

2007-2008

Michigan Winter Hazards Awareness



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The Michigan Committee for Severe Weather Awareness was formed in 1991 to promote safety awareness and coordinate public information efforts regarding tornadoes, lightning, flooding and winter weather. For more information, visit www.mcswa.org.

STATE OF MICHIGAN



Executive
Office

Jennifer M. Granholm
Governor

CERTIFICATE OF PROCLAMATION

On behalf of the citizens of Michigan, I, Governor Jennifer M. Granholm, do hereby proclaim the week of November 4, 2007, as

Winter Hazards Awareness Week

Whereas, Each year in Michigan, countless people are injured or suffer property damage resulting from winter storms that bring extreme cold, freezing rain, wind and snow; and,

Whereas, Michigan citizens encounter winter hazards such as icy roads, frostbite from extremely cold temperatures, over-exertion from snow removal, and isolation within their own homes due to heavy snowfalls; and,

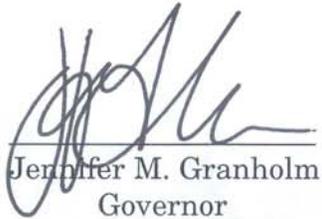
Whereas, The use of wood, kerosene and space heaters as alternative heating methods greatly increases the probability of residential fires and carbon monoxide poisoning; and,

Whereas, Inclement winter weather requires drivers to take extra precautions to ensure they reach their destinations safely; and,

Whereas, The "Michigan Committee for Severe Weather Awareness" and other emergency management officials, in conjunction with the news media, are cooperating to educate the public about winter hazards and how to prepare for them; and now therefore be it,

Resolved, That I, Jennifer M. Granholm, Governor of the State of Michigan, do hereby proclaim the week of November 4, 2007, as Winter Hazards Awareness Week, and I encourage all citizens to learn more about methods of preparation for winter hazards to protect themselves, their families and their homes during the winter season.




Jennifer M. Granholm
Governor

Michigan Committee for Severe Weather Awareness

November 2007

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**For Immediate Release
October 19, 2007**

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TIME TO PREPARE FOR WINTER HAZARDS

Lansing, Michigan - To focus attention on winter safety, Governor Jennifer M. Granholm has declared November 4 – 10, 2007 as Winter Hazards Awareness Week in Michigan. Heavy snow, extreme cold, ice and wind routinely affect Michigan during winter and pose dangers to life and property. According to the Michigan Department of Community Health, 37 people in Michigan died due the exposure to the cold in 2006.

“Michigan winters can be severe, so preparedness, awareness and common sense are always important,” said Capt. Eddie L. Washington, commander of the Michigan State Police Emergency Management & Homeland Security Division. “During Winter Hazards Awareness Week, I encourage Michigan residents to learn of the dangers associated with cold, snow and ice, as well as threats posed by the use of heat sources such as wood burning stoves, fireplaces and space heaters.”

According to the Michigan Committee for Severe Weather Awareness, Michigan's 2006-07 winter season ended warmer than the average.

The winter season started in mid-October when an early season arctic air mass that plunged over the Great Lakes producing record breaking snowfall. Many locations in Southern Lower Michigan recorded the earliest measurable snowfall on record, and some locations in Upper Michigan had up to 25 inches of lake effect snowfall.

Through much of the first half of the winter season, however, it remained warm and mild with little winter weather. For the first time in 12 years Northern Lower Michigan and the Upper Peninsula experienced a “brown Christmas.” In fact, the 30-day period between December 10 and January 9 was one of the warmest 30-day periods in any Michigan winter.

Despite the warm weather in November and December, the first significant winter storm hit the Lower Peninsula on December 1. Ice accumulated to one-half inch across portions of extreme Southwest Lower Michigan, while heavy snow fell across all of Northern Lower Michigan, with 5 to 10 inches away from Lake Michigan, and more closer to the coast including 17 inches of snow in Manistee.

It wasn't until mid-January when winter would visit the state again with a significant ice storm across Southern Lower Michigan on January 14 - 15. Ice accumulated up to one-half inch which caused widespread tree damage, power outages, and millions of dollars in damage. Snow accumulated across Central Lower Michigan with up to 6-9 inches.

The heaviest of the lake effect in the arctic air mass in late January and early February occurred around February 2-4. Blizzard conditions were experienced not only near the favored lake effect regions downwind of Lakes Michigan and Superior, but across nearly the entire state. The worst conditions were experienced in those favored areas. The Gerald R. Ford International Airport in Grand Rapids reported visibility at or under a quarter of a mile from 9:30 a.m. through 8 p.m. on February 3.

One last blast of arctic air hit the entire eastern U.S. during the first week of April and Michigan was not spared. Snow from both a winter storm and lake effect fell from April 3-8 and left up to 4 and 5 feet of snow for portions of Western Upper Michigan. Areas across Northern Lower Michigan received up to 18 inches of snow, and even as far south as Flint and Detroit accumulating snowfall was observed.

To prepare for a winter storm at home, the Michigan Committee for Severe Weather Awareness recommends the following:

- Keep handy a battery-powered flashlight, NOAA weather radio and portable radio, extra food (canned or dried food is best), can opener, and bottled water (at least 3 gallons per person).
- Make sure each member of household has a warm coat, gloves, hat and water-resistant boots.
- Ensure that extra blankets and heavy clothes are available.
- Keep on hand items for infant, elderly or disabled family members.
- Be aware of potential fire and carbon monoxide hazards if you plan to use an emergency heating source such as a fireplace, wood stove or space heater.

For more information on how to prepare for severe weather, visit the Michigan Committee for Severe Weather Awareness website at www.mcswa.org. The Michigan Committee for Severe Weather Awareness was formed in 1991. Its mission is to provide information and advice that keeps Michigan residents prepared when severe weather strikes.

Winter Safety Tips

PREPARING FOR A WINTER STORM

At home:

- Keep handy a battery-powered flashlight, NOAA weather radio and portable radio, extra food (canned or dried food is best), can opener, and bottled water (at least 3 gallons per person).
- Make sure each member of household has a warm coat, gloves, hat and water-resistant boots. Ensure that extra blankets and heavy clothes are available.
- Keep on hand items for infant, elderly or disabled family members.
- Be aware of potential fire and carbon monoxide hazards if you plan to use an emergency heating source such as a fireplace, wood stove or space heater. (See Heat Source Safety page later this packet for more information.)

Outside:

- Avoid overexertion, such as shoveling heavy snow, pushing a car, or walking in deep snow. Sweating could lead to chill and hypothermia. Cold weather also puts extra strain on the heart, so the elderly and those with heart conditions should be especially cautious when out in the cold.
- Walk carefully on snowy, icy sidewalks.
- Wear loose-fitting, lightweight warm clothing in layers, with a waterproof outer layer. Wear wool hat and mittens.
- Keep your clothes dry. Change wet socks and clothing quickly to prevent loss of body heat.
- Understand the hazards of wind chill. As wind speed increases, heat is carried away from a person's body more rapidly.



DURING A WINTER STORM

At home:

- To save heat, close off unneeded rooms, cover windows at night and stuff towels or rags in cracks under doors.
- Maintain adequate food and water intake. Food provides the body with energy for producing its own heat.

If stranded in a vehicle:

- Attach a bright cloth to your antenna to attract attention and then remain in the vehicle.
- Run the motor about 10 minutes each hour for heat. However, open the window slightly for fresh air **and make sure that the exhaust pipe isn't blocked.**
- Get attention by turning on the dome light and emergency flashers when running the engine.
- Exercise by moving arms, legs, fingers and toes to keep blood circulating and to keep warm.

If stranded outside:

- Try to stay dry and cover all exposed parts of the body.
- Prepare a windbreak or snow cave for protection from the wind. Build a fire for heat and to attract attention.
- Do not eat snow. It will lower your body temperature. Melt it first.

Winter Safety Tips

ANYTIME

Listen for All-Hazards NOAA Weather Radio or local radio, television and cable stations for the latest updates on hazardous winter weather.



- To ensure uninterrupted weather information, make sure the NOAA Weather Radio or other radio has a battery-operated backup and fresh batteries. A battery-operated TV is another option.
- For All-Hazards NOAA Weather Radio information, including a station near you, see the NOAA Weather Radio page on the Internet at <http://www.nws.noaa.gov/nwr> or contact your National Weather Service office.

Know the difference between a winter storm WATCH (conditions make the storm possible) and winter storm WARNING (the storm is headed for your area).

A blizzard WARNING means strong winds, blinding wind-driven snow, and dangerous wind chill. Avoid driving and seek shelter.

***For more information on winter storms, see
<http://www.nws.noaa.gov/om/brochures/winterstorm.pdf>.***

Winter Hazards FAQs

On average, a major winter storm hits part of Michigan at least once per month between October and April. In 2006, 37 persons died as a direct result of severe winter weather according to local and state medical examiners and health departments. This is in addition to victims of auto accidents due to slippery roads and those who suffer heart attacks while shoveling snow.

1. What is wind chill?

Wind chill is the perceived temperature resulting from the effect of wind, in combination with cold air, which increases the rate of heat loss from the human body.

2. What is frostbite and what can you do to treat it?

Frostbite is damage to body tissue caused by that tissue being frozen. Frostbite causes a loss of feeling and a white or pale appearance in extremities, such as fingers, toes, ear lobes, or the tip of the nose. Frostbite varies in severity from frostnip to deep frostbite, depending on the length of exposure, temperature to which the skin is exposed and wind speed. For frostnip, place firm, steady pressure from a warm hand against the area. Also, blow on the surface holding the frostnipped area against the body. Do not rub the area, apply snow or plunge it into very hot or cold water. Victims of severe frostbite must receive prompt medical attention.

3. What is hypothermia and what are the warning signs?

Hypothermia occurs when the body temperature drops to 95 degrees F. or lower. It can develop whenever body heat loss exceeds heat gain. Hypothermia is not exclusive to winter. It can occur during the wind and rain of spring and summer. Hypothermia is often mistaken for fatigue, irritability, or dehydration and may include some of these signs: abnormal decision making; improper response to cold; apathy, lethargy; decreased cooperation; slurred speech; disorientation; shivering; stumbling; and stiffness progressing to inability to move.

4. How do you treat hypothermia?

Mild to moderate hypothermia (body temperature greater than 90 degrees F., conscious, shivering, able to walk)

- Prevent further heat loss. Dry, remove from cold and insulate.
- Rewarm by warming the body core first. Rehydrate with warm broth.
- Seek medical attention.

Severe hypothermia (body temperature less than 90 degree F., unconscious, not shivering).

- Prevent further heat loss.
- Seek immediate medical attention.

5. What are the various winter weather warnings and advisories?

- A winter storm watch indicates that severe winter weather conditions may affect your area in the next 12 to 48 hours.
- A winter storm warning indicates that severe winter conditions are imminent. There are a variety of winter storm warnings including heavy snow warning, ice storm warning and lake effect snow warning.
- A winter storm warning for heavy snow indicates in the Lower Peninsula: snowfalls of at least 4 inches in 6 hours (southern lower only), 6 inches in 12 hours or 8 inches in a 24-hour period. In the Upper Peninsula: snowfalls of at least 8 inches in 12 hours and 10 inches in a 24-hour period.
- Blizzard warnings are issued when sustained wind speeds or frequent gusts of at least 35 miles per hour are accompanied by considerable falling and/or blowing snow. Visibility is greatly reduced to near zero during a blizzard.
- Snow advisories are issued when snowfalls are expected to be hazardous, but less than warning criteria. Generally, in the Lower Peninsula, 4 to 5 inches are expected in a 12-hour period. In the Upper Peninsula, it would result when 4 to 7 inches of snow are anticipated in that same time period.

Preventing Frozen Pipes

YOU CAN PREVENT FROZEN PIPES

Frozen pipes aren't just an inconvenience. An average of a quarter-million families have their homes damaged and lives disrupted each winter...all because of water pipes that freeze.

An eighth-inch crack in a pipe can spew up to 250 gallons of water a day, destroying floors, furniture, and personal property. Both plastic (PVC) and copper pipes may burst.

Before the Cold Hits...

INSULATE pipes in crawl spaces and attics, the ones most susceptible to freezing. Remember: The more insulation, the better protected your pipes will be.

HEAT TAPE or thermostatically-controlled heat cables can be used to wrap pipes. Use only products approved by an independent testing organization, such as Underwriters Laboratories, and only for the use intended (exterior or interior). Closely follow all manufacturer's installation and operating instructions.

SEAL leaks that allow cold air inside, near where pipes are located. Look for air leaks around electrical wiring, dryer vents and pipes. Use caulk or insulation to keep the cold out and the heat in. With severe wind chill, a tiny opening can let in enough cold air to cause a pipe to freeze.

DISCONNECT garden hoses and, if practical, use an indoor valve to shut off and drain water from pipes leading to outside faucets. This reduces the chance of freezing in the short span of pipe just inside the house.

When the Mercury drops...

A TRICKLE of hot and cold water might be all it takes to keep your pipes from freezing. Let warm water drip overnight, preferably from a faucet on an outside wall.

OPEN cabinet doors to allow heat to get to uninsulated pipes under sinks and appliances near exterior walls.

If you're away...

SET the thermostat no lower than 55 degrees F.

ASK a friend or neighbor to check your house daily to make sure it's warm enough to prevent freezing, or...

SHUT OFF and drain the water system. Be aware that if you have a fire protection sprinkler system in your house, it will be deactivated when you shut off the water.



If your pipes freeze...

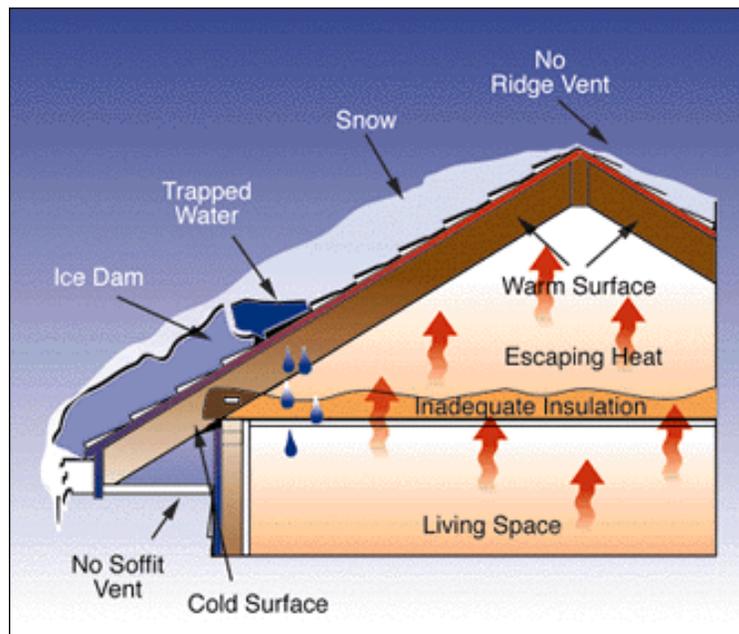
DON'T TAKE CHANCES. If you turn on your faucets and nothing comes out, leave the faucets turned on and call a plumber. If you detect that your water pipes have frozen and burst, turn off the water at the main shut-off valve in the house; leave the water faucets turned on. (Make everyone in your family aware of where the water shut-off valve is and how to open and close it.)

NEVER try to thaw a pipe with a torch or other open flame. Water damage is preferable to fire damage. You may be able to thaw a frozen pipe with the warm air from a hair dryer. Start by warming the pipe as close to the faucet as possible, working toward the coldest section of pipe.

DO NOT use electrical appliances in areas of standing water because electrocution is possible.

Preventing Roof Ice Dams

Hot Tips for Preventing Cold Weather Damage



Ice dams are most common in northern climates. They occur when heavy snow buildup melts during the day and then refreezes when temperatures drop overnight.

After several days of freezing-melting cycles, the melted water and ice tend to work up under the shingles until water enters the attic and eventually does damage to the ceilings, wall and contents. If the ice dam goes unnoticed for an extended period, it can significantly damage the building and its contents.

There's no way to guarantee an ice dam won't damage your home, but you can reduce the likelihood of an ice dam forming in the first place:

- Thoroughly clean all leaves, sticks and other debris from rain gutters and down spouts. This allows melting roof snow to flow into gutters and through down spouts.
- Strive to keep snow on your roof to a minimum. Long-handled devices on the market called "roof rakes" let you stand on the ground and pull the snow off the roof. Keeping heavy snow loads off your roof reduces the chances for both ice dam formation and roof failure due to the weight.
- Keep gutters and down spouts clear of snow and icicles all winter.
- Evaluate the insulation and ventilation in your attic. Most experts agree attic insulation should have an R-value of at least R-30 (R-38 is preferable in northern climates). In addition, good airflow from under the eaves or soffit area along the underside of the roof and out through the roof vents is essential. The insulation prevents heat loss from the interior of the home. The venting allows the attic air to stay cold enough to prevent or minimize the freeze/thaw cycle on the roof. Consult a reputable roofing and/or insulation contractor about these improvements.

Preventing Flood Damage

Are you at Risk?

Your local floodplain manager, building official, city engineer, or planning and zoning administrator can typically tell you whether you are in a flood or other hazard area. Your local community official is also a good source of information on how to protect yourself, your house and property from flooding and other hazards.

Ways to protect your house and property

Basement flood protection can involve a variety of changes to your house and property—changes that can vary in complexity and cost. You may be able to make some types of changes yourself. Complicated or large scale changes or those that affect the structure of your house or its electrical wiring and plumbing should be carried out only by a professional contractor licensed to work in your state, county, or city. Below are some examples of flood protection.

- **Install Sewer Backflow Valves.** In some flood prone areas, flooding can cause sewage from sanitary sewer lines to back up into houses through drainpipes. Sewage backup not only causes damage, but also creates health hazards. Backflow valves have a variety of designs ranging from simple to complex. This is something that only a licensed plumber or contractor should do.
- **Raise or Flood-Proof Heating, Ventilating, and Air Conditioning Equipment.** In flood prone houses, a good way to protect HVAC equipment is to elevate it above the areas that flood. Another method is to leave the equipment where it is and build a concrete or masonry block flood wall around it.
- **Anchor Fuel Tanks.** Unanchored fuel tanks can be easily moved by floodwaters. One way to anchor a tank is to attach it to a large concrete slab whose weight is great enough to resist the force of floodwaters. Elevate tanks to a minimum of at least one foot above the base flood elevation. Floating and/or damaged tanks pose serious threats not only to you, your family, and your house, but also to public safety and the environment.
- **Raise Electrical System Components.** Any electrical system component, including service panels (fuse and circuit boxes), meters, switches, and outlets, can easily be damaged by floodwaters. All components of the electrical system, including the wiring, should be raised at least one foot above the base flood elevation.
- **Raise Washers and Dryers.** Washers and dryers can easily be damaged in a flood. In order to prevent this from happening, utilities can be placed on cinder blocks one foot above the base flood elevation.
- **Add a sump pump in your basement.** Sump pumps can help keep groundwater from entering your home's interior.
- **Cut drywall so that it is one-half to 1-inch off the floor.** This is especially important in basements. Concrete floors commonly absorb ground moisture—especially in winter months. That moisture can wick up the wallboard if it's touching the floor, allowing mold to grow out-of-sight within the walls. (You can hide the gap with wood or rubberized floor trim.)
- **Don't forget to buy flood insurance.** Flood insurance provides year-round financial protection and improves your ability to quickly recover when severe storms strike and cause unexpected flooding. Call your local insurance agent or 1-800-720-1090 to reach National Flood Insurance Program specialists.

Flood Insurance

1. Is flood damage covered by my homeowners insurance?

Flood damage is excluded in nearly all homeowners and renters insurance policies, but can be purchased as a separate policy.

2. Where do I get flood insurance?

Any licensed property/casualty insurance agent can sell a flood insurance policy. If you experience trouble in locating an agent, contact the National Flood Insurance Program's (NFIP) agent referral program at 1-888-CALL FLOOD or go to <http://www.floodsmart.gov/floodsmart/pages/purchaseinsurance.jsp>

3. Is there a waiting period before my flood insurance policy becomes effective?

There is a 30-day waiting period before a new or modified flood insurance policy becomes effective.

4. Are all flood insurance policies the same?

Flood insurance coverage can be purchased for homes and businesses – separate coverage must be purchased for the building and its contents.

5. Do I need to live in a floodplain to get flood insurance?

You do not need to live in a floodplain to purchase flood insurance – coverage is available to any building located in a community that has qualified for the National Flood Insurance Program. Click [here](#) or go to <http://www.fema.gov/fema/csb.shtm> for Michigan's flood insurance participating community listing from the NFIP.

6. Is water back up in basements covered by a flood insurance policy?

Coverage for water back up in basements (drains/sewers) is excluded from the flood insurance policy.

7. Can I get coverage for water back up in basements?

Although basement water back up is excluded under most homeowners' insurance policies, coverage can be obtained by purchasing an endorsement. Most insurance companies offer sewer and drain back up as optional coverage. Coverage and limits vary by insurance company, so check with your agent/company about specifics. Some insurance companies include full coverage for sump pump failure while others specify items that are covered.

8. Are there steps I can take to minimize losses from water back up in basements?

- Never store perishables or valuables in basements that you can't afford to lose or replace.
- Do not store any item near basement drains.
- Check storm drain lines to make sure they're clear of debris, roots, etc.
- Grade the property around your home to drain water away from it.
- Install gutters and make sure downspouts are extended away from the foundation in order to carry water away from the basement walls.
- Use shelving or store items several inches above the potential water level in order to prevent loss.

Heat Sources Safety

Each year fire claims the lives of 4,000 Americans, injures tens of thousands, and causes billions of dollars worth of damage. People living in rural areas are more than twice as likely to die in a fire as those living in mid-sized cities or suburban areas. The misuse of wood stoves, portable space heaters and kerosene heaters is especially common risks in rural areas.

The United States Fire Administration (USFA) believes rural fire problems can be reduced by teaching people to recognize the hazards. The following precautionary steps can greatly reduce an individual's chances of becoming a fire casualty.

Wood Stoves

Wood stoves cause over 9,000 residential fires every year. Carefully follow the manufacturer's installation and maintenance instructions. Look for solid construction, such as plate steel or cast iron metal. Check for cracks and inspect legs, hinges and door seals for smooth joints and seams. Use only seasoned wood for fuel, not green wood, artificial logs, or trash. Inspect and clean your pipes and chimneys annually and check monthly for damage or obstructions. Be sure to keep combustible objects at least three feet away from your wood stove.



Electric Space Heaters

Buy only heaters with the Underwriter's Laboratory (UL) safety listing. Check to make sure it has a thermostat control mechanism, and will switch off automatically if the heater falls over. Heaters are not dryers or tables; don't dry clothes or store objects on top of your heater. Space heaters need space; keep combustibles at least three feet away from each heater. Always unplug your electric space heater when it is not in use.

Kerosene Heaters

Buy only UL-approved heaters and check with your local fire department on the legality of kerosene heater use in your community. Never fill your heater with gasoline or camp stove fuel; both flare up easily. Only use crystal clear K-1 kerosene. Never overfill any portable heater. Use the kerosene heater in a well ventilated room.

Fireplaces

Fireplaces regularly build up creosote in their chimneys. They need to be cleaned out frequently and chimneys should be inspected for obstructions and cracks to prevent deadly chimney and roof fires. Check to make sure the damper is open before starting any fire. Never burn trash, paper or green wood in your fireplace. These materials cause heavy creosote buildup and are difficult to control. Use a screen heavy enough to stop rolling logs and big enough to cover the entire opening of the fireplace to catch flying sparks. Don't wear loose-fitting clothes near any open flame. Make sure the fire is completely out before leaving the house or going to bed. Store cooled ashes in a tightly sealed metal container outside the home.

Finally, having a working smoke alarm dramatically increases your chances of surviving a fire. And remember to practice a home escape plan frequently with your family.

Automotive Preparedness

Getting Ready for Winter

Ensure the vehicle is winterized by late fall. This includes having the proper mix of anti-freeze and water in the cooling system, topping off the windshield washing solution, and checking the tire treads. Have a mechanic check the belts, hoses, tires, battery and coolant.

Keep the fuel tank near full, as low fuel levels can cause condensation to form, degrading fuel quality and possibly causing fuel line freeze-up. Additionally, gas stations may be closed during a severe winter storm, so it is wise to fill up if warnings of an impending storm are being broadcast.

Your car should always be equipped with emergency supplies.

Keep the following items stored in a portable container:

- A small battery powered radio (AM is sufficient) and extra batteries
- Flashlight with extra batteries
- Cellular phone
- Windshield scraper
- Jumper Cables
- Fire extinguisher
- Maps
- Shovel
- Blanket
- Flares
- Bottled water
- First aid kit
- Tire repair kit and pump
- Tow chain or rope
- Nonperishable, high energy foods (granola bars, canned nuts, raisins, hard candy, trail mix, peanut butter and crackers).
- Phone book and phone list
- De-icer
- Extra antifreeze
- Extra clothes
- "Call Police" or other "Help" sign



If travel is necessary:

- Inform someone of your destination and travel time. Take along a cell phone in case you must call for help.

If the power goes out:

- Use extreme caution when driving. If traffic signals are out, treat each signal as a stop sign – come to a complete stop at every intersection and look before you proceed.
- Do not call 9-1-1 to ask about the power outage. Listen to news radio stations for updates.

National Weather Service Offices



Detroit/Pontiac - DTX

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9200 White Lake Road
White Lake, MI 48386-1126
(248) 625-3309, Ext. 726
Contact: Rich Pollman
www.weather.gov/dtx
Richard.Pollman@noaa.gov

Gaylord - APX

NWS Office, NOAA
8800 Passenheim Road
Gaylord, MI 49735-9454
(989) 731-3384, Ext. 726
Contact: Jim Keysor
www.weather.gov/apx
James.Keysor@noaa.gov

Grand Rapids - GRR

NWS Office, NOAA
4899 South Complex Drive, SE
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(616) 949-0643, Ext. 276
Contact: Mike Heathfield
www.weather.gov/grr
Mike.Heathfield@noaa.gov

Marquette - MQT

NWS Office, NOAA
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Northern Indiana - IWX

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