

Guide to Home Winterization and Emergency Preparation

Protecting Your Home and Staying Warm This Winter

As temperatures drop this winter, it's important to keep you, your family and your home protected. There are simple steps you can take to help you save money and prevent costly repairs.

Sealing your home against heat loss will keep you warm and save money on your heating bill.

- Check and refresh caulk around windows.
- Check for air leaks around windows and doors using a lit incense stick. If the smoke is sucked out of an opening, seal the leak with weather-stripping, caulk or spray foam.
- Check the insulation in your attic and refresh if needed. The Environmental Protection Agency suggests at least 12-15 inches of insulation on the floor of the attic.
- If you don't have energy-efficient windows, use a shrink-film window-insulation kit from a local hardware store.

For more information on sealing and insulating your home, download the *Do-It-Yourself Guide To Sealing And Insulating* from the US EPA's Energy Star website at www.energystar.gov/ia/partners/publications/pubdocs/DIY_Guide_May_2008.pdf.

Prevent ice dams from forming. Ice dams occur when an attic is warm enough to allow ice and snow on the roof to repeatedly freeze and thaw. This causes pools of water to be trapped under layers of ice which seep into the roof and cause significant damage to the roof and attic.

- Keep the temperature air in the attic cool enough to keep snow on the roof from melting
- Keep the warm air out of the attic by maintain a sufficient insulation on the attic floor.
- Seal all openings that would allow vapor to rise into the attic, including holes created from installing light fixtures, ceiling fans, etc.
- Make sure the attic ventilation is adequate to replace warm air in the attic with cold outside air.
- Keep gutters and downspouts clear to allow melted snow and ice to flow properly.
- Avoid attempting to remove the snow from the roof. It is a significant fall risk and you can cause significant damage to your roof.
- Do not use salts or other snow melt materials on your roof. These are very damaging to roof shingles and tiles not to mention gutters and downspouts



Prevent pipes from freezing. Avoid big messes and costly repairs.

- Use foam to protect exposed pipes.
- Use indoor shutoff valves and drain outdoor faucets. If you don't have indoor shutoff valves, use an insulating dome or other covering on outdoor faucets and spigots. This step will reduce the likelihood of the water in the pipes freezing, expanding and rupturing.
- If the power goes out during a hard freeze, let faucets drip in a steady stream. This makes it more difficult for the water to freeze and it reduces the pressure in the pipes. But if the water does freeze, the reduced pressure makes it less likely for the pipes to rupture.
- If you're going out of town during freezing weather for an extended period, turn off the water to your home and open all of the taps to drain the water system.

Guide to Home Winterization and Emergency Preparation

Properly Manage Heating Sources

Properly managing your heat sources will not only keep you warm, but also keep you safe this winter. Furnaces, fireplaces and space heaters can become hazards when used improperly or poorly maintained.

Maintain your Furnace System: Furnace systems, no matter how simple or complex, should be maintained in good working order. If something needs repairs, call a licensed professional.

- Be sure all furnace controls and emergency shutoffs are in proper working condition.
- Inspect the walls and ceiling near the furnace and along the chimney line. If the wall is hot or discolored, additional pipe insulation or clearance may be required.
- Check the flue pipe and pipe seams to make sure they are well supported, free of holes, and cracks. Soot along or around seams may be an indicator of a leak.
- Keep trash and other combustibles away from the heating system.



Use Space Heaters Wisely: Portable space heaters are often associated with wintertime injury and death. Both electric, gas and liquid-fueled space heaters can, however, be used safely when the manufacturer's directions for use are followed. Other things you can do to be safe when using a space heater include:

- Never use portable heaters designed for outdoor use. When used indoors, these heaters can fill the house with deadly carbon monoxide.
- When buying a heater, look for one that has been tested and labeled by a nationally recognized testing company, such as Underwriter's Laboratories (UL).
- Purchase a space heater with more modern safety features like those that shut off if the heater is tipped or turned over.
- Place the heater on a level surface away from areas where someone might bump into it and knock it over. Be careful to keep children and pets away from the heater.
- Keep the heater three feet away from drapes, furniture or other flammable materials.
- Try to locate electric space heaters where they can be plugged directly into the wall outlet. If you must use an extension cord, make sure it is a heavy duty cord marked with a power rating at least as high as that on the label of the heater itself.
- Never use an electric heater with a damaged power cord.
- Keep electric heaters away from water. Never use them near a sink or in the bathroom.
- For liquid fueled heaters, follow the manufacturer's fueling instructions using only the approved fuel. Never use gasoline! Never fill a heater that is still hot.
- Do not overfill liquid fueled heater; you must allow for the expansion of the liquid. Only use approved containers, clearly marked for that particular fuel, and store them outdoors.
- Ensure gas lines are not damaged and seals are tightly sealed.
- Have vented space heaters professionally inspected every year. If the heater is not vented properly, not vented at all, or if the vent is blocked, separated, rusted, or corroded, dangerous levels of carbon monoxide (CO) can enter the home causing sickness and death. CO also can be produced if the heater is not properly set up and adjusted for the type of gas used and the altitude at which it is installed.
- Never leave a space heater unattended or running while you sleep.

Guide to Home Winterization and Emergency Preparation

Maintain your Fireplace: Though often providing a feeling of comfort and security, fireplaces can be particularly dangerous if not maintained and used properly. While enjoying your fireplace all winter, be sure that each fire is as safe as it is warm. Before you light your first fire of the season, be sure you have completed these safety steps

- Have your chimney or wood stove inspected and cleaned annually by a certified chimney specialist.
- Clear the area around the hearth of debris, decorations and flammable materials.
- When building a fire, place logs at the rear of the fireplace on an adequate supporting grate.
- Never use flammable liquids to start a fire and use only seasoned hardwood.
- Never burn cardboard boxes, trash, charcoal or debris in your fireplace or wood stove.
- Build small fires that burn completely and produce less smoke.
- Keep air inlets on wood stoves open, and never restrict air supply to fireplaces. Otherwise you may cause creosote buildup that could lead to a chimney fire.
- If you have glass fireplace doors, leave them open while burning a fire to ensure that the fire receives enough air to ensure complete combustion and keep creosote from building up in the chimney.
- Always use a metal mesh screen with fireplaces that do not have a glass fireplace door.
- Never leave a fire in the fireplace unattended. Extinguish the fire before going to bed or leaving the house.
- Install smoke alarms on every level of your home and inside and outside of sleeping areas. Test them monthly and change the batteries at least once a year.



Emergency Preparation

Prepare for Extended Power Outages This Winter: Power outages and extreme winter weather often go hand and hand. It doesn't matter if you live in a highly populated area like Old Town Manassas or a more isolated part of the County, ice storms and blizzards can result in power outages that last for days. It's important to be prepared to stay warm and ride out an extreme winter storm and its aftermath.



A backup generator is a great option to keep key systems running to protect your home and your family. A properly sized generator can provide heat to keep your family warm as well as protect pipes from freezing. A generator can help keep water well pumps working so you have drinking water and are able to use toilets.

Guide to Home Winterization and Emergency Preparation

What to Do If You Have No Heat: If you don't have a generator and can't get somewhere with heat, there are some things you can do to stay warm without power.

- Unplug appliances to reduce the load on the system when the power comes back.
- Seal and insulate your house before winter weather becomes a problem.
- Cover floors with rugs. You can further insulate the floor in an emergency situation with a blanket.
- Dress for success. Wear layers to conserve body heat. Don't forget to protect your extremities with socks and gloves.
- Exercise! Ten to twenty minutes of physical activity can raise your body temperature and keep it elevated for so time afterwards. Physical activity is especially important for those with poor circulation.
- Have extra blankets and sleeping bags on hand.
- Keep the family together in one closed room if possible. This will concentrate body heat.
- Close heating vents and doors in unused rooms. This is help slow heat loss from warmer areas of the house.
- Consume warm food and drinks if possible.

Consuming food and drink that is hot will help your body stay warmer longer. If you have a gas stove, a power failure won't affect your ability to heat food and water. Don't be tempted to run the oven as an impromptu heater as deadly carbon monoxide gas can accumulate. If you have an electric stove, you need a backup plan for when the power goes out. Outdoor grills and camp stoves should not be used inside.

Sterno and similar gelled alcohol fuels are safe for indoor use. Many sporting goods stores sell small, inexpensive stoves designed to work with *Sterno* and similar products. A standard size *Sterno* can is about the size of 2 tuna cans stacked on top of each other. One can of *Sterno* will burn for a few hours. *Sterno* will slowly evaporate over time so you should check it every few months if you store it for an extended period.

Stock Up On the Right Food

Food is fuel and the simple act of digestion will generate body heat, even if you do not have the means to heat your food. It's important to keep bottled water for drinking and simple, non-perishable foods and drink mixes in on hand for winter emergencies. Ultra high temperature pasteurization (UHT) allows liquids to be shelf stable for extended periods of time without refrigeration. Soups, milk, juices and other products commonly sold in waxed or plasticized paperboard boxes are usually UNT. Once opened, these products should be refrigerated or put in a cooler. Canned foods are relatively inexpensive and have a long shelf life. Avoid dehydrated foods and condensed soups as you will need extra water to reconstitute them. Avoid salty foods as they will make you thirsty and increase your water consumption. Keep in mind special dietary needs when stockpiling food.



Guide to Home Winterization and Emergency Preparation

When bad weather is expected, make sure you have enough medicine on hand in case you're snowed or iced in for an extended stay. If you take medicines that require refrigeration, like insulin, be sure to have a cooler and ice on hand.

Types of Supplemental Lighting: Supplemental lighting is important in an emergency situation. Backup will allow you to be active mentally and physically for more hours of day. There are many types of light sources available. Battery powered flashlights and lanterns are widely available. The problem with this type of light is that people forget to make sure they have fresh batteries.

Candles are inexpensive light sources that have been used in emergencies for hundreds of years. Candles should be used with great care. Many safety agencies are recommending against the use of candles in emergencies if you choose to use candles, make sure you

- Blow out all candles when you leave the room or go to bed. Avoid the use of candles in the bedroom and other areas where people may fall asleep.
- Keep candles at least 12 inches away from anything that can burn.
- Use candle holders that are sturdy, and won't tip over easily.
- Put candle holders on a sturdy, uncluttered surface.
- Don't burn a candle all the way down.
- Handheld candles should not be passed from one person to another at any time.
- Lit candles should not be placed in windows where a blind or curtain could catch fire.
- If a candle must burn continuously, be sure it is enclosed in a glass container and placed in a sink, on a metal tray, or in a deep basin filled with water.
- **Never** use a candle if oxygen is used in the home.



Glow sticks can also be used for light. They rely on a non-toxic chemical reaction to generate a soft, cool light. Glow sticks come in several colors, including a white light. Glow sticks are activated by bending the stick to break an inner vial. This starts the chemical reaction. Standard, 6 inch glow sticks will last several hours once they've been activated. Cool will slow the reaction and make glow sticks last longer. They can be stored 3 or more years in foil packaging. You can buy flashlights made to work with glow sticks. Putting a glow stick in a clear jar of water will help disperse the light throughout a room.

Communication: Having a radio during an extended power outage can help you stay informed and keep you entertained. There are many relatively inexpensive portable radios that can be powered by batteries, sunlight and/or by using a hand crank.

Keeping in contact with the outside by phone can be difficult if you don't have a landline. You can conserve battery life by turning your phone off when not in use. Text messages use less power than voice calls. There are an increasing number of devices that act as external batteries or battery rechargers. Some of these are powerful enough for laptops and tablets.

Guide to Home Winterization and Emergency Preparation

Do You Have a Family Emergency Kit?

A well-stocked emergency kit can make big difference in getting through an extended power outage. It's important to include items that will help you stay warm, have food and water and be as comfortable as possible. The Virginia Department of Emergency Management recommends having the following supplies on hand in case of a disaster and provides a good guide for being prepared for an extended winter power outage:

- Food, at least a three-day supply of food per person that does not need electricity for storage or for preparation
- Manual can opener for food (if kit contains canned food)
- Water, at least three gallons per person for drinking and sanitation
- Battery-powered/hand-crank radio with weather band and extra batteries
- Written family emergency plan

Once you have the essentials you should add these items to your kit:

- Wrench or pliers to turn off utilities
- Flashlight and extra batteries
- First aid kit
- Whistle to signal for help
- Prescription medications and eyewear
- Sanitation supplies: moist towelettes or baby wipes, toilet paper, soap and plastic garbage bags

Additional items to consider adding to an emergency supply kit:

- Items for infants and toddlers
- Items for pets
- Local maps
- Copies of important family documents, such as insurance policies, identification and bank account records in a waterproof, portable container
- Cash in small denominations or traveler's checks and change
- Emergency reference material such as a first aid book
- Sleeping bag or warm blanket for each person
- Complete change of clothing
- Household chlorine bleach and medicine dropper (when diluted in water, bleach can be used to kill germs)
- Fire Extinguisher
- Matches in a waterproof container
- Feminine supplies and personal hygiene items
- Paper cups, plates and plastic knives, forks and spoons, paper towels
- Paper and pencil
- Books, games, puzzles or other activities for children

Once the power comes back on, check food in the refrigerator and freezer. With the freezer closed, foods usually will stay frozen at least a day, perhaps longer. How long depends on many factors including the size of the freezer, amount of insulation, how full the freezer is, etc. Many freezers will keep for several days if the freezer is not opened once the power goes out. Partial thawing and re-freezing can ruin the quality of foods, like fruits, vegetables and prepared foods. Red meats are affected less than many other foods. However, it may still be safe to eat. You may safely re-freeze some foods if they still contain ice crystals or if they have been kept at 40 degrees F or below for no more than two days. Frozen dinners, vegetables, meat and fish should be thrown out rather than refrozen if they've begun to thaw. Discard any other foods touched by the juices of thawed meat, fish or vegetables.

Guide to Home Winterization and Emergency Preparation

Many refrigerated foods will keep safely for a few days at room temperature. Items like butter, margarine, fresh fruits and vegetables, dried fruits and nuts, hard and processed cheeses, open condiments, fruit juice, pickles and breads without fillings.

Several foods, once they are left at 40 degrees for longer than 2 hours should be thrown out. Raw and cooked meats, poultry and seafood, and dishes containng any of them, milk, cream, soft cheeses, cooked rice, pasta, pasta salad, custard, chiffon, cheese pies or pastries containing these fillings, eggs and egg substitutes, lunch meats, hot dogs, pizza with meat, casseroles, soups, stews, and refrigerated dough **MUST BE DISCARDED**.

Virginia has a recurring sales tax holiday each year on May 25 at 12:01 a.m. and ending at 11:59 p.m. on May 31. The holiday will expire in July of 2017. During this sales tax holiday, many emergency supplies are tax exempt. Normally this is in late May in preparation for hurricane season. The Virginia Department of Taxation (www.tax.virginia.gov/site.cfm?alias=STHoliday) and Department of Emergency Management (www.vaemergency.gov/readylvirginia/stay-informed/hurricanes/sales-tax-holiday) have information about the program and what items qualify for the tax exemption.



Dealing with Icy Sidewalks and Driveways

Winter weather leads to slippery surfaces. It's important to protect your family and guests from becoming one of the thousands of Americans will fall because of ice this winter.

There are several deicer options available to homeowners, including rock salt, calcium magnesium acetate (CMA) and calcium chloride. All of these products have advantages and disadvantages. They all vary in cost, corrosiveness, potential to pollute waterways and the coldest temperature at which they will work. For example,

rock/table salt (sodium chloride) is inexpensive and works in temperatures down to 15 F, but it is corrosive to concrete (especially new concrete), brick, stone and metals and it's saline runoff that can negatively effects water quality, soil, plants and aquatic life.

Nitrogen fertilizers, such as urea, should **NEVER** be used as deicers. When applied as deicers, fertilizers leach harmful levels of salts and nutrients into ground water and runoff into surface waters.

You can minimize salt damage by using deicers wisely. Before applying deicers, wait until the precipitation has ended and remove as much of the ice and snow as possible. Mix salt with abrasive materials, like sand to help physically break up ice and provide traction. Avoid piling salt-laden snow and ice around trees and shrubs. As soon as the ground thaws in early spring, heavily water areas where salt accumulated over winter to flush salts out of the root zone.

Project Mend-A-House is a community organization helping community residents maintain safety and independence within their home. We are committed to improving the living conditions of seniors, veterans, persons with disabilities and low-income residents in Manassas, Manassas Park, and Prince William County by providing home repairs, safety and accessibility assistance.