have had issues in the past.
- Encouraging communities to consider elevated levels of manganese in their water supply. Clarify that the paper is not recommending leaving these levels untreated or letting them get higher.
- What the city practices are around irrigation wells – are any banning the practice and how common it is.

Discussion: Water Availability, Access, & Use



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Thank You

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