Conservation ONTARIO
Natural Champions

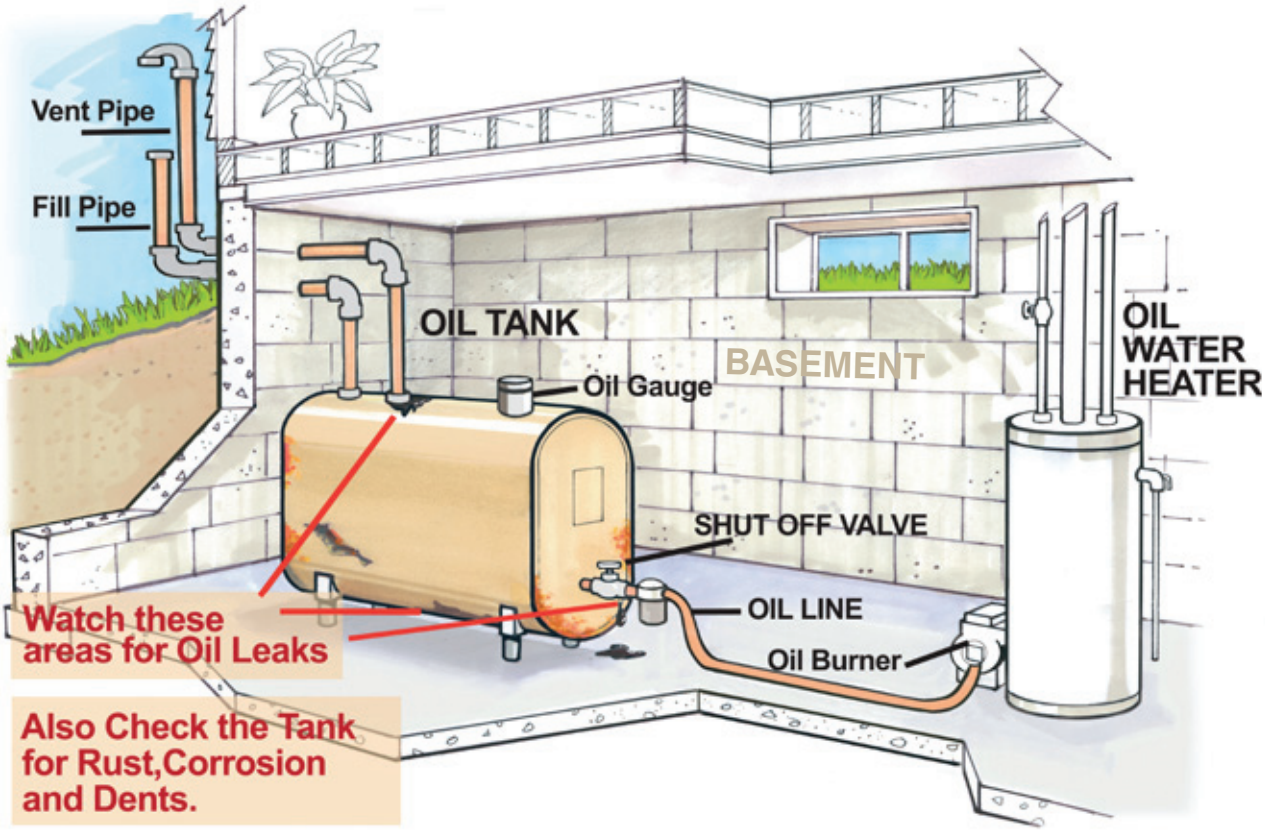
HOME HEATING OIL STORAGE

What Should I Know About Home Heating Oil?

Residential heating oil is used to fuel furnaces that heat homes, and is stored in tanks that can be located outside or indoors - most commonly in a basement. Oil tanks can be found above or below ground, and are typically 900 litres in size.

Oil spills, as well as leaks, can affect both your health and the environment. Spilled oil can seep into soils and groundwater and flow into the rivers and lakes that supply your drinking water, causing contamination. Other problems such as offensive odours, fires, and explosions can also be associated with an oil spill.

Through the Technical Standards and Safety Act homeowners have a legal responsibility to properly maintain their heating oil tanks, as well as clean up and report any leaks or spills. Oil tanks should be inspected on a regular basis so that potential problems can be discovered and corrected before they affect tank longevity, system performance or cause damage to your property and the environment. Other benefits of regular inspections include fewer service calls, more efficient appliances, and a smaller chance that supply lines or tanks will leak.



The Clean Water Act and Threats to Drinking Water Safety

The intent of the Clean Water Act, 2006 is to protect municipal drinking water supplies through developing collaborative, locally driven, science-based drinking water source protection plans.

Additional regulations identify 21 different activities or threats which can, if not properly managed, pose a risk to municipal drinking water sources. Across Ontario, nineteen Source Protection Committees made up of local stakeholders have identified current and potential future threats to local drinking water quality and quantity. Municipalities, Conservation Authorities, property owners, farmers, industry, community groups, and the public will need to work together to ensure local sources of drinking water are protected from these threats, now and in the future. Property owners can help by taking responsibility for properly maintaining their heating oil tank in order to minimize threats to their own health and the health of the environment.

Photo Credit: Eileen Lewington

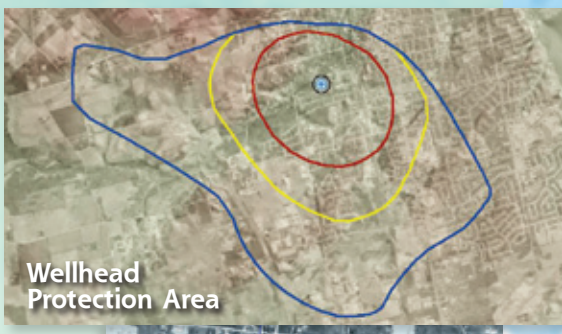
Why is Home Heating Oil a Potential Threat to Drinking Water Safety ?

Home heating oil contains many compounds that, if spilled or leaked, have the potential to contaminate municipal drinking water supplies. Heating oil contains BTEX, an acronym for four compounds-benzene, toluene, ethylbenzene, and xylenes. BTEX compounds have strong odours and tastes and some have been associated with serious health conditions such as leukemia and Hodgkin's Lymphoma, as well as birth defects. BTEX compounds dissolve easily in water which means that they can travel long distances in ground and surface water.

Heating oil also contains petroleum hydrocarbons (PHC), naturally occurring compounds that originally come from crude oil. We use PHCs for various purposes such as fueling vehicles, making some types of plastic, in certain chemicals and pesticides, and heating our homes. PHCs have been associated with harmful effects to the reproductive, respiratory, immune, and nervous systems and can also harm the kidneys, liver, skin, eyes, and blood. PHCs may also affect the odour, taste, and appearance of water.

Are All Home Heating Oil Tanks Considered a Threat to Drinking Water?

Under the Clean Water Act, home heating oil tanks are considered a "significant threat" to municipal drinking water sources based on several factors, including when a tank is located within vulnerable areas such as Wellhead Protection Areas or Intake Protection Zones. Adoption of best management practices such as having your tank properly inspected and maintained, will reduce the potential for your tank to contaminate drinking water sources.



Wellhead Protection Areas – are areas of land surrounding municipal drinking water wells. If a home is located in a vulnerable Wellhead Protection Area, storing heating oil is considered a significant threat to drinking water if more than 250 litres of fuel is being stored below ground level or partly below ground level, including in basements, and if 2500 litres or more is being stored at or above ground level.

Intake Protection Zones - are areas of water and land surrounding a water body such as a lake, river, or stream, which is used as a municipal drinking water source. If a home is located in a vulnerable intake protection zone, storing heating oil is considered a significant threat to drinking water if more than 2500 litres of fuel is being stored either partly below ground or above ground.

To find out if your home is located within a Wellhead Protection Area or Intake Protection Zone, contact your local Source Protection Region or Area. You can find out which Source Protection Region or Area you live in at **www.conservationontario.ca**

In this example, the yellow dot represents the location of the water intake. The red lines show the area of the Intake Protection Zone.

What Can I Do to Prevent Home Heating Oil Tank Spills and Leaks?

Oil spills and leaks can occur for a variety of reasons including corrosion, overfilling, improper tank location, and improper installation and/or maintenance. Having your home fuel tank properly installed, inspected, and maintained is an easy way to help prevent spills and protect drinking water. Here are some ways for you to help prevent leaks and spills and reduce risk to water quality:

- Have your home heating oil tank maintained once a year by an oil burner technician as legally required under Technical Standards and Safety Authority and Canadian Standards Association (CSA) code
- Place your oil tank in an area where it is unlikely to be in the way of normal household activities
- If your tank is installed in a garage, provide proper distance and protection from moving vehicles
- If possible, install an overfill protection device on your tank
- If possible, have drip trays installed under the tank and oil supply lines (in order to catch any leaks)
- When replacing an old tank or installing a new one, consider choosing a double walled or double bottom tank
- If possible, have your tank installed away from any floor drains or other openings in the floor to prevent spills from escaping.
- Stay informed and get involved in your local source protection process. To find a Drinking Water Source Protection Planning Region or Area near you go to **www.conservationontario.ca**

How Might I Know of There is a Problem With My Fuel Tank ?

Use the following checklist to examine the condition of your fuel tank. Does your fuel tank have:

- ☐ Excessive rusting on the outside of the tank
- ☐ Obvious dents or other physical damage on the outside of the tank
- ☐ Bent or pinched fuel lines
- ☐ Broken or cracked fill gauge
- ☐ Rusted or corroded valves
- ☐ A thin layer of oil around the joints on the tank (weeping)
- ☐ Stains on the floor underneath the tank
- ☐ Fuel gauge levels that don't seem to change
- ☐ Unstable legs
- ☐ An abnormal odour surrounding it

If you checked off one or more of the above fuel tank conditions, your tank may be at risk of developing a leak.

What Should I Do if I Suspect a Problem With My Fuel Tank ?

If you are unsure about the condition of your fuel tank, or suspect a problem, contact a local certified Oil Burner Mechanic to inspect or repair your tank.

To report spills or get more info on spill cleanup, contact the Ministry of Environment's Spills Action Centre at 1-800- 268-6060 (24 hours)

Additional Information

Contact your local Source Protection Region or Area. You can find out which Source Protection Region or Area you live in at **www.conservationontario.ca**

Additional information pertaining to home heating oil can be obtained from the Ontario Chapter of the Canadian Oil and Heat Association at **http://www.coha.ca**

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DRINKING WATER SOURCE PROTECTION
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For more information on the Source Protection Program, please visit the Ministry of the Environment's website:
www.ontario.ca/cleanwater

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