



# Frozen water lines

Every winter, a few residents will experience freezing water pipes, service lines and water outages. Often, frozen water lines and pipes can be avoided with simple steps in your home. We encourage everyone to learn more about how to prevent water lines from freezing.

## Why do my lines freeze?

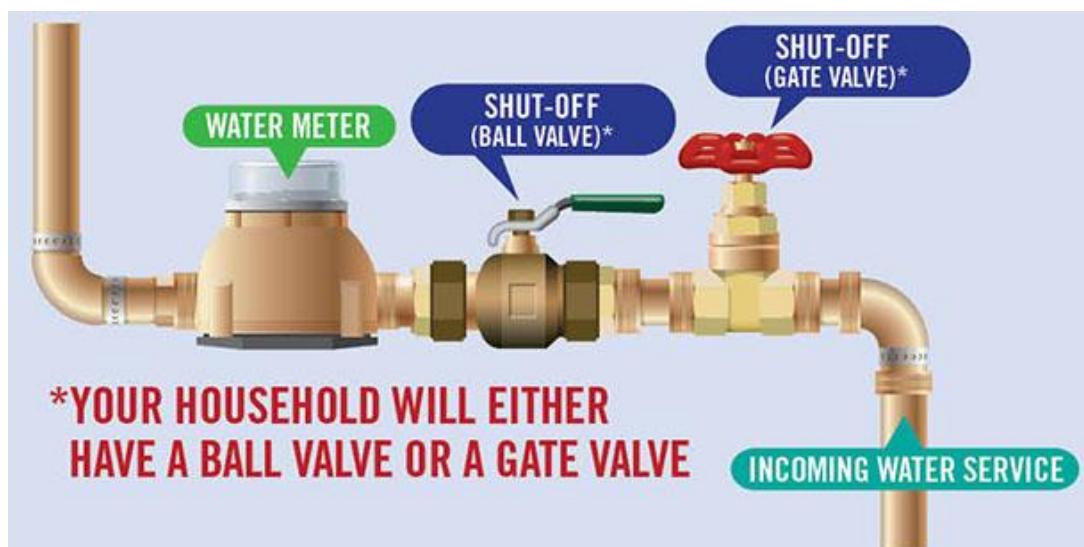
Homes and businesses can be at risk for many different reasons, but it is usually due to the depth of the water service pipe. Lines freeze most often in older areas.

## How to tell if your pipes are frozen

The signs of frozen pipes are:

- No water or very little water coming out of the faucet – you may have a lack of running water coming out of your faucets. Check all faucets in the home.
- Frost on your internal pipes – a large amount of frost on your main shut-off valve or internal pipes.
- Flooding – frozen water can cause pipes to burst and cause flooding within the home.

Main Shut Off Valves



## What should I do if my water service freezes?

If your house or basement is flooding, turn off the main shut-off valve and call the Public Works After-Hours Emergency phone line **403-650-8914**.

If you believe that your pipes have frozen, turn off the water at the main shut-off valve and call a plumber.

Check all other faucets in your home to find out if you have additional frozen pipes. If one pipe freezes, others may also freeze.

*When in doubt, always call a plumber.*

## How to prevent frozen pipes

### Look for cold draughts

Check around your home for areas where water supply lines are in unheated areas and take measures to prevent the flow of cold air in these areas.

Common locations include basements, crawl spaces, attics, garages, and under kitchen and bathroom cabinets.

### Insulate pipes

Consider installing specific products made to insulate water pipes like a pipe sleeve or installing UL-listed heat tape, heat cable or similar materials on exposed pipes.

Don't forget - both hot and cold water pipes in cold or draughty areas should be insulated. A *hot water supply line can freeze just like a cold water supply line* if water is not running through the pipe and the water temperatures become cold.

### Find your water shut-off valve

Determine where the water main shut-off valve is in your house and learn how to use it.

For most homes, the water main shut-off valve is located **near the water meter** at the point where the water line comes into your home, which usually in your basement.

If you live in a condo or townhome, call your management company or condo corporation.

### Protect garage pipes

If you have plumbing in your garage, keep your garage door closed when it's very cold.

Pipes in unheated garages or basements should be insulated.

### Seal your home from winter

Repair broken windows, check doors and insulate areas that allow cold exterior air to enter.

## Be prepared when travelling

Leaving during winter? Keep your thermostat set at 15 degrees or higher, and have someone check your house every second day - have them check for signs of freezing.

## Winterize outside faucets

Make sure the water line to outside faucets (such as your garden hose) is turned off, the hoses disconnected, and the line is drained.

## Why do service lines freeze?

### Water temperature

During winter, the temperature of rivers in the Foothills can decrease to around 0° Celsius. At this temperature, if the water stops flowing it can turn to ice. Our water treatment process takes place inside and warms the water slightly to anywhere from 1-3° Celsius.

Water that is already this cold as it enters our water distribution system takes very little exposure to colder temperatures for it to freeze. That is why it is important to make sure your water service lines are not exposed to colder air during winter months.

### Frost depth

This is the depth to which the ground is frozen. In Black Diamond, it is not unusual to reach a frost depth of seven feet by late winter.

It takes several months to reach this depth and usually occurs in late February or early March.

In early spring, it may seem warmer, but frost is still deep in the ground and stays this way as long as it drops below freezing at night.

Another factor is if we have colder weather in fall months, the frost depth can exceed seven feet and put service lines at risk.

If the ground surrounding the water service pipe becomes frozen, the water in the pipe could freeze, blocking all water flow through the pipe. *Moving water prevents ice from forming all the way through the pipe and helps maintain the flow of non-frozen water.*