



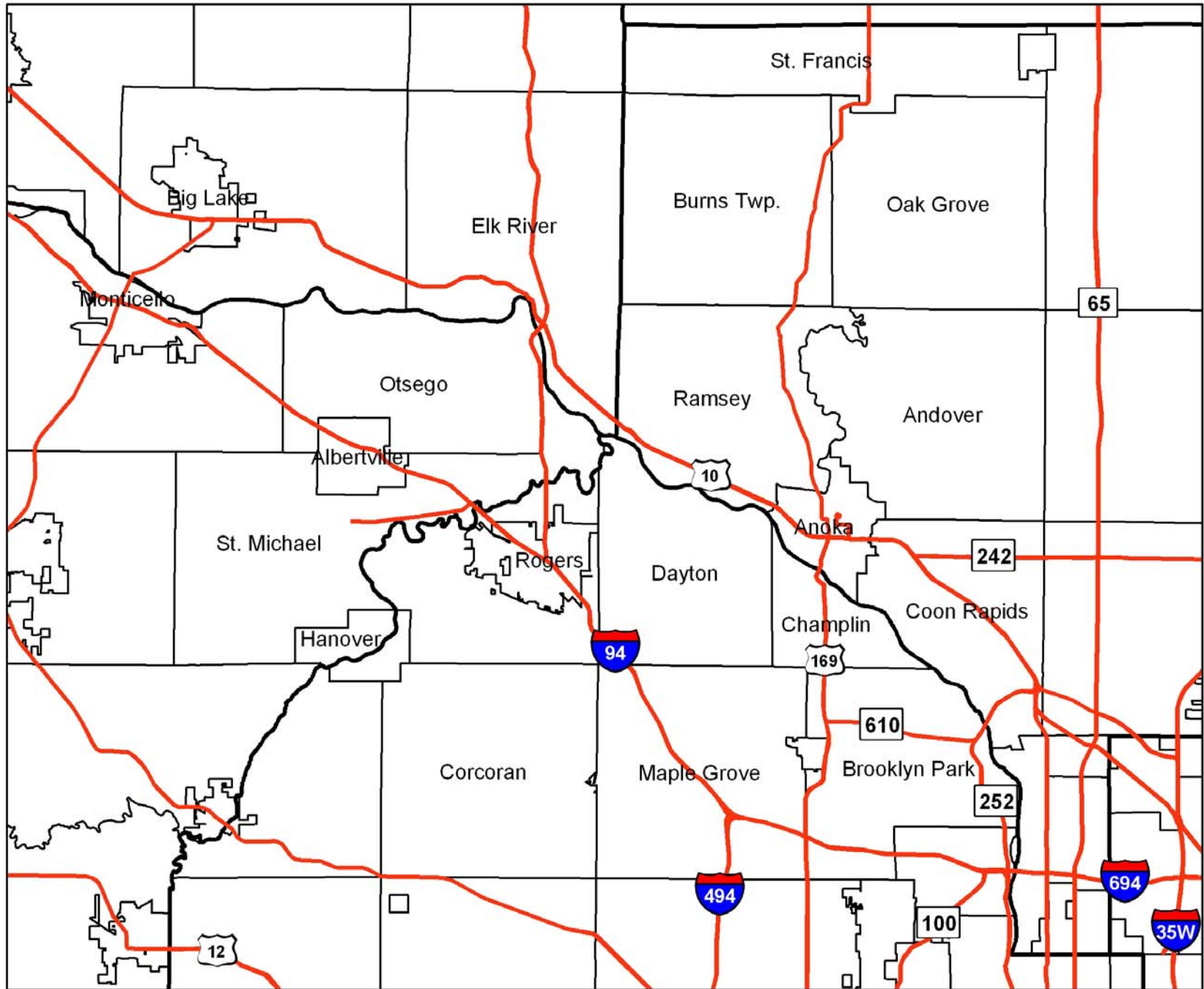
# Metropolitan Area Water Supply Advisory Committee

## Northwest Metro Water Supply Overview

**August 23, 2007**

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Manager, Water Supply Planning





# NW Metro Area Concerns



- **Population Growth Demands**
- **Radium in Mt. Simon aquifer**
- **Limited Groundwater Availability in Mt. Simon (MS) and Franconia-Ironton-Galesville (FIG) aquifers**
- **Surface Water Options**
- **Where do we go from here?**

# Projected Population Served

<b>Supplier</b>	<b>2004</b>	<b>2020</b>	<b>Difference</b>
<b>Andover</b>	<b>17450</b>	<b>27188</b>	<b>9138</b>
<b>Anoka</b>	<b>18172</b>	<b>19800</b>	<b>1628</b>
<b>Brooklyn Park</b>	<b>71260</b>	<b>80500</b>	<b>9240</b>
<b>Champlin</b>	<b>23000</b>	<b>23841</b>	<b>841</b>
<b>Coon Rapids</b>	<b>62295</b>	<b>66000</b>	<b>3705</b>
<b>Dayton</b>	<b>275</b>	<b>15459</b>	<b>15184</b>
<b>Elk River</b>	<b>13277</b>	<b>20895 (2014)</b>	<b>7618</b>
<b>Joint Powers</b>	<b>18701</b>	<b>26100 (2015)</b>	<b>7399</b>
<b>Maple Grove</b>	<b>59200</b>	<b>75700</b>	<b>16500</b>
<b>Otsego</b>	<b>1980</b>	<b>17596 (2016)</b>	<b>15616</b>
<b>Ramsey</b>	<b>9482</b>	<b>34442</b>	<b>24960</b>
<b>Rogers</b>	<b>5660</b>	<b>14400</b>	<b>8740</b>
<b>St. Francis</b>	<b>4190</b>	<b>8090</b>	<b>3900</b>

**Total 124,469**

# What is Radium?



- Naturally occurring radioactive contaminant
- Maximum Contaminant Level (MCL) = 5.4 picoCuries/liter (pCi/L)
- Found in Eastern US, Upper Midwest, throughout Minnesota, and the NW metro area...
- Radon accumulation in treatment plants
- Distribution systems
- Operator safety issues
- Waste disposal regulations

# Radium in NW Metro Area



- **Big Lake: Radium in several wells; Radium-removal TP built 2006**
- **Joint Powers: Radium in Well 4; Radium removal at TP**
- **Elk River: Radium in MS test well; using FIG wells instead**
- **Otsego: Radium in MS test well; considering Radium-removal TP**
- **Champlin: Radium in several wells; Radium-removal at TP and emergency/backup use of Well 1**
- **Coon Rapids: Radium in Wells 16 and 18; using flow-weighted averaging**

and the list goes on...



- **Maple Grove: Radium in Wells 1 and 5; emergency/backup use**
- **Brooklyn Park: Radium in Well 1; emergency/backup use**
- **Andover: Radium in Wells 1, 2, and 3; emergency backup use of Well 1 and flow-weighted averaging at Wells 2 and 3**
- **Anoka: Radium in several wells; Radium-removal at TPs and emergency/backup use of TP 7**
- **East Bethel: Radium in Well 1; new well on-line 2008**
- **St. Francis: Radium in Wells 1 and 2; emergency/backup use of Well 1 and Radium-removal TP on-line 2008**

## ...and the cost to communities



- MS or FIG well with pumphouse  
\$ 480,000 – 730,000
- Radium-removal TP for one well  
\$ 1,150,000 – 2,010,000
- Radium-removal TP for several wells  
\$ 2,420,000–11,000,000
  
- Estimates taken from 2006-2008 Drinking Water Revolving Fund

# Limited groundwater availability



- **Mount Simon (MS) aquifer: DNR use restrictions and radium occurrences**
- **Franconia-Ironton-Galesville (FIG) aquifer: interference, impact on surface water, limited quantities**

# Surface water options



- **Localized or regional treatment**
- **Transmission main or 'wheeling' water**
- **Potential access or excess capacity**

# Reactions



- No Problem for Us
- Uncertainty
- Timing
- Organization
- Funding
- Others?



# Next Steps?



- Population growth demands
- Resource availability analysis
- Infrastructure options and costs
- Potential regional resources
- Work group facilitation
- What else?