

## Turn Around Don't Drown

Each year, more deaths occur due to flooding than from any other thunderstorm related hazard. Why? The main reason is people underestimate the force and power of water. Many of the deaths occur in automobiles as they are swept downstream. Of these drownings, many are preventable, but too many people continue to drive around the barriers that warn you the road is flooded.



Whether you are driving or walking, if you come to a flooded road, **Turn Around Don't Drown**®. You will not know the depth of the water nor will you know the condition of the road under the water.

## Flood Safety

Nearly one-half of all flash flood fatalities are vehicle-related. Follow these safety rules to protect yourself and others:

- ❖ **Climb to safety!** Move to higher ground as quickly as possible. You will not be able to outrun the flood.
- ❖ **Never drive across water covered or flooded roadways.** Two feet of water can carry away most automobiles. Road beds may be washed out under flood waters. *Turn Around Don't Drown*®
- ❖ **Don't underestimate the power of moving water!** Avoid areas already flooded, especially if the water is flowing fast. Do not attempt to cross flowing streams. *Turn Around Don't Drown*®
- ❖ **Leave your vehicle immediately and seek higher ground** if your vehicle is suddenly caught in rising water.
- ❖ **Flash floods are most common at night.** Never camp in a canyon or near a stream. If you must abandon camp, have a planned escape route.
- ❖ **Be especially cautious at night** when it is harder to recognize flood dangers.



## NOAA Weather Radio

The quickest way to get  
weather information!

NOAA Weather Radio provides broadcasts of the latest weather information from the National Weather Service office in Riverton 24 hours a day. These radios are either battery-operated portable units or AC-powered desktop models with battery back-up. While NOAA Weather Radio broadcasts will not be found on the standard AM/FM radio bands, some CB radios and scanners are capable of receiving the weather band frequencies. Also, many weather radios are small enough to take along on the road or on outdoor activities and can keep you informed of the latest weather changes. NOAA Weather Radio also serves as an "all hazards" alert system. This allows emergency management officials to inform the public of emergencies and other incidents that require the public to take action to protect themselves. NOAA Weather Radio operates as an "all hazards" radio network, making it the single source for the most comprehensive weather and emergency information available to the public. Broadcasts of emergency and post-event information for all types of hazards, both natural and man-made, are broadcast whenever these situations arise.

### Wyoming NOAA Weather Radio Frequencies

<u>Transmitter</u>	<u>Frequency</u>	<u>Transmitter</u>	<u>Frequency</u>
Afton	162.425		
Casper	162.400	Lander	162.475
Cheyenne	162.550	Lead, SD	162.525
Cody	162.400	Mammoth	162.425
Dubois	162.450	Newcastle	162.475
Evanston	162.450	Pinedale	162.500
Gillette	162.500	Rawlins	162.425
Glendo	162.450	Rock Springs	162.550
Grant Village	162.450	Sheridan	162.475
Jackson	162.525	Thermopolis	162.500
Kaycee	162.550	Worland	162.525



A Touchstone Energy<sup>SM</sup> Cooperative   
The power of human connections

Presents:

# Lightning and Flood Safety

## A Basic Weather Safety Guide

In Cooperation With:



**National Weather Service**  
**12744 West U.S. Highway 26**  
**Riverton, WY 82501**  
(307) 857-3898  
(800) 211-1448

<http://www.weather.gov/riverton>

## Lightning Facts

Did you know that nearly 1,800 thunderstorms are occurring at any moment around the world? That totals 16 million each year! In the United States, thunderstorms produce an estimated 25 million cloud-to-ground flashes of lightning each year. This deadly and destructive force of nature can reach a temperature of 50,000°F and one stroke can carry between 100 million and 1 billion volts of electricity! Also, lightning causes about \$5 billion of economic impact each year in the United States.

Among the most deadly of all thunderstorm phenomena is lightning. Lightning occurs with **ALL** thunderstorms and is responsible for more deaths and injuries across Wyoming each year than any other thunderstorm phenomena. In fact, Wyoming tops the nation with an average of 5.74 injuries per million people each year. The Cowboy State ranks only behind New Mexico in the number of deaths per million people each year. Experts believe that injuries and fatalities related to lightning may be under-reported by 30% to 50%. Nationwide, lightning kills an average of 73 people each year, approximately 10% of those it strikes.

Most lightning occurs within the cloud or between the cloud and ground. A cloud-to-ground strike begins as an invisible channel of electrically charged air moving from the cloud toward the ground. When the channel nears an object on the ground, a powerful surge of electricity from the ground moves upward to the cloud and produces the visible lightning strike. The rapid heating and cooling of the air near the lightning stroke causes a shock wave that results in thunder. If you can hear thunder you are close enough to be struck by lightning. You should:

- ❖ **Observe the 30/30 rule!** If the time between when you see lightning and hear thunder is 30 seconds or less go to a safe shelter. Stay there until 30 minutes after the last rumble of thunder is heard.

## Hiking and Camping Safety



If you are hiking or camping in the mountains above treeline you are the tallest object. **Move immediately below treeline!** Since 1995, all lightning-related deaths in Wyoming have occurred in the mountains.

## Sports and Recreation Safety

The number of injuries and fatalities among those who participate in sports or outdoor recreational activities is climbing. Lightning is the most frequent weather hazard impacting athletic events. Recreation programs should implement a lightning safety program at every facility.



Action plans should be constructed, complete with locations of safe evacuation sites and shelters. These sites would include substantial buildings and fully enclosed metal vehicles with the windows up. Metal bleachers, baseball dugouts, and golf carts are **NOT** safe shelters. Avoid open fields, trees, water, and high ground. Next, a responsible person should be designated to monitor weather conditions during events. This person should not be the coach, umpire, or referee, as they are frequently unable to devote the proper attention needed to monitor changing weather conditions. The designated monitor must know the facility's action plan and be empowered to enact the plan. The 30/30 rule must be observed! Lightning strokes from 15 miles away, "bolts from the blue," are not uncommon. Activities should also be stopped if the sky darkens or appears threatening. Lightning can develop overhead with little or no warning.

## ...WARNING...WARNING...

Severe weather can develop quickly in Wyoming. The NOAA National Weather Service will do their best to keep you informed of weather hazards by issuing *Watches* and *Warnings*. Knowing the difference between these two terms, and how to react when they are issued, could help you save your life.

**WATCH:** Conditions are *favorable* for the development of severe weather conditions. Watch the sky and remain alert to swift changes in the weather.

**WARNING:** Severe weather conditions are *imminent* or *are occurring*. Take immediate action to protect yourself.

During the **thunderstorm** season, the following Watches and Warnings are issued:

- ❖ Severe Thunderstorm
- ❖ Tornado
- ❖ Flash Flood
- ❖ Flood



## Lightning Safety

When thunderstorms approach you can protect yourself and others by following these rules:

- ❖ **Move inside a sturdy shelter immediately!** If you can see the lightning or can hear thunder, you are close enough to be struck.
- ❖ **Avoid being the tallest object around!** Get as low as you can, but do not lie flat on the ground. Squat on the balls of your feet. If you are wearing a backpack, remove it.
- ❖ **Avoid being near the tallest object around, like a tree.** Sheltering from the rain under a tree is dangerous.
- ❖ **If you take shelter in an automobile be sure it is hard-topped and keep the windows up.** It is the metal shell that protects you, not the rubber tires.
- ❖ **You do not have to be directly hit by lightning to be affected.** Lightning can travel along the ground or jump from nearby objects that have been struck.
- ❖ **Avoid being near fence lines or power lines.** Lightning can travel along the wires and jump to your body.
- ❖ **Don't take shelter in small sheds, under isolated trees, roadside picnic areas, or near water.** Move to a house or other substantial building.
- ❖ **Call for medical help immediately if someone is struck!** Often lightning victims are not dead, their hearts have just stopped beating. Administer CPR immediately. People who have been struck by lightning do not carry an electrical charge.

*Did you know?: To estimate the distance between a lightning flash and your location, count the number of seconds it takes for you to hear thunder after you see the flash. Divide this number by five to approximate how many miles you are from the lightning strike.*

### At home, practice these safety rules:

- ❖ **Stay away from windows and doors.**
- ❖ **Do not touch anything that conducts electricity.** This includes corded phones, wiring, plumbing, and anything connected to these.
- ❖ **If you use a cordless phone stay away from the base station.** The base station is connected to the wiring and will conduct electricity!
- ❖ **Do not shower or wash dishes.**
- ❖ **Unplug electronics before the storm arrives.**