

DRINKING WATER THREATS: Organic Solvents



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Drinking Water Source Protection is a provincial program to protect our municipal drinking water sources from threats of contamination.



Organic Solvents

Organic solvents usually have a low boiling point and evaporate easily. Most are highly volatile, flammable and extremely toxic. These solvents quickly travel vast distances and can travel into sources of groundwater and surface water from spills. Most organic solvents are lighter than water and will form a separate layer on top.

Organic solvents are a chemical class of compounds that are used in commercial industries and industrial sites but can also be found in household cleaning compounds. Common uses for organic solvents include: dry cleaning (e.g., tetrachloroethylene), paint thinning (e.g., toluene, turpentine), nail polish removers and in glue solvents (acetone, methyl acetate, ethyl acetate), spot removers (e.g., hexane, petrol ether), detergents (citrus terpenes) and perfumes (ethanol).

Exposure to organic solvents can result in respiratory issues, liver and kidney damage, cardiovascular problems, can have serious negative effects on the nervous system, fertility problems and are carcinogenic.



What can I do?

The storage and handling of organic solvents in certain quantities is considered a drinking water threat under Ontario's *Clean Water Act, 2006*.

Everyone has a role to play in protecting our water. If you use and store Organic Solvents always make sure to prevent them from entering water sources. This means they need to be used and handled with extreme care.

Organic solvents can move quickly, if a spill occurs, contact the 24 hour Spills Action Centre immediately at 1-800-268-6060.



Understanding the Threat policy

The Sault Ste. Marie Source Protection Plan has a policy to manage the risk, prevent spills and ensure appropriate spill response where volumes are greater than normal residential use. The policy applies in vulnerable areas where the threat could be significant in all Wellhead Protection Area "A" (WHPA-As) such as retail sales establishments who sell large volumes or industrial sites where large volumes are stored and handled.

Organic solvents can cause devastation to the natural environment, damage to property, and irreversible damage to plants, animals, water supplies and human health.





Am I in a vulnerable area?

You can find out if you live or own property in a vulnerable area by contacting your local Risk Management Official (RMO) or Risk Management Inspector (RMI). They will help you find solutions intended to keep our municipal drinking water safe. They are available to speak to you on the phone or in person to answer any questions you might have.

Local policies were created to provide conditions on what volumes or what measures need to be in place to safeguard our municipal drinking water sources. In some cases a Risk Management Plan may be required.



Best Management Practices

All organic solvents should be considered potentially hazardous and handled with care. The following best management practices should be used.

- Never use any solvents in a confined, or any other poorly ventilated area
- Store solvents in tightly closed containers in cool dry well ventilated areas
- Keep away from heat, sparks and sources and ignition
- Always dispose of organic solvent containers and/or residual solvents at Hazardous Waste Facilities
- Do not mix different kinds of organic solvents together



Managing the risk

The Sault Ste. Marie Region Source Protection Plan, Policy Number: SSM-orgsolvents-F-1.1 is designed for the prevention of the storage and handling of organic solvents within vulnerable areas where the threat could be significant and manage existing handling and storage of organic solvents.

The handling and storage of organic solvents (future) are designated for the purposes of Section 57 of the *Clean Water Act, 2006* Prohibition in vulnerable areas where the threat could be significant (all WHPA-As) except retail sales establishments.

The handling and storage of organic solvents (existing) are designated for the purposes of Section 58 of the *Clean Water Act, 2006* requiring Risk Management Plans in vulnerable areas where the threat could be significant (all WHPA-As). Risk Management Plans are required for retail sales (future and existing) located within the vulnerable areas where the activity would be significant.

If you live in a vulnerable area, you have a special responsibility to be aware of your actions and how they can impact our drinking water supplies - a responsibility we hope you take personally. This responsibility also applies if you are leasing, renting or subletting the land. The decisions you make can affect the water coming out of the tap for you and your neighbours. Best management practices can improve water quality for future generations.



Prevention is key

It sounds obvious...chemicals and other toxic substances could make our water undrinkable. It's far easier to prevent contamination than it is to clean it up. In fact, for some chemicals and substances, clean-up is practically impossible. In some cases, municipalities have been forced to decommission, or plug and seal wells because of contamination.

FOR MORE INFORMATION, CONTACT



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