

What's in your garage?

Chemical handling practices for protecting drinking water

What are DNAPLs?

Dense Non-Aqueous Phase Liquids or DNAPLs are chemicals that are more dense than water. They do not dissolve easily in water, and remain a separate liquid phase in surface water and groundwater. These chemicals can be toxic and carcinogenic to humans and the environment. Even at low levels, DNAPLs can be harmful to consume.

DNAPLs are used in many industries and can be found in small quantities in common household products.

How does this affect me?

DNAPLs can be a threat to drinking water sources because they can reach aquifers (areas where water moves through the ground and is used as a drinking water source). Even a small DNAPL spill can contaminate groundwater over a large area and persist for many years. They can form insoluble and mobile pools that make conventional cleanup methods difficult or impossible, ultimately contaminating drinking water supplies. The best way to protect our drinking water is DNAPL education and caution when working with chemicals.

When are they a threat?

The storage and handling of DNAPLs in certain vulnerable areas are considered a drinking water threat under **Ontario's Clean Water Act, 2006**.

If you are unsure if you live in an area where DNAPLs could be a concern, please visit our website for more information: www.ottawa.ca/sourceprotection

What can I do?

In order to prevent DNAPLs from entering drinking water sources, it is important to use management strategies to help prevent accidents. Best Management Practices (BMPs) should be used to ensure that work environments remain clean and orderly. Employee training about DNAPL management techniques will help eliminate the potential for accidents and reduce the possibility of mishandling chemicals or equipment.

Some Best Management Practices include:

- Neat and orderly storage of drums and containers of chemicals;
- Do not store containers where they may be exposed to precipitation or runoff;
- Inspect storage areas regularly for leaks or spills;
- Properly dispose of unused chemicals, visit www.ottawa.ca to find out more about the safe disposal of household hazardous waste;
- Maintain a list of procedures to follow in case of a spill, for example absorbent and/or containment materials should be kept on hand to respond to spills;
- Contact the 24 hour Spills Action Centre at 1-800-268-6060 if a spill occurs.



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What are organic solvents?

Solvents are substances that are capable of dissolving solids, gases, or liquids. Organic solvents are carbon-based solvents. They share a common structure and exist in liquid form at room temperature. Many organic solvents are recognized as carcinogens, reproductive hazards and neurotoxins.

Where are they used?

Organic solvents have been used in large quantities for decades in industrial and commercial applications and can also be found in small quantities in common household products, such as adhesives and cleaners. Organic solvents are used in paints, varnishes, lacquers, adhesives, glues, degreasing/cleaning agents, and in the production of dyes, polymers, plastics, textiles, printing inks, agricultural products and pharmaceuticals.

When are they a threat?

The storage and handling of organic solvents in certain vulnerable areas are considered drinking water threats under Ontario's Clean Water Act, 2006.

Generally, the handling and storage of organic solvents are considered a threat when it is stored above ground in amount greater than 250 L. However, in some circumstances, the threat is significant to groundwater sources if the amount of organic solvent is stored below ground is greater than 25 L.

If you are unsure if you live in an area where DNAPLs could be a concern, please visit our website for more information: www.ottawa.ca/sourceprotection

What can I do?

In order to prevent organic solvents from entering drinking water sources, it is important to use management strategies to ensure accidents do not occur. Best Management Practices (BMPs) should be used to ensure that work environments remain clean and orderly. Employee training about organic solvent management techniques will help eliminate the potential for accidents and reduce the possibility of mishandling chemicals or equipment.

Some Best Management Practices include:

- Never use any solvents in a confined or poorly ventilated area;
- Store solvents in tightly closed containers in cool, dry and well ventilated areas away from heat, sparks and sources of ignition;
- Inspect storage areas regularly for leaks or spills;
- Properly dispose of unused chemicals, visit www.ottawa.ca to find out more about the safe disposal of household hazardous waste;
- Maintain a list of procedures to follow in case of a spill, for example absorbent and/or containment materials should be kept on hand to respond to spills;
- Contact the 24 hour Spills Action Centre at 1-800-268-6060 if a spill occurs.



Information in this factsheet was provided by the Raisin-South Nation Source Protection Region.