

Flood



NORTH DAKOTA
DEPARTMENT of HEALTH

701.328.5166

www.ndhealth.gov/flood

INFORMATION

Commercial Underground Storage Tanks

Before the Flood

Petroleum is lighter than water, but an underground storage tank (UST) which is in use and full is unlikely to rise out of flooded ground. An empty tank is very buoyant; even a modest increase in groundwater can be enough to push the tank up through the ground. Underground tanks, if not completely full with fuel at the time of the flood, may be hydrostatically lifted and thereby sustain major damage. As a last resort, water can be poured into the tank as ballast before a flood if fuel is unavailable. (Note: any water in your tank after the flood will need to be removed by a qualified disposal company.)

Make sure that vents from tanks are extended above the maximum anticipated flood level.

Pressurized piping systems have shear (crash) valves. Close or “trip” the shear valve. This will prevent product from getting out of the pipelines if debris floats by and knocks over a dispenser.

Turn off power to electrical systems such as pumps, turbines, dispensers, ATG consoles, emergency shutoff panel boxes, etc. Check fuel levels in each tank for later comparison.

Once your underground tank is no longer in service, seal the tank’s fill port cap, probe cap and any other openings in the tank to prevent water from entering or fuel from leaving the tank. Remember that the seals must be water tight.

After the Flood

If a UST system becomes submerged by floodwater or if it is subject to abnormally high groundwater, the following steps should be taken after the floodwater or groundwater has receded:



- Turn off the power (electricity) to any UST-related equipment before beginning any investigation. This includes the power to the dispensers, pumps, release detection equipment and other devices.
- Remove water from the sump(s) under the dispensers and above the tanks. Sumps at USTs are commonly located around the fill pipe and the submersible pump. Inspect the piping and fittings for damage and possible leaks.
- Test the leak detection system on the tanks and piping. If no leak detection system has been installed, run tightness tests to ensure the integrity of the entire system.
- Use water-finding paste on the end of a gauge stick to determine whether water has entered the tank. If it has not, the UST system is probably intact and further investigation is not needed. Continue to keep good inventory records so that product loss will be easy to identify should a leak develop.
- If there is water in the tank, try to determine its source. Water may have entered through a loose fitting on top of the tank or the UST may have shifted in the ground, damaging the tank, piping or both. Testing of the piping and tank is required if it can’t be determined how water entered the system.

- If the tank has a cathodic protection system, it should be tested to make sure it is still operating properly.

Floating Tanks

If a tank was not anchored when it was installed, it may float out of its excavation. If this occurs, follow these steps:

- In case of an emergency dial 9-1-1. If there is any evidence of spilled product, call the North Dakota Department of Emergency Services at 800.472.2121 or 701.328.9921. The Department of Emergency Services will inform the North Dakota Department of Health of the spill.
- Call the local fire department.

- Turn off any power in the vicinity of the tank(s) and piping. Call the power company immediately if any power lines are down in the area around the tank(s).
- Rope off the area, and keep people away from the hole in the ground.
- If the tank has not floated away, empty it of all product.
- Call a UST contractor to remove the piping and tank properly.

Assistance

Call the North Dakota Department of Health, Division of Waste Management, at 701.328.5166 for information about tank removal, reinstallation/replacement, or potential assistance.