



# National Weather Service



## TORNADO SAFETY FOR YOU AND YOUR FAMILY

### BEFORE

- ✓ **BE WEATHER-READY:** Check the forecast often to see if a tornado is coming. Listen to local news or a NOAA Weather Radio to stay informed about tornado watches and warnings.
- ✓ **SIGN UP FOR NOTIFICATIONS:** Know how to get warnings. Media broadcasts and smart phones can alert residents of severe storms capable of producing tornadoes.
- ✓ **CREATE A PLAN:** Have a family plan that includes an emergency meeting place and shelter spaces. Pick a safe room in your home, such as a basement, storm cellar or an interior room on the lowest floor with no windows.
- ✓ **PRACTICE YOUR PLAN:** Conduct a drill regularly so everyone knows what to do if a tornado is approaching. Make sure all family members know where to go when a tornado warning is issued. Don't forget pets if time allows.
- ✓ **PREPARE YOUR HOME:** Consider having your safe room reinforced. You can find plans for reinforcing an interior room to provide better protection at [fema.gov/safe-room-resources](https://www.fema.gov/safe-room-resources)
- ✓ **HELP YOUR NEIGHBOR:** Encourage your loved ones to prepare for the possibility of tornadoes. Take CPR training so you can help if someone is hurt.

### DURING

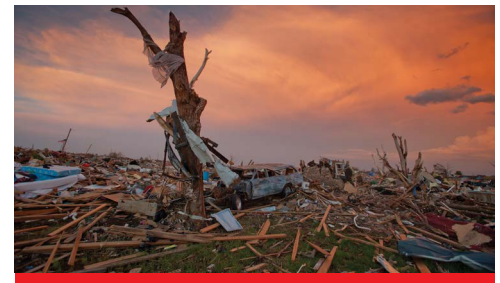
- ✓ **STAY WEATHER-READY:** Continue to listen to local news or a NOAA Weather Radio to stay updated about tornado watches and warnings.
- ✓ **AT YOUR HOUSE:** If you are in a tornado warning area, go to your basement, safe room or an interior room away from windows. Don't forget pets if time allows.
- ✓ **AT YOUR WORKPLACE OR SCHOOL:** Follow your tornado drill and proceed to your tornado shelter quickly and calmly. Stay away from windows and do not go to large open rooms such as cafeterias, gymnasiums or auditoriums.
- ✓ **OUTSIDE:** Seek shelter inside a sturdy building immediately if a tornado is approaching. Sheds and storage facilities are NOT safe.
- ✓ **IN A VEHICLE:** Being in a vehicle during a tornado is NOT safe. The best course of action is to drive to the closest shelter. If you are unable to make it to a safe shelter, either get down in your car and cover your head, or abandon your car and seek shelter in a low lying area such as a ditch or ravine.



If you don't have a tornado shelter, stay in an inside room or hallway and cover your head. Photo: NOAA

### AFTER

- ✓ **STAY INFORMED:** Keep listening to local news or NOAA Weather Radio for updates about more tornado watches and warnings that may be coming. The next round of thunderstorms may bring more tornadoes.
- ✓ **CONTACT YOUR FAMILY AND LOVED ONES:** Let your family and close friends know you are okay so they can help spread the word. Send text messages or posts updates on social media. These posts are more reliable forms of communication than phone calls.
- ✓ **ASSESS THE DAMAGE:** After the tornado threat has ended, check for property damage. When walking through storm damage, wear long pants, a long-sleeved shirt and sturdy shoes. Contact utilities if you see power lines down and stay away from them. Stay out of damaged buildings. Be aware of insurance scammers.
- ✓ **HELP YOUR NEIGHBOR:** If you see someone injured, call 911. Then, if you are trained, provide first aid until emergency responders arrive.



After a tornado, watch out dangerous debris such as sharp metal, glass or downed power lines. Photo: NOAA

For more information, visit [weather.gov/safety/tornado](https://www.weather.gov/safety/tornado)



## TORNADO WATCH VS. WARNING

### TORNADO WATCH: BE PREPARED!

Tornadoes are possible in and near the watch area. Review and discuss your emergency plans and check supplies and your safe room.

Be ready to act quickly if NWS issues a warning or you suspect a tornado is approaching. Acting early helps save lives!

Watches are issued by the Storm Prediction Center for counties where tornadoes may occur. The watch area is typically large, covering numerous counties or even states.

### TORNADO WARNING: TAKE ACTION!

A tornado has been sighted or indicated by weather radar. There is imminent danger to life and property. Move to an interior room on the lowest floor of a shelter. Avoid windows.

If you are in a mobile home, a vehicle or outdoors, move to the closest substantial shelter and cover your head to avoid flying debris.

Warnings typically encompass a much smaller area, around the size of a city or small county. Warnings are issued when a tornado is spotted on the ground or identified by a forecaster on radar.



Photo by Brad Goddard

WIRELESS  
EMERGENCY  
ALERTS  
CAPABLE



# MANUFACTURED/ MOBILE HOME SAFETY



## STEP 01

## STEP 02

## STEP 03

### Every Day

- ✓ **Identify a Safe Place:** Have a family plan that includes ideas for shelter spaces and emergency locations. If there are current plans, review them.
- ✓ **Know Evacuation Routes:** Have routes planned out for evacuating your home in the event of severe weather. Keep up to date on potential road closures in your community.
- ✓ **Timing:** Know how long it will take you to evacuate your home during severe weather.
- ✓ **Be Weather-Ready:** Check the forecast frequently to see if you are at a risk of severe weather. Listen to local news or a NOAA Weather Radio to stay informed about tornado watches and warnings.
- ✓ **Sign Up for Notifications:** Know how to get watches and warnings in your community. Check media alerts in your area.

### Day Before Severe Weather

- ✓ **Verify Your Shelter:** Check with your community's Emergency Management on if shelters will be open in your area. Ask questions if need to.
- ✓ **Coordinate with Family/Friends:** Talk with family and friends to discuss spending time at their home if it is safer.
- ✓ **Help Your Neighbor:** Encourage those around you to prepare for the possibility of severe weather. Check on them and offer to help them get to a safe place.
- ✓ **Stay Weather-Ready:** Continue to listen to local news or a NOAA Weather Radio to stay updated about future watches and warnings.
- ✓ **Transportation:** Make sure all cars are filled up with enough gas to get you to a sturdier shelter. If you do not have a car, contact friends or family to prepare transportation.

### Day of Severe Weather

- ✓ **Execute Your Plan:** If a tornado watch is issued in your community and storms are headed toward your area, it is time to evacuate your home to a sturdier shelter. Take important documents with you. Don't forget your pets.
- ✓ **Stay Informed:** Keep listening to local news or NOAA Weather Radio for more updates about tornado watches and warnings impacting your area.
- ✓ **Contact Your Family and Loved Ones:** Let your family and close friends know where you are evacuating to. Ask if family and close friends in vulnerable housing need to relocate as well.
- ✓ **Last Resort:** If a Tornado Warning is issued for your community before you evacuate, it may already be too dangerous to evacuate to a safer location. Last resort options include driving away (seatbelt on) to a sturdy structure or moving to a protected area outside shielded from potential debris or flooding.



**You can replace your  
possessions...  
...but you cannot replace  
a life.**





## Tornadoes Can Be Deadly

**72%** of all tornado fatalities occur in homes (permanent, mobile, manufactured, etc.)

**54%** of the housing fatalities occur in mobile/manufactured homes, even though MHs only make up 6% of the US housing stock.<sup>1</sup>

Previous research showed that residents are 15-20 times more likely to be killed in a mobile/manufactured home compared to a permanent home.<sup>2</sup> Complete destruction of a MH is expected for wind loads approximately 45% of winds expected to destroy a permanent home.<sup>3</sup>

## No One Is Safe

No matter what type of manufactured home you live in, it is not a safe place to take shelter during a severe weather event. **MOVE TO A SAFER STRUCTURE.**

Single family homes are safer, but not completely safe. After coming to a well-built single-family home or commercial building, it's still important to move to the lowest floor, preferably underground. Keep as many walls between you and the outside as possible. Protect your head with a helmet.

## How to Get Warning Information:



**Wireless Emergency Alerts**



**Internet / Weather Apps**



**Local TV and Radio**



**NOAA Weather Radio**



**Outdoor Sirens**



**Friends and Family**

# Tornado Sheltering Guidelines

Seek the best available refuge area **immediately** when a Tornado Warning is issued.  
Your chance of surviving a tornado is excellent if you follow these guidelines.

### WORST OPTIONS

Mobile homes  
Vehicles  
Underneath a highway overpass

### BAD OPTIONS

Large open rooms like gymnasiums  
Manufactured housing

### GOOD OPTIONS

Interior room of a well-constructed home or building  
Basement

### BEST OPTIONS

Above or below ground Tornado Storm Shelter (NNSA/ICC 500 compliant)\*  
Specifically-designed FEMA Safe Room\*

**Find another option**



**Stay in place until all clear**

PHOTO: U.S. Air Force - Tech. Sgt. Bradley C. Church

\*Recommended by FEMA



1: S.M. Strader, W.S. Ashley, Fine-scale assessment of mobile-home tornado vulnerability in the Central and Southeast U.S., Weather Clim. Soc. (2018)

2: Brooks, H. E., and C. A. Doswell III, 2002: Deaths in the 3 May 1999 Oklahoma City tornado from a historical perspective.

3: J.R. McDonald, K.C. Mehta, A Recommendation for an Enhanced Fujita Scale (EFScale), Wind Science and Engineering Center, Texas Tech University, 2006.





# National Weather Service



## THUNDERSTORM SAFETY FOR YOU AND YOUR FAMILY

### BEFORE A THUNDERSTORM

- ✓ **Be Weather-Ready:** Check the forecast regularly to see if you're at risk for severe thunderstorms. Listen to local news or a NOAA Weather Radio to stay informed about watches and warnings. Preparation is key to staying safe and minimizing impacts.
- ✓ **Sign Up for Notifications:** Know how your community sends warnings. Check media severe thunderstorm alerts available in your area.
- ✓ **Create a Communications Plan:** Have a family plan that includes an emergency meeting place. Pick a safe room in your home such as a basement, storm cellar or an interior room on the lowest floor with no windows.  
Get more details at [ready.gov/make-a-plan](https://www.ready.gov/make-a-plan)
- ✓ **Practice Your Plan:** Conduct a family severe thunderstorm drill regularly so everyone knows what to do if damaging wind or large hail is approaching. Don't forget pets.
- ✓ **Prepare Your Home:** Keep trees trimmed near your house. If you have time before severe weather hits, put away loose objects, close windows and doors, and move valuable objects inside or under a sturdy structure.
- ✓ **Help Your Neighbor:** Take CPR training so you can help if someone is hurt during severe weather. Conduct a drill with elderly or disabled neighbors.



Sit down with your family or friends and develop a communications plan. Photo NOAA

### DURING A THUNDERSTORM

- ✓ **Stay Weather-Ready:** Continue to listen to local news or a NOAA Weather Radio to stay updated about watches and warnings.
- ✓ **At Your House:** Go to your secure location if you hear a severe thunderstorm warning and damaging wind or large hail is approaching. Take your pets if time allows.
- ✓ **At Your Workplace or School:** Stay away from windows if you are in a severe thunderstorm warning. Damaging wind or large hail could blow a heavy object at windows. Do not go to large open rooms such as cafeterias, gymnasiums or auditoriums.
- ✓ **Outside:** Go inside a sturdy building immediately if severe thunderstorms are approaching. Sheds and storage facilities are not safe. Taking shelter under a tree can be deadly. The tree may fall on you and you are at risk of getting struck by lightning.
- ✓ **In a vehicle:** Being in a hard-topped vehicle is safer than being outside; however, if you have time, drive to the closest secure shelter.

### AFTER A THUNDERSTORM

- ✓ **Stay Informed:** Keep your NOAA Weather Radio or portable radio with you in your safe place/shelter, so you can listen for updates on watches and warnings and know whether the threat has passed.
- ✓ **Contact Your Family and Loved Ones:**  
Let your family and close friends know you're okay so they can help spread the word. Power may be out and phone lines may be down.
- ✓ **Assess the Damage:** After you are sure the severe weather threat has ended, check your property for damage. When walking through storm damage, wear long pants, a long-sleeved shirt and sturdy shoes. Contact local authorities if you see power lines down. Stay out of damaged buildings. Be aware of insurance scammers if your property has been damaged.
- ✓ **Help Your Neighbor:** If you see someone injured, call 911. Then, if you are trained, provide first aid until emergency responders arrive.

For more information, visit [weather.gov/safety/thunderstorm](https://www.weather.gov/safety/thunderstorm)





## SEVERE THUNDERSTORM RISK CATEGORIES

	<b>Thunderstorms (No Label)</b>	<ul style="list-style-type: none"> <li>✓ No Severe Thunderstorms Expected, Lightning/Flooding threats exist with all thunderstorms, Winds to 40 mph, Small hail.</li> </ul>
<b>1</b>	<b>MARGINAL (MRGL)</b>	<ul style="list-style-type: none"> <li>✓ Isolated severe thunderstorms possible, Limited in duration and / or intensity. Winds 40 - 60 mph. Low tornado risk.</li> </ul>
<b>2</b>	<b>SLIGHT (SLGT)</b>	<ul style="list-style-type: none"> <li>✓ Scattered severe thunderstorms possible.</li> <li>✓ Short-lived and / or not widespread, isolated intense storms possible. One or two tornadoes.</li> <li>✓ Reports of strong wind damage</li> <li>✓ Hail - 1", Isolated - 2"</li> </ul>
<b>3</b>	<b>ENHANCED (ENH)</b>	<ul style="list-style-type: none"> <li>✓ Numerous severe thunderstorms possible</li> <li>✓ More persistent and / or widespread.</li> <li>✓ A few tornadoes. Several reports of strong wind damage.</li> <li>✓ Damaging hail - 1 - 2"</li> </ul>
<b>4</b>	<b>MODERATE (MDT)</b>	<ul style="list-style-type: none"> <li>✓ Widespread severe thunderstorms likely</li> <li>✓ Long-lived, widespread and intense.</li> <li>✓ Strong tornadoes.</li> <li>✓ Widespread wind damage</li> <li>✓ Destructive hail - 2"+</li> </ul>
<b>5</b>	<b>HIGH (HIGH)</b>	<ul style="list-style-type: none"> <li>✓ Widespread severe thunderstorms expected.</li> <li>✓ Long-lived, very widespread and particularly intense.</li> <li>✓ Tornado Outbreak.</li> <li>✓ Derecho</li> </ul>

Developed by the Storm Prediction Center (SPC)



## THUNDERSTORMS WATCH VS. WARNING

### Severe Thunderstorm Watch: **Be Prepared!**

Severe thunderstorms are possible in and near the watch area. Stay informed and be ready to act if a severe thunderstorm warning is issued. Watches are issued by the Storm Prediction Center ([spc.noaa.gov](https://www.spc.noaa.gov)) for counties where severe thunderstorms may occur. The watch area is typically large, covering numerous counties or even states.

### Severe Thunderstorm Warning: **Take Action!**

A severe thunderstorm has been indicated by radar or reported by a spotter producing hail one inch or larger in diameter and/or winds exceeding 58 mph. Warnings indicate imminent danger to life and property. Take shelter in a substantial building. Severe thunderstorms can produce tornadoes with little or no advance warning.



After a tornado, watch out for dangerous debris, such as sharp metal, glass, or downed power lines.. Photo: NOAA



# National Weather Service



## LIGHTNING SAFETY FOR YOU AND YOUR FAMILY

### WHEN THUNDER ROARS, GO INDOORS!

Each year in the United States, there are about 25 million cloud-to-ground lightning flashes and about 300 people struck by lightning. Of those struck, about 30 people are killed and others suffer lifelong disabilities. Most of these tragedies can be prevented. When thunderstorms threaten, get inside a building with plumbing and electricity, or a hard-topped metal vehicle!

The National Weather Service collects information on weather-related deaths to learn how to prevent these tragedies. Many lightning victims say they were “caught” outside in the storm and couldn’t get to a safe place. Other victims simply waited too long before seeking shelter. With proper planning, similar tragedies can be avoided.

Some people were struck because they went back outside too soon. Stay inside a safe building or vehicle for at least 30 minutes after you hear the last thunder. While 30 minutes may seem like a long time, it is necessary to be safe.

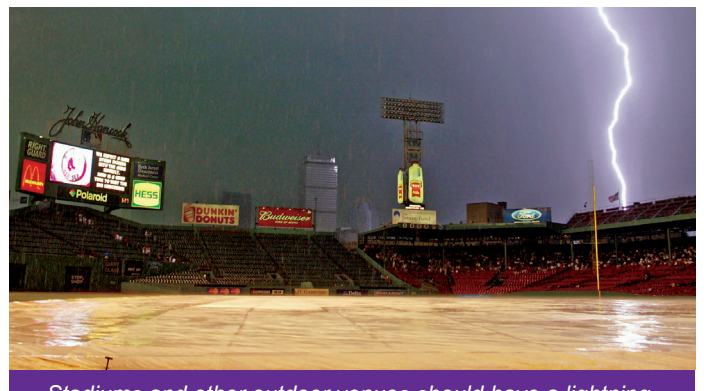
Finally, some victims were struck inside homes or buildings while they were using electrical equipment or corded phones. Others were in contact with plumbing, outside doors, or window frames. Avoid contact with these electrical conductors when a thunderstorm is nearby!

### AVOID THE LIGHTNING THREAT

- ✓ **Have a lightning safety plan.** Know where you’ll go for safety and ensure you’ll have enough time to get there.
- ✓ **Postpone activities.** Consider postponing activities if thunderstorms are forecast.
- ✓ **Monitor the weather.** Once outside, look for signs of a developing or approaching thunderstorm such as towering clouds, darkening skies, or flashes of lightning.
- ✓ **Get to a safe place.** If you hear thunder, even a distant rumble, seek safety immediately. Fully enclosed buildings with wiring and plumbing are best. A hard-topped metal vehicle with the windows closed is also safe. Stay inside until 30 minutes after the last rumble of thunder. Sheds, picnic shelters, tents or covered porches do NOT protect you from lightning.
- ✓ **If you hear thunder, don’t use a corded phone except in an emergency.** Cordless phones and cell phones are safe to use.
- ✓ **Keep away from electrical equipment and plumbing.** Lightning will travel through the wiring and plumbing if your building is struck. Don’t take a bath or shower, or wash dishes during a storm.



Lightning discharge on a golf green. Photo: E. Philip Krider



Stadiums and other outdoor venues should have a lightning safety plan. Photo: NOAA

For more information, visit [weather.gov/safety/lightning](https://www.weather.gov/safety/lightning)



# National Weather Service

## WHAT YOU MIGHT NOT KNOW ABOUT LIGHTNING

- ✓ **All thunderstorms produce lightning and are dangerous.** Fortunately, people can be safe if they follow some simple guidelines when thunderstorms are forecast.
- ✓ **Lightning often strikes outside the area of heavy rain and may strike as far as 10 miles from any rainfall.** Many lightning deaths occur ahead of storms before any rain arrives or after storms have seemingly passed and the rain has ended.
- ✓ **If you can hear thunder, you are in danger.** Don't be fooled by blue skies. If you hear thunder, lightning is close enough to pose an immediate threat.
- ✓ **Lightning leaves many victims with permanent disabilities.** While only about 10% of lightning victims die, many survivors must live the rest of their lives with intense pain, neurological disabilities, depression, and other health problems.

**When Thunder Roars, Go Indoors!**

**STOP all activities.**

Seek shelter in a substantial building or hard-topped vehicle.

Wait 30 minutes after storm to resume activities.

[www.lightningsafety.noaa.gov](http://www.lightningsafety.noaa.gov)



### ORGANIZED OUTDOOR ACTIVITIES

It's essential that people in charge of organized outdoor activities understand the dangers of lightning and have a lightning safety plan. Don't be afraid to ask. If you hear thunder, it's time to get to a safe building or vehicle. Speak out!

### DON'T GET CAUGHT OUTSIDE

No place outside is safe when a thunderstorm is in the area. Get inside as soon as you hear thunder. Run to a substantial building or hard-topped metal vehicle as fast as you can. If you can't get to a safe building or vehicle:

- ✓ **Avoid open areas.** Don't be the tallest object in the area.
- ✓ **Stay away from isolated tall trees, towers or utility poles.** Lightning tends to strike the taller objects in an area.
- ✓ **Stay away from metal conductors such as wires or fences.**  
Metal does not attract lightning, but lightning can travel long distances through it.
- ✓ **If you are with a group of people, spread out.** While this actually increases the chance that someone might get struck, it tends to prevent multiple casualties, and increases the chances that someone could help if a person is struck.

### IF SOMEONE IS STRUCK

Cardiac arrest is the immediate cause of death for those who die. Lightning victims do not carry an electrical charge and may need first aid immediately.

- ✓ **Call for help. Call 9-1-1.**
- ✓ **Give first aid. Begin CPR if you are trained.**
- ✓ **Use an Automatic External Defibrillator if one is available.**  
These units are lifesavers!
- ✓ **Don't be a victim.** If possible, move the victim to a safer place. Lightning CAN strike twice.

For more information, visit [weather.gov/safety/lightning](http://weather.gov/safety/lightning)





# National Weather Service



## FLOOD SAFETY FOR YOU AND YOUR FAMILY

### BEFORE A FLOOD

- ✓ Stay informed: Visit [weather.gov](https://weather.gov) or tune into your local news for the latest forecast.
- ✓ Determine whether your home, school or work is in an area likely to flood.
- ✓ Learn which roadways are likely to flood and find an alternative route so you can avoid them.
- ✓ Create a communications plan so your family will know how to connect during an emergency.
- ✓ Assemble an emergency kit.
- ✓ Prepare for possible evacuation. Pack your bags and include items for your pets so you are ready to leave at a moment's notice.
- ✓ Charge all essential electronics.
- ✓ Be Proactive: Leave before the flooding starts to avoid getting stranded.

### DURING A FLOOD

- ✓ Stay informed: Tune into your local news for updates on flooding in progress.
- ✓ Get to higher ground if you are in an area that is subject to flooding.
- ✓ Follow evacuation orders and heed warning signs.
- ✓ If you have time before you evacuate, disconnect utilities and appliances.
- ✓ Avoid floodwaters: It is NEVER safe to drive or walk through them.

### AFTER A FLOOD

- ✓ Stay informed: Tune into your local news for updates on affected areas and the safety of your drinking water.
- ✓ Avoid floodwaters: Standing water can hide chemicals that can make you sick, power lines that can cause electrocution and sharp debris that can seriously harm you.
- ✓ Avoid disaster areas: Your presence may hamper emergency operations.
- ✓ Heed road closure and cautionary signs.
- ✓ Wait for the "all-clear" before returning to an area that was impacted by flooding.
- ✓ Contact your family and loved ones to let them know you are okay.



Image from the FEMA Photo Library

For more information, visit [weather.gov/safety/flood](https://weather.gov/safety/flood)





# National Weather Service

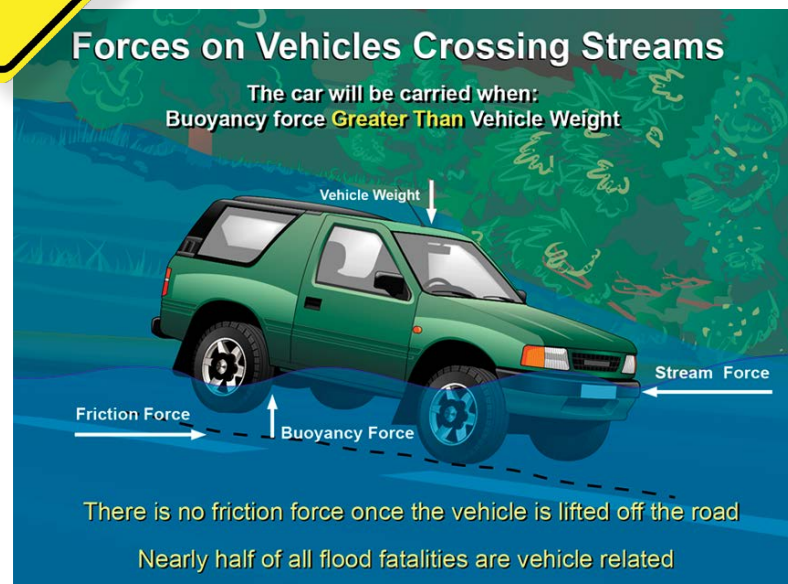
## TURN AROUND DON'T DROWN®

### MOST FLOOD-RELATED DEATHS AND INJURIES COULD BE AVOIDED IF PEOPLE FOLLOWED THIS SIMPLE ADVICE:

Turn Around Don't Drown®. More than 50 percent of flood-related deaths are due to someone driving or walking into floodwaters.

- ✓ **6 INCHES OF FAST-MOVING WATER** can knock adults off their feet and sweep them away.
- ✓ **12 INCHES OF MOVING WATER** can carry off a small car.
- ✓ **18 TO 24 INCHES OF MOVING WATER** can carry away larger vehicles including trucks, vans and SUVs.

If you come to an area that is covered with water, you may not know the depth of the water or the condition of the road or ground underneath. This is especially true at night, when your vision is limited. Play it safe. Whether driving or walking, any time you come to a flooded area, Turn Around Don't Drown®.



For more information, visit [weather.gov/safety/flood](https://www.weather.gov/safety/flood)



# National Weather Service



## HEAT SAFETY FOR YOU AND YOUR FAMILY

### DURING A HEAT WAVE

- ✓ **Slow down:** Reduce, eliminate or reschedule strenuous activities until the coolest time of the day. Children, seniors and anyone with health concerns should stay in the coolest available place, not necessarily indoors.
- ✓ **Dress for summer:** Wear lightweight, loose-fitting, light-colored clothing to reflect heat.
- ✓ **Eat light:** Choose easy-to-digest foods such as fruit or salads. If you pack food, put it in a cooler or carry an ice pack. Meats and dairy products can spoil quickly in hot weather.
- ✓ **Drink plenty of water (not very cold):** Focus on non-alcoholic and decaffeinated fluids. Drink water even if you don't feel thirsty. If you're on a fluid-restrictive diet or have a problem with fluid retention, consult a physician before increasing consumption of fluids.
- ✓ **Use air conditioners:** Spend time in air-conditioned locations such as malls and libraries if your home isn't air conditioned.
- ✓ **Use portable electric fans:** Fans exhaust hot air from rooms or draw in cooler air. Do not direct the flow of portable electric fans toward yourself when room temperatures are hotter than 90°F. The dry blowing air will dehydrate you faster, endangering your health.
- ✓ **Minimize direct exposure to the sun.** Sunburn reduces your body's ability to dissipate heat. Take a cool bath or shower.
- ✓ **Do not take salt tablets:** Only take salt tablets if recommended by a physician.
- ✓ **Be aware of infants, older, sick or frail people and pets.** Never leave children, disabled adults or pets in a car.
- ✓ **For more heat health tips,** go to the Centers for Disease Control and Prevention: [cdc.gov](https://www.cdc.gov)

### WARNING VS. WATCH

#### Excessive Heat Watch

An Excessive Heat Watch is typically issued two to five days ahead of possible dangerous heat conditions. Certainty regarding the development and timing of the event is lower than a warning.

#### Excessive Heat Warning

An Excessive Heat Warning, sometimes preceded by an Excessive Heat Watch, is typically issued within one to three days of the onset of extremely dangerous heat conditions and remains in effect until the extreme danger subsides. Certainty is high that the event will occur.

#### Heat Advisory

A Heat Advisory is typically issued within one to three days of the onset of dangerous heat and remains in effect until the danger subsides. These conditions pose a lesser, but still dangerous, risk to communities. Certainty is high that conditions will occur.

### EXCESSIVE HEAT - AMERICA'S DEADLIEST WEATHER

Excessive heat poses a significant risk to people's health, including heat stroke and heat exhaustion, which can result in death. Excessive heat generally means unusually hot temperatures, possibly combined with oppressive humidity, that persists for two or more days. However, specific guidelines vary across the country and may be refined through work with local and state health professionals.



*Drink plenty fluids in hot weather, even if you aren't thirsty.*

For more information, visit [weather.gov/safety/heat](https://www.weather.gov/safety/heat)





## HEAT CAN BE DANGEROUS

### The Heat Index

The Heat Index is one way to measure how hot it feels when humidity is considered with the temperature. For example, when the temperature is 95 °F and the relative humidity is 50 percent, the Heat Index is 105 °F. To find the Heat Index temperature, use the chart or use the online calculator available at

[weather.gov/safety/heat-index](http://weather.gov/safety/heat-index).

Heat Index temperatures shaded in red indicate extreme danger. The National Weather Service utilizes the Heat Index in many parts of the country to determine when and where to issue heat alerts.

NWS Heat Index TEMPERATURE (°F)

	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Relative Humidity (%)



LIKELIHOOD OF HEAT DISORDERS  
with Prolonged Exposure or Strenuous Activity

Caution

Extreme Caution

Danger

Extreme Danger



**NEVER** leave a baby, senior or pet locked in a car, even for a few minutes. Dozens of infants and untold numbers of pets die every year in hot vehicles.

HEAT EXHAUSTION		OR	HEAT STROKE	
Faint or dizzy			Throbbing headache, confusion	
Excessive sweating			No sweating	
Cool, pale, clammy skin			Body temperature above 103°	
			Red, hot, dry skin	
Nausea or vomiting			Nausea or vomiting	
Rapid, weak pulse			Rapid, strong pulse	
Muscle cramps			May lose consciousness	
<ul style="list-style-type: none"> <li>Get to a cooler, air conditioned place</li> <li>Drink water if fully conscious</li> <li>Take a cool shower or use cold compresses</li> </ul>		<p><b>CALL 9-1-1</b></p> <ul style="list-style-type: none"> <li>Move person to cooler place</li> <li>Cool using cool cloths or bath</li> <li>Do not give anything to drink</li> </ul>		



# National Weather Service



## WINTER WEATHER SAFETY FOR YOU AND YOUR FAMILY

### BEFORE A WINTER STORM

Before the storm strikes, make sure your home, office and vehicles are stocked with the supplies you might need. Know how to dress for varying degrees of cold weather.

#### AT HOME AND WORK.

- ✓ Your primary concerns at home or work during a winter storm are loss of heat, power and telephone service and a shortage of supplies if storm conditions continue for more than a day. In either place, you should have **Home & Work Winter Storm Survival Kit**.

#### IN VEHICLES.

- ✓ Before you leave the house, call 511 for the latest traffic weather conditions. **TAKE IT SLOW IN THE SNOW.**
- ✓ Fully check and winterize your vehicle before the winter season begins. Carry a [Car Winter Storm Survival Kit](#).

#### ON THE FARM, PET OWNERS.

- ✓ Move animals to sheltered areas or bring pets inside.
- ✓ Haul extra feed to nearby feeding areas.
- ✓ Have water available. Most animals die from dehydration in winter storms.
- ✓ Make sure pets have plenty of food and water and a warm shelter

### DURING A WINTER STORM

When caught in a winter storm, there are life saving actions you can take to protect yourself outside, in a vehicle and inside your home or office.

#### OUTSIDE

- ✓ **Find Shelter.**
- ✓ **When There Is No Shelter Nearby:** Build a lean-to, windbreak or snow cave for protection from the wind.
- ✓ **Melt Snow for Drinking Water:** Eating unmelted snow will lower your body temperature.
- ✓ **Exercise:** From time to time, move arms, legs, fingers and toes vigorously to keep blood circulating.

#### IN VEHICLES

- ✓ Slow down!
- ✓ Make sure your vehicle is completely clear of ice or snow before starting the trip.
- ✓ Let someone know where you are going and what route you will take.
- ✓ Don't leave the house without the following a fully charged mobile phone and car charger and a emergency supplies kit in your car.
- ✓ If your car gets stuck during a storm, stay in the vehicle!
- ✓ Run the motor about 10 minutes each hour for heat.
- ✓ While running the motor, open the window a little for fresh air to avoid carbon monoxide poisoning.
- ✓ Clear snow from the exhaust pipe to avoid gas poisoning.
- ✓ Turn on the dome light at night when running the engine.
- ✓ After snow stops falling, raise the hood to indicate you need help.

#### INSIDE

**Stay Inside:** When using heat from a fire place, wood stove, space heater, etc., use fire safeguards and properly ventilate. If you have a gas furnace, make sure it is not blocked by a snowdrift as soon as it's safe to go out. If you have an upstairs gas furnace which vents out the roof, you may need to turn off the upstairs unit until the snow melts from your roof.

### AFTER A WINTER STORM

Caution! Winter Storm Dangers Linger

When the snow and ice melt, it's tempting to relieve that cabin fever and hit the roads. But melting snow can cause floods, partially cleared roads may be icy or blocked, and creeks and rivers often overflow from the rush of melting snow and ice. Heavy snow may have knocked down power lines and caused gas leaks, both of which can be deadly, but are not obvious at first glance. Follow the tip below to stay safe.

- ✓ Stay Informed. Stay tuned to your local news for updated information on road conditions.
- ✓ Avoid Flooded Roads and Heed Road Danger Signs
- ✓ Check Your Home, Contact Family and Isolated Neighbors.
- ✓ Roadway Hazards After a Winter Storm.

For more information, visit [\*\*weather.gov/safety/winter\*\*](https://weather.gov/safety/winter)



## WINTER WEATHER ALERTS

Winter weather related Warnings, Watches and Advisories are issued by your local National Weather Service office. Each office knows the local area and will issue Warnings, Watches or Advisories based on local criteria. For example, the amount of snow that triggers a "Winter Storm Warning" in the Northern Plains is typically much higher than the amount needed to trigger a "Winter Storm Warning" in the Southeast:

### WARNINGS: TAKE ACTION!

- ✓ **Blizzard Warnings**
- ✓ **Winter Storm Warnings**
- ✓ **Extreme Cold Warnings**
- ✓ **Lake Effect Snow Warnings**
- ✓ **Snow Squall Warnings**

### WATCHES: BE PREPARED

- ✓ **Winter Storm Watches**
- ✓ **Extreme Cold Watches**

### ADVISORIES: BE AWARE

- ✓ **Winter Weather Advisories**
- ✓ **Cold Weather Advisories**

## WINTER WEATHER KEY TERMS

- ✓ **FREEZING RAIN:** Rain that freezes when it hits the surface; creating a coating of ice on roads, walkways, trees and power lines.
- ✓ **SLEET:** Rain that turns to ice pellets before reaching the ground. Sleet also causes moisture on roads to freeze and become slippery.
- ✓ **WIND CHILL:** A measure of how cold people feel due to the combined effect of wind and cold temperatures; the Wind Chill Index is based on the rate of heat loss from exposed skin. Both cold temperatures and wind remove heat from the body; as the wind speed increases during cold conditions, a body loses heat more quickly. Eventually, the internal body temperature also falls and hypothermia can develop. Animals also feel the effects of wind chill, but inanimate objects, such as vehicles and buildings, do not. They will only cool to the actual air temperature, although much faster during windy conditions.





**BLIZZARD WARNING** Sustained winds or frequent gusts to 35 mph or higher for at least 3 hours, & considerable falling and/or blowing snow reducing visibility to 1/4 mile or less.

**DOWNBURST** A strong downdraft from a cumulonimbus cloud which induces damaging winds on or near the ground.

**FLASH FLOOD** A flood that follows heavy rainfall, dam/levee failure, or sudden release of water impounded by an ice jam, within a few hours. There is nothing in the NWS definition that says a flash flood must be a "wall of water."

**FUNNEL CLOUD** Rotating column of air that forms a pendant from a cumulus or cumulonimbus cloud. Circulation does not reach ground.

**HIGH WINDS** Sustained wind of 40 mph or greater for at least one hour, or wind of 58 mph or greater for any length of time.

**ICE STORM WARNING** Ice accumulation of 1/4-inch or more on all surfaces. Usually causes power outages.

**MACROBURST** Large downburst with outflow diameter 2 1/2 miles or larger & damaging winds lasting 5 to 20 minutes. Intense macrobursts can cause tornado-force damage.

**MICROBURST** Small downburst with outflow diameter less than 2 1/2 miles and peak winds lasting only 2 to 5 minutes. May induce dangerous wind and downstream wind shears dangerous to aircraft.

**SEVERE THUNDERSTORM** A thunderstorm accompanied by winds (sustained or gusts) of 58 mph (50 knots) or more and/or hail 1 inch in diameter or larger. Structural wind damage may be used to infer severe thunderstorm occurrence.

**SQUALL LINE** A line of thunderstorms that may extend over several hundred miles, often causing wind damage.

**TORNADO** A violently rotating column of air, usually funnel shaped, always attached to a cumulonimbus cloud. Circulation reaches the ground. Nearly always starts as a funnel. May be accompanied by a loud roaring sound, greenish looking sky, and/or very large hail.

**TORNADO/SEVERE THUNDERSTORM WATCH** A product issued by the Storm Prediction Center indicating atmospheric conditions are favorable for tornadoes/severe thunderstorms. Pay attention.

**TORNADO/SEVERE THUNDERSTORM WARNING** A product issued by local NWS offices to warn of existing or suspected tornadoes/severe thunderstorms. Take cover!

**WIND CHILL WARNING**  
Northwest IN: Wind chill -30°F or colder  
Rest of IN: -25° or colder

**WIND CHILL ADVISORY**  
Northwest IN: Wind chill -20 to -29°F  
Central and rest of Northern IN: Wind chill -15 to -24°  
Southern IN: Wind chill -10 to -24°

**WINTER STORM WARNING for HEAVY SNOW**  
Northern & Central IN:  
6 inches or more in 12 hours or less  
8 inches or more in 24 hours or less

Southern IN: 4 inches or more in 12 hours or less  
6 inches or more in 24 hours or less

**WINTER WEATHER ADVISORY for BLOWING SNOW**  
Visibility at or below 1/4 mile due to blowing snow with winds less than 35 mph.

**WINTER WEATHER ADVISORY for SNOW**  
Northern, Central IN 3 to 5 inches in 12 hours  
Southern IN Less than 4 inches in 12 Hours

**SNOW SQUALL WARNING**  
Usually: visibility 1/4SM or less with subfreezing road temperatures, or plunging temperatures along and behind an Arctic cold front sufficient to produce flash freezes, gusty winds, and blowing snow. Warnings typically last 30 to 60 minutes and are not issued when Winter Storm Warnings or Blizzard Warnings are in effect.

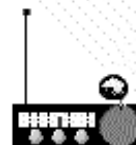


<http://www.nws.noaa.gov/stormready>

NWS Headquarters: <http://weather.gov>  
NWS Weather Radio: <http://www.nws.noaa.gov/nwr>  
Severe Weather: <http://www.spc.noaa.gov>  
Climate Obs / Fcsts: <http://www.ncep.noaa.gov>

**National Weather Service**  
6900 West Hanna Avenue  
Indianapolis, IN 46241  
<http://weather.gov/ind>

317-856-0360  
317-856-0664



# NOAA All Hazards Radio

**Broadcasting from Indianapolis:**  
WXM-78 Bloomington, 162.450 MHz  
WWG-83 Edwardsport, 162.425 MHz  
WWG-72 Georgia, 162.500 MHz  
WWG-73 Seymour, 162.525 MHz  
KEC-74 Indianapolis, 162.550 MHz  
WXK-74 Monticello, 162.475 MHz  
WXK-72 Putnamville, 162.400 MHz  
KZZ-27 Newport, 162.425 MHz  
KJY-93 Muncie, 162.425 MHz



FIPS CODE FOR PARKE COUNTY IS 18121

## Broadcast Schedule

### SEVEN-DAY FORECAST

24 hours a day

Updated by 4:00 AM and 4:00 PM, and as needed

### EIGHT TO FOURTEEN-DAY OUTLOOK

24 hours a day

Updated at 3:00 PM each day

### LOCAL WEATHER OBSERVATIONS

24 hours a day

Updated by 5 minutes past each hour

### SPECIAL PROGRAMMING

Weather safety information during weather preparedness weeks; regular programming is interrupted during times of severe weather

### ULTRAVIOLET INDEX FORECAST

9 Hours a day from April 15th to September 30th.

Updated daily in the early afternoon

## Broadcast Schedule

### CLIMATOLOGICAL REPORT

7:30 AM to 9:30 AM

and 7:30 PM to 9:30 PM

### HAZARDOUS WEATHER OUTLOOK

~5:00 AM to 10:00 AM every 20 minutes

May be updated and played for similar time period any time

### SPECIAL WEATHER STATEMENTS, WATCHES, WARNINGS AND FLOOD STATEMENTS

As needed

### ROUTINE WEEKLY TEST

Wednesday between 11:00 AM and 12:00 PM during good weather, otherwise postponed until the next day of good weather

## DESCRIPTIONS

**SEVEN-DAY FORECAST:** Detailed local weather forecast for the seven days. Winds available for first 2 1/2 days.

**EIGHT TO FOURTEEN-DAY OUTLOOK:** Forecast of above/near/below-normal temperatures & precipitation eight to fourteen days out, plus normal values for the time period.

**LOCAL WEATHER OBSERVATIONS:** A summary of weather conditions over Indiana and parts of adjacent states. Greater detail provided for Indianapolis, Lafayette, Terre Haute, Lawrenceville/Vincennes area, Muncie, and Bloomington.

**CLIMATOLOGICAL REPORT:** Indianapolis climate information including items such as high and low temperatures, precipitation and degree days. Also, Lafayette, Terre Haute, Lawrenceville, Muncie, and Bloomington high and low temperatures for closest associated transmitter locations.

**HAZARDOUS WEATHER OUTLOOK:** Description of any weather hazards expected during the next 7 days.

**SPECIAL WEATHER STATEMENTS, WATCHES, WARNINGS AND FLOOD STATEMENTS:** Specific information on hazardous weather conditions. Warnings and certain watches are preceded by a warning alarm, which activates radios that have the warning alarm feature.

**ULTRAVIOLET INDEX FORECAST:** A scale of 0 to 11+ to help Americans plan outdoor activities to avoid overexposure to UV radiation and thereby lower the risk of skin cancer, cataracts, and other illnesses.

**ROUTINE WEEKLY TEST (RWT):** Broadcast of a test warning alarm and SAME\* tones for verifying operational readiness of NWS and customer equipment. Radio receivers designed and set to activate upon reception of these tones should activate during the test.

\*Specific Area Message Encoding (SAME) is part of the Emergency Alert System (EAS). See your local electronics dealer for more information on weather radios with the SAME feature.