



GALLATIN COUNTY EMERGENCY MANAGEMENT

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Tornadoes

WHAT IS A TORNADO?

A tornado is defined as a violently rotating column of air extending from a thunderstorm to the ground. The most violent tornadoes are capable of tremendous destruction with wind speeds of 250 mph or more. Damage paths can be in excess of one mile wide and 50 miles long.

WHAT CAUSES TORNADOES?

Thunderstorms develop in warm, moist air in advance of eastward-moving cold fronts. These thunderstorms often produce large hail, strong winds and tornadoes. Tornadoes in the winter and early spring are associated with strong frontal systems that form in Texas and Oklahoma and move eastward toward Caddo-Bossier area. Occasionally, large outbreaks of tornadoes occur with this type of weather pattern. Several states may be affected by numerous severe thunderstorms and tornadoes.

During the spring in the South-Central States, thunderstorms frequently develop along a "dryline" which separates very warm, moist air to the east from hot, dry air to the west. Tornado-producing thunderstorms may form as the dryline moves east during the afternoon hours.

Along the front range of the Rocky Mountains, in the Texas Panhandle, and in the southern High Plains, thunderstorms frequently form as air near the ground flows "upslope" toward higher terrain. If other favorable conditions exist, these thunderstorms can produce tornadoes.

Small tornadoes can even accompany tropical storms and hurricanes that move over land. Tornadoes are most common to the right and ahead of the path of the storm center as it comes onshore.

FREQUENCY OF TORNADOES

Tornadoes can occur at any time of the year.

Tornadoes are most likely to occur between 3 and 9 p.m. but have been known to occur at all hours of the day or night.

The average tornado moves from southwest to northwest, but tornadoes have been known to move in any direction. The average forward speed is 30 mph, but may vary from nearly stationary to 70 mph.

PREPAREDNESS • MITIGATION • RESPONSE • RECOVERY

WHAT TO LISTEN FOR

Tornado Watch: Tornadoes are possible in our area. Remain alert for approaching storms.

Tornado Warning: A tornado has been sighted or indicated by weather radar. If a tornado warning is issued for your area and the sky becomes threatening, move to your pre-designated place of safety.

Severe Thunderstorm Watch: Severe thunderstorms are possible in our area.

Severe Thunderstorm Warning: Severe thunderstorms are occurring.

Remember, tornadoes occasionally develop in areas in which a severe thunderstorm watch or warning is in effect. Remain alert to signs of an approaching tornado and seek shelter if threatening conditions exist.

WHO'S MOST AT RISK?

People in automobiles.

The elderly, very young and the physically or mentally impaired.

People in mobile homes.

People who may not understand the warning due to a language barrier.

TORNADO MYTHS

MYTH: Areas near rivers, lakes, and mountains are safe from tornadoes.

FACT: No place is safe from tornadoes. In the late 1980's, a tornado swept through Yellowstone National Park leaving a path of destruction up and down a 10,000-ft. mountain.

MYTH: The low pressure with a tornado causes buildings to "explode" as the tornado passes overhead.

FACT: Violent winds and debris slamming into buildings cause most structural damage.

MYTH: Windows should be opened before a tornado approaches to equalize pressure and minimize damage.

FACT: Opening windows allows damaging wind to enter the structure. Leave the windows alone; instead, immediately go to a safe place.

TORNADO SAFETY: WHAT YOU CAN DO

Before the Storm:

Develop a plan for yourself and your family for home, work, school and when outdoors. Have frequent drills.

Have a NOAA Weather Radio with a warning alarm tone and a battery backup to receive warnings.

Listen to radio and television for information.

If planning a trip outdoors, listen to the latest forecasts and take necessary action if threatening weather is possible.

If a warning is issued or if threatening weather approaches:

In a home or building, move to a pre-designated shelter, such as a basement.

If an underground shelter is not available, move to an interior room or hallway on the lowest floor and get under a sturdy piece of furniture.

Stay away from windows.

Do not try to outrun a tornado in your car; instead leave it immediately.

If caught outside or in a vehicle, lie flat in a nearby ditch or depression.

Mobile homes, even if tied down, offer little protection from tornadoes and should be abandoned.

Occasionally, tornadoes develop so rapidly that advance warning is not possible. Remain alert for signs of an approaching tornado. Flying debris from tornadoes causes most deaths and injuries.

It's up to you!

Each year, many people are killed or seriously injured by tornadoes despite advance warning. Some did not hear the warning while others received the warning but did not believe a tornado would actually affect them. The preparedness information in this section combined with timely severe weather watches and warnings, could save your life in the event a tornado threatens your area. After you have received the warning or observed threatening skies, YOU must make the decision to seek shelter before the storm arrives. It could be the most important decision you will ever make!

TORNADO SAFETY IN SCHOOLS

Every school should have a plan!

Develop a severe weather action plan and have frequent drills.

Basements offer the best protection. Schools without basements should use interior rooms and hallways on the lowest floor and away from windows.

Those responsible for activating the plan should monitor weather information from NOAA Weather Radio and local radio and television.

If the school's alarm system relies on electricity, have a compressed air horn or megaphone to activate the alarm in case of power failure.

Make special provisions for disabled students and those in portable classrooms.

Make sure someone knows how to turn off electricity and gas in the event the school is damaged.

Keep children at school beyond regular hours if threatening weather is expected. Children are safer at school than in a bus or car. Students should not be sent home early if severe weather is approaching.

Lunches or assemblies in large rooms should be delayed if severe weather is anticipated. Gymnasiums, cafeterias, and auditoriums offer no protection from tornado strength winds.

Move students quickly into interior rooms or hallways on the lowest floor. Have them assume the tornado protection position.

Hospitals, nursing homes and other institutions should develop a similar plan.

FAMILY DISASTER PLAN

Families should be prepared for all hazards that affect their area. Develop a family disaster plan.

Where will your family be when disaster strikes? They could be anywhere – at work; at school or in the car. How will you find each other? Will you know if your children are safe? Disasters may force you to evacuate your neighborhood or confine you to your home. What would you do if basic services – water, gas, electricity or telephones – were cut off?

Follow these basic steps to develop a family disaster plan.

Meet with family to create plan. Discuss the information you have gathered. Pick two places to meet: a spot outside your home for an emergency, such as a fire, and a place away from your neighborhood in case you can't return home. Choose an out-of-state friend as your "family check-

in contact" for everyone to call if the family gets separated. Discuss what you would do if advised to evacuate.

Implement your plan. (1) Purchase a weather radio with automatic warning; (2) Post emergency telephone numbers; (3) Install safety features in your house, such as smoke detectors and fire extinguishers; (4) Inspect your home for potential hazards (such as items that can move, fall, break or catch fire) and correct them; (5) Have your family learn basic safety measures, such as CPR and first aid; how to use a fire extinguisher; and how and when to turn off water, gas, and electricity in your home; (6) Teach children how and when to call 9-1-1; (7) Keep enough supplies in your home to meet your needs for at least three days. Assemble a disaster supplies kit with items you may need in case of an evacuation. Store these supplies in sturdy, easy-to-carry containers, such as backpacks, or duffel bags. Keep important family documents in a waterproof container. Keep a smaller disaster supplies kit in the trunk of your car.

A disaster supplies kit should include: A 3-day supply of water (one gallon per person per day) and food that won't spoil *one change of clothing and footwear per person * a first aid kit including a battery-powered NOAA Weather Radio and a portable radio, flashlight and plenty of extra batteries * an extra set of car keys and a credit card or cash * special items for infant, elderly or disabled family members.