Winterization Process

Step 1. Shut off: Hot Water/Furnace/Well Pump

First you will need to ensure that the Hot Water tank, Furnace, and Well pump is shut off. How this is done depends on what type of system you are working with. For a Gas system you will locate the gas shut off for each appliance. For an Electric system you will locate the breaker that goes to that device. Take a photo of the gas or electric in the shut off position.
* For gas appliances also shut off the pilot if applicable.
** For electric systems tape down the breakers and switches connected to the device.
*** ALWAYS turn off the pump for a well system before moving on***

* For electric either use a client’s designated sticker or a piece of tape to ensure it stays in the shut off position. Normally you will also place a notice on the front of the fuse/breaker box as well to notify that the system has been winterized and not to turn it back on until it has been de-winterized
**Step 2. Water Supply**

The next step is to locate the Water Supply, i.e. Well or City Water connection.

Shut off the incoming water supply knob and zip tie it closed. "This is the shut off before the homes plumbing, i.e. before the meter or before the pressure tank, it is normally located nearest the wall."

**Step 3. Pressurize**

When you have Shut off the water supply you will connect your Air compressor to the system to blow out any excess water in the lines. The best location to perform this from is the Washer/Dryer hookup in the home. This gives you access to the cold water and hot water lines in one location. You will need to pressurize the system to 45 psi or higher. Always provide a photo showing where you connected the compressor to in the system, and a photo of the compressor itself.
*If you are only able to connect to one line at a time "you do not have the "Y" hose connection" connect to the cold water input as it will also join with the hot water at the hot water tank.

** If there is not Washer/Dryer hookup you can use another cold water supply hookup such as a utility sink, faucet in a standard sink "you will need an adapter set to connect this to your air lines", Pressure tank drain, outside spicket, etc.

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**Step 4. Draining Tanks.**

When the system is pressurized the first thing you need to do is drain the larger storage tanks to speed the process along. "If you do not drain these tanks first you will be forcing this water through the plumbing in the home and it will take much longer to complete the winterization"

Most homes will have a Hot Water Tank that will need to be drained. To drain this tank connect a hose to the bottom of the hot water tank. Move the hose to an adequate location "i.e. sump pump hole, outside the home, floor drain, etc." The pressure will help empty the tank quickly. For hot water tanks you can also open the pressure relief valve "upper side of the tank" to speed the draining along.

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***Always Provide photos showing where you drained the storage tank.
You may have other tanks that will need to be drained as well. For instance in a Well Water system you will need to drain the pressure tank, and possibly water softener/filter tanks. These tanks are generally close to each other.

*Again show where you are draining these tanks to. If it is hard plumbed, show the plumbing.

![Bypass Valve](image)

* Normally the water softener has its own built in drain and it will drain when you apply pressure. However sometimes there is no drain. Also inline filters might not become drained all the way when pressure is applied so you may need to unscrew it and drain the filter/softeners in the line to ensure they will not freeze and burst.

**To do this you will need to switch the bypass valve "pictured above." This is a standard valve with nearly all filters/softeners. By pushing the arm to the opposite direction you redirect the flow of water around the device allowing you to remove it and drain it. Restore everything to its original position and make sure that the valves are closed again after draining.

### Step 5. Draining Fixtures

Now that the tanks are drained and the system is pressurized you will go throughout the home and open all faucets to remove the remaining water in the lines.

![Sink](image)

*You will go from fixture to fixture turning them on, then off when the water is completely drained. This will allow for adequate pressure at all of the fixtures to blow out the lines completely.

** For toilets after you have flushed the back of the tank "and only air is coming through the water supply to the tank" make sure to shut off the water supply valve beneath the tank. "If you do not you will not be able to hold pressure for the pressure check at the end."
Step 6. Disconnect/Plug Water Supply

Now that you have drained the pipes and tanks, and all the water is removed from the system you will need to finish it off by removing the water connection to the system. To do this you will disconnect the Water Meter for city water, or the supply line before the pressure tank for well water.

If possible you will completely remove the water meter from both sides of the line and leave it on the ground. This is only possible in some areas as many water meters have a security strap "metal cable" on at least one side on the meter to prevent from illegal hookup. In this case you will disconnect the one side and cap the open ends "the meter and the line".

Some City water systems have a security strap on both sides on the meter. It is not legal to cut these straps so you are to note and photograph this to show that you are unable to remove the meter from the system. Ensure that the shut offs are working in this scenario, and that no water is getting back into the system.

Many well water systems also do not provide for easy disconnection of the water supply. Well water relies on a pump system. As stated in the beginning you are to shut off the power to the pump and tape/sticker the breaker off. If a local switch "light switch" is near the pressure tank you will also flip the power switch and tape/sticker it as well. Note if unable to disconnect the wells incoming water line.
Step 7. Pressure Test

Now that all the tanks and lines have been drained, and the water source is plugged, you will perform a pressure test on the plumbing. Make sure all opening are closed i.e. faucets, spickets, toilet fill valves, dishwashers, etc.

The pressure test will be no less than 45 psi and it is to be held for 30 minutes. Provide photos showing the inlet pressure "the air compressors pressure" and of the outlet pressure "the pressure you are applying to the plumbing itself."

If it does not hold pressure go around the house and check each faucet/spicket for leaks. It could be that the seat's and washers are worn out causing a leak. If this is the case note the leaking faucet and its location. You can then shut off the main supply shut off going to that fixture. "Normally under the sink for faucets, under the floor for outside spickets"

If the pressure still does not hold you most likely have a leak in the system. Investigate the plumbing throughout the home and try to locate the leak in the plumbing. When you have found the cause of the leak note its location, severity, and what is needed to fix the issue. Always take photos of any damaged plumbing.

Example:

----Now the water Supply System is drained and winterized, next we will work on the drain system----
Step 8. Antifreeze Drain Lines

The next step is to ensure that the drain lines in the home will be protected through the cold. Because the drain system has gas traps we cannot completely flush the system out. We will have to add antifreeze to the system to ensure it can handle the cold.

For Toilets you will put antifreeze in the back of the tank. Make sure that it turns the entire tank pink, a good couple inches is normally used to ensure any water still in the tank now contains antifreeze. You will also fill the trap of the tank "the bowl" with antifreeze. Ensure that there is very little water in the tank when you do this. You may need to force flush the tank with extra water or a plunger.

You will also put anti freeze in every sink and drain. This includes the laundry drain "normally located in the same spot as the water supply" any floor drains, utility sinks, etc.

* Make sure to winterize any appliances that also use drains like dish washers
Step 9. Labeling the Winterization

Now you have completed the winterization of the home. You will need to now label the home to show any future residents, inspectors, contractors that the home has been winterized and that steps will need to be taken before the water supply can be utilized again.

Each clients postings vary, but the locations tend to stay the same. You will need to put a posting on the electrical box, the hot water tank, the furnace, the water supply “pressure tank or meter”, toilets, showers and baths, and each of the sinks or drains where you have added antifreeze.

Example:

---This completes a Dry winterization--- Make sure to provide photos of every step outlines here---