Home Winterization
Baby, It's Cold Outside!

Objective: Prevent damage from broken water pipes due to freezing temperatures.

While there is no guarantee against frozen pipes, it is important to prepare the home before the first cold snap of the winter season. In the event that a property is expected to remain vacant and unsupervised for an extended period of time, it is imperative that the property be properly winterized.

The science of freezing water

As water freezes and crystalizes, it expands. Because water supply lines already are under constant pressure, expanding ice can cause pipes to rupture and crack.

Winterization is the process of removing water from the home's supply by draining the home's pipe systems and introducing anti-freeze agents, as necessary, to prevent any remaining water from freezing.

The best approach to proper winterization is to enlist the services of a licensed plumber, who is equipped to ensure that appropriate measures are taken to winterize a home's plumbing and, if applicable, other hydronic systems such as boilers.

Winterization: Five easy steps

1. Turn off heat sources to the furnace and water heater.

In most cases, the furnace can be turned off by switching off the electrical power supply. If the water heater is powered by electric or oil, turn off the power at the switch; if the water heater is gas-powered, turn off the gas valve.

2. Close the main water valve.

The main water valve usually is located in the basement or laundry room of the home. After the main valve has been securely turned off, turn on (open) all inside faucets – kitchen sink, bathroom sinks, tubs, showers and laundry room basin – and all outside faucets; remove garden hoses from outside spigots. The purpose of opening all faucets is to drain all water from the pipes inside and outside the home.

3. Drain the water heater.

Connect a hose to the drain at the bottom of the unit and allow the water to run into the floor drain. If a floor drain is not present, extend the hose to the outside of the house, or establish a "bucket brigade" to

a nearby laundry tub to remove the drained water from the heater. After the water heater has been drained, be sure to close the drain valve.

4. Flush, dry and treat all toilets and traps.

Flush each toilet, then open the tank and sponge away all remaining water. Dip out all remaining water in the toilet bowl, then add diluted non-toxic propylene glycol anti-freeze; do not use auto anti-freeze! Note that some water must be left in the toilet bowl to adequately seal the traps, which prevents sewer gas from entering the home through the drain system. When finished with the toilets, pour the non-toxic solution into all the drains: basins, sinks, laundry tubs, bath tubs, and showers.

5. Protect all exposed pipes.

Wrap exposed pipes with insulation or, in cases in which water cannot be totally removed from pipes that are exposed, heat tape may be applied.

The sun also rises: De-winterization

Important note regarding electric water heaters – The water tank must be re-filled with water prior to restoring electrical power to the unit to prevent damage to the heating element.

1. Close all faucets before opening the main water valve.

While water is filling the system, stand near one sink or tub with the faucet(s) open. When water begins to flow from the cold water faucet, turn it off and leave the hot water faucet open until water flows from the hot water faucet, which indicates that the hot water heater is full; turn off the hot water faucet. Open each faucet until water flows without any air spitting out.

2. Turn on the hot water heater.

3. Flush the non-toxic solution from all toilets.

Hot water heating systems

If the home has a hot water heating system (e.g., with baseboard or conventional radiators), the system must also be drained as part of the winterization process. To drain this system, turn off electrical power source and water supply. If the system is powered by natural gas or oil, turn off the fuel valve and pilot. Then, open the drain valve on the bottom of the unit; the expansion tank is usually suspended from the ceiling above the boiler and should have a drain valve for a hose connection. Drain the expansion tank; while draining the tank, the reduction in pressure will cause the draining process from the boiler and tank to slow down. After the tank is drained, open all radiator or baseboard air vents on the top floor and, as the water level drops, open the vents on the lower floors.

To turn the heating system on, close all vents, boiler drain, and expansion tank drain. Turn on water feed valve to begin venting the radiators, starting on the first floor and working up through each floor level. Once the piping is refilled, restore power to the boiler unit, open the fuel valve and re-fire the pilot/burner, as necessary.

Short-term vacancies: Ask a friend to check the home!

In cases where the home will be unoccupied for a relatively short period, such as a vacation, we recommend that the property be supervised to prevent any surprises. Ask a friend to visit daily to check power and heating system to help ensure that the pipes won't freeze. The person monitoring the home should have access to utility and service company contact information in case of emergency.

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