

General Qualitative Risk Assessment and Ranking by Multiple Barrier Category

Barrier Category/ System Aspect	Qualitative Risk Ranking	Rationale	Mitigating
Source Protection			
source is under the control of the water owner.	Low	The Owner controls the water source.	
source water protection-and-management in place.	Moderate	The Owner has completed Wellhead Protection Area Plan study but is not able to control land use outside their property boundary	The City of Ottawa communal system WHPAP, and the coordinate protection objectives.
permitted uses are limited and designated.	Moderate to High	Inability to control land use in significant portion of recharge area (outside of Owner's property)	See above. Also, relatively natural source zone.
contaminant sources are absent from the permit area or are low risk.	Moderate to High	See above.	See above.
there is a low intrinsic source vulnerability (e.g., sand aquifer, stable head).	Low	Relatively well naturally protected aquifer, and relatively deep well casing minimizes potential for surface impacts on source water quality.	
integrity and location of the well/intake from the best-quality source ensure the best of water is captured.	Low to Moderate	See above. NOTE – surface water features in proximity to wells may require ongoing verification of non GUDI classification.	
source water quality is consistently good, with minimal fluctuations that do not disrupt treatment systems.	Low	Naturally protected aquifer and deeper well casings minimize potential in water quality variability and impact from surface.	
total water source capacity can supply current projected water demand.	Low	Water source capacity much higher than demand.	
backup (secondary) source is in position.	Low	Backup in place, and third well (not currently connected) could be developed for additional supply.	
community and water users are aware of the potential of human activity on source water quality integrity.	Low to Moderate	See item b), above.	
Treatment			
Appropriate treatment technology is selected, based on source water type, quality requirements.	Low	Water treatment system is in place, and is based on regulatory management requirements.	
Treatment is effective at eliminating/removing pathogens and reducing inorganic constituents such as minerals or chemicals to meet or below acceptable concentrations.	Low	See above.	
The treatment system is reliable. It can be depended upon to produce high quality finished water in all but exceptional circumstances.	Low	System has a history of producing water to regulatory requirements.	
Regular process monitoring and system maintenance are performed.	Low	A licensed/ certified operator oversees the system.	

<p>Record-keeping procedures are in place—documenting maintenance activities, operational procedures, process control, preventative strategies, monitoring and corrective actions.</p> <p>The system is located in a secure building. Proper disinfection and flushing procedures are used for all repairs and new construction.</p>			
<p>Water Monitoring</p>	<p>Low</p>	<p>Regular monitoring and reporting is completed on source water and treated water in accordance to the requirements of the <i>MOE Safe Drinking Water Act, 2002 Ontario Regulation 170/03</i>.</p>	
<p>Operator Training</p>	<p>Low</p>	<p>The system is maintained and operated by a certified potable water system operator in accordance to the <i>MOE Safe Drinking Water Act, 2002 Ontario Regulation 170/03</i>.</p>	
<p>Emergency Response Planning</p>	<p>Low</p>	<p>The system is maintained and operated by a certified potable water system operator in accordance to the <i>MOE Safe Drinking Water Act, 2002 Ontario Regulation 170/03</i>.</p> <p>The operator is aware of regulatory notification requirements in the event of an emergency.</p>	