



## Hands on Safety

### "Being Safe Is No Accident"



## CRC Receives Annual Health and Safety Award

On December 21, 2009 an awards ceremony was held at the Correctional Reception Center (CRC) presenting CRC with the annual Health and Safety Award. CRC was recognized for their effort in solving a problem the facility was having with providing latex gloves to the inmate porters who are responsible for cleaning the housing units. Due to budgetary constraints, the institution was not able to keep up the demand for the gloves throughout all areas of the institution. As a solution, the committee came up with a pilot using heavy duty rubber gloves that can be re-used. During the pilot, the inmates were taught how to properly clean the gloves after each use to ensure they were sanitary for the next person who needed to wear them. As a result, the institution will see a cost savings of approx. \$7,000 per year.



Pictured: Asst. Director Ernie L. Moore, Neal Nolan, Tammy Lowery, Edgar Zillner, Statewide Health and Safety Co-Chair Dave Justice, Charlotte Jenkins, George Warner, Rebecca Young, Director Terry J. Collins, Angela Hill, Warden Ginny Lamneck and Carleton Neighbors.

From the DRC Statewide Health and Safety Committee



# Winter Home Protection Tips



While you can't change the weather, you can minimize some of winter's biggest threats to your home.

**Heavy snow accumulation** can pose a threat to your home or business - - both as it builds up and as it melts. The three most important things to do are:

- Watch for snow accumulation on the leeward (downwind) side of a higher-level roof where blowing snow will collect. For safe removal that won't endanger you or damage your roof, consult a roofing contractor for a referral.
- Remove snow from basement stairwells, window wells and all walls. Melting snow can lead to water damage and moisture intrusion.
- Keep your attic well ventilated to maintain a temperature close to that of the outdoors to minimize the risk of ice dams forming. A warm attic melts snow on the roof, causing water to run down and refreeze at the roof's edge, where it's much cooler. If ice builds up and blocks water from draining, water is forced under the roof covering and into your attic or down the inside walls of your house.

**Water intrusion and flood damage** from melting snow and ice can threaten homes and businesses, but you can take these steps to help minimize the potential damage.

Immediately after the threat of physical danger has passed:

- Make sure the building is structurally safe to enter or reoccupy.
- Turn off electrical power. Do not use electricity until it is safe to do so.
- Ensure that natural gas sources are safely secured.
- Secure the exterior to prevent further water intrusion. This can include boarding up broken windows, making temporary roof repairs, sealing cracks or tacking down plastic sheeting against open gaps in walls or roofs.

When it's safe to begin cleanup:

- Disconnect all electronics/electrical equipment and move it to a safe, dry location.
- Remove as much standing water as possible from inside the building.
- Begin to remove water-damaged materials immediately.
- Ventilate the home as best you can with fans and/or dehumidifiers.
- Contact a water extraction company, if necessary, for assistance.

## Winter Home Protection Tips (con't)

By taking immediate action, you will reduce the amount of damage and increase the chance of salvaging usable materials. You'll also reduce the amount of rust, rot, mold and mildew that may develop, and lower the likelihood that the water will lead to structural problems.

**Ice dams** are an accumulation of ice at the lower edge of a sloped roof. When interior heat melts the snow, water can run down and refreeze at the roof's edge, where it's much cooler. If the ice builds up and blocks water from draining off the roof, water is forced under the roof covering and into your attic or down the inside walls of your house.

To help reduce the risk of ice dams:

- Make sure your gutters are clear of leaves and debris.
- Keep the attic well ventilated so snow doesn't melt and refreeze on the roof's edge.
- Make sure the attic floor is well insulated to minimize the amount of heat rising through the attic from within the house.

**Bursting pipes** occur when frozen water causes a pressure buildup between the ice blockage and the closed faucet. Pipes in attics, crawl spaces and outside walls are particularly vulnerable to extreme cold. To keep water in your pipes from freezing:

- Fit exposed pipes with insulation sleeves or wrapping to slow heat transfer. The more insulation the better.
- Seal cracks and holes in outside walls and foundations near water pipes with caulking.
- Keep cabinet doors open to allow warm air to circulate around pipes (particularly in the kitchen and bathroom).
- Keep a slow trickle of water flowing through faucets connected to pipes that run through an unheated or unprotected space. Or drain the water system, especially if your house will be unattended during cold periods.

Review your homeowners insurance policy periodically with your insurance agent or company representative to make sure you have sufficient coverage to protect the investment you've made in your home. Report any property damage to your insurance agent or company representative immediately and make temporary repairs to prevent further damage.



Source: Institute for Business and Home Safety. IBHS is a national nonprofit initiative of the insurance industry to reduce deaths, injuries, property damage, economic losses and human suffering caused by natural disasters.

# Preventing Frozen Pipes



When water freezes, it expands. That's why a can of soda explodes if it's put into a freezer to chill quickly and forgotten. When water freezes in a pipe, it expands the same way. If it expands enough, the pipe bursts, water escapes and serious damage results.

## Why Pipes Burst

Surprisingly, ice forming in a pipe does not typically cause a break where the ice blockage occurs. It's not the radial expansion of ice against the wall of the pipe that causes the break. Rather, following a complete ice blockage in a pipe, continued freezing and expansion inside the pipe causes water pressure to increase downstream -- between the ice blockage and a closed faucet at the end. It's this increase in water pressure that leads to pipe failure. Usually the pipe bursts where little or no ice has formed. Upstream from the ice blockage the water can always retreat back towards its source, so there is no pressure build-up to cause a break. Water has to freeze for ice blockages to occur. Pipes that are adequately protected along their entire length by placement within the building's insulation, insulation on the pipe itself, or heating, are safe.

## Regional Differences

Generally, houses in northern climates are built with the water pipes located on the inside of the building insulation, which protects the pipes from subfreezing weather. However, extremely cold weather and holes in the building that allow a flow of cold air to come into contact with pipes can lead to freezing and bursting.

Water pipes in houses in southern climates often are more vulnerable to winter cold spells. The pipes are more likely to be located in unprotected areas outside of the building insulation, and homeowners tend to be less aware of freezing problems, which may occur only once or twice a season.

Pipes in attics, crawl spaces and outside walls are all vulnerable to freezing, especially if there are cracks or openings that allow cold, outside air to flow across the pipes. Research at the University of Illinois has shown that wind chill, the cooling effect of air and wind that causes the human body to lose heat, can play a major role in accelerating ice blockage, and thus bursting, in water pipes.

## Preventing Frozen Pipes (con't)

Holes in an outside wall where television, cable or telephone lines enter can provide access for cold air to reach pipes. The size of pipes and their composition (e.g., copper or PVC) have some bearing on how fast ice forms, but they are relatively minor factors in pipe bursting compared with the absence of heat, pipe insulation and exposure to a flow of subfreezing air.

### When is it Cold Enough to Freeze?

When should homeowners be alert to the danger of freezing pipes? That depends, but in southern states and other areas where freezing weather is the exception rather than the rule (and where houses often do not provide adequate built-in protection), the temperature alert threshold is 20°F.

This finding was supported by a survey of 71 plumbers practicing in southern states, in which the consensus was that burst-pipe problems began to appear when temperatures fell into the teens. However, freezing incidents can occur when the temperature remains above 20°F. Pipes exposed to cold air (especially flowing air, as on a windy day) because of cracks in an outside wall or lack of insulation are vulnerable to freezing at temperatures above the threshold. However, the 20°F temperature alert threshold should address the majority of potential burst-pipe incidents in southern states.

### Mitigating the Problem

Water freezes when heat in the water is transferred to subfreezing air. The best way to keep water in pipes from freezing is to slow or stop this transfer of heat.

Ideally, it is best not to expose water pipes to subfreezing temperatures, by placing them only in heated spaces and keeping them out of attics, crawl spaces and vulnerable outside walls. In new construction, proper placement can be designed into the building.

In existing houses, a plumber may be able to re-route at-risk pipes to protected areas, although this may not be a practical solution. If the latter is the case, vulnerable pipes that are accessible should be fitted with insulation sleeves or wrapping (which slows the heat transfer), the more insulation the better. It is important not to leave gaps that expose the pipe to cold air. Hardware stores and home centers carry the necessary materials, usually in foam rubber or fiberglass sleeves. Better yet, plumbing supply stores and insulation dealers carry pipe sleeves that feature extra-thick insulation, as much as 1" or 2" thick. The added protection is worth the extra cost.



## Preventing Frozen Pipes (con't)

Cracks and holes in outside walls and foundations near water pipes should be sealed with caulking to keep cold wind away from the pipes. Kitchen and bathroom cabinets can keep warm inside air from reaching pipes under sinks and in adjacent outside walls. It's a good idea to keep cabinet doors open during cold spells to let the warm air circulate around the pipes. Electric heating tapes and cables are available to run along pipes to keep the water from freezing. These must be used with extreme caution; follow the manufacturer's instructions carefully to avoid the risk of fire, and check to make sure the product conforms to UL 2049. Tapes and cables with a built-in thermostat will turn heat on when needed. Tapes without a thermostat have to be plugged in each time heat is needed, and may be forgotten.

### Letting the Water Run

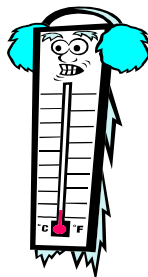
Letting a faucet drip during extreme cold weather can prevent a pipe from bursting. It's not that a small flow of water prevents freezing; this helps, but water can freeze even with a slow flow.

Rather, opening a faucet will provide relief from the excessive pressure that builds between the faucet and the ice blockage when freezing occurs. If there is no excessive water pressure, there is no burst pipe, even if the water inside the pipe freezes.

A dripping faucet wastes some water, so only pipes vulnerable to freezing (ones that run through an unheated or unprotected space) should be left with the water flowing. The drip can be very slight. Even the slowest drip at normal pressure will provide pressure relief when needed. Where both hot and cold lines serve a spigot, make sure each one contributes to the drip, since both are subjected to freezing. If the dripping stops, leave the faucet(s) open, since a pipe may have frozen and will still need pressure relief.

### If You Suspect a Frozen Pipe

If you open a faucet and no water comes out, don't take any chances. Call a plumber. If a water pipe bursts, turn off the water at the main shut-off valve (usually at the water meter or where the main line enters the house); leave the faucet(s) open until repairs are completed. Don't try to thaw a frozen pipe with an open flame; as this will damage the pipe and may even start a building fire. You might be able to thaw a pipe, with the faucet open. Work toward the coldest section. Don't use electrical appliances while standing in water; you could get electrocuted.



## Preventing Frozen Pipes (con't)

### Going on a Trip

When away from the house for an extended period during the winter, be careful how much you lower the heat. A lower temperature may save on the heating bill, but there could be a disaster if a cold spell strikes and pipes that normally would be safe, freeze and burst.

A solution is to drain the water system. This is the best safeguard. With no water in the pipes, there is no freezing. This remedy should be considered even when the homeowner is not leaving but is concerned about a serious overnight freeze.

To drain the system, shut off the main valve and turn on every water fixture (both hot and cold lines) until water stops running. It's not necessary to leave the fixtures open, since the system is filled mostly with air at that point and not subject to freezing. When returning to the house, turn on the main valve and let each fixture run until the pipes are full again.

Source: Institute for Business and Home Safety. IBHS is a national nonprofit initiative of the insurance industry to reduce deaths, injuries, property damage, economic losses and human suffering caused by natural disasters.

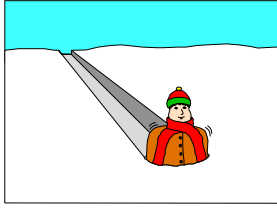
## Winter Weather

### Add this additional equipment in your trunk:

- Tow and tire chains.
- Shovel.
- Bag of salt or cat litter.
- Tool kit.
- Ice scraper and snow brush.
- Flares and a flashlight.
- Items to keep you warm such as heavy woolen mittens, a scarf, cap and blankets. It's also a good idea to include a complete change of clothing (including underwear), extra boots and an extra coat just in case you become wet and need to change.

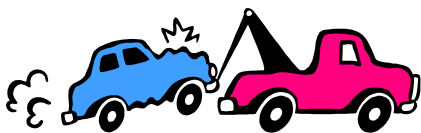


## Be Prepared...



### If you become stranded:

- Do not leave your car unless you know exactly where you are, how far it is to possible help, and are certain you will improve your situation.
- If you are sure the car's exhaust pipe is not blocked, run the engine and heater for about 10 minutes every hour or so depending upon the amount of gas in the tank.
- Keep at least one window open slightly. Heavy snow and ice can seal a car shut.
- Eat a hard candy to keep your mouth moist.
- Keep non-perishable food items, such as granola bars, food items with pop top lids that don't require cooking and bottled juice and water.



## Agency Health & Safety Committee Members

- Buffy Andrews (Management Co-Chair)
- Dave Justice (Bargaining Unit Co-Chair)
- Andrew Albright (Management)
- Dave Bailey (Bargaining Unit)
- Jody Burkhardt (Management)
- Bridgette Duncan (Bargaining Unit)
- Ed Henderson (In Memoriam)
- Stuart Hudson (Management)
- Stephanie Lee (Bargaining Unit)
- Chris Mabe (Bargaining Unit)
- Bryant Palmer (Management)
- Kevin Runyon (Management)
- Danny Southward (Management)
- Charlie Williamson (Bargaining Unit)
- Chere Wilson (Bargaining Unit)



The Intranet for DRC employees has a health and safety website with various health and safety resources. Some items posted for review are approved outside agency web links, DRC Safety protocol and additional Safety and Health Coordinator Basic, Intermediate and Advanced training classes. You can access the Office of Prisons Safety and Health Program at:

<http://intra.drc.state.oh.us/web/OOP/safety.htm>