

# *M*ontana

## *Disaster & Emergency Survival Guide*

## Survival in Montana.

Most of us don't think about survival much, but this can be a real challenge under the right circumstances. Montana's weather is among the most severe in the nation. Additionally, our weather is among the most diverse, presenting extreme highs and lows. Add to that the high risk for flooding, wildland fires, earthquakes, and a variety of other hazards, and you could have a survivor challenge.



Nearly a million Montanans live in this vast state. That's about six people per square mile, very remote by most standards. Yet, many millions more travel through or visit every year. A camping trip, a visit to our national parks and forests, a hunting expedition, driving our scenic highways any one of these outings could turn disastrous. Could you survive?



Now is the time to be informed of your risks and understand your role in increasing your chances for surviving them. This reference guide is stocked with valuable information that could save your life.

So, let's enjoy Montana! Safely.

Brought to you by....



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## Montana Traveler Information Know Before You Go...

Get access to information such as road conditions, camera images and RWIS at various locations statewide as well as incidents, road closures, construction, weather and more.

Download MDT's mobile app— "MDT Travel Info" or visit our website at: [www.mdt511.com](http://www.mdt511.com)

You can also get information by dialing 511 or 1-800-226-7623.



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Whether you hunt, hike, travel, work or play, Montana is a state of diversity with something for everyone. Outings provide memories for a lifetime—stories we'll tell for years to come. Other adventures may turn dismal and if you aren't prepared, could turn tragic.

Everyone should enjoy Montana, but let's do it safely.

- Could you build a shelter in the mountains if lost?
- Do you have some basic supplies ready if stranded at home or lost?
- What is the difference between a weather watch and a weather warning?
- Have you thought about any of this?



This guide provides excellent information you can use to survive most situations.

Remember, the actions you take now could help you later. Read this guide and keep it close—it may have just the information you need!



## On The Road

Montana has one of the highest highway fatality rates in the nation.

### *Did You Know?*

- Most fatal crashes involve a single vehicle leaving the road and overturning or hitting something.
- Falling asleep, talking on your cell phone, visiting with passengers, sightseeing and other distractions can all contribute to accidents. Taking a break or pulling over can help but it's mostly about paying attention to your driving.
- Wildlife is a formidable hazard and hundreds of collisions occur each year. These accidents are most common in the early morning and late afternoon but can happen at any time.
- Twenty to forty percent of all crashes occur under icy or snowy conditions. Severe weather and road conditions can happen in any month of the year.
- The percentage of crashes that occur at nighttime are much higher than those that occur during the day. Adjust your speed for visibility and the chance that you may encounter an animal, stalled vehicle or other unforeseen object in your path.

Some of what you encounter may be unavoidable. Fortunately, you can help or reduce your risk in some instances.

If you notice a drunk, erratic or otherwise unsafe driver, call the Montana Highway Patrol at (855) 647-3777

### PLEASE BUCKLE UP!

In 2020, 94 occupants died on Montana highways in crashes involving passenger vehicles. During the last five-years unrestrained fatalities represented 49% of all statewide fatalities.

In an Emergency  
**DIAL 911**

## Your Vehicle: Tune It Up

Your vehicle can be your best friend or your worst enemy. Many people ignore the maintenance of their vehicle, leading it to an untimely breakdown. A good, consistent maintenance schedule can help prevent you from becoming stranded. Maintenance and a little preparation can help keep you safe.



Before it gets cold, check or have the following checked:

- **Cooling System:** Flush & protect the radiator and engine to well below zero.
- **Heater, Defroster & Wipers:** These are for comfort as well as safety. Check and repair before it gets cold.
- **Fuel System:** Replace fuel and air filters. Keep water out of the system by using additives and by maintaining a full tank of gas.
- **Oil Level:** If necessary, replace existing oil with a winter grade oil or SAE 10w/30 weight variety.
- **Battery & Ignition System:** Should be in top condition with clean battery terminals. Minor deficiencies such as old, worn parts will be greatly magnified in cold weather.
- **Lights:** All lights should be checked. This is a safety for you and others on the road.
- **Exhaust System:** Check for leaks and crimped pipes to eliminate the risk of carbon monoxide poisoning.
- **Tires:** You need good tread. All season radials on a front-wheel-drive passenger vehicle are adequate, as are snow tires on most rear wheel drives. Chain restrictions in Montana are most often put into effect for commercial vehicles. Studded tires can be used in Montana from October 1 until May 31 and they are 218% more effective than conventional tires. Chains are 630% more effective.
- **Brakes:** Check wear and fluid level.
- Keep your car's windows, mirrors and lights clear of snow and ice.
- Equip your vehicle with an emergency travel kit.

Motorists can help ensure a safer winter driving experience if they are prepared, alert, and cautious.

## Winter Driving

- Be aware of potentially icy areas such as shady spots and bridges.
- Keep a safe distance of at least five seconds behind other vehicles and trucks that are plowing the road. Do not pass a snowplow or spreader unless the visibility allows you to do so safely. Please remember “The road conditions in front of the plow are the reason the plows are out working.”
- Leave a few minutes early allowing extra time to reach your destination.
- Poor visibility can lead to large chain reaction accidents. Please be aware of changing road conditions, especially bridge decks, shaded areas and places where you experience changes in elevation.

### ALWAYS...

**Buckle Up!** Safety belts are the most effective means of reducing fatalities and serious injuries in traffic crashes. They minimize the effects on the human body. In most crashes, there are two collisions. The first involves the vehicle striking an object. The second is the “human collision” where the body strikes a hard surface and comes to a stop within a very short distance. Because the hard surface has little give, the human body must absorb most of the force. Properly adjusted and fastened seatbelts distribute the forces of the rapidly decelerating body over a larger area, while stretching to absorb some of the force. In addition, belts hold the body in place while the car crushes and slows down. Whether a person is belted or not often becomes the difference between life and death. While researchers may differ by a few percentage points either way, figures from seatbelt studies reveal:

- Seatbelts can reduce the number of serious injuries by 50 percent.
- Seatbelts can reduce fatalities by 40 to 60 percent.

**Stay Alert!** In Montana,

inattentiveness, carelessness, and driving too fast accounted for over 50% of the crashes in the past 10 years. The inattentive drivers were more susceptible to fatal crashes than the other two categories. Some of the contributing factors of inattentiveness listed by the Highway Patrol include eating, smoking, talking on cell phones, adjusting controls, inserting tapes and CDs, and looking at maps.

### Don't Drink and Drive!

Montana has the highest alcohol-related fatality rate in the nation per vehicle mile traveled.

- Think before you drink and arrange a ride home if necessary.
- Do not ride with others who have been drinking.
- Don't allow drinking friends to drive. Make arrangements to get them home safely.
- Obey Montana's OPEN CONTAINER LAW

**At 40 miles per hour, a car that takes 110 feet to stop on dry pavement will take 200 feet to stop in the rain, 350 feet in gravel and 770 feet on ice. Driving is a different game when road conditions change.**

The following Tips can help you travel more safely:

- **Plan ahead.** Know in advance how to get to your destination and avoid roads that might be closed, unplowed or congested. If you are planning a long trip, leave earlier and pay attention to weather reports.
- **Make sure you can see and be seen.** Whenever you turn on the windshield wipers, turn on the headlights. In the snow, clean off the whole car, paying particular attention to all lights and glass areas.
- **Proceed in slow motion.** Enemies of traction in the snow are excessive speed and sudden movements of the brake, steering or gas. Slow down; anticipate lane changes, turns, curves and braking much farther in advance; and concentrate on making smooth, precise movements.
- **Don't spin your wheels.** A spinning wheel gathers no traction - start slow and easy. On snow and ice, point the front wheels straight to reduce resistance. If stuck, rock the vehicle gently by going between a forward and reverse gear. (Consult your owner's manual to make sure this procedure will not damage your transmission.)
- **Keep going.** By watching traffic farther ahead and giving yourself more room to maneuver and brake, you can reduce stops and starts. Shift gears smoothly and stay in the highest gear possible. Let your momentum carry you up and over hills, slowing at the crest. Never use cruise control when road conditions are slippery and keep a watchful eye out for bridges, shady spots and the bottom of hills, where water gathers and ice forms first.
- **Maintain a reasonable speed.** Always drive at a speed that matches the prevailing visibility, traffic and road conditions, and your driving ability. Roads are slickest when it first starts to rain because oil on the road rises to the surface.
- **Squeeze the brake gently.** If you feel the wheels begin to lock up, ease off the brake and reapply gently. However, if your car has an anti-lock brake system (ABS), you can apply the brakes as hard as you like. Don't be alarmed at a pulsating feeling in the brake pedal. This is the system at work, preventing wheel lockup so you can simply steer past obstacles. Despite this big advantage, however, braking distances are still much longer, even with ABS. Owners of four-wheel-drive or front-wheel-drive cars and trucks also should note that, although these vehicles offer greater traction in rain and snow, they don't stop any faster.
- **Don't panic.** If you skid, don't brake, hit the gas or jerk the wheel. Take your foot off the gas and, if the car has a manual transmission, depress the clutch.

- In a rear-wheel skid, carefully steer in the direction of the skid. When the car stops skidding, accelerate gently and steer it back on course. If your car has rear-wheel drive and you over-correct the first skid, be prepared for fish-tailing, or a rear-wheel skid in the opposite direction.
- In a front-wheel skid, don't turn the steering wheel, since the sideways skid of the front wheels will help slow the vehicle. Wait for the front wheels to grip, then steer gently in the desired direction. As a last resort, use a snow bank as a brake.
- **Skid control requires skill**, so practice these maneuvers in a safe, open area, such as an abandoned parking lot, before you have to use them on the road.

- **Avoid hydroplaning.**

Hydroplaning is when the tires literally float over an area of standing water or slush, usually at high speeds. It results in a nearly total loss of control as the tires lose contact with the road surface. The best defenses are to have tires with good tread and to travel at low speeds with a watchful eye for potential trouble.



- **Don't drive into standing water.** You wouldn't dive head first into a swimming pool without knowing how deep it was, so don't drive into large areas of standing water. When driving through large puddles or lots of slush, dry your brakes by gently applying pressure to the gas and brake pedals at the same time.

- **Winter roadway width** is usually narrower due to snow build-up. In this case, you do not have much margin for error in passing or meeting cars from the opposite direction.
- **Inclement Weather.** Roads that are intermittently dry and icy pose very interesting and dangerous driving problems. This situation calls for extreme caution, reduced speeds and more distance between you and other drivers. Driving in inclement weather has a detrimental effect on some drivers. It may make them more nervous, frustrated, tense and perhaps even aggressive.

**Cruise control** can become a killer on slick highways. While using cruise control, your vehicle will either accelerate or decelerate to maintain a constant set speed. This is great on dry pavement; however, on icy or snow-packed roads, the use of cruise control can cause accidents. The car may sense a need for increased power to maintain its set speed just as you enter an icy spot. This would have the same effect as if you suddenly stepped down on the accelerator. The result is almost always a break of traction of the drive wheels and a dangerous loss of control.

**If you get stuck**, there are a few things you can try. Clear a path in front and behind your wheels. Get the sand or kitty litter from your emergency kit and spread it in the path you have made. If you are out, use branches or a floor mat to gain traction under the wheels. Try “rocking” yourself out. Accelerate forward until you lose traction, then quickly move into reverse until the tires begin to break traction, then back the other way. You should gain a little ground each time and eventually rock yourself free. You can master this technique with either a standard or automatic transmission, the trick is timing. Another trick—gently accelerate with the emergency brake partially applied, this may prevent the drive wheels from losing traction as quickly.

- Don't spin your tires. Spinning causes friction which turns snow to ice or digs you into the snow deeper. Apply power gently.
- Keep the tire pressure at recommended levels for normal winter driving. When stuck, try letting some pressure out of the pulling tires, putting more tread on the road. If you deflate for traction, be sure to inflate them as soon as possible.

- If you add weight to your vehicle for traction, your vehicle may not handle properly and you will decrease your gas mileage. So, if you decide to add weight, don't overdo it. Place the weight over the drive wheels.

**Bridge surfaces freeze** before roads do and shady spots in the road will be icy for some time after the open areas clear off.

**Let someone know when you are leaving, where you are going, the route you are taking, and your expected arrival and return time.**

**Monitor weather** and download MDT's mobile app, MDT Travel Info, or visit [www.mdt.511.com](http://www.mdt.511.com) for the most current information.

**Keep your fuel tank full.** You are less likely to become stranded with a full tank and if you do become stranded, you will have enough fuel to run your vehicle and stay warm. Keeping the tank full will minimize condensation. Using a fuel additive will help. Winter travel on interstates or other major highways will lessen the likelihood of becoming stranded.

**If road conditions exceed or even test your driving ability, find a safe place to wait until you can continue your journey safely.**

## Beware of the Dark

Despite having fewer travelers on the road at night, more than half of all accidents occur after dark. The most dangerous time is between 9:00 p.m. and 3:00 a.m. on weekends. One explanation is that there are three times as many alcohol-related crashes at night. But, the fact remains, **drivers simply can't see as well at night.**

When the sun sets, remember to:

- **Slow down.** Reduce your speeds at night to compensate for lost visibility, and never over-drive your headlights.
- **Dim your high beams.** In most states it is illegal to use high beams within 500 feet of an oncoming vehicle. High beams can blind the other driver, particularly older drivers who take up to eight times as long to recover from glare as a teenager. Be considerate—dim your high beams to oncoming traffic as well as those vehicles you approach from the rear.
- **Divert your eyes.** When you meet high beams head on, don't stare into them. Instead, look to the right edge of the road. Safety experts recommend that you not flick your high beams to warn the other driver. And never leave your high beams on to get even as this only increases the chances of an accident.
- **Focus driving lights.** Many sporty models today have an extra set of driving or fog lights. Although they can aid drivers in the fog or on certain dark country lanes, these lights should be used sparingly in well-lighted urban areas and they should be kept focused on the road, not shining up in the trees or into the eyes of oncoming drivers.



## Work Zone Safety

Knowing that fines double in Montana's work zones slows most drivers down but not all.

Here are other tips to follow:

- **Stay alert:** Dedicate your full attention to the roadway.
- **Pay close attention:** Signs and work zone flaggers save lives.
- **Turn on your headlights**
- **Don't speed:** Note the posted speed limits in and around the work zone.
- **Expect the unexpected**
- **Be patient:** Remember that construction crews are working to improve your future ride.



## Snowplow Safety

Remember...Don't Crowd the Plow!

Here are a few tips for sharing the road with snowplows:

- **Stay Back:** At least 5 car lengths
- **Slow Down:** Most winter driving crashes are caused by driving too fast for conditions.
- **Be Patient:** Remember snowplows maneuver slowly and need room to work.
- **Stay Alert:** Snowplows turn and exit the roadway frequently.
- **Watch For Whiteouts:** Never drive through a snow cloud caused by a plow or blowing snow. Wait until you can see and be seen.



For more information on winter driving tips:

<https://www.mdt.mt.gov/other/webdata/external/maint/winter-driving-tips.pdf>

In the event you find yourself broken down while traveling or need to evacuate your home or office, you should have some supplies in your vehicle to keep you as comfortable as possible & help you survive.

# Emergency Travel Kit

## What You Need...

- NOAA Weather Radio
- Flashlight
- Extra Batteries
- First aid kit
- Blankets
- Season-appropriate clothing
- Whistle to signal for help
- Dust mask
- Moist towelettes, garbage bags & plastic ties
- Basic Tool Kit, Knife & Shovel
- Axe or Saw
- Tow Chain, Straps or Come-Along
- Spare Tire
- Wire & Rope
- Starter Fluid, Extra Oil, & Deicer
- Flares
- Kitty Litter or Sand
- Booster Cables
- Water
- Non-perishable, high energy food
- Local maps

## Additional Items to Consider:

- Prescription medications & glasses
- Infant formula & diapers
- Pet food & extra water for your pet
- Important family documents (copies of insurance policies, identification and bank account records in a waterproof container)
- Cash or traveler's checks & change
- Fire Extinguisher
- Matches in a waterproof container
- Feminine supplies & personal hygiene items
- Mess kits, paper cups, plates & plastic utensils, paper towels
- Paper and pencil
- Books, games, puzzles or other activities for children
- Specialized items for disabled family members.

## GPS Can Save Your Life!

Your handheld or vehicle GPS (Global Positioning System) can be among your most valuable tools if you become lost. Know how to use it and take it with you on EVERY trip.



## Could Your Vehicle Save Your Life...Sure!\_\_\_\_\_

Even without a survival kit, you can use your vehicle to keep you safe and possibly save your life. Here's how:

- A hubcap or sun visor can be substituted for a shovel.
- Seat covers can be used as blankets.
- Floor mats can be used to shut out wind or be used as covers for warmth.
- Engine oil burned in a hubcap creates a smoke signal visible for miles. To start the fire, prime with a little gasoline you get from your tank using a wire and a tissue or rag.
- Use your horn! It can be heard as far as a mile away. Three long blasts ten seconds apart every 30 minutes is a standard distress signal.
- A rearview mirror can be removed and will serve as an excellent signaling device.
- Burn a tire for warmth and to send a signal. Be sure to remove the tire from the car first!

## If you are trapped in your vehicle:

- Keep calm.
- If you are on a well-traveled road, indicate to others you are in trouble. Use the signaling devices in your survival kit, emergency lights on your vehicle, raise the hood, and tie something bright to your antenna.
- Stay in the vehicle and wait for help. Do not leave unless you see a house or building within walking distance.
- Run the engine to keep warm but do it sparingly.
- Check the exhaust pipe of your car to ensure snow has not blocked it. If this happens, you risk carbon monoxide poisoning.
- Exercise, clap your hands, move your arms and legs vigorously or do other

isometric exercises to keep your circulation going.

- Take turns on watch if possible.
- Stay awake if you are alone.

## Light it Up:

Don't be so sure other drivers can see you if you are pulled over or disabled on the side of the road. Hazard lights along with auxiliary warning devices such as triangle reflectors or flares can increase your chances of others seeing you from a distance. Place the first one ten feet from your car, the second 100 feet away and the third one 200 feet away. On an undivided road, put one triangle 100 feet in front of your car, one ten feet behind and another 100 feet behind.

## Towing:

Improper towing on snowy streets and highways cause accidents every year. Typically, the vehicle being towed is not running, leaving its driver with many disadvantages. Power steering and power brakes do not work on a vehicle that is not running, nor does the defroster. Try seeing through an icy windshield at 20 below!



If towing is necessary, it is recommended that an automobile dealer or commercial towing service do it. Commercial operators are usually aware of state and local laws pertaining to towing and if you avoid a towing accident by using them, you may save money.

## Starting a Cold Car

Starting a vehicle in freezing temperatures is tough on the engine. In addition to a well-tuned engine and good fuel, heat is the best solution for cold weather starting problems. Engine block heaters heat and some even circulate the water. They also keep the oil a little warmer, which greatly reduces engine wear. Even leaving a trouble light on overnight under the hood can keep a little of the cold out.

If your car won't start and you must use it, you may require a battery boost. Check your battery fluid first. If the fluid is frozen, chances are your battery is ruined and boost starting will not help.

Next, find someone willing to help with a battery of the same voltage. Leave the battery caps off both batteries. Hook up the booster cables to the live battery first, then hook the positive cable to the positive post of the dead car. Last, hook the negative cable to a ground on the dead car (not on the negative post); this will greatly reduce the chance of sparks or a possible explosion.

Run the engine of the live car at fast idle for a few minutes to partially charge the battery. Start the car and remove the cables in reverse order.

Use extreme caution with starting fluid. Most starting fluids contain ether which

is very volatile. It is best to have a fire extinguisher available if you attempt to use this product. In addition to the chance of fire, the ether has a tendency to wash the lubricant from the pistons, causing tremendous wear on the pistons and cylinder walls of an engine.

Water can enter the fuel system by condensation. There is also the possibility you may purchase fuel that has been contaminated with water. A solution to these problems is a product commonly called deicer. There is a difference between diesel and gas deicer. A good preventative measure is to periodically add a can to your fuel tank.

### Winter Driving Techniques:

Today, the number of 4-wheel drive vehicles is at an all-time high in Montana; however, 2-wheel drive passenger cars still top the vehicle registration lists. Due in part to the relatively salt-free environment in our state and the mechanical genius of our people, many of the older rear-wheel automobiles are still on duty. Driving characteristics vary greatly among 4X4, front-wheel drive and rear-wheel drive vehicles and are beyond the scope of this guide.

## The Outdoors

Hikers, skiers, hunters, horseback riders, ATVers, snowmobilers—all are intrigued by the allure of Montana's outdoors. Occasionally, one of these outings goes bad as someone is lost or stranded in desolate terrain and/or severe weather.

### Admit You Are Lost - Don't Panic - And Take Action

You may spend an uncomfortable night (or more), but you can survive.

- If you are with a friend or group, stick together.
- Physical exertion, exhaustion, and climatic conditions can lead to hypothermia.

### Stay Calm:

Use your emergency supply kit to take care of your immediate needs.

### Get Busy:

**Build a Shelter:** A calm mind and a good analysis of what resources are available can result in a very adequate shelter. In timber country you are limited only to your imagination. The lean-to is effective and easy to construct. Cut two "Y" poles with your hatchet or pocket knife or use two trees with long limbs for the corner poles. Place a cross pole between them and place small trees or branches from the cross pole to the ground. Use the string or tape from your pack and interweave cross

members for more protection and warmth. A large log can make a good back for part of the shelter. Take advantage of rock overhangs, a series of dead, intertwined trees, etc.

In open country, take advantage of any depression, rock pile, abandoned auto,



fence, etc. for a windbreak. Snow caves can provide the warmest shelter possible. Dig your cave on the downwind side of the drift. Pine boughs, grass and sticks are suitable to cover the bottom of shelters, but plastic bags or ground tarpaulins are best. The more pine boughs you use, the more comfortable you will be.

Start your fire while it is still daylight. You will not start many fires directly from a match so your survival kit should contain tissue paper, commercial fire starter tablets, steel wool, etc. Pine resin from the wound of a tree is a great starter. If the fire must be started on the snow, build a platform of logs or stones. Place the fire close enough to throw heat into your shelter. Use your space blanket

or plastic bag against the back of your lean-to to reflect the heat.

Once the fire is going, melt snow for water and make some soup or hot chocolate.

Gather fuel for your fire.

### Stay With Your Shelter:

Help will come. Montana has one of the best Search and Rescue systems in the country. They may search on ground or by air—make sure you are visible to them.

### Avalanche:

Snow avalanches pose a very serious threat to the backcountry traveler. Most avalanches that injure or kill people are caused by the victims themselves or members of their group.

Most avalanches occur on slopes of 30 to 45 degrees and during or shortly after storms. During periods of rapid new snow loading, the new snow hasn't yet had time to strengthen and bond to the underlying snow pack. Rapid warming of the snow pack by sun or rain is also destabilizing and often leads to avalanching.

Every person traveling in the back county should carry and know how to use an avalanche transceiver, probe and shovel. Fifty percent of avalanche victims die within the first 20 to 30 minutes of being buried. Two-thirds of the fatalities occur as a result of suffocation while the other third die from trauma injury.

### Safety in the backcountry:

- Educate yourself on avalanches and the areas of risk.
- Carry and know how to use avalanche safety equipment.
- Practice safe avalanche route selection and travel techniques.
- Have an escape plan.



## Create a Family Disaster Plan

Know what to do in case household members are separated in a disaster. Disaster situations are stressful and can create confusion so keep your plan simple and easy to remember.

### Pick two places to meet:

- Right outside your home in case of a sudden emergency, like a fire.
- Outside your neighborhood in case you cannot return home or are asked to leave your neighborhood.

### Pick two out-of-town contacts:

- A friend or relative who will be your household's primary contact.
- A friend or relative who will be your household's alternative contact.

Both adults and children should know the primary and alternative contacts' names, addresses, and home/cell numbers. If necessary, carry the information with you. You can also include these contact numbers on your pet identification tags, or use a national pet locator service that someone could call to report finding your pet.

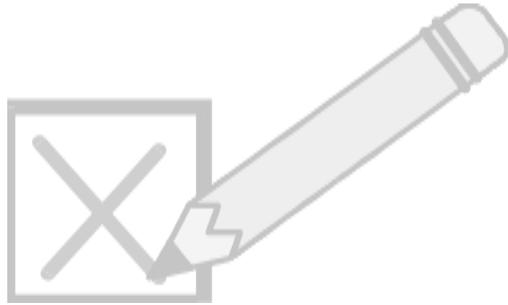
Separation is particularly likely during the day when adults are at work and children are at school or daycare. If household members are separated from one another in a disaster, they should call the primary contact. If the primary contact cannot be reached, they should call the alternative contact. Remember, after a disaster it is often easier to complete a long-distance connection than a local call. Make sure that adults and children know how to tell the contact where

they are, how to reach them, and what happened. Be prepared to leave this essential information in a brief voice mail.

- Discuss what to do if a family member is injured or ill.
- Discuss what to do in the circumstance that authorities advise you to shelter-in-place.
- Discuss what to do if authorities advise you to evacuate.
- Plan how to take care of your pets. Pets (other than service animals) usually are not permitted in public shelters or other places where food is served. Plan where you would take your pet (s) if advised to go to a public shelter where they are not permitted. Many communities are developing emergency animal shelters similar to shelters for people. Contact your local emergency management agency to find out about emergency animal shelters in your community.
- Post emergency numbers by telephones in your home or have them listed as an emergency contact in your cell phone. You may not have time to look them up during an emergency.

**NOTE: You can adapt the Family Disaster Plan to any household—couples, related or unrelated individuals, adults without children, adults with children.... even those who live alone should create a**  
> Disaster Plan <

## Get a Kit, Make A Plan, Be Informed



### What Shelter-in-Place Means:

One of the instructions you may be given in an emergency where hazardous materials may have been released into the atmosphere is to shelter-in-place. This is a precaution aimed to keep you safe while remaining indoors. (This is not the same thing as going to a shelter in case of a storm.) Shelter-in-place means selecting a small, interior room, with no or few windows, and taking refuge there. It does not mean sealing off your entire home or office building. If you are told to shelter-in-place, follow these instructions.

### Why You Might Need to Shelter-in-Place:

Chemical, biological, radiological, or nuclear contaminants may be released accidentally or intentionally into the environment. Should this occur, information will be provided by local authorities on television and radio stations on how to protect you and your family.

Because information will most likely be provided on television and radio, it is important to keep a TV or radio on, even during the workday. The important thing is for you to follow instructions of local authorities and know what to do if they advise you to shelter-in-place.

**Local officials on the scene are the best source of information for your particular situation. Following their instructions during and after emergencies regarding sheltering, food, water, and clean up methods is your safest choice.**

Remember that instructions to shelter-in-place are usually provided for durations of a few hours, not days or weeks. There is little danger that the room in which you are taking shelter will run out of oxygen.

## Shelter-In-Place

If you are told to "shelter-in-place," act quickly and follow the instructions of local authorities.

### In General

- Bring children and pets indoors immediately. If your children are at school, do not try to bring them home unless advised. The school will shelter them.
- Close and lock all outside doors and windows. Locking may provide a tighter seal.
- If you are told there is danger of explosion, close the window shades, blinds or curtains.
- Turn off the heating, ventilation or air conditioning system. Turn off all fans, including bathroom fans operated by the light switch.
- Close the fireplace or woodstove damper.
- Get your disaster supplies kit and make sure the radio is working.
- Take everyone, including pets, into an interior room with no or few windows and shut the door.
- If you have pets, prepare a place for them to relieve themselves where you are taking shelter. Pets should not go outside during a chemical or radiation emergency because it is harmful to them and they may track contaminants into your shelter. The Humane Society of the United States suggests that you have plenty of plastic bags and newspapers, as well as containers and cleaning supplies, to help deal with pet waste.
- If you are instructed to seal the room, use duct tape and plastic sheeting, such as heavy-duty plastic garbage bags, to seal all cracks around the door into the room. Tape plastic over any windows. Tape over any vents and seal electrical outlets and other openings. As much as

possible, reduce the flow of air into the room.

- Call your emergency contact and keep the phone handy in case you need to report a life-threatening condition. Otherwise, stay off the phone so that the lines will be available for use by emergency responders.
- Keep listening to your radio or television until you are told all is safe or you are told to evacuate. Do not evacuate unless advised to do so.
- When you are told that the emergency is over, open windows and doors, turn on ventilation systems and go outside until the building's air has been exchanged with the now clean outdoor air. Follow any special instructions given by emergency authorities to avoid chemical or radiological contaminants outdoors.

### In Your Vehicle

- If you are very close to home, your workplace or a public building, go there immediately and go inside. Follow the "shelter-in-place" recommendations for that location.
- If you are unable to get indoors quickly and safely, pull over to the side of the road and stop your vehicle in the safest place possible. If it is sunny outside, it is preferable to stop under a bridge or in a shady spot to avoid being overheated.
- Turn off the engine.
- Close windows and vents.
- If possible, seal the heating, ventilating and air conditioning vents with duct tape or anything else you may have available.
- Listen to the radio periodically for updated advice and instructions. (Modern car radios consume very little battery power and should not affect your ability to start your car later.)
- Stay where you are until you are told it is safe to get back on the road. Be aware

that some roads may be closed or traffic may be delayed or detoured.

- Follow the directions of law enforcement officials.

#### **At Work**

- Check with your workplace to learn their plans for dealing with a hazardous materials emergency. Their "shelter-in-place" plans should include the following:
- Employers should close the office, making any customers, clients or visitors in the building aware that they need to stay until the emergency is over. Close and lock all windows, exterior doors and any other openings to the outside.
- A knowledgeable person should use the building's mechanical systems to turn off all heating, ventilating and air conditioning systems. The systems that automatically provide for exchange of inside air with outside air, in particular, need to be turned off, sealed or disabled.
- Unless there is an imminent threat, employers should ask employees, customers, clients and visitors to call their emergency contacts to let them know where they are and that they are safe.
- If time permits and it is not possible for a person to monitor the telephone, turn on call-forwarding or alternative telephone answering systems or services. If the business has voicemail or an automated attendant, it should be switched to a recording that indicates that the business is closed and that staff and visitors are remaining in the building until authorities advise it is safe to leave.
- If you are told there is danger of explosion, close any window shades, blinds or curtains near your workspace.
- Take your workplace disaster supplies kits and go to your pre-determined sheltering room(s) and, when everyone is in, shut and lock the doors. There should

be radios or TVs in the room(s) and they should be monitored for information and instructions.

- If instructed to do so by officials, use duct tape and plastic sheeting, such as heavy-duty plastic garbage bags, to seal all cracks around the door(s) and any vents into the room. As much as possible, reduce the flow of air into the room.
- One person per room should write down the names of everyone in the room. Call your business-designated emergency contact to report who is in the room with you and their affiliation with your business (employee, visitor, client, customer).
- Keep listening to the radio or watching TV for updates until you are told all is safe or you are told to evacuate.
- When you are told that all is safe, open windows and doors, turn on heating, ventilating and air conditioning systems and go outside until the building's air has been exchanged with the now-clean outdoor air. Follow any special instructions given by emergency authorities to avoid chemical or radiological contaminants outdoors.

## **Listen to local authorities for guidance on when to Shelter-In-Place.**

## **Where to Shelter-in-Place**

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### **\*An interior room**

The room should have ten square feet of floor space per person in order to provide sufficient air to prevent carbon dioxide buildup for five hours. In this room, you should store scissors, plastic sheeting pre-cut to fit over any windows or vents and rolls of duct tape to secure the plastic. Access to a water supply is desirable, as is a working hard-wired telephone, a battery-operated radio and television. Don't rely on cell phones because cellular telephone circuits may be overwhelmed or damaged during an emergency.

### **\*Sheltering room(s)**

Avoid overcrowding by pre-selecting several interior rooms with the fewest number of windows or vents. The appropriate location depends entirely on the emergency situation. If a chemical has been released, you should take shelter in a room above ground level, because some chemicals are heavier than air and may seep below ground. On the other hand, if there are radioactive particles in the air, you should choose a centrally located room or basement. Knowing what to do under specific circumstances is an important part of being prepared.

The rooms should have adequate space for everyone to be able to sit, including an estimated number of visitors. Large storage closets, utility rooms, pantries, break rooms and copy and conference rooms without exterior windows would work well. Access to bathrooms is a plus. If you do not equip this room with a disaster supplies kit, make sure you take your home, office or vehicle kit with you to the area in which you shelter.

### **\*Business-designated emergency contact**

Businesses and schools should assign one or two people to collect information on who is in the building when an emergency happens so they can be accounted for by first responders if necessary.

### **\*Pre-selected rooms**

Classrooms may be used if there are no windows or the windows are sealed and cannot be opened. Large storage closets, utility rooms and meeting rooms could be used. A gymnasium without exterior windows would also work well.

## Evacuation Plans

When community evacuations become necessary, local officials provide information to the public through the media, door-to-door, sirens, telephone calls, reverse 911, emergency broadcast systems, or by other means deemed most effective for that particular situation.

The amount of time you have to leave will depend on the hazard. If the event is a weather condition, such as a severe storm that can be monitored, you might have a day or two to prepare. Unfortunately, many disasters allow little time for people to gather even the most basic necessities. This is why planning ahead is essential.

### Evacuation:

More common than you realize  
Hundreds of times each year, transportation and industrial accidents release harmful substances, forcing thousands of people to leave their homes. Fires and floods cause evacuations even more frequently. People can be evacuated to a shelter, to another community, or even to another state.

Ask local authorities about emergency evacuation routes and see if maps are available with pre-determined evacuation routes marked.

### Evacuation Guidelines

- Keep a full tank of gas in your car if an evacuation seems likely. Gas stations may be closed during emergencies and you will be unable

to pump gas during power outages. Plan to take one car per family to reduce congestion and delay.

- Gather your disaster supplies kit.
- Make transportation arrangements with friends or your local government if you do not own a car.
- Wear sturdy shoes and clothing that provide some protection— long pants, long-sleeved shirts, and a cap. Be mindful of the weather conditions.
- Listen to a battery-powered radio and follow local evacuation instructions.

### Secure your home:

- Close and lock doors and windows.
- Unplug electrical equipment and small appliances. Leave freezers and refrigerators plugged in unless there is a direct risk of flooding.
- Gather your family, pets and survival kit and go if you are instructed to evacuate immediately.
- Let others know where you are going.
- Leave early enough to avoid being trapped by the event.
- Follow recommended evacuation routes. Do not take shortcuts as they may be blocked.
- Be alert for washed-out roads and bridges.
- Do not drive into areas impacted by the disaster.
- Stay away from downed power lines.

Listen to  
Your Local

## Preparedness At Home: Survival Kit

A severe winter storm...catastrophic earthquake...chemical release...major power outage...even civil unrest. Any one of these could require you to be sheltered in your home for an undetermined period of time. Are you prepared? A basic survival kit can help you care for yourself and your family during times of disaster. Here are some of the items you should have in your kit:

**Water** — You should store at least one gallon of water per person per day. Individual needs vary, depending on age, physical condition, activity, diet, and climate.

- Children, nursing mothers, and ill people need more water.
- Very hot temperatures can double the amount of water needed.
- A medical emergency might require additional water.

**Food** —Select foods that require no refrigeration, preparation or cooking and little or no water. If you must heat food, pack a can of sterno fuel. Select food items that are compact and lightweight. Avoid foods that will make you thirsty.

- Ready-to-eat canned meats, fruits and vegetables
- Canned juices, milk, soup (if powdered, store extra water)
- Staples--sugar, salt, pepper
- High energy foods--peanut butter, jelly, crackers, granola bars, trail mix
- Vitamins
- Foods for infants, elderly persons or persons with special dietary needs
- Comfort/stress foods--cookies, hard candy, sweetened cereals, lollipops, instant coffee, tea bags

### First aid supplies

- Sterile adhesive bandages in assorted sizes
- 2-inch sterile gauze pads
- 4-inch sterile gauze pads
- Hypoallergenic adhesive tape
- Triangular bandages

- 2-inch sterile roller bandages
- 3-inch sterile roller bandages
- Scissors
- Tweezers
- Needles
- Moistened towelettes
- Antiseptic
- Thermometer
- Tongue blades
- Tube of petroleum jelly or other lubricant
- Assorted sizes of safety pins
- Cleansing agent/soap
- Latex gloves
- Sunscreen

### Non-prescription drugs

- Aspirin or non-aspirin pain reliever
- Anti-diarrhea medication
- Antacid
- Syrup of Ipecac (use to induce vomiting if advised by the Poison Control Center)
- Laxative
- Activated charcoal (use if advised by the Poison Control Center)

### Clothing, bedding and sanitation supplies

— Consider the climate in which you live and modify for the seasons.

- Jacket or coat
- Long pants & long sleeve shirts
- Sturdy shoes or work boots
- Hat, gloves and scarf

- Rain gear
- Thermal underwear
- Blankets or sleeping bags
- Sunglasses

### Sanitation

- Toilet paper
- Soap, liquid detergent
- Hand sanitizer
- Feminine supplies
- Personal hygiene items
- Plastic garbage bags, ties (can be used for personal sanitation)
- Plastic bucket with lid
- Disinfectant
- Household chlorine bleach

### Tools

- Mess kits, paper cups, plates and plastic utensils
- Portable battery operated radio or tv Flashlight
- Extra batteries
- Cash, traveler's checks & change
- Nonelectric can opener, utility knife
- Fire extinguisher: small canister, ABC type
- Pliers
- Tape
- Compass
- Matches in a waterproof container
- Aluminum foil
- Plastic storage containers
- Signal flare
- Paper, pencil
- Needles, thread
- Medicine dropper
- Shut-off wrench (household gas & water)
- Whistle
- Plastic sheeting
- Map of the area (for locating shelters)

### Special Items for Baby

- Formula

- Diapers
- Bottles
- Pacifiers
- Powdered milk
- Medications

### Special Items For Adults

- Heart and high blood pressure medication
- Insulin
- Prescription drugs
- Denture needs
- Contact lenses and supplies
- Extra eye glasses
- Hearing aid batteries

### Important Documents — Keep these

records in a waterproof, portable container.

- Will, insurance policies, contracts, deeds, stocks and bonds
- Photo IDs, passports, social security cards, immunization records
- Bank account numbers
- Credit card account numbers and companies
- Inventory of valuable household goods, important telephone numbers
- Family records (birth, marriage, death certificates)
- Photocopies of credit and identification cards

It is also helpful to have some way to entertain and pacify yourselves during times of crisis. Games, toys, books, clay, and something to draw or paint with are good ways to pass the time. Whatever you enjoy, make sure it is available in your kit or be sure to take it with you if evacuated.

### NOAA Weather Radio

The NWS maintains a nationwide network of weather radio transmitters-NOAA Weather Radio (NWR) - which broadcast weather information 24-hours a day, 365 days a year. This weather information includes, but is not limited to, local forecasts and observations, severe weather watches and warnings, and educational information. The NOAA Weather Radio Network broadcasts information over more than 560 stations across America and can be received over much of the State of Montana.

### NWR Receiver Consumer Information

NOAA Weather Radio All-Hazards transmitters broadcast on one of seven VHF frequencies from 162.400 MHz to 162.550 MHz. The broadcasts cannot be heard on a simple AM/FM radio receiver; however, there are many receiver options, ranging from handheld portable units to desktop and console models.

**Where to Buy One:** While NOAA's National Weather Service staff prepare and produce Weather Radio broadcasts, NWS neither manufactures nor sells receivers. Receivers can be found at many retail outlets, including electronics, department, sporting goods, or boat and marine accessory stores. They can also be purchased via the Internet from online retailers or direct from manufacturers.

**Key Features:** Depending on the information you want to access and how and where you plan to access our broadcasts, you have many options. There are Standalone Weather Radio receivers as well as Multi-Band/Function Receivers with the Weather Band included. If you want to be alerted to Warnings and Watches day or night, a Standalone receiver might work best for you. If you just want to be able to tune to in the Weather Broadcast, but you do not care about receiving alerts, a general multi-band/function receiver could be better.

**Standalone Receivers:** Standalone Receivers might also come with AM/FM bands, but their primary use will be to receive Weather Radio broadcasts. You can choose between handheld and desktop models depending on whether you will want to take your radio with you when you go out. There are many choices from a number of manufacturers depending on the number of features included.

### Among a receiver's most useful features:

**Tone alarm:** The National Weather Service will send a 1050 Hz tone alarm before most warning and many watch messages are broadcast. The tone will activate all the receivers which are equipped to receive it, even if the audio is turned off. This is especially useful for warnings which occur during the night when most people are asleep.

**SAME technology:** SAME or Specific Alert Message Encoding allows you to specify the particular area for which you wish to receive alerts. Most warnings and watches broadcast over NOAA Weather Radio, are county or independent city-based. Since most NWR transmitters are broadcasting for a number of counties, SAME receivers will respond only to alerts issued for the area (or areas) you have selected.

**Selectable alerting of events:** While SAME allows you to specify a particular area of interest, some receivers allow you to turn off the alarm for certain events which might not be important to you.

**Battery backup:** Since power outages often occur during storms, having a receiver with battery backup can be crucial. **External antenna jack:** While most receivers come with a whip antenna which can usually be extended out from the unit, depending on your location you may need an external antenna to get a good reception. Some receivers come with an external antenna jack (normally in the back of the unit) which will allow you to connect to a larger antenna (indoors or outdoors). You can often purchase these as accessories at the place where you bought your receiver, or from most stores with an electronics department.

### WEATHER WATCH OR WARNING?

**Watch:** Conditions exist that could develop into an event.  
**Warning:** Situation is occurring or is imminent.

## More To Know

- If you live in an area susceptible to wildland fires, make sure you have done all you can to minimize the fuels around your home and outbuildings. Removing trees & shrubs, keeping lawns green, and building with non-flammable materials are helpful. Creating defensible space can make a difference in whether your home survives a wildland fire. For additional information, visit [www.firewise.org](http://www.firewise.org)

## Insurance

- Learn where your community shelters will be located in the event a disaster forces you from your home.
- Mitigate your home and office environment to withstand a catastrophic earthquake. Anything that could hurt or kill you (falling or moving furniture, imploding windows) or anything that is valuable to you (computer systems, artwork, mementoes), should be secured and protected to assure they will not contribute to your injuries or losses.
- Make sure you are insured!! Review your policy with your insurance adjuster to assure you have the appropriate riders to cover the hazards in your area. Earthquakes and floods commonly are not covered on a standard policy.
- Infants, elderly, special-needs populations, and your pets will all require additional considerations during times of disasters and emergencies. Prepare now so you are able to accommodate those needs.

## Mitigate

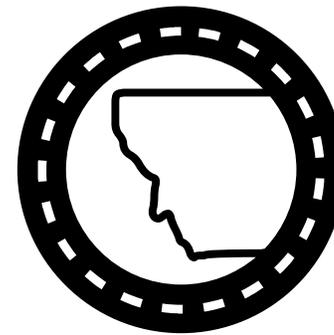
- It is not always advisable to turn off your water, electricity, or natural gas. If you are advised or need to do any of these during times of disaster, now is the time to learn how.
- If you are renting a new place or building or buying a home, now is the time to find out about hazards within that community and the risks associated with those hazards. Are you willing to assume the responsibility of possibly facing those consequences? Mitigating now could prevent substantial losses later.
- [www.Ready.gov](http://www.Ready.gov) provides great information on preparing for disasters at home and in the workplace. It even has information for kids so they can learn about disasters and their role in preparing for them.

## Defensible Space

- Want to do more? Look into starting or becoming part of a Community Emergency Response Team, or CERT. This is a great way to help your community and better prepare yourself for disaster. More information can be found at: [www.citizencorps.gov/cert/index](http://www.citizencorps.gov/cert/index)
- Building codes and guidance on land use planning exist for your benefit. Respecting these laws and following local recommendations will contribute to your safety. Additionally, overall losses will be minimized if your home and/or business survives a disaster.

## Notes

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**VISION ZERO** ★  
zero deaths · zero serious injuries

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**MONTANA DEPARTMENT  
OF TRANSPORTATION**

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