
Water Treatment

NOTES

Cornell Cooperative Extension, College of Human Ecology

Safe Fuel Use Around the Home

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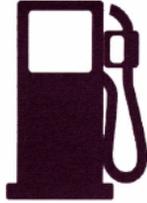
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Did you know that just one pint of oil can create a slick larger than a football field? Oil persists for a long time in the environment, sticks to everything from sand to bird feathers, and fouls fish gills. It floats on water and prevents the exchange of gases such as oxygen that are needed by aquatic life. And oil can contaminate our drinking water.

A small fuel spill or leak on your property can travel across land to streams or lakes or leach through the soil to groundwater. Such spills and leaks are surprisingly common but very dangerous to water supplies.

Fuels are hazardous and can pollute the water you drink and the air you breathe. Use the following fuel storage and management guidelines to protect the health of your family, the property value of your home, and the local environment.



Use Caution When Filling Containers

- Refuel on a paved surface where you can contain a spill if one occurs.
- Refuel at least 50 feet away and downhill from drinking water wells and streams, ponds, or wetlands.
- Always use a funnel or spout to prevent spilling or splashing when refueling equipment.
- Never refill a gas tank while a machine is running or while it is still hot.
- For motor boats, remove the portable tank and fill it in a secure location onshore. Use a secondary containment device, such as a plastic tub, under the tank for added protection.
- Refuel snowmobiles and other gasoline-powered engines onshore and not on frozen lakes and ponds.

Store Fuels Safely

- Containers are usually color coded and marked for a particular fuel. Gasoline containers are red.
- Kerosene containers are usually blue.
- Store fuels at least 100 feet from drinking water wells and streams, ponds, or wetlands.
- Keep fuels in an unattached shed or garage with an impervious (concrete) floor.
- Store fuels at ground level, not on a shelf, to minimize the danger of falling and spilling.
- Keep caps tightly closed on fuel containers.
- Store fuels in a cool, dry place out of direct sunlight.
- Do not store fuels in a car trunk.
- Do not store gasoline in the basement or elsewhere in the house.

Home Underground Storage Tanks

Fuel used in furnaces and hot water heaters is sometimes stored in underground tanks. Because of the potential for leaks, underground tanks can contaminate soil and water, decrease property value, and scare away lenders and prospective buyers. Local, state, and federal laws hold homeowners financially responsible for leaks from an underground tank even if the homeowner is unaware of the tank's existence. The following steps can help you avoid significant costs to your family's health, your bank account, and the environment.

Why should I replace an underground storage tank?

Like all equipment, oil tanks have a limited useful life and must eventually be repaired, replaced, or removed. The likelihood of a leak increases as a tank ages, especially after it is 15 years old, because most older tanks were not fitted with corrosion protection. Even newer underground tanks and piping can leak, and cleaning up a leak is expensive. Generally, it is advisable to replace any below-ground storage tank and piping with an aboveground tank and

new piping. Abandoned underground tanks should be emptied, cleaned, purged of all vapors, and filled with approved materials (check for details specific to your county). If you must use an underground storage tank, ensure that it is a modern, double-walled design. Regulations regarding tank type vary by county, but most counties require underground storage tanks to be made of fiberglass. Before having a tank installed, check with the manufacturer to learn which dealers and installers in your area are authorized to install its tanks. Ensure that the tank has a vent whistle or fill-level indicator that may help alert you of problems.

How can I detect a leak?

Underground storage tanks must be inspected regularly for leaks and damage. Professionals can test for tank and pipe tightness. Many homeowners opt to have their tanks removed instead of paying for potentially costly testing. To check for leaks, you can monitor the fuel level over time. Measure and record the amount of fuel in the tank each month. Then compare your records to the amount



Use Fuels Properly

- Buy only small quantities such as the amount of fuel needed for one month.
- Use only containers approved by a nationally recognized testing lab such as Underwriters Laboratories (UL).
- *Never* use gasoline or oil to start a charcoal grill or wood fire.
- *Never* use fuel to control weeds or pests.

Prevent Fuel Spills

- Avoid spilling fuel on the ground, especially near wells and streams, ponds, or wetlands.
- If a spill occurs, use kitty litter, saw dust, or an absorbent towel to soak up the spill, then dispose of it properly.

Dispose of Fuels Properly

- Use up fuel so that disposal is unnecessary. Give leftover fuel to a friend or neighbor to use.
- Never pour fuel onto the ground or into storm drains, septic tanks, outhouses, trash, or sewers.
- Use your town's household hazardous waste collection for safe and convenient disposal of excess or old fuel. Transport old fuel in an approved container.
- Contact your local Cornell Cooperative Extension office, city or town offices, or environmental agency for information on the accepted disposal methods in your area.

of fuel delivered and dispensed. Differences in your records may indicate a leak. This method is not always accurate, and some leaks can be missed. Tanks are best monitored in the summer. If you notice an unexplainable increase in your home heating oil use, your tank may be leaking. An oil-like substance on stream surfaces or wet places near the tank may indicate a leak. Soil may be stained or smell like oil. Your tank may have a constant smell of petroleum. Unusual or changing operating conditions, such as a rattling suction pump or uneven fuel flow, may also indicate a leak.

Where should tanks be located?

The minimum recommended distance between a tank and nearby wells and water bodies differs from county to county. Check with your county Department of Health for local recommendations. Tanks should be located down slope from wells. Keep in mind that certain soils, such as sandy ones, allow pollutants to seep more rapidly into groundwater. If a tank must be near a well or surface water, above-ground storage tanks with secondary containment are necessary. Check with your county Department of Health, regional Department of Environmental

Conservation office, or county Cornell Cooperative Extension to find out the minimum distance between a tank and the water table. When water rises close to the surface, chances increase that it will come in contact with the walls of a tank. Wet conditions increase the possibility of metal corrosion, especially among tanks older than 15 years. Some soils, especially clay, may also promote rusting. Oil spills reach groundwater more quickly if the water table is close to the surface. If you do not know how deep your underground storage tank is buried, assume it is no more than 10 feet. Remember that the cost of moving it today may be far less than paying for cleanup in the future.

What should I do if I discover a leak or other problem?

Begin cleanup right away even if the leak seems relatively small. Addressing the problem immediately prevents higher cost and cumulative damage later. Contact a local professional or the nearest New York State Department of Environmental Conservation (DEC) regional office. You can also reach the DEC by calling the toll-free number 1-800-462-6553 for more questions about household hazardous waste..

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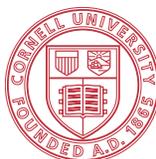
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