

**DRAFT Water Supply Alternatives –North Oaks Company, Minnesota**

	Alternative Description	Water Source	Treatment Needs	Long-term Sustainability Rating	Long-term Capacity Reliability	Ownership Structure	Regulatory Approvals or Legal Agreements	Timeline to Bring Online	Land Costs	Engineering Costs	Capital Costs	O&M Costs	Risks
1.	WBT Interconnection – As Is	Groundwater from White Bear Township and Private Wells	None	Low	Low	Wholesale Agreement. City of North Oaks purchases available water from White Bear Township.	Existing Wholesale Agreement	0 months	NA	NA	NA	NA	<ul style="list-style-type: none"> <li>Future water needs may not be addressed</li> <li>Water supply quantity is not guaranteed</li> <li>City of North Oaks to rely on outside entity for water needs</li> </ul>
2.	Lino Lakes Interconnection	Groundwater from Lino Lakes Wells	None	Low	Moderate	Wholesale Agreement. City of North Oaks purchase water from Lino Lakes.	Wholesale Agreement	6-12 months	\$\$	\$\$	\$\$	\$	<ul style="list-style-type: none"> <li>Negotiate expanded three (3) city Joint Powers Agreement (JPA)</li> <li>Infrastructure and land purchase needed for interconnection</li> <li>City of North Oaks to rely on outside entity for water needs</li> </ul>
3.	Shoreview Interconnection	Groundwater from Shoreview Wells	None	Low	Moderate	Wholesale Agreement. City of North Oaks purchases water from Shoreview.	Wholesale Agreement	6-12 months	\$\$	\$\$	\$\$	\$	<ul style="list-style-type: none"> <li>Coordination with City of Shoreview to expand the existing service agreement</li> <li>Infrastructure and land purchase needed for interconnection</li> <li>City of North Oaks to rely on outside entity for water needs</li> </ul>
4.	Saint Paul Regional Water Services (SPRWS) Wholesale Agreement with City of North Oaks or WBT	Surface Water	None	High	High	Wholesale Agreement. City of North Oaks or WBT purchases water from SPRWS.	Wholesale Agreement	12-24 months	\$	\$\$	\$\$\$	\$	<ul style="list-style-type: none"> <li>Coordination with SPRWS required</li> <li>City of North Oaks to rely on outside entity for water needs</li> <li>Need to negotiate cost of long piping interconnection with SPRWS</li> </ul>
5.	SPRWS Operates a New Satellite WTP near or within City of North Oaks	Surface Water	None	High	High	Wholesale Agreement. SPRWS builds and operates a new water treatment plant. City of North Oaks buys finished water from SPRWS.	Wholesale Agreement	24-36 months	\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	<ul style="list-style-type: none"> <li>SPRWS to pay high upfront cost and longer schedule to construct new WTP</li> <li>City of North Oaks and SPRWS agree on cost share and rates</li> <li>City of North Oaks to rely on outside entity for water needs</li> </ul>
6.	North Oaks Company Owns and Operates a Water Treatment Plant	Surface Water	High MDH Surface Water Treatment Standards	High	High	Wholesale Agreement. North Oaks Company purchases raw water from SPRWS and North Oaks Company owns and operates water treatment plant.	Wholesale Agreement MDH Pilot and WTP Approval	24 months	\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	<ul style="list-style-type: none"> <li>High upfront cost and longer schedule to construct new WTP</li> <li>Ongoing costs and risks to operate and maintain WTP and purchase raw water</li> <li>Future risks to meet new water treatment standards</li> </ul>
7.	New Well in City of North Oaks	Groundwater	Moderate MDH Groundwater Standards	Low	Low	City of North Oaks owns and operates well outside of 5-mile White Bear Lake radius.	DNR Appropriation Approval; MDH Approval	6-12 months	\$	\$\$	\$\$	\$	<ul style="list-style-type: none"> <li>DNR appropriation is not guaranteed</li> <li>Limited waters supply capacity by a single well</li> <li>Limited area for well siting (must be outside WBL 5-mile buffer zone)</li> </ul>
8.	Wastewater Reuse	Wastewater	High MPCA/MDH Treatment Standards	High	Low; potable reuse is not allowed	City of North Oaks owns and operates wastewater treatment reuse system for non-potable uses.	MPCA Approval; MDH Approval	24 months	\$\$	\$\$\$	\$\$\$	\$\$\$	<ul style="list-style-type: none"> <li>High upfront cost and longer schedule to construct WWTP reuse facility</li> <li>Ongoing cost to operate and maintain WWTP reuse facility</li> <li>Can only be used for non-potable uses</li> </ul>
9.	Stormwater Reuse	Stormwater	MPCA/MDH Treatment Standards	High	Low; potable reuse is not allowed	City of North Oaks owns and operates stormwater reuse system.	Plumbing Code Approval; MDH Approval	12-18 months	\$\$\$	\$\$	\$\$	\$\$	<ul style="list-style-type: none"> <li>Unreliable source of water</li> <li>High upfront costs and longer schedule to construct a reuse facility</li> <li>Can only be used for non-potable uses</li> <li>Large amount of land required for water storage</li> </ul>



	Acronyms	
	JPA	Joint Powers Agreement
	MDH	Minnesota Department of Health
	MPCA	Minnesota Pollution Control Agency
	NOC	North Oaks Company
	SPRWS	Saint Paul Regional Water Services
	WBL	White Bear Lake, related to the 5-mile groundwater use area
	WBT	White Bear Township
	WTP	Water Treatment Plant
	WWTP	Wastewater Treatment Plant
	Color Guide	
		Favorable
		Less Favorable
		Unfavorable

Relative Ranking: High, Moderate, Low