Winter Weather Safety Tips
For Rural Residents

Ready In Three: Be Prepared for Any Emergency

Winterize Your Car: Pack Essential Items Now

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Shelterbelts: Things To Consider

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HOW TO PLAN FOR AN EMERGENCY

At home, school, work, and even in our cars, we need to know what to do in an emergency. We need to know where to go in an emergency. The Missouri Department of Health and Senior Services developed a program called Ready in 3. It is an easy way to prepare for an emergency.

Ready in 3 includes three steps:
1. **Create a plan** for you, your family, and your business
2. **Prepare a kit** for home, car, and work
3. **Listen for information** about what to do and where to go during an actual emergency

1. **Create a plan** for you, your family, and your business. No one knows when an emergency will happen. You may not be at home. Your family may not be together. Some things to keep in mind:

   • **Develop an emergency plan for the family.** Your family might not be together when an emergency happens. That’s why it is important to have a plan in place. The entire family should know and understand the plan. In case you and your family are separated during an emergency, consider contacting the same friend or family member. That person can help connect separated family members.

   • **Plan for two situations – staying home or having to leave.** You should be prepared for two things, to stay in one place (like your house) or to evacuate. Deciding whether it is best to stay or go depends on the type of emergency. Officials may make the decision for you.

   • **Know where to go if you have to leave.** Sometimes it may not be safe to stay in your home. Plan where family members can meet. Know where you will go and how you will get there.

2. **Prepare a kit for home, car, and work.** If an emergency happens, you might not be able to get food or water for days or weeks. And, your electricity may not be working. You should have an emergency kit in your home. Smaller emergency kits should be kept in your car and at your workplace.
• **Basic supplies for your kit include:**
  
  o Water and canned or dried food  
  o Battery-powered radio  
  o Flashlight  
  o Extra batteries for the radio and flashlight  
  o Prescription medicine  
  o First-aid kit  

• Try to have three days worth of food for each person in your plan. Fresh water is also very important. You should have one gallon of water for each person for at least three days. If you have the room, you should store additional water supplies for each person.

• Keep your emergency supplies in a waterproof container that can be easily carried in case you have to leave home. You could use a large bag, plastic container, or a trash can with a lid.

3. **Listen for information** about what to do and where to go during an actual emergency. It is important to stay calm in an emergency. Get as much information about the situation as possible by listening to the radio or TV for news. But, in some emergencies, the electricity may go out. Make sure to have a battery-powered radio with extra batteries. City, county, and state officials have developed emergency plans. During an emergency, it is important to follow their directions and advice. They will provide you with the latest information.

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**Ready in 3** is an emergency-preparedness program for Missouri. The Missouri Department of Health and Senior Services sponsors the program. **Ready in 3** aims to help residents and communities prepare for many types of emergencies from tornadoes to terrorism. For more information, visit www.dhss.mo.gov. (Rev. 1-04)
Ready To Hit The Road This Winter?

The nip in the air tells us winter is right around the corner. With colder weather, it is imperative that you make sure your car is winterized. Along with the blankets, candles, matches and snow shovel, don’t forget the food! Even if you are not traveling far, you need to be prepared for the worst. It is important to keep in mind that of all the deaths in winter, 70 percent occur in automobiles.

18 Must Have Car Kit Essentials
1. Fresh drinking water.
2. Food (nuts, dried fruit, energy bars or cans of liquid nourishment).
3. Waterproof matches and candle.
4. Flashlight.
5. Road Flares.
8. First Aid Kit.
10. Collapsible Shovel.
12. Cell Phone & charger.
13. Rope.
15. Duct tape.
16. Tool kit.
17. Gloves, hat and boots.
18. Chains or traction devices.

These basic items should sustain a person for several days. If you are traveling in conditions that may turn hazardous keep in mind to have enough supplies and proper clothing for all members traveling in your vehicle. Other supplies that are good to have on hand include moist wipes, waterless soap, plastic cups, plastic sandwich bags to serve as a dish and large garbage bags for trash. You might also want to stick in some of the single-use hand warmers to keep hands and feet warm. You can often find these in the hunting and/or sports sections of stores.

If you do become stranded, don’t panic. Stay in your vehicle. If you leave your vehicle, you may get lost; especially if visibility is a problem. To avoid carbon monoxide build up inside the vehicle, clear snow from the exhaust pipe and open a downwind window for ventilation. Run the motor and heater only when necessary. It is important to keep fresh air circulating.

If you are concerned about road conditions, call the Missouri Highway Patrol’s winter road report at 1-800-222-6400. You can also visit the Missouri Department of Transportation’s road conditions site on the web at http://modot.org.
Information Sources on the Web

State Emergency Management Agency
http://sema.dps.mo.gov/semapage.htm

National Weather Service, Springfield, MO
http://www.crh.noaa.gov/sgf/?n=winter_briefing

University of Missouri Extension Personal Emergency Preparedness
http://extension.missouri.edu/cemp/preparedness.html

Iowa State University Winter Awareness
http://www.extension.iastate.edu/General/winter.html
Shelterbelt: A Living Barn

Many livestock producers realize the importance of shelterbelts. As reference, German immigrants brought the idea of planting shelterbelts to protect farmsteads from drying winds and provide shelter for livestock, crops and homes. In the early 1930s, a severe drought triggered the dust bowl on the Great Plains, devastating over 100 million acres of farmland, which impacted farms, families and communities. This prompted Franklin D. Roosevelt, in 1935, to institute a massive shelterbelt project to promote large-scale planting of trees across the Great Plains to minimize wind erosion. Today, shelterbelts are still an important landscape feature. They provide living snow fences, wildlife habitat, noise barriers, help conserve energy for adjacent dwellings, protect livestock, beautify property and increase privacy.

If you are considering planting windbreaks on your farm, here are a few tips to keep in mind:

Planted windbreaks/shelterbelts can be very effective in reducing weather effects on livestock. The numbers vary, but a figure of 20 percent or more reduction in energy costs is often noted with proper windbreaks around farmsteads.

You need space for at least two rows of trees, shrubs or a combination of the two. These should be staggered. Three rows is better, and four or five are excellent if you have the needed space.

At least one or two of the rows needs to be coniferous. These plans retain their needles during the winter and are more effective.

More rows allow planting various trees and/or shrubs to take advantage of differences in height and growth habit.

Survival the first year after planting is critical. Many times, watering is necessary. After the initial establishment year, mortality should lower dramatically.
Professional help from a MDC, NRCS, or professional forester or arborist is available and is strongly recommended. There is so much variability in soils, slope, etc. – a site specific plan is a great help.

A terrific web site to help walk you through site evaluation is located at http://agebb.missouri.edu/commag/shelterbelt/. The University of Missouri Center for Agroforestry also has some good educational materials on shelterbelts. This organization’s website can be found at http://www.centerforagroforestry.org/moagforest.asp.

**In Ice and Snow, Take It Slow!**

As the Missouri Department of Transportation prepares for the upcoming winter weather, the agency also alerts motorists to a soon-to-be-familiar refrain: **In Ice and Snow, Take It Slow.**
Missouri has joined with 10 other Midwestern states in a group called **Clear Roads** to send consistent messages during the winter season with the best advice for driving in winter weather - Ice and Snow, Take it Slow.

"It's common sense, but it is a great reminder, especially after a long season of warm weather," said Jim Carney, state maintenance engineer. “Many of us have forgotten how to drive on a slick road, and the best thing you can do is slow down.”

Although MoDOT works hard to clear roads fast and make them safe for motorists, it is also the motorist's job to drive cautiously, pay extra attention to signs and drive defensively, according to Carney.

**Clear Roads** is a pooled-fund winter highway maintenance research project. Messages from the campaign developed by the group will begin this winter with posters and radio public service announcements, as well as travel tips and road condition information being provided to media outlets during winter weather events.

MoDOT uses a priority system of routes to determine which roadways are cleared first and get traffic moving as quickly as possible. The following are priority levels for snow and ice-removal:

- **Priority 1**: Highest traffic-volume roadways are cleared first, including interstates and other major routes. These roads receive continuous treatment throughout a storm.

- **Priority 2**: Lower-volume, lettered or numbered routes are opened to two-way traffic and treated with salt at critical areas such as intersections, hills and curves.

After the storm during regular work hours, workers clean up accumulation on shoulders, bridge edges and interchanges.

Annually MoDOT spends approximately $30 million on snow and ice removal. Last year, approximately 3,000 employees spent more than 541,000 hours using the 1,800 snow-removal vehicles, which added up to $43 million on snow and ice prevention and removal. Department facilities are stocked with snow-removal materials by Nov 1.

For information on road conditions across the state, safe traveling tips and a diagram on driveway clearing techniques, visit [www.modot.org](http://www.modot.org) or call 888-ASK MODOT. Recorded road-condition information is available at (800) 222-6400.

**Winter Driving Safety Tips**

- Slow down for wet, snowy, icy conditions.
- Avoid quick braking or acceleration.
- Find out about driving conditions before you go.
- Every time you travel - Buckle Up.
- Turn signals, brake lights and windows need to be clear of snow.
- You should never use cruise control in winter weather conditions.
**Be Careful When Shoveling Snow**

Keep in mind that outdoor activities can be risky. Snow shoveling, for example, can be especially dangerous. Exercise experts say shoveling heavy snow requires as much energy as running 9 miles per hour! In addition, breathing cold air, and being exposed to the cold all make the heart work harder.

If you are over 45, sedentary, smoke, have elevated blood pressure, are overweight, and/or have a heart condition, play it safe and get someone else to do the shoveling.

Experts warn that snow shoveling is not the exercise to use to start getting in shape. To prevent injury:

- Don't shovel snow after smoking, or eating a heavy meal -- these activities all put an extra load on our cardiovascular system.
- Dress in layers so clothing can be peeled off as the body becomes warm.
- Wear a scarf over nose and mouth to avoid breathing cold air.
- Wear a hat to retain body heat.
- Pace yourself taking frequent rest breaks.
- Shovel safely by bending legs slightly at the knee, letting thigh muscles do most of the pushing and lifting work; this will reduce strain on the heart and back. Use a shovel with a small scoop and keep loads light and small.

*Source: Hope Heart Institute*
Sizing and Safety Tips: Standby Power Generators

Missouri's geographical location midway between northern and southern weather systems often means surprise amounts of ice and snow accumulations in the winter. They are a cold reminder of the difficulties involved in running a modern farm when the power goes out, even for just a few minutes or hours. That's why a standby power generator can be good insurance to keep critical facilities running, says Bob Schultheis, a University of Missouri Extension natural resource engineering specialist. But several critical factors need consideration when buying, installing and using them.

Schultheis says to notify your local electric utility company if you plan to use a standby generator in case of power failure, and follow the manufacturer's maintenance instructions for the generator, which include regularly scheduled warm-ups to keep it in working order.

"The generator must be capable of providing adequate power at the correct voltage without putting occupants or utility workers at risk," he warns.

Portable generators with 4- to 5-kilowatt ratings are the minimum size needed for a typical three-bedroom home, and prices can range from $600 to $4,000. More expensive units run quieter, are more durable and have larger fuel tanks.

But whether it's a direct-connected engine-driven unit or one driven by a tractor power-take-off (PTO), make sure a double-pole, double-throw transfer switch is properly installed by a licensed electrician.

This switch disconnects the main power source from the standby generator and prevents electricity made by the generator from mistakenly flowing out onto utility lines where it could electrocute members of the repair crew. The switch must have the capacity to carry the total load of the farm or building it feeds, even though the generator has less capacity.

Schultheis says generators are rated in kilowatts, or KW. One kilowatt equals 1,000 watts. If the nameplate has two kilowatt ratings, the larger number is the 'short-time overload capacity'. The smaller is the 'continuous-output rating'.

"Electric motors draw three to five times more power at starting than when running under full load, so proper generator sizing is critical to avoid motor burnouts. The ampere rating
of equipment needing power can be converted to watts by multiplying its voltage by its amperage as given on the nameplate.”

Sizing the generator depends upon whether it's an automatic- or manual-start unit.

To size automatic-start units, add the wattage of all motors connected to the generator and multiply this number by 3.5. Then add the wattage of all other connected equipment. To size manual-start units, you need to know the starting wattage of your largest motor, then add the maximum running- and starting-wattage demand on the generator at any point in the system to get the required generator size.

For example, a 5-horsepower, 5,000-watt running-load motor has a starting wattage of 17,500 watts, so an 18 KW generator is needed to start the motor. For PTO-driven units, the tractor should have a horsepower rating at least twice the kilowatt capacity of the generator. A 15 KW generator requires at least a 30-horsepower tractor to drive it at full load.

Don’t forget to store fuel in approved containers, and never inside the home or garage, Schultheis cautions. The generator should always be operated outdoors to avoid carbon monoxide poisoning from the engine exhaust.

For additional information on standby generators, contact natural resource engineering specialists through University of Missouri Extension centers in Missouri counties.

Questions? Contact Amanda Marney, Agriculture Preparedness Specialist, (417) 669-4362, marneya@missouri.edu