

Table 1: Potential Water Infrastructure Solutions summary of ranks and scores

Rank	Total	Rank (others only pay)	Total (others-only pay)	Potential Water Infrastructure Solutions (Summary)
1	230	1	238	17. Augment White Bear Lake from East Vadnais Lake with up to 2 billion gallons per year (BGY) of surface water treated for suspended solids, aquatic invasive species, phosphorus, nitrogen, total organic carbon, and manganese (Study 7B)
2	212	2	224	18. Augment White Bear Lake from East Vadnais Lake with up to 1 billion gallons per year (BGY) of surface water treated for suspended solids, aquatic invasive species, phosphorus, nitrogen, total organic carbon, and manganese with a facility that is designed to be expanded up to a 2 billion gallons per year pumping and treatment capacity in the future if needed (Study 7B)
3	202	3	214	21. Augment White Bear Lake with up to 2 billion gallons per year (BGY) of partially treated surface water purchased from Saint Paul Regional Services (SPRWS) with no additional clarifier and recarbonation/ozonation basin (low range cost estimate) or with an additional clarifier and recarbonation/ozonation basin (high range cost estimate), water booster station, and transmission main (Study No. 7B Amendment)
3	202	3	214	22. Augment White Bear Lake with up to 1 billion gallons per year (BGY) of partially treated surface water purchased from Saint Paul Regional Water Services (SPRWS) with no additional clarifier and recarbonation/ozonation basin (low range cost estimate) or with an additional clarifier and recarbonation/ozonation basin (high range cost estimate), water booster station, and transmission main and with a pumping facility that is designed to be expanded up to a 2 billion gallons per year (BGY) pumping capacity in the future if needed (Study 7B Amendment)
5	174	5	192	19. Augment White Bear Lake from East Vadnais Lake with up to 2 billion gallons per year (BGY) of surface water treated for suspended solids and aquatic invasive species only (Study 7B)
6	142	6	156	20. Augment White Bear Lake from East Vadnais Lake with up to 1 billion gallons per year (BGY) of surface water treated for suspended solids and aquatic invasive species with a facility that is designed to be expanded up to a 2 billion gallons per year pumping and treatment capacity in the future if needed (Study 7B Amendment)
7	116	7	132	2. Distribute treated surface water from St. Paul Regional Water Services to Mahtomedi, Saputo Dairy Foods, Vadnais Heights, White Bear Lake, and White Bear Township for Hugo 1 or Hugo 2 development scenario – Alternative 1 (Study 2)
8	112	8	128	4. Distribute treated surface water from St. Paul Regional Water Services to Mahtomedi, North Oaks, Saputo Dairy Foods, Vadnais Heights, White Bear Lake, and White Bear Township for Hugo 1 or Hugo 2 development scenario - Alternative 3 (Study 2)
9	106	10	108	25. Serve City of North Oaks with treated drinking water supplied by Shoreview in lieu of treated surface water from Saint Paul Regional Water Services or a new regional surface water treatment plant (Alternatives 4 and 5) (Study 15)
10	102	9	110	3. Distribute treated surface water from St. Paul Regional Water Services to Mahtomedi, North St. Paul, Saputo Dairy Foods, Vadnais Heights, White Bear Lake, and White Bear Township for Hugo 1 or Hugo 2 development scenario – Alternative 2 (Study 2)
11	100	10	108	5. Distribute treated surface water from St. Paul Regional Water Services to Mahtomedi, North Oaks, North St. Paul, Saputo Dairy Foods, Shoreview, Vadnais Heights, White Bear Lake, and White Bear Township - Alternative 4 (Study 2)
12	76	12	78	9. Construct a new regional surface water treatment plant near the chain of lakes to serve Mahtomedi, North Oaks, Saputo Dairy Foods, Vadnais Heights, White Bear Lake, and White Bear Township for Hugo 1 or Hugo 2 development scenario - Alternative 3 (Study 2)
12	76	12	78	23. Raise outlet elevation of White Bear Lake by 6 to 12-inches and purchase existing properties in and near the flood plain that could be impacted (Studies 9A and 9B)
14	74	15	74	10. Construct a new regional surface water treatment plant near the chain of lakes to serve Mahtomedi, North Oaks, North St. Paul, Saputo Dairy Foods, Shoreview, Vadnais Heights, White Bear Lake, and White Bear Township - Alternative 4 (Study 2)
15	72	14	76	7. Construct a new regional surface water treatment plant near the chain of lakes to serve Mahtomedi, Saputo Dairy Foods, Vadnais Heights, White Bear Lake, and White Bear Township for Hugo 1 or Hugo 2 development scenario – Alternative 1 (Study 2)
16	64	17	64	8. Construct a new regional surface water treatment plant near the chain of lakes to serve Mahtomedi, North St. Paul, Saputo Dairy Foods, Vadnais Heights, White Bear Lake, and White Bear Township for Hugo 1 or Hugo 2 development scenario - Alternative 2 (Study 2)
17	60	16	68	12. Serve City of Lake Elmo with treated surface water from Saint Paul Regional Water Services in addition to Alternatives 1, 2, 3, 4, or 5 (Study 2)
18	30	18	30	14. Implement stormwater reuse for irrigation in existing and future development areas (Study 4)
19	14	19	24	24. Implement/require/encourage non- or less-potable water or potable reuse for irrigation and process water in Vadnais Heights, White Bear Lake, and Gem Lake (Study 11)
20	8	20	8	15. Reuse and treat water discharged from contaminated wells for the City Lake Elmo or both the cities of Lake Elmo and Oakdale – MPCA Project 1007 (Study 5)
21	-16	21	-10	1. Augment White Bear Lake from surface water pumped from Judicial Ditch 3 (outfall from Bald Eagle Lake) that is treated for phosphorus, nitrogen, and chlorophyll (Study 1)
22	-48	22	-38	6. Distribute treated surface water from St. Paul Regional Water Services to Saputo Dairy Foods, White Bear Lake, and White Bear Township with up to 3.8 million gallons per day (MGD) of treated wastewater injected into Prairie du Chien-Jordan aquifer or discharged directly into White Bear Lake - Alternative 5 (Study 2)
23	-72	23	-62	11. Construct a new regional surface water treatment plant near the chain of lakes to serve Saputo Dairy Foods, White Bear Lake, and White Bear Township with up to 3.8 million gallons per day (MGD) of treated wastewater injected into Prairie du Chien-Jordan aquifer or discharged directly into White Bear Lake – Alternative 5 (Studies 2 and 6)
24	-88	24	-86	16. Treat wastewater from local Met Council interceptors and inject the treated wastewater into the aquifer to raise groundwater elevations (Study 6)
25	-116	25	-116	13. Reuse treated wastewater from local Met Council interceptors for industrial and agricultural users (Study 3)

Table 2: Potential Water Infrastructure Solutions Summary

Potential Water Infrastructure Solution (Summary)	DNR	Hugo	Lake Elmo	Lake Elmo (others pay)	Lino Lakes	Mahtomedi	MDH	MPCA	New Brighton	North St. Paul	North St. Paul (others pay)	Oakdale	Shoreview	SP Regional Water Services	Stillwater	Vadnais Heights	White Bear Township	White Bear Lake	Woodbury	Total	Total (others pay option)	Rank	Rank (others pay option)
1. Augment White Bear Lake from surface water pumped from Judicial Ditch 3 (outfall from Bald Eagle Lake) that is treated for phosphorus, nitrogen, and chlorophyll (Study 1)	-6	16	-2	-8	4	-2	-12	2	2	0	12	0	0	-20	-10	-4	8	14	-6	-16	-10	21	21
2. Distribute treated surface water from St. Paul Regional Water Services to Mahtomedi, Saputo Dairy Foods, Vadnais Heights, White Bear Lake, and White Bear Township for Hugo 1 or Hugo 2 development scenario – Alternative 1 (Study 2)	12	2	14	22	10	2	14	8	20	-10	-2	4	24	-4	10	-6	4	4	8	116	132	7	7
3. Distribute treated surface water from St. Paul Regional Water Services to Mahtomedi, North St. Paul, Saputo Dairy Foods, Vadnais Heights, White Bear Lake, and White Bear Township for Hugo 1 or Hugo 2 development scenario – Alternative 2 (Study 2)	12	2	16	24	10	2	14	8	20	-24	-24	4	22	-4	10	-6	4	4	8	102	110	10	9
4. Distribute treated surface water from St. Paul Regional Water Services to Mahtomedi, North Oaks, Saputo Dairy Foods, Vadnais Heights, White Bear Lake, and White Bear Township for Hugo 1 or Hugo 2 development scenario - Alternative 3 (Study 2)	12	2	16	24	10	2	14	8	20	-10	-2	4	20	-4	8	-6	4	4	8	112	128	8	8
5. Distribute treated surface water from St. Paul Regional Water Services to Mahtomedi, North Oaks, North St. Paul, Saputo Dairy Foods, Shoreview, Vadnais Heights, White Bear Lake, and White Bear Township - Alternative 4 (Study 2)	12	2	16	24	10	2	14	10	20	-24	-24	4	20	-4	8	-6	4	4	8	100	108	11	10
6. Distribute treated surface water from St. Paul Regional Water Services to Saputo Dairy Foods, White Bear Lake, and White Bear Township with up to 3.8 million gallons per day (MGD) of treated wastewater injected into Prairie du Chien-Jordan aquifer or discharged directly into White Bear Lake - Alternative 5 (Study 2)	-8	2	-6	-6	0	-10	-2	2	8	-10	0	0	6	-10	-12	-6	4	2	-8	-48	-38	22	22
7. Construct a new regional surface water treatment plant near the chain of lakes to serve Mahtomedi, Saputo Dairy Foods, Vadnais Heights, White Bear Lake, and White Bear Township for Hugo 1 or Hugo 2 development scenario – Alternative 1 (Study 2)	2	2	8	8	10	4	14	8	16	-12	-8	4	16	-2	-2	-12	4	4	8	72	76	15	14
8. Construct a new regional surface water treatment plant near the chain of lakes to serve Mahtomedi, North St. Paul, Saputo Dairy Foods, Vadnais Heights, White Bear Lake, and White Bear Township for Hugo 1 or Hugo 2 development scenario - Alternative 2 (Study 2)	6	2	8	8	10	4	14	8	16	-24	-24	4	16	-2	-2	-12	4	4	8	64	64	16	17
9. Construct a new regional surface water treatment plant near the chain of lakes to serve Mahtomedi, North Oaks, Saputo Dairy Foods, Vadnais Heights, White Bear Lake, and White Bear Township for Hugo 1 or Hugo 2 development scenario - Alternative 3 (Study 2)	6	2	8	8	10	4	14	8	16	-10	-8	4	14	-2	-2	-12	4	4	8	76	78	12	12
10. Construct a new regional surface water treatment plant near the chain of lakes to serve Mahtomedi, North Oaks, North St. Paul, Saputo Dairy Foods, Shoreview, Vadnais Heights, White Bear Lake, and White Bear Township - Alternative 4 (Study 2)	10	2	8	8	10	4	14	8	16	-24	-24	4	14	-2	6	-12	4	4	8	74	74	14	15
11. Construct a new regional surface water treatment plant near the chain of lakes to serve Saputo Dairy Foods, White Bear Lake, and White Bear Township with up to 3.8 million gallons per day (MGD) of treated wastewater injected into Prairie du Chien-Jordan aquifer or discharged directly into White Bear Lake – Alternative 5 (Studies 2 and 6)	-10	2	-6	-6	-2	-12	-2	0	6	-12	-2	-4	6	-10	-8	-12	-4	4	-8	-72	-62	23	23
12. Serve City of Lake Elmo with treated surface water from Saint Paul Regional Water Services in addition to Alternatives 1, 2, 3, 4, or 5 (Study 2)	2	0	6	14	10	-12	-6	14	12	-8	-8	2	24	-8	6	-4	6	14	2	60	68	17	16

Table 2: Potential Water Infrastructure Solutions Summary (continued)

Potential Water Infrastructure Solution (Summary)	DNR	Hugo	Lake Elmo	Lake Elmo (others pay)	Lino Lakes	Mahtomedi	MDH	MPCA	New Brighton	North St. Paul	North St. Paul (others pay)	Oakdale	Shoreview	SP Regional Water Services	Stillwater	Vadnais Heights	White Bear Township	White Bear Lake	Woodbury	Total	Total (others pay option)	Rank	Rank (others pay option)
13. Reuse treated wastewater from local Met Council interceptors for industrial and agricultural users (Study 3)	-2	0	-6	-6	-10	-20	-10	0	-4	-2	-2	-14	2	-20	-14	-10	-2	8	-12	-116	-116	25	25
14. Implement stormwater reuse for irrigation in existing and future development areas (Study 4)	0	20	4	4	2	-2	-16	6	6	-4	-4	-10	2	-18	8	16	2	10	4	30	30	18	18
15. Reuse and treat water discharged from contaminated wells for the City Lake Elmo or both the cities of Lake Elmo and Oakdale – MPCA Project 1007 (Study 5)	4	-4	-4	-4	8	-4	-20	14	8	-4	-4	-8	4	-18	0	4	6	12	10	8	8	20	20
16. Treat wastewater from local Met Council interceptors and inject the treated wastewater into the aquifer to raise groundwater elevations (Study 6)	-8	-2	-16	-16	-4	-24	-6	2	4	0	2	-8	-2	-8	-2	-12	2	10	-14	-88	-86	24	24
17. Augment White Bear Lake from East Vadnais Lake with up to 2 billion gallons per year (BGY) of surface water treated for suspended solids, aquatic invasive species, phosphorus, nitrogen, total organic carbon, and manganese (Study 7B)	2	12	20	16	22	12	10	14	24	10	22	10	22	10	10	12	14	14	12	230	238	1	1
18. Augment White Bear Lake from East Vadnais Lake with up to 1 billion gallons per year (BGY) of surface water treated for suspended solids, aquatic invasive species, phosphorus, nitrogen, total organic carbon, and manganese with a facility that is designed to be expanded up to a 2 billion gallons per year pumping and treatment capacity in the future if needed (Study 7B)	2	12	16	16	20	10	10	12	22	10	22	6	16	6	10	14	16	16	14	212	224	2	2
19. Augment White Bear Lake from East Vadnais Lake with up to 2 billion gallons per year (BGY) of surface water treated for suspended solids and aquatic invasive species only (Study 7B)	0	14	10	16	12	8	12	4	14	10	22	6	22	10	10	12	16	2	12	174	192	5	5
20. Augment White Bear Lake from East Vadnais Lake with up to 1 billion gallons per year (BGY) of surface water treated for suspended solids and aquatic invasive species with a facility that is designed to be expanded up to a 2 billion gallons per year pumping and treatment capacity in the future if needed (Study 7B Amendment)	0	14	10	12	10	10	10	-2	12	6	18	2	12	4	10	14	16	4	10	142	156	6	6
21. Augment White Bear Lake with up to 2 billion gallons per year (BGY) of partially treated surface water purchased from Saint Paul Regional Services (SPRWS) with no additional clarifier and recarbonation/ozonation basin (low range cost estimate) or with an additional clarifier and recarbonation/ozonation basin (high range cost estimate), water booster station, and transmission main (Study No. 7B Amendment)	-4	12	14	14	22	12	6	8	22	10	22	12	18	8	8	12	18	14	10	202	214	3	3
22. Augment White Bear Lake with up to 1 billion gallons per year (BGY) of partially treated surface water purchased from Saint Paul Regional Water Services (SPRWS) with no additional clarifier and recarbonation/ozonation basin (low range cost estimate) or with an additional clarifier and recarbonation/ozonation basin (high range cost estimate), water booster station, and transmission main and with a pumping facility that is designed to be expanded up to a 2 billion gallons per year (BGY) pumping capacity in the future if needed (Study 7B Amendment)	-4	12	20	20	20	10	6	6	22	10	22	10	18	8	8	14	18	14	10	202	214	3	3
23. Raise outlet elevation of White Bear Lake by 6 to 12-inches and purchase existing properties in and near the flood plain that could be impacted (Studies 9A and 9B)	-2	10	-4	-4	8	16	-8	10	12	0	2	14	20	-20	16	-18	18	-6	10	76	78	12	12
24. Implement/require/encourage non- or less-potable water or potable reuse for irrigation and process water in Vadnais Heights, White Bear Lake, and Gem Lake (Study 11)	-6	-8	2	2	6	-6	-20	10	-2	0	10	0	8	-8	8	10	2	12	6	14	24	19	19

Table 2: Potential Water Infrastructure Solutions Summary (continued)

Potential Water Infrastructure Solution (Summary)	DNR	Hugo	Lake Elmo	Lake Elmo (others pay)	Lino Lakes	Mahtomedi	MDH	MPCA	New Brighton	North St. Paul	North St. Paul (others pay)	Oakdale	Shoreview	SP Regional Water Services	Stillwater	Vadnais Heights	White Bear Township	White Bear Lake	Woodbury	Total	Total (others pay option)	Rank	Rank (others pay option)
25. Serve City of North Oaks with treated drinking water supplied by Shoreview in lieu of treated surface water from Saint Paul Regional Water Services or a new regional surface water treatment plant (Alternatives 4 and 5) (Study 15)	8	-8	-2	-2	2	2	-6	18	12	0	2	4	22	-8	14	12	10	16	10	106	108	9	10

Table 3: Potential Water Savings Solutions Summary

Potential Water Savings Solution (Summary)	DNR	Hugo	Lake Elmo	Lake Elmo (others pay)	Lino Lakes	Mahtomedi	MDH	MPCA	New Brighton	North St. Paul	North St. Paul (others pay)	Oakdale	Shoreview	St. Paul Regional Water Services	Stillwater	Vadnais Heights	WB Township	WBL	Woodbury	Total	Total (others pay option)	Rank	Rank (others pay option)
1. Install smart controllers on all lawn irrigation systems (day of week and time) (Study 10)	6	18	18	18	10	18	4	18	16	-18	-18	18	14	6	12	12	10	18	18	198	198	1	1
2. Increase tiered increasing block water utility rates (Study 12)	12	18	12	12	10	14	12	18	10	-18	-18	14	18	8	-8	18	16	18	16	188	188	2	2
3. Alternative low input turf grasses (Study 13)	10	18	16	16	6	18	10	18	8	-18	-18	8	16	-6	10	18	8	18	12	170	170	3	3

Table 4. Stacked solutions suggestions

Representative	Stacking Ideas
DNR	All water conservation solutions should be considered in combination with more robust water quantity solutions (Studies 4, 10, 11, 12, and 13)
Mahtomedi	I believe the only solutions would be to raise the outlet elevation back to historical levels, augment from nearby lakes.
MDH	From an MDH perspective, I do like the idea of having surface water at some of the communities. Especially those who are affected by other challenges like PFAS contamination. However, I understand that giving up local control partially or completely is not palatable for many. I think the additional benefits of surface water beyond solving this problem should be considered. Both in that the water will likely be centrally softened (easily could choose that) and that it will provide strong source resiliency if the current wells can be emergency backups.
MPCA	A variety of stacking options exist. It could be helpful to use cost as a main factor to develop some cost buckets, and from there develop some stacking scenarios dependent on the overall cost category.
New Brighton	I would look to use a combination of surface water reroutes from solutions 1, 17, 18, and then use treated SPRWS for community water supplies from solutions 2-4
North St. Paul	Infrastructure Solutions 1, 17, 18, 19, 20 ,21, and 22 to augment the lake should be the 1st top tier consideration in any stacked solution as lake levels are the environmental impact that kicked everything off in the first place under permitting and appropriations monitoring by the DNR, and then combined with any combinations of Infrastructure Solutions 2, 4, 6, 7, 9, and 11-25, together with any combination of Water Savings Solutions 1, 2, or 3.
Oakdale	raise outlet 6" to 1' and use one of the augmentation proposals, but at a lower capacity. The lower level of treatment we utilize the more cost effective this will be. It doesn't make sense to treat surface water when many of us are already heavily invested in treating our own groundwater. We're not really capturing the sunk costs of all of our collective water treatment plants. Augmentation is the way to go.
Shoreview	For the money, the combination of solutions 3, 19 and 25 appear to provide the most benefit to increasing the level of White Bear Lake while preserving the water quality and providing a long-term water supply solution for the 14 cities.
St. Paul Regional Water Services	Solution #24 may make sense to stack with any of the augmentation solutions depending on pipeline routing. If option #19 or #20 is chosen, space should possibly be left on site to expand treatment to match options #17 and #18 in the future
Vadnais Heights	Any conservation measures that are simple, cost-active and scalable should be prioritized and implemented. A regional or statewide approach to building requirements and turf management would help protect cities from pressure to not adopt conservation measures. Also, augmentation in some capacity appears to be the only real solution.
WB Township	Combining Option 23 with 21 or 22 seems most favorable.
White Bear Lake	Cities that are currently either not served by municipal water or those that need additional appropriations to serve future development could be provided with a regional surface water solution from SPRW or a new Chain of Lakes facility. Existing water systems like the City of White Bear Lake's should be left alone as we have significant investments in our treatment and distribution systems. Not a one size fits all solution. Solutions 12, 13, 14, 15 and 25 could independently utilized to reduce overall need for ground water and implemented in addition to new surface water source and/or augmentation. If only new water needs were served by SPRW or new facility, augmentation could be used to make up any difference in lake level which would likely require a smaller system than presented in the study options. Further study of separate irrigation metering could be completed to review the effects of allowing cities to closely regulate use and/or rates as well as better understand the volume used for irrigation.
Woodbury	See submitted letter below.

Table 5. Additional feedback

Representative	Additional Feedback
DNR	Any augmentation solution will need to address natural level variability to ensure proper lake ecosystem function.
Mahtomedi	The costs associated should be state funded, without increased DNR user fees, WAC charges or local/state sales tax. The residents should not have to bear the cost of raising the lake level. The water rates in Mahtomedi are the highest of all 14 communities already.
MDH	I think it is difficult to put all of those categories weighted evenly. In my mind it starts with effectiveness. Does it solve the problem or at least make a sizable dent to be combined with other measures? What is the risk that it doesn't work as planned? Once you've established feasibility to solve the problem, then we can assess feasibility to implement (regulatory hurdles and costs) and finally cost to come to the final proposed solution. I just don't want to see something ranked high that doesn't cost much, doesn't have regulatory concerns, but doesn't actually do anything much effective to solve the problem at hand.
North St. Paul	North St. Paul's circumstances warrant special consideration when evaluating regional water supply alternatives. The city has experienced little to no population growth and projects minimal growth in water demand through 2050. Water-use trends demonstrate continued declines in consumption, improved operational efficiency, and lower per-capita usage among both residential and non-residential customers. Seasonal irrigation demand is also relatively limited compared to many suburban communities due to North St. Paul's housing characteristics and development pattern. These factors are particularly important when considered alongside community affordability. According to Census data, approximately 11.2% of North St. Paul residents live below the federal poverty level, including approximately 16% of children. Significantly higher than State or Twin Cities Metro averages, and especially the other communities included in the WBL Work Group, Census Tract 426.02 reports an estimated overall poverty rate of 13.7% and child poverty approaching 20%. Requiring North St. Paul ratepayers to fund substantial regional water supply infrastructure investments while simultaneously maintaining existing local infrastructure, much of which is approaching or exceeding 70 to 100 years in age, may create disproportionate financial impacts on lower-income households. As such, any regional alternative should include a detailed affordability assessment, environmental justice review, and evaluation of cumulative financial impacts on economically vulnerable populations, none of which are included in the ranking survey responses requested from local communities here. Policymakers should carefully evaluate whether the economic burden imposed on lower-income households would be proportional to the benefits received and whether less burdensome alternatives exist. This survey provides a useful initial screening tool and a mechanism for collecting local input. However, the summary scores generated by the survey should be viewed as one input among many rather than a definitive ranking of alternatives. The methodology applies equal weighting across all evaluation categories, aggregates multiple considerations within individual criteria, and does not explicitly address broader policy questions such as affordability, cost-effectiveness, environmental justice, or distribution of benefits among communities. Accordingly, additional technical, economic, and policy analysis will be necessary before a preferred regional alternative can be identified.
Oakdale	Maintaining municipal independence will be important to our City Council.
St. Paul Regional Water Services	As noted in emails with Met Council staff, I believe that SPRWS could likely accommodate Solution #21 or #22 without the need for constructing a new clarifier or recarb/ozone basin. Comment on Solution 2 water quantity, reliability, risks: With only a single treatment plant at SPRWS, there remains a concentrated risk of a natural disaster or a terrorist action causing widespread disaster. This expands upon that risk by bringing on other customers. It is typical for large utilities but not negligible. Comment on Solution 2 regulatory: Noted as unfavorable because communities have generally indicated that they're not interested in this solution. Getting buy-in from regulators might not be too tough. Getting it from city councils and city leadership is likely to be a major challenge. Comment on Water Savings Solution 1 water quantity, reliability, risks: Regulatory approvals are easy, but engaging individual businesses/homeowners is difficult Comment on Water Savings Solution 3 water quantity, reliability, risks: I think it will be very difficult to get meaningful adoption on this. Don't see a window to moving the needle much WRT the WBL elevation
WB Township	This evaluation has been comprehensive with focus on the lake elevation for White Bear Lake. Considering the cost for serving communities with surface water options it seems that municipal wells provide better value unless groundwater becomes contaminated or the groundwater supply is compromised.
White Bear Lake	Cities such as White Bear Lake, which is for the most part built out and has a long-standing existing water system that delivers high quality water at an affordable price while meeting conservation goals should be allowed to have continued autonomy at the end of this process.
Woodbury	See submitted letter below.



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September 17, 2026

White Bear Lake Area Comprehensive Plan Work Group
c/o Metropolitan Council
390 Robert Street North
Saint Paul, MN 55101

RE: Response to the Potential Solutions Ranking Survey and Comments on the White Bear Lake Area Comprehensive Plan

Dear Members of the Work Group:

The City of Woodbury appreciates the opportunity to participate in the White Bear Lake Area Comprehensive Plan Work Group and to comment on the potential solutions evaluated to date. This letter in conjunction with the rank results table represents Woodbury's response to the survey.

Woodbury supports the work group mandated purpose of "Ensuring that communities around White Bear Lake have reliable access to safe drinking water sufficient to support municipal growth, while sustaining both surface water and groundwater supplies for future generations."

White Bear Lake's (WBL's) water levels are being managed primarily for recreational purposes, and recent rebounds have been driven largely by increased precipitation. As Woodbury has consistently noted, using lake levels as a proxy for aquifer health is akin to using short-term weather patterns to understand long-term climate trends, one does not accurately measure the other. From our perspective, the core issue extends well beyond lake levels. The region's long-term challenge is ensuring sustainable, durable groundwater appropriations that protect the health of the aquifer while supporting continued community growth. Woodbury strongly supports policy decisions that safeguard aquifer sustainability, including conservation measures implemented at the city level to promote long-term resource stewardship.

We urge the work group to maintain focus not solely on engineering solutions tied to lake levels, but also on policy tools, appropriation governance, groundwater recharge investments, and water reuse strategies, the approaches most likely to create meaningful, long-term regional sustainability. The comments below identify

- the integrated solutions provided in the survey in which Woodbury believes best achieves the purpose,
- elements Woodbury cannot support, and
- several technical and methodological recommendations for the work group's consideration.

Recommended Integrated Regional Water Supply Solution

Due to our continued question of whether managing WBL levels is necessary beyond recreational purposes, Woodbury's first recommendation is that a method be explored that allows continued growth in water use, regardless of WBL water levels if communities in the five-mile radius commit to conservation measures that manage their impact on the aquifer responsibly; this is listed as the primary solution below. If a capital solution was determined necessary, it appears that augmentation from East Vadnais Lake is the solution which can create the most benefit for the cost. Although, the question may need to be explored – if the hundreds of millions of dollars which would need to be invested in a capital solution were re-directed towards conservation initiatives, could the impact be greater?

1. Water Savings Solutions 1, 2, and 3: Regionwide Conservation

Water Savings Solutions 1, 2, and 3, consisting of irrigation controllers, tiered block water rates, and alternative low input turf grasses, should be implemented across the WBL 5-mile radius and ahead of, or concurrent with, the augmentation program.

These measures require lower or no capital investment, do not require significant regulatory approvals, and are projected to provide a combined lake elevation benefit of up to 0.64 feet. More importantly, conservation reduces the volume of augmentation ultimately required and provides measurable evidence of commitment to water efficiency. Demonstrated conservation performance should also strengthen the case for state participation in the capital cost of the augmentation infrastructure.

2. Infrastructure Solutions 17-22: Augmentation of White Bear Lake via East Vadnais Lake

While all the infrastructure solutions are cost prohibitive, augmentation of WBL via East Vadnais Lake seems to be the most cost-effective way to meet the needed elevation requirement.

Woodbury supports phasing the project initially at 1 BGY while preserving capacity for expansion to 2 BGY. This approach allows the region to evaluate actual augmentation performance, conservation results, and demand growth before committing to the second increment of capital. Additionally, further consideration of phased implementation of treatment technology, as suggested in options 17, 19, 20, 21, and 22, could be considered to lower initial costs and allow for real world data on possible but not confirmed water quality impacts to WBL if full treatment as defined in the option 18 were not immediately implemented.

3. Infrastructure Solution 15: MPCA Project 1007

Infrastructure Solution 15, MPCA Project 1007, should be coordinated/considered with, rather than incorporated into, the regional lake elevation solution. Its purpose, while possibly mutually or tangentially beneficial to WBL elevation, is separate.

Project 1007 may address specific groundwater contamination and should not be evaluated based on its cost per foot of lake elevation benefit. It does, however, have the potential to help remove contamination from and limit future contamination of the shared Prairie du Chien-Jordan aquifer that supplies Woodbury and other communities in Washington County, making it a direct Woodbury interest.

Solutions the City of Woodbury Does Not Support

Treated wastewater injection: Woodbury does not support incorporating solutions that rely on injection of treated wastewater into the Prairie du Chien-Jordan aquifer, including Solutions 6, 11, and 16. These approaches would require a change in Minnesota law and would introduce

unquantified emerging contaminant risk into the aquifer that supplies Woodbury and much of the east metropolitan area.

Cost Allocation to communicates without direct benefit: Woodbury does not support assessing ratepayers for water supply conversion infrastructure that primarily serves individual communities. Those costs should be borne by the communities receiving the direct water supply benefit.

Additional Technical and Analytical Recommendations

1. Data Correction

On the Reference tab, the water quantity summary for Infrastructure Solution 16 states that the improvements would raise WBL by only 0.1 feet. This language appears to have been carried over from Solution 13 or the increase is incorrect. The estimated increase column for Solution 16 identifies an increase of 0.7 to 1.44 feet. Woodbury recommends correcting this discrepancy before the summary is finalized and published.

2. Scoring Methodology

The current additive scoring methodology weighs all four evaluation categories equally. As a result, a relatively inexpensive solution that provides little or no lake elevation benefit can receive a score comparable to a solution that directly addresses the 922.0-foot lake elevation objective. Woodbury recommends that the work group clearly identify this limitation when presenting the compiled results or, preferably, apply appropriate category weighting before the rankings are used to screen or prioritize alternatives.

3. Cost per Foot Metric

Cost per foot of lake elevation is not a meaningful comparison for solutions whose primary purpose is drinking water supply rather than lake elevation, including Solutions 12, 15, and 25. Woodbury recommends limiting the cost per foot metric to augmentation and recharge alternatives. Water supply conversion alternatives should instead be evaluated using metrics such as cost per million gallons of supply capacity and cost per household served or use a combination of both for clarity. This will provide a more meaningful comparison of alternatives based on their intended purpose.

4. Reliability Assumptions

The reliability ratings for the surface water alternatives appear to assume average Mississippi River availability during extreme drought conditions. Woodbury recommends that the plan clearly identify the specific drought condition used in the reliability analysis and document the anticipated water supply curtailment or augmentation requirements if Saint Paul Regional Water Services or the chain of lakes cannot deliver the assumed volume. Reliability should be evaluated under the same conditions used to establish the regional water supply need.

5. Emerging Contaminants

Several water quality summaries identify potential impacts as unknown, including stormwater recharge under Solution 14, while other alternatives rely on treatment systems to address contaminants, including the aquifer injection alternatives. Given the region's experience with PFAS and other emerging contaminants, Woodbury recommends that no recharge or injection element advance without a defined emerging contaminant monitoring, response, and contingency framework developed in coordination with the Minnesota Department of Health and the affected municipal water suppliers.

White Bear Lake Area Comprehensive Plan Work Group

September 17, 2026

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Closing

Woodbury remains committed to the mandated purpose of this effort in creating a comprehensive plan that ensures safe drinking water access in the WBL area to support municipal growth, and long-term sustainability of both surface and groundwater supplies. We appreciate the work group's continued effort and welcome the opportunity to discuss these comments in greater detail.

Please contact us with any questions regarding this response.

Sincerely,



Mary Van Milligen
Public Works Director



Jim Westerman
Assistant PW Director



Chris Hartzell, PE
Engineering Director

Enclosure: Completed Potential Solutions Ranking Survey