

White Bear Lake Area Comprehensive Plan Update



Metropolitan Area Water Supply Technical Advisory Committee

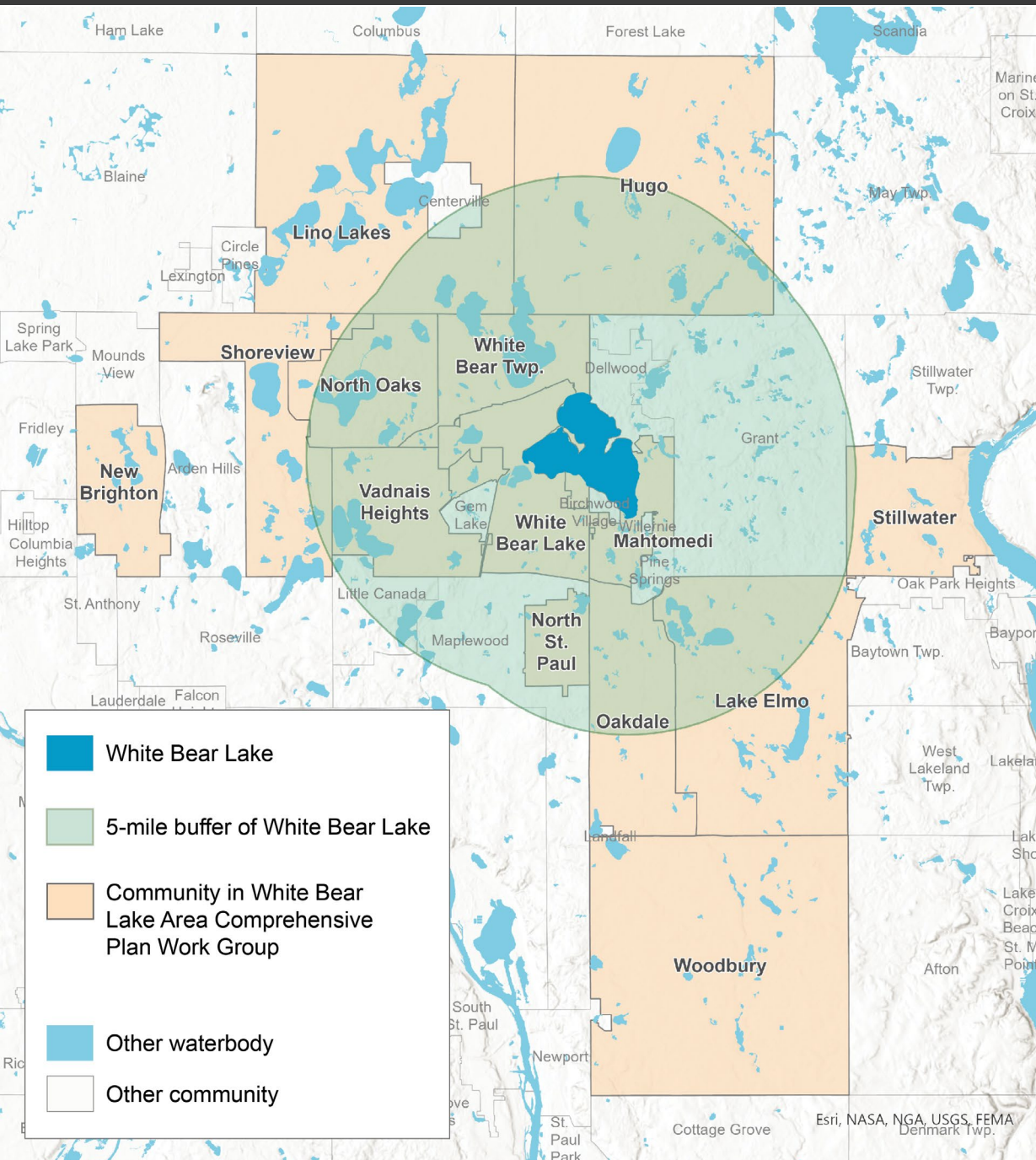
Greg Johnson | May 14, 2026

White Bear Lake Area Comprehensive Plan legislation (1/4)



- The Minnesota legislature provided funding for the Metropolitan Council to form a work group to identify a long-term solution
- The completed plan must be submitted to the Minnesota Legislature by June 30, 2027

White Bear Lake Area Comprehensive Plan legislation (2/4)

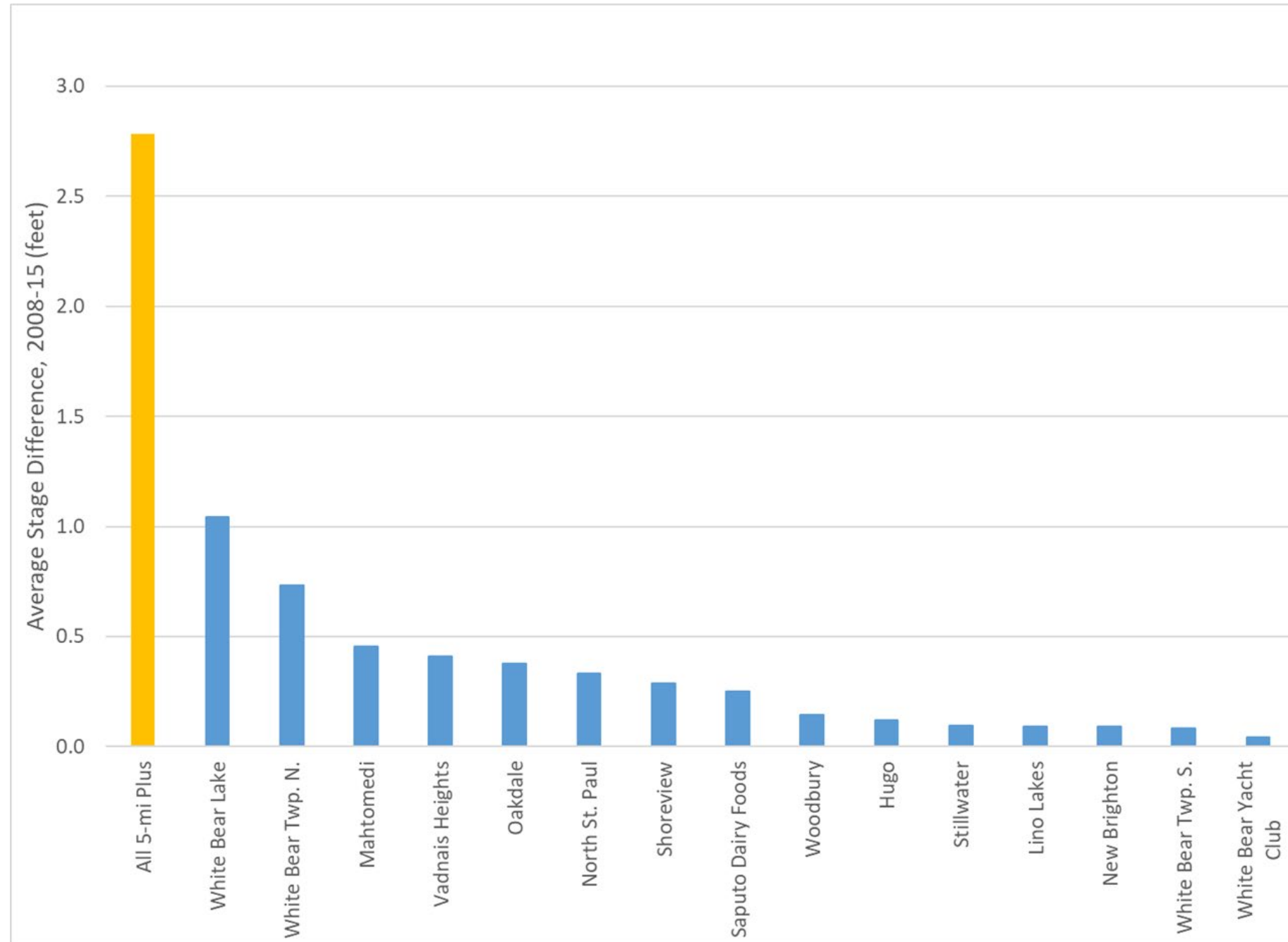


The Metropolitan Council has established a work group consisting of:

- Commissioners or designees from the DNR, MDH, and MPCA
- Representatives from Metropolitan Area Water Supply Advisory Committee (MAWSAC) and St. Paul Regional Water Services
- The communities of Stillwater, Mahtomedi, Hugo, Lake Elmo, Lino Lakes, North St. Paul, Oakdale, Vadnais Heights, Shoreview, Woodbury, New Brighton, White Bear Lake, White Bear Township, and North Oaks

These communities combined have a water service population slightly over 300,000 people or approximately 10% of the metro region's total population.

White Bear Lake Area Comprehensive Plan legislation (3/4)



White Bear Lake Area Comprehensive Plan legislation (4/4)

Evaluate methods to conserve and recharge groundwater include four main areas to address:

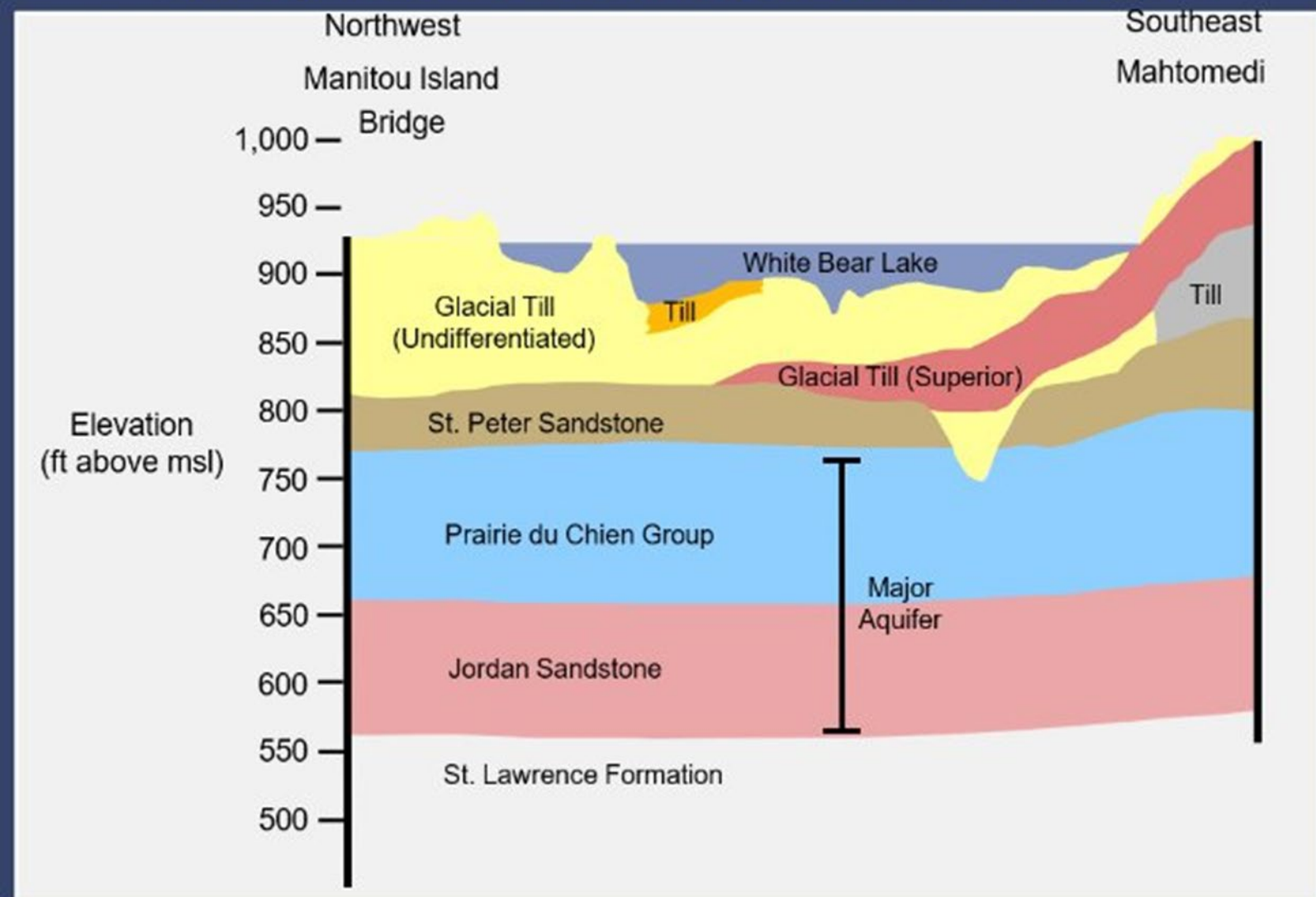
- Converting water supplies that are groundwater dependent to total or partial supplies from surface water
- Reuse water, including water discharged from contaminated wells
- Projects designed to increase groundwater recharge
- Other methods for reducing groundwater use

White Bear Lake hydrogeology (1/2)

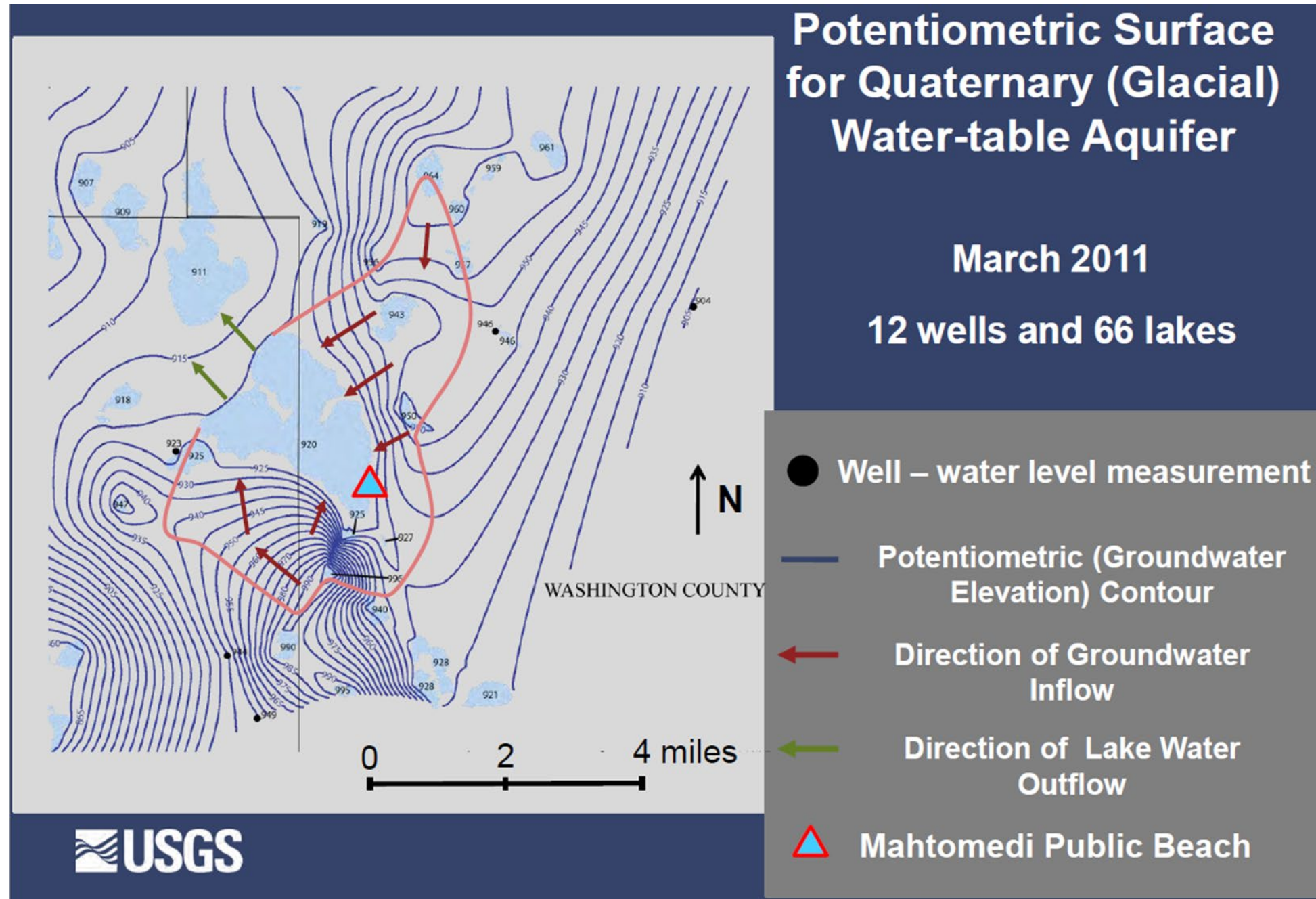
Geologic cross-section – White Bear Lake (Tipping, 2011)



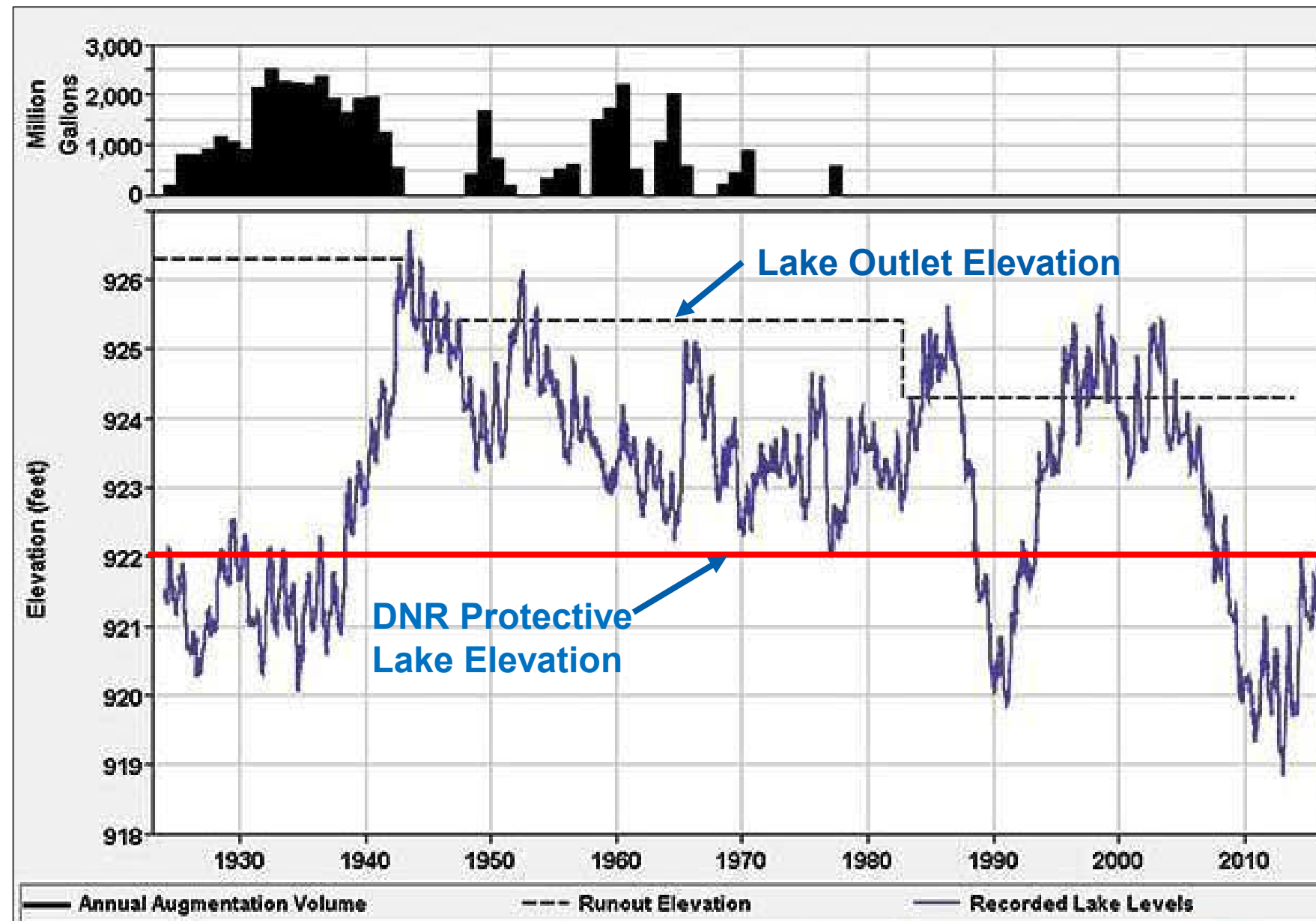
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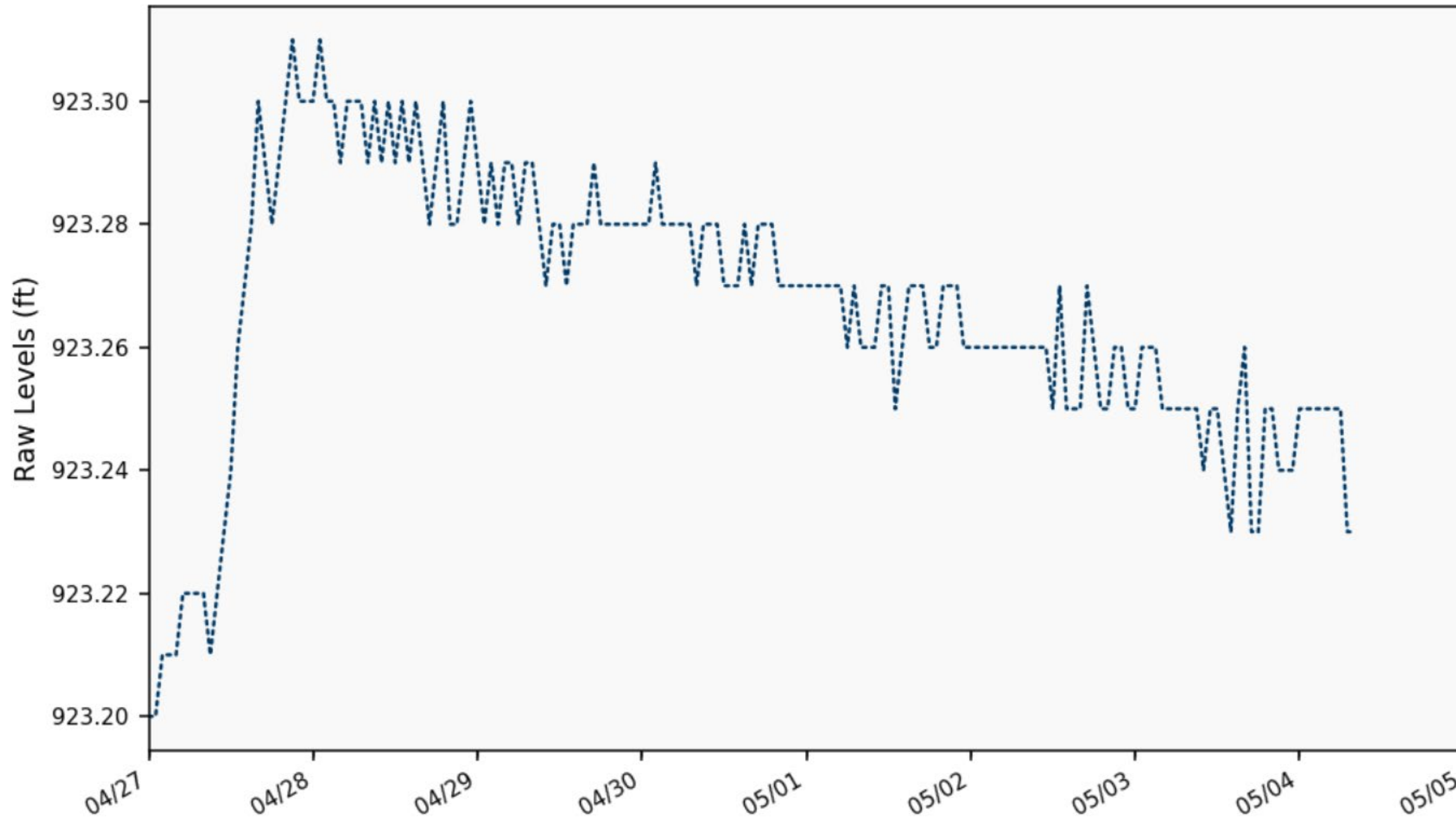
White Bear Lake hydrogeology (2/2)



White Bear Lake surface water elevations (1/2)

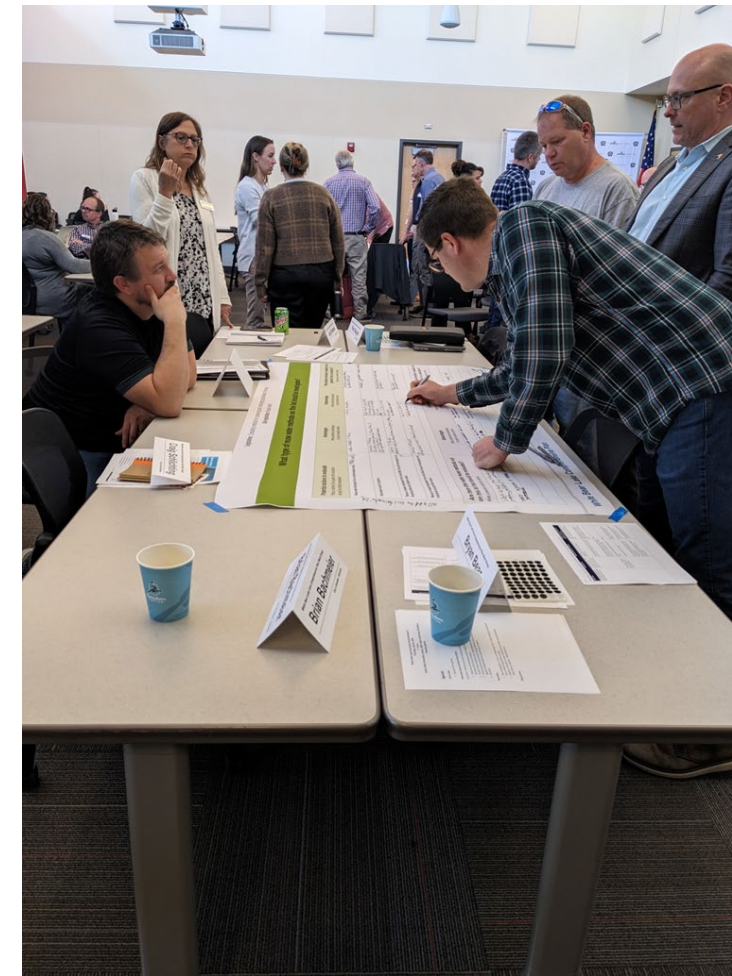


White Bear Lake surface water elevations (2/2)



Potential solutions being evaluated

Workgroup identified potential solutions that are currently being evaluated with 18 individual studies



Water demand projections (1/6)



White Bear Lake area projected growth

Hugo 1 development scenario

Current White Bear Lake Area water service population - 300,222 people versus 449,847 people at ultimate development

➔ Increase of 149,625 people in the White Bear Lake area at ultimate development

Water demand projections (2/6)



White Bear Lake area projected growth

Hugo 2 development scenario

Current White Bear Lake Area water service population - 300,222 people versus 527,301 people at ultimate development

➔ Increase of 227,079 people in the White Bear Lake area at ultimate development

Water demand projections (3/6)

White Bear Lake Area water demand projections – Hugo 1 development scenario

Projected Demands	Low Range	Mid Range	High Range
Historical Variable Demand Factor (Percent Increase or Decrease)			
Projected 2050 Average Day Demand (Gallons Per Day)	34,667,190	37,391,404	39,963,370
Projected 2050 Maximum Day Demand (Gallons Per Day)	88,781,141	95,757,730	102,344,422
Projected Ultimate Development Average Day Demand (Gallons Per Day)	41,290,441	44,535,122	47,598,469
Projected Ultimate Development Maximum Day Demand (Gallons Per Day)	105,742,994	115,597,410	121,897,573

Water demand projections (4/6)

White Bear Lake Area water demand projections – Hugo 2 development scenario

Projected Demands	Low Range	Mid Range	High Range
Historical Variable Demand Factor (Percent Increase or Decrease)			
Projected 2050 Average Day Demand (Gallons Per Day)	34,667,190	37,391,404	39,963,370
Projected 2050 Maximum Day Demand (Gallons Per Day)	88,781,141	95,757,730	102,344,422
Projected Ultimate Development Average Day Demand (Gallons Per Day)	46,312,283	49,951,589	53,387,507
Projected Ultimate Development Maximum Day Demand (Gallons Per Day)	118,603,707	134,679,623	136,723,044

Water demand projections (5/6)

Additional groundwater wells needed with Hugo 1 development scenario for ultimate development

- Hugo – 4 wells
- Lake Elmo – 6 wells
- Lino Lakes – 5 wells
- North Oaks – 4 wells (1 well is backup)
- Vadnais Heights – 1 well

Total – 20 wells



Water demand projections (6/6)

Additional groundwater wells needed with Hugo 2 development scenario for ultimate development

- Hugo – 16 wells
- Lake Elmo – 6 wells
- Lino Lakes – 5 wells
- North Oaks – 4 wells (1 well is backup)
- Vadnais Heights – 1 well

Total – 32 wells



Comprehensive Plan study areas

- Converting water supplies that are groundwater dependent to total or partial supplies from surface water
- Reuse water, including water discharged from contaminated wells
- Projects designed to increase groundwater recharge
- Other methods for reducing groundwater use



Converting water supplies that are groundwater dependent to total or partial supplies from surface water (1/4)

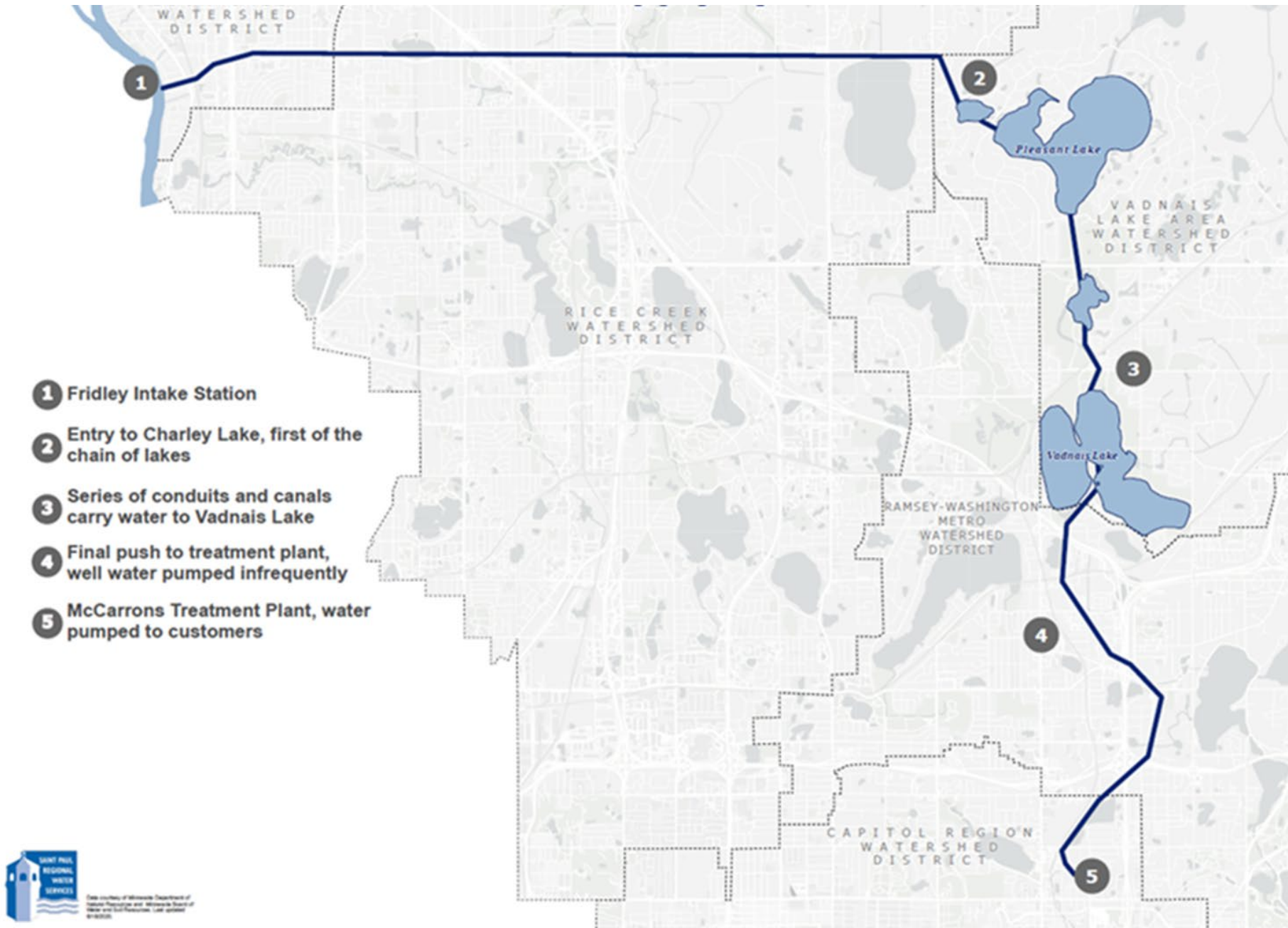
Study 1 - Redirect stormwater to augment White Bear Lake

Work group identified evaluating water reuse pumped from existing stormwater ponds, Centerville Lake, Bald Eagle Lake, Ramsey/Washington counties Ditch 1, and areas of Grant that are known to flood.

Study 2 – Serve treated surface water to select communities

1. Convey treated surface water from St. Paul Regional Water Services to north and east communities
2. Construct a new regional surface water treatment plant near the chain of lakes in the north metro area and convey treated surface water to north and east communities

Converting water supplies that are groundwater dependent to total or partial supplies from surface water (2/4)



Converting water supplies that are groundwater dependent to total or partial supplies from surface water (3/4)

Study 2 surface water supply scenarios

1. Alternative 1 (DNR groundwater modeling scenario 2a) – Supply Mahtomedi, Saputo Dairy Foods, White Bear Lake, Vadnais Heights (includes Gem Lake), and White Bear Township (north and south systems)
2. Alternative 2 (DNR groundwater modeling scenario SW 3) – Supply Mahtomedi, **North St. Paul**, Saputo Dairy Foods, Vadnais Heights (includes Gem Lake), White Bear Lake, and White Bear Township (north and south systems)
3. Alternative 3 (DNR groundwater modeling scenario SW 5) – Supply Mahtomedi, **North Oaks**, Saputo Dairy Foods, Vadnais Heights (includes Gem Lake), White Bear Lake, and White Bear Township (north and south systems).

Converting water supplies that are groundwater dependent to total or partial supplies from surface water (4/4)

Study 2 surface water supply scenarios (cont.)

4. Alternative 4 (DNR groundwater modeling scenarios SW 4 and 4-2) – Supply Mahtomedi, North Oaks, North St. Paul, Saputo Dairy Foods, **Shoreview**, North Oaks, Vadnais Heights (includes Gem Lake), White Bear Lake, and White Bear Township (north and south systems).
5. Alternative 5 (DNR groundwater modeling scenarios for treated wastewater aquifer injection) – Supply Saputo Dairy Foods, White Bear Lake, and White Bear Township (north and south systems) from SPRWS **and up to 3 MGD of treated wastewater injected into aquifer.**

Reuse water



Study 3 - Reuse of treated wastewater from local Met Council interceptors for industrial and agricultural users

Study 4 - Stormwater reuse for irrigation

Study 5 - Reuse water discharged from contaminated wells
– MPCA Project 1007

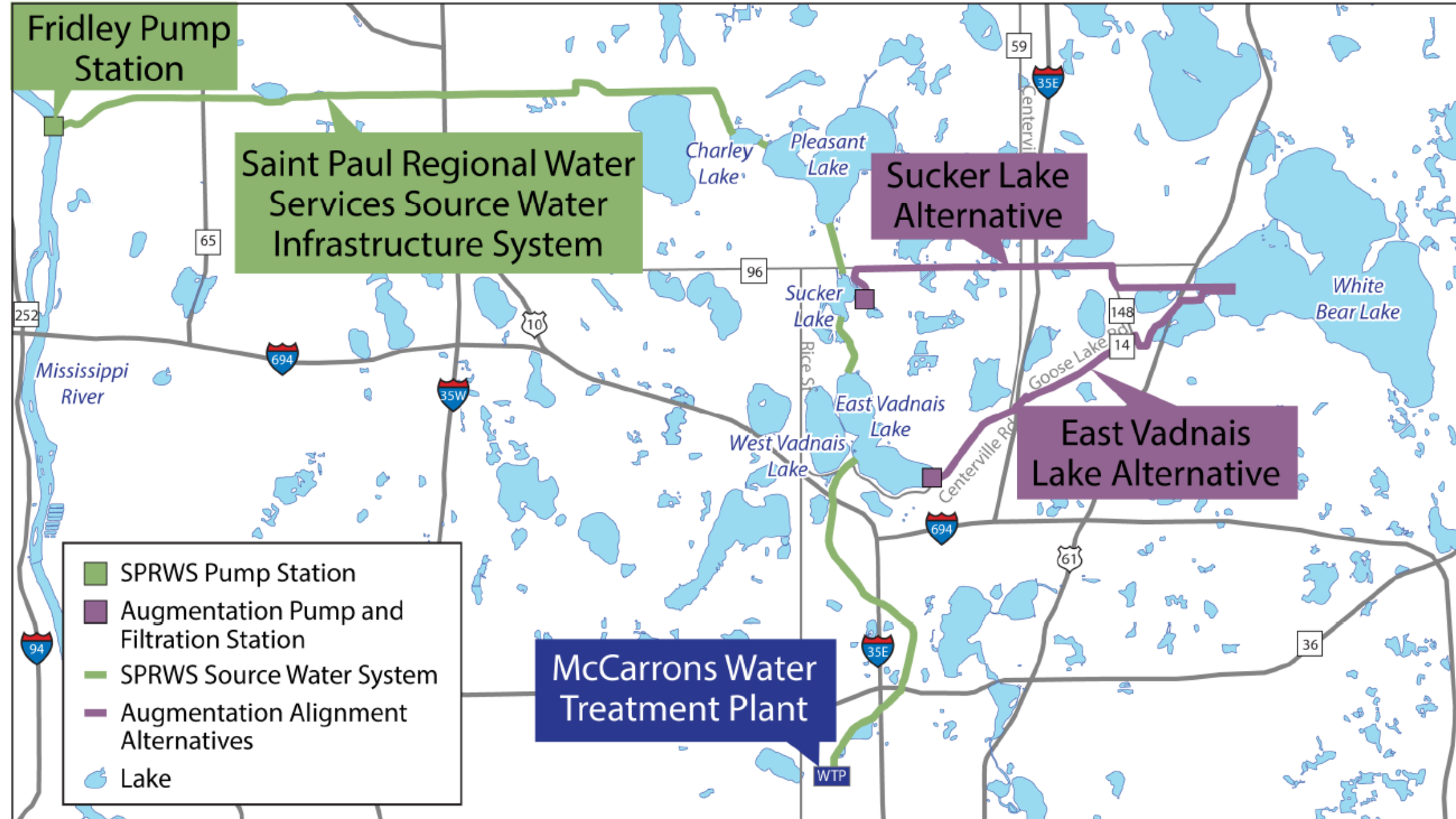
Projects designed to increase groundwater recharge (1/3)

Study 6 - Treat wastewater from local Met Council interceptors and inject the treated wastewater into the aquifer to raise groundwater elevations

Study 7 - Lake augmentation by pumping treated surface water from the chain of lakes into White Bear Lake



Projects designed to increase groundwater recharge (2/3)



Projects designed to increase groundwater recharge (3/3)

Study 8 - Stormwater collection and infiltration to raise groundwater elevations

Study 9 – Raise outlet elevation of White Bear Lake

Other methods for reducing groundwater use (1/2)

Study 10 - Lawn water restrictions (day of week and time)

Study 11 - Implement/require/encourage non- or less-potable water reuse for irrigation and process water

Study 12 - Tiered increasing block water utility rates

Study 13 - Potential water savings from alternative low input turf grasses

Other methods for reducing groundwater use (2/2)

Study 14 - Future community impacts from PFAS groundwater contamination with groundwater modeling

Study 15 - Estimated capital and long-term O&M costs to construct two additional wells in Shoreview and expand the city's existing water treatment plant capacity to serve drinking water for North Oaks

Survey results for potential funding sources (1/2)

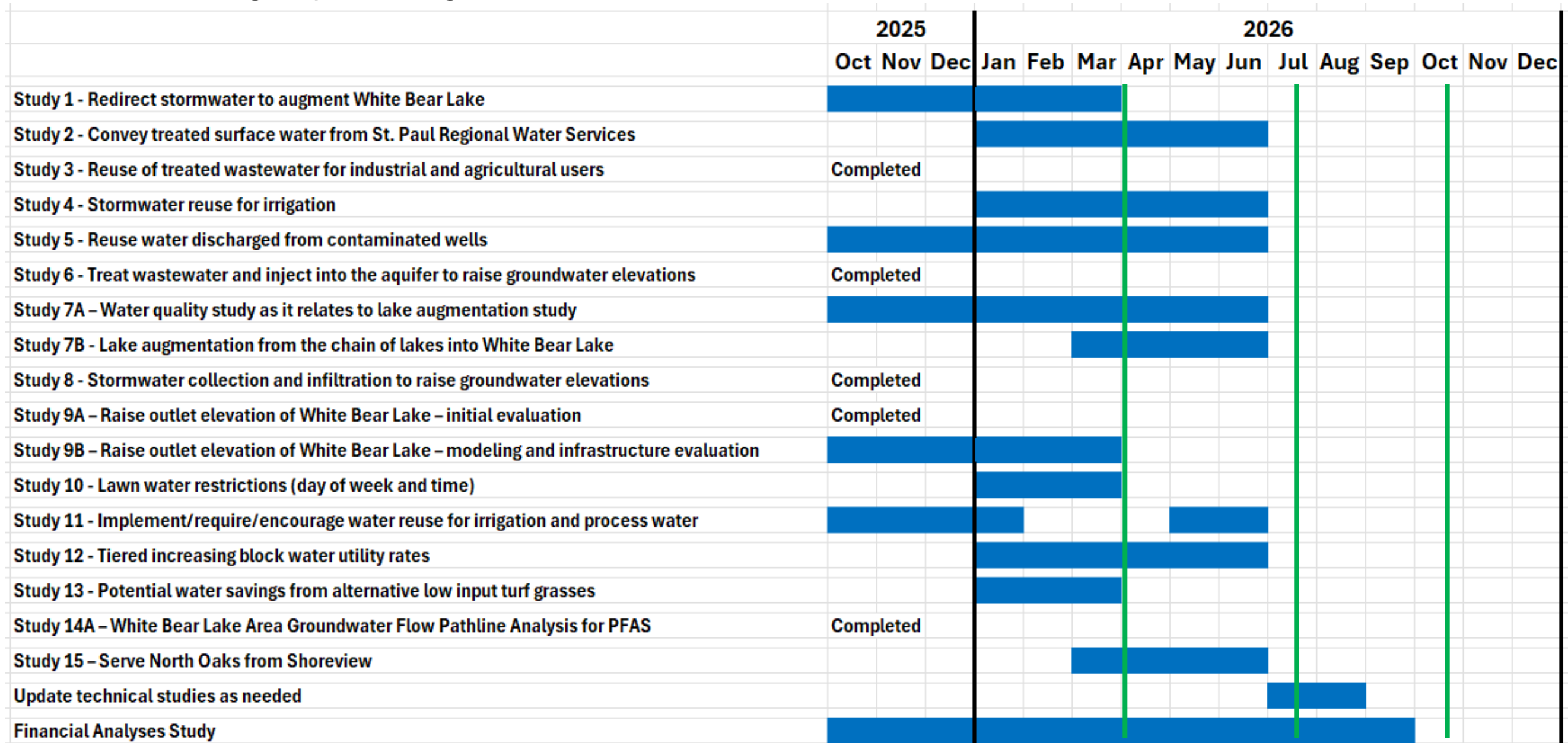
Rank	Funding Method/Source	Average Score
1	State of Minnesota funding (ex. bonding bill)	5.00
2	Federal congressional funding	4.64
3	Environment and Natural Resources Trust Fund	4.00
4	Assessments to lake front property owners	3.45
5	Surcharge or tax to private well users in the White Bear Lake area (golf courses, industries, and domestic non-permitted wells)	3.09
6	Boater registration/ license fees	3.09
7	Fishing license fees	3.09
8	DNR user fees	3.09
9	State tax such as a state-wide sales tax	2.36
10	Water Availability Charges (WAC) to future development	1.82
11	Local sales tax in Anoka, Ramsey, and Washington counties	1.70
12	Groundwater use surcharge (cost per 1,000 gal pumped from aquifer)	1.36
13	Water utility rate increases	1.09
14	Local sales tax in 14 White Bear Lake Area work group communities	1.00

Survey results for potential funding sources (2/2)

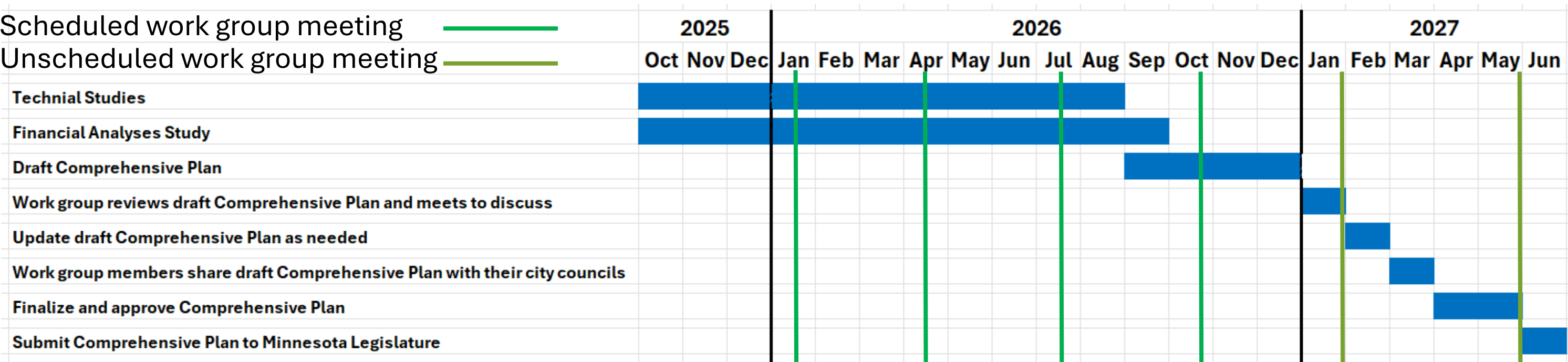
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Project schedule (1/2)

Scheduled work group meeting 



Project schedule (2/2)



Project summaries

Study Summaries White Bear Lake Area Comprehensive Plan

Study	Status	Description	Amount of water saved	Estimated cost
Study 1 – Redirect stormwater to augment White Bear Lake	In Progress	Study 1 by Kimley-Horn explores redirecting water that is collected in nearby stormwater ponds to augment White Bear Lake. April 2025 Update: Work group members collectively agreed they do not want to move forward with studying this method further due to its lack of effectiveness. Instead, they proposed to evaluate pumping reuse water from Bald Eagle Lake, Ramsey/Washington Counties Ditch 1, Centerville Lake, and areas of Grant that are known to have excess surface water. July 2025 Update: Met Council presented a proposal to amend Study 1 to evaluate additional surface water sources for augmentation. The amended Study 1 includes evaluating pumping surface water from Bald Eagle Lake, Ramsey/Washington Counties Ditch 1, Centerville Lake, and areas of Grant that are known to have excess surface water. Amended Study 1 will be presented at the April 2, 2026 work group meeting.	Not applicable for Study 1 since base evaluation was determined not feasible. To be determined for Amended for Study 1.	Not applicable for Study 1 since base evaluation was determined not feasible. To be determined for Amended for Study 1.
Study 2 – Convey treated surface water from St. Paul Regional Water Services	In Progress	Study 2 by SEH evaluates conveying treated surface water from either St. Paul Regional Water Services or a new regional surface water treatment plant to select White Bear Lake area communities in the north and east metro area. The results of this study will be presented at the July 16, 2026 work group meeting.	To be determined	To be determined
Study 3 – Reuse of treated wastewater for industrial and agricultural users	Completed	Study 3 by SEH evaluated reusing treated wastewater from nearby Met Council interceptors for industrial and agricultural users in the White Bear Lake area. July 2025 Update: Due to the very minimal estimated improvement to White Bear Lake water levels (less than 0.1 feet), the work group members collectively agreed to not move forward with further studying this method and to use the project funds for other studies for now but can come back to it later.	123.3 million gallons per year	Capital cost - \$296,000,000 Annual O&M cost - \$1,350,000
Study 4 – Stormwater reuse for irrigation	In Progress	Study 4 by Barr Engineering will evaluate using stormwater reuse for irrigation to reduce groundwater pumping from the acquired. The results of this study will be presented at the July 16, 2026 work group meeting.	To be determined	To be determined

Additional Information



- **Work group website for additional information:**

Google search:

“White Bear Lake Area Comprehensive Plan Work Group”

Or go to:

<https://metro council.org/Council-Meetings/Work-Groups/White-Bear-Lake-Work-Group.aspx>

Next work group meeting



Next meeting:

Date: July 16, 2026

Time: 12:30-4:00 pm

Location: The Rookery Activity Center
(7690 Village Dr, Lino Lakes, MN 55014)

Topics:

- Updates on multiple studies
- Discussion about which studies to prioritize

Questions for TAC



- What are your thoughts on the what you heard today and the proposed solutions being evaluated?
- Is there anything else that should be considered as the White Bear Lake area work group moves forward to evaluate and further prioritize the potential solutions?