





# Four key risks to safe drinking water



Water Services Authority  
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If risks to safe drinking water are not appropriately managed, it can cause serious harm to people and the environment. Our regulatory priorities for the next three years seek to address four key hazards or risks that can impact drinking water safety.

Risk	Potential consequence	Our expectation
 <b>Microbial contamination</b> Happens when harmful microscopic organisms (e.g. bacteria, viruses or protozoa) get into drinking water.	<ul style="list-style-type: none"><li>• People are at increased risk of getting sick from their drinking water if it isn't properly treated for harmful bacteria, viruses and protozoa (e.g. microscopic parasites like Cryptosporidium).</li><li>• Drinking water contamination is known to result in sporadic cases of illness and can cause outbreaks, serious illness or even death.</li></ul>	Our first priority is to ensure all supplies have appropriate treatment in place to remove or inactivate harmful microorganisms.
 <b>Chemical contamination</b> Happens when chemical contaminants (e.g. arsenic, lead, nitrates) get into water sources or are introduced during treatment and distribution processes.	<ul style="list-style-type: none"><li>• Long-term exposure to certain chemicals can harm people's health over time. For example, by:<ul style="list-style-type: none"><li>» affecting brain development in children</li><li>» increasing the risk of cancer or organ damage.</li></ul></li><li>• Chemical exposure often doesn't cause symptoms immediately. It's important that drinking water is tested regularly so that they don't go unnoticed.</li></ul>	Suppliers should test for chemical contaminants that can put people's health at risk and take appropriate action to address these risks.
 <b>Physical contamination leading to ineffective treatment</b> When source water is cloudy from dirt, algae and other particles, this can make treatment systems ineffective at removing or inactivating harmful contaminants.	<ul style="list-style-type: none"><li>• These pose risks to drinking water safety and public health by:<ul style="list-style-type: none"><li>» making treatment processes less effective</li><li>» increasing the risk of harmful contaminants getting into drinking water.</li></ul></li><li>• People might choose to use another water source that may be less safe if the drinking water they're supplied doesn't look clear or tastes or smells strange.</li></ul>	Suppliers should carry out appropriate monitoring to quickly detect and fix issues.
 <b>Loss or interruption of supply</b> Can be caused by infrastructure failure, poor operational practices, issues during planned outages or natural hazard events.	<ul style="list-style-type: none"><li>• Can leave people without enough safe water to meet essential drinking, hygiene or sanitary needs.</li><li>• Even short-term outages can cause health risks and undermine public trust in the safety and reliability of a water supply.</li></ul>	Suppliers should have robust plans in place to reduce the frequency and impact of unexpected events.

Suppliers have a responsibility to tell the people they serve, and us, about risks to drinking water safety or sufficiency

For more information read the Compliance, Monitoring and Enforcement Strategy 2025-28