Clarke County Government

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Emergency Preparedness

- Natural Disasters -

Drought

Fact Sheet on Water Conservation

Many people have asked the American Red Cross for tips on conserving water for environmental reasons, as well as when drought conditions threaten. The following tips were developed by a coalition of specialists on water conservation in Florida, and are also consistent with the recommendations that were developed through the National Disaster Education Coalition's "Drought Forum":

Indoor Use

General

- Never pour water down the drain when there may be another use for it. Use it to water your indoor plants or garden.
- Make sure your home is leak-free. When you are certain that no water is being used in your home, take a reading of the water meter. Wait 30 minutes and then take a second reading. If the meter reading changes, you have a leak!
- Repair dripping faucets by replacing washers. One drop per second wastes 2,700 gallons of water per year!

Bathroom

- Check for toilet leaks by adding food coloring to the tank. If you have a leak, the color will appear in the bowl within 30 minutes. (Flush immediately to avoid stains.)
- If the toilet handle frequently sticks in the flush position letting water run constantly, replace or adjust it.
- Leaky toilets usually can be fixed inexpensively by replacing the flapper.
- Install a toilet displacement device to cut down on the amount of water needed for each flush. (Contrary to popular opinion a brick should not be used because it can dissolve and the loose pieces can cause damage to the internal parts. Instead, place a one-gallon plastic jug of water into the tank to displace toilet flow or purchase a device available at most hardware and home centers designed for this purpose.) Be sure installation does not interfere with the operating parts.
- Consider purchasing a low-volume toilet that uses less than half the water of older models. NOTE: In many areas, low-volume units are required by law.
- Take shorter showers.
- Replace your showerhead with an ultra-low-flow version.
- Place a bucket in the shower to catch excess water for watering plants.
- In the shower, turn the water on to get wet; turn off to lather up; then turn the water back on to rinse. Repeat when washing your hair.
- Don't let the water run while brushing your teeth, washing your face or shaving.
- Avoid flushing the toilet unnecessarily. Dispose of tissues, insects, and other similar waste in the trash rather than the toilet.

Kitchen

- Operate automatic dishwashers only when they are fully loaded. Use the "light wash" feature if available to use less water.
- When hand washing dishes, save water by filling two containers - one with soapy water and the other with rinse water containing a small amount of chlorine bleach.
- Most dishwashers can clean soiled dishes very well, so dishes do not have to be rinsed before washing. Just remove large particles of food, and put the soiled dishes in the dishwasher.
- Store drinking water in the refrigerator. Don't let the tap run while you are waiting for water to cool.
- Do not use running water to thaw meat or other frozen foods. Defrost food overnight in the refrigerator, or use the defrost setting on your microwave.
- Do not waste water waiting for it to get hot. Capture it for other uses such as plant watering or heat it on the stove or in a microwave.
- Clean vegetables in a pan filled with water rather than running water from the tap. Re-use the water that vegetables are washed in for cleaning or watering plants.
- Kitchen sink disposals require lots of water to operate properly. Start a compost pile as an alternate method of disposing of food waste, or simply dispose of food in the garbage.

Laundry

- Operate automatic clothes washers only when they are fully loaded or set the water level for the size of your load.

Long Term Indoor Water Conservation

Retrofit all household faucets by installing aerators with flow restrictors.
Consider installing an instant hot water heater on your sink
Insulate your water pipes to reduce heat loss and prevent them from breaking if you have a sudden and unexpected spell of freezing weather.
If you are considering installing a new heat pump or air-conditioning system, the new air-to-air models are just as efficient as the water-to-air type and do not waste water.
Install a water-softening systems only when the minerals in the water would damage your pipes. Turn the softener off while on vacation.
When purchasing a new appliance, choose one that is more energy and water efficient.

Outdoor Use

General

- If you have a well at home, check your pump periodically. If the pump turns on and off while water is not being used, you have a leak.

Car Washing

- Use a shut-off nozzle on your hose that can be adjusted down to a fine spray, so that water flows only as needed. When finished, turn it off at the faucet instead of at the nozzle to avoid leaks. Check hose connectors to make sure plastic or rubber washers are in place to prevent leaks.
- Consider using a commercial car wash that recycles water. If you wash your own car, park on the grass so that you will be watering it at the same time.

Lawn Care

- Don't overwater your lawn. Lawns only need to be watered every five to seven days in the summer, and every 10 to 14 days in the winter. A heavy rain eliminates the need for watering for up to two weeks. Most of the year, lawns only need one inch of water per week. Buy a rain gauge so that you can better determine when to water.
- Water in several short sessions rather than one long one in order for your lawn to better absorb moisture. For example, water in ten-minute sessions spaced 30 minutes apart, rather than one straight 30-minute session.
- Water lawns during the designated hours.
- Position sprinklers so water lands on the lawn and shrubs and not on paved areas.
- Avoid sprinklers that spray a fine mist; most of the mist evaporates before it reaches the lawn. Check sprinkler systems and timing devices regularly to be sure they operate properly. Florida law now requires that "anyone who purchases and installs an automatic lawn sprinkler system MUST install a rain sensor device or switch which will override the irrigation cycle when adequate rainfall has occurred."
- Raise the lawn mower blade to at least three inches, or to its highest level. A higher cut encourages grass roots to grow deeper, shades the root system, and holds soil moisture.
- Avoid over fertilizing your lawn. Applying fertilizer increases the need for water. Apply fertilizers that contain slow-release, water-insoluble forms of nitrogen.
- Use a broom or blower instead of a hose to clean leaves and other debris from your driveway or sidewalk.
- Do not leave sprinklers or hoses unattended. A garden hose can pour out 600 gallons or more in only a few hours. Use a bell timer to remind yourself to turn sprinklers off.

Pool

- If you have a swimming pool, consider installing a new water-saving pool filter. A single backflushing with a traditional filter uses 180 to 250 gallons of water.
- Cover pools and spas to reduce evaporation of water.

Long Term Outdoor Conservation

- Plant it smart. Plant native and/or drought-tolerant grasses, ground covers, shrubs and trees. Once established, they do not need water as frequently and usually will survive a dry period without watering. They also require less fertilizer or herbicides. Landscape with plants that are heat and drought tolerant and that do not require much water to live. Small plants require less water to become established. Group plants together based on similar water needs.
- Install irrigation devices that are the most water efficient for each use. Micro and drip irrigation and soaker hoses are examples of efficient devices.
- Use mulch to retain moisture in the soil. (Help preserve native cypress forests by selecting other types of mulch such as treated melaleuca.) Mulch also helps control weeds that compete with landscape plants for water.
- Avoid purchasing recreational water toys that require a constant stream of water.
- Avoid installing ornamental water features (such as fountains) unless they use recycled water.

Within the Community

- Participate in public water conservation meetings conducted by your local government, utility or water management district.

- Follow water conservation and water shortage rules in effect. You are included in the restrictions even if your water comes from a private well.
- Encourage your employer to promote water conservation in the workplace.
- Patronize businesses that practice water conservation, such as restaurants that only serve water upon request.
- Report water losses (broken pipes, open hydrants, errant sprinklers, abandoned free-flowing wells, etc.) to the property owner, local authorities or your water management district.
- Encourage your school system and local government to help develop and promote a water conservation ethic.
- Support projects that will lead to an increased use of reclaimed wastewater for irrigation and other uses.
- Support efforts that create a concern for water conservation among tourists.
- Promote water conservation in community newsletters, on bulletin boards, and by example. Encourage your friends, neighbors, and co-workers to "be water smart."
- Conserve water because it is the right thing to do - even when someone else is footing the bill, such as when you are staying at a hotel.
- Try to do one thing each day that will result in saving water. Every drop counts!

Water Restrictions
In some communities where drought conditions exist, officials may recommend measures to restrict use of water. These recommendations may include such procedures as watering lawns and washing cars on odd or even days of the week, at night, or on weekends. The restrictions may limit hours or prohibit use of water, or require use of hand watering instead of using sprinkler systems that use much more water. You should check with your local authorities or water utility for information on water restrictions that may be imposed for your area.

More Information
Please contact your local water authority or utility district, or your local emergency management agency for information specific to your area.

Flood and Flash Flood

Know What to Expect
Know your area's flood risk--if unsure, call your local Red Cross chapter, emergency management office, or planning and zoning department.

- If it has been raining hard for several hours, or steadily raining for several days, be alert to the possibility of a flood.
- Listen to local radio or TV stations for flood information.

Reduce Potential Flood Damage By

- Raising your furnace, water heater, and electric panel if they are in areas of your home that may be flooded.
- Consult with a professional for further information if this and other damage reduction measures can be taken.

Floods Can Take Several Hours to Days to Develop

- A flood WATCH means a flood is possible in your area.
- A flood WARNING means flooding is already occurring or will occur soon in your area.

Flash Floods Can Take Only a Few Minutes to a Few Hours to Develop

- A flash flood WATCH means flash flooding is possible in your area.
- A flash flood WARNING means a flash flood is occurring or will occur very soon.

Prepare a Family Disaster Plan

- Check to see if you have insurance that covers flooding. If not, find out how to get flood insurance.
- Keep insurance policies, documents, and other valuables in a safe-deposit box.

Assemble a Disaster Supplies Kit Containing

- First aid kit and essential medications.
- Canned food and can opener.
- At least three gallons of water per person
- Protective clothing, rainwear, and bedding or sleeping bags.
- Battery-powered radio, flashlight, and extra batteries.
- Special items for infants, elderly, or disabled family members.
- Written instructions for how to turn off electricity, gas and water if authorities advise you to do so. (Remember, you'll need a professional to turn them back on.)
- Identify where you could go if told to evacuate. Choose several places . . . a friend's home in another town, a motel, or a shelter.

When a Flood WATCH Is Issued

- Move your furniture and valuables to higher floors of your home.
- Fill your car's gas tank, in case an evacuation notice is issued.

When a Flood WARNING Is Issued

- Listen to local radio and TV stations for information and advice. If told to evacuate, do so as soon as possible.

When a Flash Flood WARNING Is Issued

- Or if you think it has already started, evacuate immediately. You may have only seconds to escape. Act quickly!
- Move to higher ground away from rivers, streams, creeks, and storm drains. Do not drive around barricades . . . they are there for your safety.
- If your car stalls in rapidly rising waters, abandon it immediately and climb to higher ground.

Heat

A National Problem
Heat kills by taxing the human body beyond its abilities. In a normal year, about 175 Americans succumb to the demands of summer heat. Among the large continental family of natural hazards, only the cold of

winter -- not lightning, hurricanes, tornadoes, floods, or earthquakes -- takes a greater toll. In the 40-year period from 1936 through 1975, nearly 20,000 people were killed in the United States by the effects of heat and solar radiation. In the disastrous heat wave of 1980, more than 1,250 people died. And those are the direct causalities. No one can know how many more deaths are advanced by heat wave weather -- how many diseased or aging hearts surrender, that under better conditions would have continued functioning.

North American summers are hot; most summers see heat waves in one section or another of the United States. East of the Rockies, they tend to combine both high temperatures and high humidity although some of the worst have been catastrophically dry.

NOAA's National Weather Service Heat Index Program
Considering this tragic death toll, the National Weather Service has stepped up its efforts to alert more effectively the general public and appropriate authorities to the hazards of heat waves -- those prolonged excessive heat/humidity episodes
.
Based on the latest research findings, the NWS has devised the "Heat Index" (HI), (sometimes referred to as the "apparent temperature"). The HI, given in degrees Fahrenheit, is an accurate measure of how hot it really feels when the relative humidity (RH) is added to the actual air temperature.

To find the Heat Index, look at the Heat Index Chart. As an example, if the air temperature is 95°F (found on the left side of the table), and the relative humidity is 55% (found at the top of the table), the HI -- or how hot it really feels -- is 110°F. This is at the intersection of the 95° row and the 55% column.
Important: Since HI values were devised for shady, light wind conditions, exposure to full sunshine can increase HI values by up to 15°F. Also, strong winds, particularly with very hot, dry air, can be extremely hazardous.
Note: On the HI chart the shaded zone above 105°F. This corresponds to a level of HI that may cause increasingly severe heat disorders with continued exposure and/or physical activity.

Heat Index / Heat Disorders

Heat Index / Heat Disorders	
Heat Index	**Possible heat disorders for people in higher risk groups**
130°F or higher	Heatstroke/sunstroke **highly likely** with continued exposure.
105° - 130°F	Sunstroke, heat cramps or heat exhaustion **likely**, and heatstroke **possible** with prolonged exposure and/or physical activity.
90° - 105°F	Sunstroke, heat cramps and heat exhaustion **possible** with prolonged exposure and/or physical activity.
80° - 90°F	Fatigue possible with prolonged exposure and/or physical activity.

The "Heat Index/Heat Disorders" table relates ranges of HI with specific disorders, particularly for people in the higher risk groups.

Summary of NWS's Alert Procedures
The NWS will initiate alert procedures (advisories or warnings) when the Heat Index (HI) is expected to have a significant impact on public safety. The expected severity of the heat determines whether advisories

or warnings are issued. A common guideline for the issuance of excessive heat alerts is when the maximum daytime HI is expected to equal or exceed 105°F and a nighttime minimum HI of 80°F or above for two or more consecutive days. Some regions and municipalities are more sensitive to excessive heat than others. As a result, alert thresholds may vary substantially from these guidelines. Excessive heat alert thresholds are being tailored at major metropolitan centers based on research results that link unusual amounts of heat-related deaths to city-specific meteorological conditions. The alert procedures are:

- Include HI values in zone and city forecasts.
- Issue Special Weather Statements and/or Public Information Statements presenting a detailed discussion of (1) the extent of the hazard including HI values, (2) who is most at risk, (3) safety rules for reducing the risk.
- Assist state and local health officials in preparing Civil Emergency Messages in severe heat waves. Meteorological information from Special Weather Statements will be included as well as more detailed medical information, advice, and names and telephone numbers of health officials.
- Release to the media and over NOAA's own Weather Radio all of the above information.

How Heat Affects the Body

Human bodies dissipate heat by varying the rate and depth of blood circulation, by losing water through the skin and sweat glands, and -- as the last extremity is reached -- by panting, when blood is heated above 98.6 degrees. The heart begins to pump more blood, blood vessels dilate to accommodate the increased flow, and the bundles of tiny capillaries threading through the upper layers of skin are put into operation. The body's blood is circulated closer to the skin's surface, and excess heat drains off into the cooler atmosphere. At the same time, water diffuses through the skin as perspiration. The skin handles about 90 percent of the body's heat dissipating function.

Sweating, by itself, does nothing to cool the body, unless the water is removed by evaporation -- and high relative humidity retards evaporation. The evaporation process itself works this way: the heat energy required to evaporate the sweat is extracted from the body, thereby cooling it. Under conditions of high temperature (above 90 degrees) and high relative humidity, the body is doing everything it can to maintain 98.6 degrees inside. The heart is pumping a torrent of blood through dilated circulatory vessels; the sweat glands are pouring liquid -- including essential dissolved chemicals, like sodium and chloride -- onto the surface of the skin.

Too Much Heat

Heat disorders generally have to do with a reduction or collapse of the body's ability to shed heat by circulatory changes and sweating, or a chemical (salt) imbalance caused by too much sweating. When heat gain exceeds the level the body can remove, or when the body cannot compensate for fluids and salt lost through perspiration, the temperature of the body's inner core begins to rise and heat-related illness may develop.

Ranging in severity, heat disorders share one common feature: the individual has overexposed or overexercised for his/her age and physical condition in the existing thermal environment. Sunburn, with its ultraviolet radiation burns, can significantly retard the skin's ability to shed excess heat.
Studies indicate that, other things being equal, the severity of heat disorders tend to increase with age -- heat cramps in a 17-year-old may be heat exhaustion in someone 40, and heat stroke in a person over 60.

Acclimatization has to do with adjusting sweat-salt concentration, among other things. The idea is to lose enough water to regulate body temperature, with the least possible chemical disturbance.

Cities Pose Special Hazards

The stagnant atmospheric conditions of the heat wave trap pollutants in urban areas and add the stresses of severe pollution to the already dangerous stresses of hot weather, creating a health problem of undiscovered dimensions. A map of heat-related deaths in St. Louis during 1966, for example, shows a heavier concentration in the crowded alleys and towers of the inner city, where air quality would also be poor during a heat wave.

The high inner-city death rates also can be read as poor access to air-conditioned rooms. While air-conditioning may be a luxury in normal times, it can be a lifesaver during heat wave conditions.

The cost of cool air moves steadily higher, adding what appears to be a cruel economic side to heat wave fatalities. Indications from the 1978 Texas heat wave suggest that some elderly people on fixed incomes, many of them in buildings that could not be ventilated without air conditioning, found the cost too high, turned off their units, and ultimately succumbed to the stresses of heat.

Know These Heat Disorder Symptoms

Heat Disorder	Symptoms	First Aid
Sunburn	Redness and pain. In severe cases, swelling of skin, blisters, fever, headaches.	Ointment for mild cases if blisters appear. If breaking occurs, apply dry sterile dressing. Serious, extensive cases should be seen by a physician.
Heat Cramps	Painful spasms usually in muscles of legs and abdomen possible. Heavy sweating.	Firm pressure on cramping muscles, or gentle massage to relieve spasm. Give sips of water. If nausea occurs, discontinue use.
Heat Exhaustion	Heavy sweating, weakness, skin cold, pale and clammy. Pulse thready. Normal temperature possible. Fainting and vomiting.	Get victim out of sun. Lay down and loosen clothing. Apply cool wet cloths. Fan or move victim to air conditioned room. Sips of water. If nausea occurs, discontinue use. If vomiting continues, seek immediate medical attention.
Heat Stroke (or sunstroke)	High body temperature (106°F, or higher). Hot dry skin. Rapid and strong pulse. Possible unconsciousness.	**Heat stroke is a severe medical emergency. Summon medical assistance or get the victim to a hospital immediately. Delay can be fatal.** Move the victim to a cooler environment. Reduce body temperature with cold bath or sponging. Use extreme caution. Remove clothing, use fans and air conditioners. If temperature rises again, repeat process. Do not give fluids.

Preventing Heat-Related Illness

Elderly persons, small children, chronic invalids, those on certain medications or drugs (especially tranquilizers and anticholinergics), and persons with weight and alcohol problems are particularly susceptible to heat reactions, especially during heat waves in areas where moderate climate usually prevails.

Heat Wave Safety Tips
Slow down. Strenuous activities should be reduced, eliminated, or rescheduled to the coolest time of the day. Individuals at risk should stay in the coolest available place, not necessarily indoors.
Dress for summer. Lightweight, light-colored clothing reflects heat and sunlight, and helps your body maintain normal temperatures.
Put less fuel on your inner fires. Foods (like proteins) that increase metabolic heat production also increase water loss.
Drink plenty of water or other nonalcoholic fluids. Your body needs water to keep cool. Drink plenty of fluids even if you don't feel thirsty. Persons who (1) have epilepsy or heart, kidney, or liver disease, (2) are on fluid restrictive diets, or (3) have a problem with fluid retention should consult a physician before increasing their consumption of fluids.
Do not drink alcoholic beverages.
Do not take salt tablets unless specified by a physician. Persons on salt restrictive diets should consult a physician before increasing their salt intake.
Spend more time in air-conditioned places. Air conditioning in homes and other buildings markedly reduces danger from the heat. If you cannot afford an air conditioner, spending some time each day (during hot weather) in an air conditioned environment affords some protection.
Don't get too much sun. Sunburn makes the job of heat dissipation that much more difficult.

Heat Waves

Know What These Terms Mean

- **Heat wave**: Prolonged period of excessive heat and humidity. The National Weather Service steps up its procedures to alert the public during these periods of excessive heat and humidity.
- **Heat index**: A number in degrees Fahrenheit (F) that tells how hot it really feels when relative humidity is added to the actual air temperature. Exposure to full sunshine can increase the heat index by 15 degrees F.
- **Heat cramps**: Heat cramps are muscular pains and spasms due to heavy exertion. Although heat cramps are the least severe, they are an early signal that the body is having trouble with the heat.
- **Heat exhaustion**: Heat exhaustion typically occurs when people exercise heavily or work in a hot, humid place where body fluids are lost through heavy sweating. Blood flow to the skin increases, causing blood flow to decrease to the vital organs. This results in a form of mild shock. If not treated, the victim may suffer heat stroke.
- **Heat stroke**: Heat stroke is life-threatening. The victim's temperature control system, which produces sweating to cool the body, stops working. The body temperature can rise so high that brain damage and death may result if the body is not cooled quickly.
- **Sunstroke**: Another term for heat stroke.

If a Heat Wave Is Predicted or Happening

- Slow down. Avoid strenuous activity. If you must do strenuous activity, do it during the coolest part of the day, which is usually in the morning between 4:00 a.m. and 7:00 a.m.
- Stay indoors as much as possible. If air conditioning is not available, stay on the lowest floor, out of the sunshine. Try to go to a public building with air conditioning each day for several hours.

Remember, electric fans do not cool the air, but they do help sweat evaporate, which cools your body.

- Wear lightweight, light-colored clothing. Light colors will reflect away some of the sun's energy.
- Drink plenty of water regularly and often. Your body needs water to keep cool.
- Drink plenty of fluids even if you do not feel thirsty. " Water is the safest liquid to drink during heat emergencies. Avoid drinks with alcohol or caffeine in them. They can make you feel good briefly, but make the heat's effects on your body worse. This is especially true about beer, which dehydrates the body.
- Eat small meals and eat more often. Avoid foods that are high in protein, which increase metabolic heat.
- Avoid using salt tablets unless directed to do so by a physician.

Signals of Heat Emergencies

- **Heat exhaustion**: Cool, moist, pale, or flushed skin; heavy sweating; headache; nausea or vomiting; dizziness; and exhaustion. Body temperature will be near normal.
- **Heat stroke**: Hot, red skin; changes in consciousness; rapid, weak pulse; and rapid, shallow breathing. Body temperature can be very high-- as high as 105 degrees F. If the person was sweating from heavy work or exercise, skin may be wet; otherwise, it will feel dry.

Treatment of Heat Emergencies

- **Heat cramps**: Get the person to a cooler place and have him or her rest in a comfortable position. Lightly stretch the affected muscle and replenish fluids. Give a half glass of cool water every 15 minutes. Do not give liquids with alcohol or caffeine in them, as they can make conditions worse.
- **Heat exhaustion**: Get the person out of the heat and into a cooler place. Remove or loosen tight clothing and apply cool, wet cloths, such as towels or sheets. If the person is conscious, give cool water to drink. Make sure the person drinks slowly. Give a half glass of cool water every 15 minutes. Do not give liquids that contain alcohol or caffeine. Let the victim rest in a comfortable position, and watch carefully for changes in his or her condition.
- **Heat stroke**: Heat stroke is a life-threatening situation. Help is needed fast. Call 9-1-1 or your local emergency number. Move the person to a cooler place. Quickly cool the body. Immerse victim in a cool bath, or wrap wet sheets around the body and fan it. Watch for signals of breathing problems. Keep the person lying down and continue to cool the body any way you can. If the victim refuses water or is vomiting or there are changes in the level of consciousness, do not give anything to eat or drink.

Hurricanes

Know What Hurricane WATCH and WARNING Mean

- **WATCH**: Hurricane conditions are possible in the specified area of the WATCH, usually within 36 hours.
- **WARNING**: Hurricane conditions are expected in the specified area of the WARNING, usually within 24 hours.

Prepare a Personal Evacuation Plan

- Identify ahead of time where you could go if you are told to evacuate. Choose several places--a friend's home in another town, a motel, or a shelter.
- Keep handy the telephone numbers of these places as well as a road map of your locality. You may need to take alternative or unfamiliar routes if major roads are closed or clogged.
- Listen to NOAA Weather Radio or local radio or TV stations for evacuation instructions. If advised to evacuate, do so immediately.

Assemble a Disaster Supplies Kit Including the Following Items

- First aid kit and essential medications.
- Canned food and can opener.
- At least three gallons of water per person.
- Protective clothing, rainwear, and bedding or sleeping bags.
- Battery-powered radio, flashlight, and extra batteries.
- Special items for infants, elderly, or disabled family members.
- Written instructions on how to turn off electricity, gas and water if authorities advise you to do so. (Remember, you'll need a professional to turn them back on.)

Prepare for High Winds

- Install hurricane shutters or purchase precut 1/2" outdoor plywood boards for each window of your home. Install anchors for the plywood and predrill holes in the plywood so that you can put it up quickly.
- Make trees more wind resistant by removing diseased and damaged limbs, then strategically removing branches so that wind can blow through.

Know What to Do When a Hurricane WATCH Is Issued

- Listen to NOAA Weather Radio or local radio or TV stations for up-to-date storm information.
- Prepare to bring inside any lawn furniture, outdoor decorations or ornaments, trash cans, hanging plants, and anything else that can be picked up by the wind.
- Prepare to cover all windows of your home. If shutters have not been installed, use precut plywood as described above. Note: Tape does not prevent windows from breaking, so taping windows is not recommended.
- Fill your car's gas tank.
- Recheck manufactured home tie-downs.
- Check batteries and stock up on canned food, first aid supplies, drinking water, and medications.

Know What to Do When a Hurricane WARNING Is Issued

- Listen to the advice of local officials, and leave if they tell you to do so.
- Complete preparation activities.
- If you are not advised to evacuate, stay indoors, away from windows.
- Be aware that the calm "eye" is deceptive; the storm is not over. The worst part of the storm will happen once the eye passes over and the winds blow from the opposite direction. Trees, shrubs, buildings, and other objects damaged by the first winds can be broken or destroyed by the second winds.
- Be alert for tornadoes. Tornadoes can happen during a hurricane and after it passes over. Remain indoors, in the center of your home, in a closet or bathroom without windows.

- Stay away from flood waters. If you come upon a flooded road, turn around and go another way. If you are caught on a flooded road and waters are rising rapidly around you, get out of the car and climb to higher ground.

Know What to Do After a Hurricane Is Over

- Keep listening to NOAA Weather Radio or local radio or TV stations for instructions.
- If you evacuated, return home when local officials tell you it is safe to do so.
- Inspect your home for damage.
- Use flashlights in the dark; do not use candles.

Landslide and Debris Flow (Mudslide)

Why Talk About Landslides?
Landslides are a serious geologic hazard common to almost every state in the United States. It is estimated that nationally they cause up to $2 billion in damages and from 25 to 50 deaths annually. Globally, landslides cause billions of dollars in damage and thousands of deaths and injuries each year. Individuals can take steps to reduce their personal risk. Know about the hazard potential where you live, take steps to reduce your risk, and practice preparedness plans.

What Are Landslides and Debris Flows, and What Causes Them?
Some landslides move slowly and cause damage gradually, whereas others move so rapidly that they can destroy property and take lives suddenly and unexpectedly. Gravity is the force driving landslide movement. Factors that allow the force of gravity to overcome the resistance of earth material to landslide movement include: saturation by water, steepening of slopes by erosion or construction, alternate freezing or thawing, earthquake shaking, and volcanic eruptions.

Landslides are typically associated with periods of heavy rainfall or rapid snow melt and tend to worsen the effects of flooding that often accompanies these events. In areas burned by forest and brush fires, a lower threshold of precipitation may initiate landslides.

Debris flows, sometimes referred to as mudslides, mudflows, lahars, or debris avalanches, are common types of fast-moving landslides. These flows generally occur during periods of intense rainfall or rapid snow melt. They usually start on steep hillsides as shallow landslides that liquefy and accelerate to speeds that are typically about 10 miles per hour, but can exceed 35 miles per hour. The consistency of debris flows ranges from watery mud to thick, rocky mud that can carry large items such as boulders, trees, and cars. Debris flows from many different sources can combine in channels, and their destructive power may be greatly increased. They continue flowing down hills and through channels, growing in volume with the addition of water, sand, mud, boulders, trees, and other materials. When the flows reach flatter ground, the debris spreads over a broad area, sometimes accumulating in thick deposits that can wreak havoc in developed areas.

Among the most destructive types of debris flows are those that accompany volcanic eruptions. A spectacular example in the United States was a massive debris flow resulting from the 1980 eruptions of Mount St. Helens, Washington. Areas near the bases of many volcanoes in the Cascade Mountain Range of California, Oregon, and Washington are at risk from the same types of flows during future volcanic eruptions.

Wildfires can also lead to destructive debris-flow activity. In July 1994, a severe wildfire swept Storm King Mountain, west of Glenwood Springs, Colorado, denuding the slopes of vegetation. Heavy rains on the

mountain in September resulted in numerous debris flows, one of which blocked Interstate 70 and threatened to dam the Colorado River.

Learn whether landslides or debris flows have occurred in your area by contacting local officials, state geological surveys or departments of natural resources, and university departments of geology.

Awareness Information
Areas that are generally prone to landslide hazards include existing old landslides; the bases of steep slopes; the bases of drainage channels; and developed hillsides where leach-field septic systems are used.

Areas that are typically considered safe from landslides include areas that have not moved in the past; relatively flat-lying areas away from sudden changes in slope; and areas at the top or along ridges, set back from the tops of slopes.

Learn what to watch for prior to major landsliding. Look for patterns of storm-water drainage on slopes near your home, noting especially the places where runoff water converges, increasing flow over soil-covered slopes. Check hillsides around your home for any signs of land movement, such as small landslides or debris flows or progressively tilting trees.

Plan for a Landslide
Develop a Family Disaster Plan. Please see the "Family Disaster Plan" section for general family planning information. Develop landslide-specific planning. **Learn about landslide risk in your area**. Contact local officials, state geological surveys or departments of natural resources, and university departments of geology. Landslides occur where they have before, and in identifiable hazard locations. Ask for information on landslides in your area, specific information on areas vulnerable to landslides, and request a professional referral for a very detailed site analysis of your property, and corrective measures you can take, if necessary.

If you are at risk from landslides

- Talk to your insurance agent. Debris flow may be covered by flood insurance policies from the National Flood Insurance Program (NFIP).
- Develop an evacuation plan. (See the "Family Disaster Plan" section.) You should know where to go if you have to leave. Trying to make plans at the last minute can be upsetting and create confusion.
- Discuss landslides and debris flow with your family. Everyone should know what to do in case all family members are not together. Discussing disaster ahead of time helps reduce fear and lets everyone know how to respond during a landslide or debris flow.

Assemble a Disaster Supplies Kit
Please see the section "Disaster Supplies Kit" for general supplies kit information. Landslide-specific supplies should include the following:

- Disaster Suplies Kit basics
- Evacuation Supplies Kit

How to Protect Your Property

- If your property is in a landslide-prone area, contract with a private consulting company specializing in earth movement for opinions and advice on landslide problems and on corrective measures you can take. Such companies would likely be those specializing in geotechnical

engineering, structural engineering, or civil engineering. Local officials could possibly advise you as to the best kind of professional to contact in your area. Taking steps without consulting a professional could make your situation worse.

- Install flexible pipe fittings to avoid gas or water leaks. Flexible fittings will be less likely to break.

Media and Community Education Ideas

- In an area prone to landslides, publish a special newspaper section with emergency information on landslides and debris flows. Localize the information by including the phone numbers of local emergency services offices, the American Red Cross chapter, and hospitals.
- Report on what city and county governments are doing to reduce the possibility of landslides. Interview local officials about local land- use zoning regulations.
- Interview local officials and major insurers regarding the National Flood Insurance Program. Find out if debris flow is covered by flood insurance policies from the National Flood Insurance Program and contact your local emergency management office to learn more about the program.
- Work with local emergency services and American Red Cross officials to prepare special reports for people with mobility impairments on what to do if evacuation is ordered.
- Support your local government in efforts to develop and enforce land-use and building ordinances that regulate construction in areas susceptible to landslides and debris flows. Buildings should be located away from steep slopes, streams and rivers, intermittent-stream channels, and the mouths of mountain channels.

What to Do Before Intense Storms

- Become familiar with the land around you. Learn whether landslides and debris flows have occurred in your area by contacting local officials, state geological surveys or departments of natural resources, and university departments of geology. Knowing the land can help you assess your risk for danger.
- Watch the patterns of storm-water drainage on slopes near your home, and especially the places where runoff water converges, increasing flow over soil-covered slopes. Watch the hillsides around your home for any signs of land movement, such as small landslides or debris flows, or progressively tilting trees. Watching small changes could alert you to the potential of a greater landslide threat.

What to Do During Intense Storms

- Stay alert and awake. Many debris-flow fatalities occur when people are sleeping. Listen to a NOAA Weather Radio or portable, battery-powered radio or television for warnings of intense rainfall. Be aware that intense, short bursts of rain may be particularly dangerous, especially after longer periods of heavy rainfall and damp weather.
- If you are in areas susceptible to landslides and debris flows, consider leaving if it is safe to do so. Remember that driving during an intense storm can be hazardous. If you remain at home, move to a second story if possible. Staying out of the path of a landslide or debris flow saves lives.
- Listen for any unusual sounds that might indicate moving debris, such as trees cracking or boulders knocking together. A trickle of flowing or falling mud or debris may precede larger landslides. Moving debris can flow quickly and sometimes without warning.
- If you are near a stream or channel, be alert for any sudden increase or decrease in water flow and for a change from clear to muddy water. Such changes may indicate landslide activity upstream, so be prepared to move quickly. Don't delay! Save yourself, not your belongings.

- Be especially alert when driving. Embankments along roadsides are particularly susceptible to landslides. Watch the road for collapsed pavement, mud, fallen rocks, and other indications of possible debris flows.

What to Do if You Suspect Imminent Landslide Danger

- Contact your local fire, police, or public works department. Local officials are the best persons able to assess potential danger.
- Inform affected neighbors. Your neighbors may not be aware of potential hazards. Advising them of a potential threat may help save lives. Help neighbors who may need assistance to evacuate.
- Evacuate. Getting out of the path of a landslide or debris flow is your best protection.

What to Do During a Landslide

- Quickly move out of the path of the landslide or debris flow. Moving away from the path of the flow to a stable area will reduce your risk.
- If escape is not possible, curl into a tight ball and protect your head. A tight ball will provide the best protection for your body.

What to Do After a Landslide

- Stay away from the slide area. There may be danger of additional slides.
- Check for injured and trapped persons near the slide, without entering the direct slide area. Direct rescuers to their locations.
- Help a neighbor who may require special assistance--infants, elderly people, and people with disabilities. Elderly people and people with disabilities may require additional assistance. People who care for them or who have large families may need additional assistance in emergency situations.
- Listen to local radio or television stations for the latest emergency information.
- Watch for flooding, which may occur after a landslide or debris flow. Floods sometimes follow landslides and debris flows because they may both be started by the same event.
- Look for and report broken utility lines to appropriate authorities. Reporting potential hazards will get the utilities turned off as quickly as possible, preventing further hazard and injury.
- Check the building foundation, chimney, and surrounding land for damage. Damage to foundations, chimneys, or surrounding land may help you assess the safety of the area.
- Replant damaged ground as soon as possible since erosion caused by loss of ground cover can lead to flash flooding.
- Seek the advice of a geotechnical expert for evaluating landslide hazards or designing corrective techniques to reduce landslide risk. A professional will be able to advise you of the best ways to prevent or reduce landslide risk, without creating further hazard.

Severe Thunderstorm

Before Lightning Strikes

- Keep an eye on the sky. Look for darkening skies, flashes of light, or increasing wind. Listen for the sound of thunder.
- If you can hear thunder, you are close enough to the storm to be struck by lightning. Go to safe shelter immediately.
- Listen to NOAA Weather Radio, commercial radio, or television for the latest weather forecasts.

When a Storm Approaches

- Find shelter in a building or car. Keep car windows closed and avoid convertibles.
- Telephone lines and metal pipes can conduct electricity. Unplug appliances. Avoid using the telephone or any electrical appliances. (Leaving electric lights on, however, does not increase the chances of your home being struck by lightning.)
- Avoid taking a bath or shower, or running water for any other purpose.
- Turn off the air conditioner. Power surges from lightning can overload the compressor, resulting in a costly repair job!
- Draw blinds and shades over windows. If windows break due to objects blown by the wind, the shades will prevent glass from shattering into your home.

If Caught Outside

- If you are in the woods, take shelter under the shorter trees.
- If you are boating or swimming, get to land and find shelter immediately!

Protecting Yourself Outside

- Go to a low-lying, open place away from trees, poles, or metal objects. Make sure the place you pick is not subject to flooding.
- Be a very small target! Squat low to the ground. Place your hands on your knees with your head between them. Make yourself the smallest target possible.
- Do not lie flat on the ground--this will make you a larger target!

After the Storm Passes

- Stay away from storm-damaged areas.
- Listen to the radio for information and instructions.

If Someone is Struck by Lightning

- People struck by lightning carry no electrical charge and can be handled safely.
- Call for help. Get someone to dial 9-1-1 or your local Emergency Medical Services (EMS) number.
- The injured person has received an electrical shock and may be burned, both where they were struck and where the electricity left their body. Check for burns in both places. Being struck by lightning can also cause nervous system damage, broken bones, and loss of hearing or eyesight.
- Give first aid. If breathing has stopped, begin rescue breathing. If the heart has stopped beating, a trained person should give CPR. If the person has a pulse and is breathing, look and care for other possible injuries. Learn first aid and CPR by taking a Red Cross first aid and CPR course. call your local Red Cross chapter for class schedules and fees.

Tornado

Prepare a Home Tornado Plan

- Pick a place where family members could gather if a tornado is headed your way. It could be your basement or, if there is no basement, a center hallway, bathroom, or closet on the lowest floor. Keep this place uncluttered.
- If you are in a high-rise building, you may not have enough time to go to the lowest floor. Pick a place in a hallway in the center of the building.

Assemble a Disaster Supplies Kit Containing

- First aid kit and essential medications.
- Canned food and can opener.
- At least three gallons of water per person.
- Protective clothing, bedding, or sleeping bags.
- Battery-powered radio, flashlight, and extra batteries.
- Special items for infant, elderly, or disabled family members.
- Written instructions on how to turn off electricity, gas, and water if authorities advise you to do so. (Remember, you'll need a professional to turn natural gas service back on.)

Stay Tuned for Storm Warnings

- Listen to your local radio and TV stations for updated storm information.
- Know what a tornado WATCH and WARNING means:
  A tornado WATCH means a tornado is possible in your area.
  A tornado WARNING means a tornado has been sighted and may be headed for your area. Go to safety immediately.
- Tornado WATCHES and WARNINGS are issued by county or parish.

When a Tornado WATCH Is Issued

- " Listen to local radio and TV stations for further updates.
- " Be alert to changing weather conditions. Blowing debris or the sound of an approaching tornado may alert you. Many people say it sounds like a freight train.

When a Tornado WARNING Is Issued

- " If you are inside, go to the safe place you picked to protect yourself from glass and other flying objects. The tornado may be approaching your area.
- " If you are outside, hurry to the basement of a nearby sturdy building or lie flat in a ditch or low-lying area.
- " If you are in a car or mobile home, get out immediately and head for safety (as above).

After the Tornado Passes

- Watch out for fallen power lines and stay out of the damaged area.
- Listen to the radio for information and instructions.
- Use a flashlight to inspect your home for damage.
- Do not use candles at any time.

Wildfire

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Emergency Preparedness

- Natural Disasters -

More and more people are making their homes in woodland settings in or near forests, rural areas, or remote mountain sites. There, homeowners enjoy the beauty of the environment but face the very real danger of wildfire.

Wildfires often begin unnoticed. They spread quickly, igniting brush, trees, and homes. Reduce your risk by preparing now before wildfire strikes. Meet with your family to decide what to do and where to go if wildfires threaten your area. Follow the steps listed below to protect your family, home, and property.

Practice Wildfire Safety

- People start most wildfires . . . find out how you can promote and practice wildfire safety.
- Contact your local fire department, health department, or forestry office for information on fire laws. Make sure that fire vehicles can get to your home. Clearly mark all driveway entrances and display your name and address.
- Report hazardous conditions that could cause a wildfire.
- Teach children about fire safety. Keep matches out of their reach.
- Post fire emergency telephone numbers.
- Plan several escape routes away from your home by car and by foot.
- Talk to your neighbors about wildfire safety. Plan how the neighborhood could work together after a wildfire. Make a list of your neighbors' skills, such as medical or technical. Consider how you could help neighbors who have special needs, such as elderly or disabled persons. Make plans to take care of children who may be on their own if parents can't get home.

Protect Your Home

- Regularly clean roof and gutters.
- Inspect chimneys at least twice a year. Clean them at least once a year. Keep the dampers in good working order. Equip chimneys and stovepipes with a spark arrester that meets the requirements of National Fire Protection Association Code 211. (Contact your local fire department for exact specifications.)
- Use 1/2-inch mesh screen beneath porches, decks, floor areas, and the home itself. Also, screen openings to floors, roof, and attic.
- Install a smoke detector on each level of your home, especially near bedrooms; test monthly and change the batteries at least once each year.
- Teach each family member how to use the fire extinguisher (ABC type) and show them where it's kept.
- Keep a ladder that will reach the roof.
- Consider installing protective shutters or heavy fire-resistant drapes.
- Keep handy household items that can be used as fire tools: a rake, axe, handsaw or chainsaw, bucket, and shovel.

Before Wildfire Threatens

- Design and landscape your home with wildfire safety in mind.
- Select materials and plants that can help contain fire rather than fuel it.
- Use fire resistant or non-combustible materials on the roof and exterior structure of the dwelling. Or treat wood or combustible material used in roofs, siding, decking, or trim with UL-approved fire-retardant chemicals.
- Plant fire-resistant shrubs and trees. For example, hardwood trees are less flammable than pine, evergreen, eucalyptus or fir trees.

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Emergency Preparedness

- Natural Disasters -

Create a 30- to 1OO-Foot Safety Zone Around Your Home

- Within this area, you can take steps to reduce potential exposure to flames and radiant heat. Homes built in pine forests should have a minimum safety zone of 100 feet. If your home sits on a steep slope, standard protective measures may not suffice. Contact your local fire department or forestry of fice for additional information.
- Rake leaves, dead limbs, and twigs. Clear all flammable vegetation.
- Remove leaves and rubbish from under structures and dispose of them properly.
- Thin a 15-foot space between tree crowns, and remove limbs within 15 feet of the ground.
- Remove dead branches that extend over the roof.
- Prune tree branches and shrubs within 15 feet of a stovepipe or chimney outlet.
- Ask the power company to clear branches from power lines.
- Remove vines from the walls of the home.
- Mow grass regularly.
- Clear a 10-foot area around propane tanks and the barbecue. Place a screen over the grill--use non-flammable material with mesh no coarser than one-quarter inch.
- Regularly dispose of newspapers and rubbish at an approved site. Follow local burning regulations.
- Place stove, fireplace, and grill ashes in a metal bucket, soak in water for two days, then bury the cold ashes in mineral soil.
- Store gasoline, oily rags, and other flammable materials in approved safety cans. Place cans in a safe location away from the base of buildings.
- Stack firewood at least 100 feet away and uphill from your home. Clear combustible material within 20 feet. Use only UL-approved wood burning devices.

Plan Your Water Needs

- Identify and maintain an adequate outside water source such as a small pond, cistern, well, swimming pool, or hydrant.
- Have a garden hose that is long enough to reach any area of the home and other structures on the property.
- Install freeze-proof exterior water outlets on at least two sides of the home and near other structures on the property. Install additional outlets at least 50 feet from the home.
- Consider obtaining a portable gasoline-powered pump in case electrical power is cut off.

When Wildfire Threatens

- If you are warned that a wildfire is threatening your area, listen to your battery-operated radio for reports and evacuation information. Follow the instructions of local officials.
- Back your car into the garage or park it in an open space facing the direction of escape. Shut doors and roll up windows. Leave the key in the ignition. Close garage windows and doors, but leave them unlocked. Disconnect automatic garage door openers.
- Confine pets to one room. Make plans to care for your pets in case you must evacuate.
- Arrange temporary housing at a friend or relative's home outside the threatened area.

If Advised to Evacuate, Do So Immediately

- Wear protective clothing--sturdy shoes, cotton or woolen clothing, long pants, a long-sleeved shirt, gloves, and a handkerchief to protect your face.

- Take your Disaster Supplies Kit.
- Lock your home.
- Tell someone when you left and where you are going.
- Choose a route away from fire hazards. Watch for changes in the speed and direction of fire and smoke.

If You're sure You Have Time, Take Steps to Protect Your Home
Inside:

- Close windows, vents, doors, venetian blinds or non-combustible window coverings, and heavy drapes. Remove lightweight curtains.
- Shut off gas at the meter. Turn off pilot lights.
- Open fireplace damper. Close fireplace screens.
- Move flammable furniture into the center of the home away from windows and sliding-glass doors.
- Turn on a light in each room to increase the visibility of your home in heavy smoke.

Outside:

- Seal attic and ground vents with pre-cut plywood or commercial seals.
- Turn off propane tanks.
- Place combustible patio furniture inside.
- Connect the garden hose to outside taps.
- Set up the portable gasoline-powered pump.
- Place lawn sprinklers on the roof and near above-ground fuel tanks. Wet the roof.
- Wet or remove shrubs within 15 feet of the home.
- Gather fire tools.

Emergency Supplies
When wildfire threatens, you won't have time to shop or search for supplies. Assemble a Disaster Supplies Kit with items you may need if advised to evacuate. Store these supplies in sturdy, easy-to-carry containers such as backpacks, dufflebags, or trash containers.
Include:

- A three-day supply of water (one gallon per person per day) and food that won't spoil.
- One change of clothing and footwear per person and one blanket or sleeping bag per person.
- A first aid kit that includes your family's prescription medications.
- Emergency tools including a battery-powered radio, flashlight, and plenty of extra batteries.
- An extra set of car keys and a credit card, cash, or traveler's checks.
- Sanitation supplies.
- Special items for infant, elderly or disabled family members.
- An extra pair of eyeglasses.
- Keep important family documents in a waterproof container. Assemble a smaller version of your kit to keep in the trunk of your car.

Create a Family Disaster Plan

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Emergency Preparedness

- Natural Disasters -

Wildfire and other types of disasters--hurricane, flood, tornado, earthquake, hazardous materials spill, winter storm--can strike quickly and without warning. You can cope with disaster by preparing in advance and working together. Meet with your family to create a disaster plan.
To get started. . .

Contact your local Red Cross chapter

- Find out about the hazards in your community.
- Ask how you would be warned.
- Find out how to prepare for each type of disaster.

Meet With Your Family

- Discuss the types of disasters that could occur.
- Explain how to prepare and respond to each type of disaster.
- Discuss where to go and what to bring if advised to evacuate.
- Practice what you have discussed.

Plan How Your Family Will Stay in Contact if Separated by Disaster

- Pick two meeting places:
- A place a safe distance from your home in case of a home fire.
- A place outside your neighborhood in case you can't return home.
- Choose an out-of-state friend as a "check-in contact" for everyone to call.

Complete These Steps

- Post emergency telephone numbers by every phone.
- Show responsible family members how and when to shut off water, gas, and electricity at main switches.
- Contact your local fire department to learn about home fire hazards.
- Learn first aid and CPR. Contact your local American Red Cross chapter for information and training.

Winter Storm

Prepare a Winter Storm Plan

- Have extra blankets on hand.
- Ensure that each member of your household has a warm coat, gloves or mittens, hat, and water-resistant boots.

Assemble a Disaster Supplies Kit Containing

- First aid kit and essential medications.
- Battery-powered NOAA Weather radio, flashlight, and extra batteries.
- Canned food and can opener.
- Bottled water (at least one gallon of water per person per day to last at least 3 days).
- Extra warm clothing, including boots, mittens, and a hat.
- Assemble a Disaster Supplies Kit for your car, too.
- Have your car winterized before winter storm season.

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Emergency Preparedness

- Natural Disasters -

Stay Tuned for Storm Warnings

- Listen to NOAA Weather Radio and your local radio and TV stations for updated storm information.

Know What Winter Storm WATCHES and WARNINGS Mean

- A winter storm WATCH means a winter storm is possible in your area.
- A winter storm WARNING means a winter storm is headed for your area.
- A blizzard WARNING means strong winds, blinding wind-driven snow, and dangerous wind chill are expected. Seek shelter immediately!

When a Winter Storm WATCH is Issued

- Listen to NOAA Weather Radio, local radio, and TV stations, or cable TV such as The Weather Channel for further updates.
- Be alert to changing weather conditions.
- Avoid unnecessary travel.

When a Winter Storm WARNING is Issued

- Stay indoors during the storm.
- If you must go outside, several layers of lightweight clothing will keep you warmer than a single heavy coat. Gloves (or mittens) and a hat will prevent loss of body heat. Cover your mouth to protect your lungs.
- Understand the hazards of wind chill, which combines the cooling effect of wind and cold temperatures on exposed skin.
- As the wind increases, heat is carried away from a person's body at an accelerated rated, driving down the body temperature.
- Walk carefully on snowy, icy, sidewalks.
- After the storm, if you shovel snow, be extremely careful. It is physically strenuous work, so take frequent breaks. Avoid overexertion.
- Avoid traveling by car in a storm, but if you must...
- Carry a Disaster Supplies Kit in the trunk.
- Keep your car's gas tank full for emergency use and to keep the fuel line from freezing.
- Let someone know your destination, your route, and when you expect to arrive. If your car gets stuck along the way, help can be sent along your predetermined route.

If You Do Get Stuck

- Stay with your car. Do not try to walk to safety.
- Tie a brightly colored cloth (preferably red) to the antenna for rescuers to see.
- Start the car and use the heater for about 10 minutes every hour. Keep the exhaust pipe clear so fumes won't back up in the car.
- Leave the overhead light on when the engine is running so that you can be seen.
- As you sit, keep moving your arms and legs to keep blood circulating and to stay warm.
- Keep one window away from the blowing wind slightly open to let in air.