

Georgia Department of Natural Resources

Environmental Protection Division

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Guidance to Homeowners for Preventing and Dealing With Frozen Water Pipes

- Homeowners in Georgia need to be alert to the danger of freezing and bursting water pipes when the outdoor temperature threatens to drop into 20-30 °F range. This threshold is primarily for homes where sub-freezing outdoor temperatures may occur a small number of times each season. Water has a unique quality in that it expands as it freezes. This expansion puts tremendous pressure on whatever is containing it, including metal or plastic pipes. No matter what the strength of the container, expanding water can cause pipes to break. Water containing only ice particles (frazil or needle ice) may cause trouble because these particles can block a pipeline by adhering to valves or other obstructions. To avoid trouble, experience indicates that water should be maintained above its freezing point (32 °F / 0 °C).
- For more information, please contact a licensed plumber or building professional.

Precautions

During the Fall and early Winter Months:

- Drain water from swimming pool and water sprinkler supply lines following manufacturer's or installer's directions. Do not put antifreeze in these lines unless directed. Antifreeze is environmentally harmful and is dangerous to humans, pets, wildlife, and landscaping.
- Remove, drain, and store hoses used outdoors. Close inside valves supplying outdoor hose bibs. Open the outside hose bibs to allow water to drain. Keep the outside valve open so that any water remaining in the pipe can expand without causing the pipe to break.
- Check around the home for other areas where water supply lines are located in unheated areas. Look in the basement, crawl space, attic, garage, and under kitchen and bathroom cabinets. Both hot and cold water pipes in these areas should be insulated. Seal all openings where cold air can get at unprotected water pipes. It's especially important to keep cold wind away from pipes, which speeds up the freezing process.
- Pipes in attics and crawl spaces should be protected with insulation or heat. Pipe insulation is available in fiberglass or foam sleeves. Home centers and hardware stores have sleeves providing 1/8 to 5/8 inches of insulation; specialty dealers have products that provide up to 2 inches of insulation. The extra thickness can save a pipe that would freeze with less insulation.
- Pipes leading to the exterior should be shut off and drained at the start of the winter. If these exterior faucets do not have a shut-off valve inside the house, have one installed by a plumber. If the exterior pipes are not insulated and cannot be drained, enclose the pipes in 2-inch fiberglass insulation sleeves.
- Heating cables and tapes can be effective in freeze protection for pipes. Select a heating cable with the UL label and a built-in thermostat that turns the heat on when needed (without a thermostat, the cable has to be plugged in each time and might be forgotten). Follow the manufacturer's instructions closely.

If Temperatures are expected to fall into the 20-30 °F range or lower and there are water pipes vulnerable to freezing:

- Leave cabinet doors open under the kitchen and bathroom sinks to allow warmer room air to circulate around pipes. Be sure to move any harmful cleaners and household chemicals up out of the reach of children.
- Keep garage doors closed if there are water supply lines in the garage.
- Keep the thermostat set to the same temperature both during the day and at night. By temporarily suspending the use of lower nighttime temperatures, you may incur a higher heating bill, but you can prevent a much more costly repair job if pipes freeze and burst.
- If you will be away during cold weather, leave the heat on in your home, set to a temperature no lower than 55 °F.
- Check with your water utility for advice on practices to keep faucets flowing during severe winter weather events.

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- Let faucets drip or trickle slowly to keep water flowing through pipes that are vulnerable to freezing. Ice might still form in the pipes, but an open faucet allows water to escape before the pressure builds to where a pipe can burst. If the dripping stops, it may mean that ice is blocking the pipe; keep the faucet open, since the pipe still needs pressure relief.

Actions to Thaw Frozen Pipes

- Turn on each water supply faucet individually (both hot and cold) to ensure that there is a steady stream of water present. If you turn on a faucet and only a trickle comes out, suspect a frozen pipe. Likely places for frozen pipes include against exterior walls or where your water service enters your home through the foundation.
- Keep the faucet open. As the frozen water within the pipe begins to melt, water will begin to flow through the frozen area. The running water through the pipe will help melt any ice inside.
- Apply heat to the section of pipe using an electric heating pad wrapped around the pipe, an electric hair dryer, heat gun, or by wrapping pipes with towels soaked in hot water. When working in potentially wet conditions and with electricity, use care around any electrical device (e.g., use GFCI outlets and electric cords in good condition). **Do not** use a blowtorch, kerosene or propane heater, charcoal stove, or other open flame device.
- Apply heat until full water pressure is restored.
- Check all other faucets in your home to find out if you have additional frozen pipes. If one pipe freezes, others may freeze, too.
- If you are unable to locate the frozen area, if the frozen area is not accessible, or if you cannot thaw the pipe, call a licensed plumber.

Actions if Pipes Burst

- Shut off water at the main valve inside the house. If there is no main shut-off valve inside, turn off the water at the main shut-off valve at the curb or near the water service meter. Make sure your family members know where the water shut-off valve is and how to operate it.
- Leave the water faucets turned on.
- If the break is in a hot water pipe, the valve on top of the water heater should be closed.
- Call a licensed plumber. Keep an emergency number nearby for quick access.

Considerations to Prevent Recurrences

- Relocate vulnerable water pipes if the home is remodeled by a professional to provide increased protection from freezing.
- Have a licensed plumber install a water main shut-off valve inside the house or near the water service meter if there is not a central shut-off valve already present.
- Add insulation to attics, basements and crawl spaces. Insulation will maintain higher temperatures in these areas.
- For more information, please contact a licensed plumber or building professional.

Sources: American Water Works Association, American Red Cross, Institute for Business and Home Safety.