

Care and Feeding of Aboveground Storage Tanks



Aboveground Storage Tanks--

Aboveground Storage Tanks (ASTs) often contain fuel oil, gasoline, or diesel fuel—all products that are highly toxic. The ASTs may be located outside your home, near your furnace, in the basement or crawl space of your home, or at a convenient location for equipment and vehicle fill-ups. You can help to prevent a catastrophic spill or a slow dripping leak by paying attention to your tank and by providing a secondary containment system for the tank.



- Inspect your tank at least once a year. Look for any signs of environmental damage, such as dead or "sick" foliage or a product sheen (rainbow colored film or fluid) in the vicinity of the tank, or actual drip spots. If there is evidence of any environmental damage, then you must do something to your tank to protect the groundwater beneath your property and the surface water runoff.
- Look for any signs of physical or structural weakness for the tank. If the tank appears to be 'shaky' or has obvious structural flaws, you should replace the tank immediately.
- Also look for rust. If your tank is rusting, lightly sand the rust away from the metal, and paint with a good rust-retardant paint. Simple maintenance can extend the life of your tank, and prevent contamination of the soil, the groundwater, and surface water.
- Check the lines leading into your home (if the tank is a fuel oil tank) and for any drips, leaks, or spills from attachments to other ASTs. If there is any sign of damage or structural weakness, replace the line immediately.

Secondary Containment

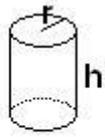
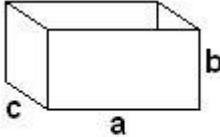
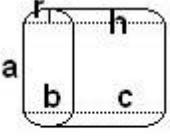
You can provide a secondary containment or catchment basin for your tank fairly easily. The goal is to catch most, if not all of the contaminants before they enter the soils or groundwater, so your containment system should be able to retain 100% of the tank's volume when full.



- One inexpensive fix is to use a small plastic child's swimming pool placed under a fuel oil tank located in a basement or a crawl space. Do this in the summer, when the tank is fairly empty, to minimize the chance of spills, and cover all floor drains with a seal to help contain an accidental spill within the basement area.
- You can also build a "berm" or containment area around the AST in your basement or crawl space. Using mortared concrete blocks, you can build a small enclosure around the tank, using the concrete floor of the basement as a solid seal under the tank. In a crawl space, you can use heavy duty plastic sheeting under the tank, with boards under the feet of the tank to make sure it doesn't "punch" through the plastic.
- You can build a "berm" or containment area around an outside AST as well. Pour a concrete pad, and use mortared concrete blocks to provide a sealed containment area. Keep the berm or containment area and the tank under cover to keep rain and snow out. Vent to prevent condensation that promotes rusting.

Need to calculate the volume of your storage tank or containment area? Use these formulas!

See the box below for details in calculating the volume of your tank and the volume of the containment system needed to contain the materials stored.

<p>To calculate the volume of a cylinder:</p>  $V = \pi r^2 h$ <p>V = Volume π = pi or 3.14 r = radius of the circle h = height of the cylinder</p>	<p>To calculate the volume of a box:</p>  $V = abc$ <p>V = Volume a = length of one side b = length of second side c = length of third side</p>	<p>To calculate the volume of a general tank:</p>  $V = \pi r^2 h + abc$ <p>V = Volume π = pi or 3.14 r = radius of the half circle h = height of the half circle a = length of one side of inner box b = length of second side of inner box c = length of third side of inner box</p>
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Filling the Tank



Make sure your tank has an over-fill protection detection device installed to prevent accidental spills. Many tanks have an inexpensive alarm installed to prevent overfills, or use a measuring gauge on the side of the tank to show the level of the fluid in the tank. Supervise the delivery and transfer of fluid into the tank to make sure that all precautions are taken.

Report a release or spill immediately to 911.

If you release or spill more than 25 gallons of gasoline or more than 75 gallons of diesel fuel or fuel oil, you must report the release to the Kentucky Emergency Response Team at 800-928-2380.



A publication of the Louisville Water Company
 Wellhead Protection Plan - Local Planning Team, Public Education