Information Item: Water Supply Planning Overview

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Environment Committee, October 22, 2019
Minnesota: Land of 10,000 Lakes!

3 Million People

Population using Public/Municipal Supply: Groundwater 54%

Population using Surface Water 25%

Population using Private Wells 21%
Water Supply Planning

• **NOT Regulator and NOT SUPPLIER**

  “Carry out planning activities addressing the water supply needs of the metropolitan area” (Minnesota Statutes, Section 473.1565)
  
  • 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.

• **Advisory Committees**
  
  – Metro Area Water supply Advisory Committee (MAWSAC)
  – Technical Advisory Committee (TAC)

• **Advisory Committees Role**
  
  – Assist and Guide Council water supply planning
  – Approve Regional Water Supply Plan
Planning Responsibilities

Thrive MSP 2040

Water Resources
Wastewater System Plan
Master Water Supply Plan

Water Sustainability: Protect, conserve and utilize the region’s groundwater and surface water in ways that protect public health, support economical growth and development, maintain habitat and ecosystem health, and provide for recreational opportunities, all of which are essential to our region’s quality of life.
Technical Support

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

- Groundwater
- Surface Water
- Total

Million Gallons per Day

1940s 1950s 1960s 1970s 1980s 1990s 2000s 2010s
Growing Population Increases Municipal Water Use

Source: 2015 Master Water Supply Plan
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

Source; 2015 Master Water Supply Plan
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
“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

Source: 2017 survey of Subregional Groups members- 39 participants
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.
“For this analysis, it should be noted that while the population is projected to increase through 2040, the **average and maximum daily water demand is projected to remain flat** due to a reduced per capita usage over this period.”

<table>
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<tr>
<th>YEAR</th>
<th>PROJECTED TOTAL POPULATION (1)</th>
<th>PROJECTED POPULATION SERVED</th>
<th>PROJECTED TOTAL PER CAPITA WATER DEMAND (GPCD)**</th>
<th>PROJECTED AVERAGE DAILY DEMAND (MGD)***</th>
<th>PROJECTED MAXIMUM DAILY DEMAND (MGD) (2)</th>
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Financial Support

2015-2016
19 Communities

- High growth
- Groundwater source
Technical Support: MN Technical Assistance Program (MnTAP) Supporting Industrial Water Efficiency

• MnTAP continues to provide multiple wins for Minnesota:
  
  • Water Savings
  
  • Financial Savings: operational cost reductions for businesses,
  
  • Real-world training for the engineers and scientists who will lead these efforts through the twenty-first century.
Are we heading in the right direction?

Now we use more groundwater compared to river water

Groundwater withdrawal 2011-2015 average is less than 2007-2010 average by 17 MGD
Resources

• Water Supply Planning staff
• Environmental services staff
• 6 consulting companies
• University of Minnesota
• Freshwater
• United States Geological Survey

• Clean Water Fund ($2.75 Millions)
  – Water supply sustainability support
  – Efficiency Grants

• Metropolitan Council
  – Regional planning ($100,000)
  – MAWSAC/TAC coordination & support ($75,000)
  – Local water supply planning support ($100,000)
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
Questions

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