



Systemwide Safety Programs
Department of Facilities Management
MONTGOMERY COUNTY PUBLIC SCHOOLS
Rockville, Maryland

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Tornado Safety Information

The following information was obtained from the Federal Emergency Management Agency (FEMA) and the National Oceanic and Atmospheric Administration (NOAA) to be reviewed and implemented in the event of severe weather. Tornadoes can occur at any time of year; however, according to the National Weather Service, the peak activity period is March through early July. Administrators should share this information with students, staff, and parents, as appropriate. Also, NOAA weather radios and emergency phones should be monitored continuously. Questions regarding this information may be directed to the Department of School Safety and Security at 301-279-3066 or Mr. Peter Park, team leader, Systemwide Safety Programs, Department of Facilities Management, at 240-314-1070.

Tornado Safety in Schools

- Be prepared to respond to a wide range of weather-related emergencies such as severe thunderstorms, tornadoes, and winter storms. Designate internal spaces such as interior hallways and classrooms as safe areas to go to in the event of a tornado.
- Basements offer the best protection. Schools without basements should use interior rooms and hallways on the lowest floor and away from windows. Rooms with wide spans of open space (cafeterias, gymnasiums, all purpose rooms) should not be used.
- Designate a staff person to monitor weather information from local radio and television stations and the school's NOAA weather radio.
- Check the emergency kit and first aid kits regularly to ensure readiness of supplies.
- If there is a power failure during a tornado or other weather-related emergency, schools equipped with a generator will maintain the fire alarm system, public address system, phones, and emergency lighting. Schools without generators should plan for alternative ways to communicate throughout the school (megaphone, runners, cell phones, etc.).
- Make specific provisions for students and staff with special needs.

- Initiate a Severe Weather Shelter and provide students and staff with directions via the public address system or e-mail during severe weather.
- Ensure student/staff accountability during all types of weather emergencies.

About Tornadoes

The average tornado moves from southwest to northeast and can produce whirling winds of tremendous speeds. Tornadoes are classified using the Fujita Scale between F-1 and F-5—the higher the number, the stronger the winds. Winds can exceed 300 miles per hour during an F-5 tornado. The updated Enhanced F-Scale (replacing the original Fujita Scale) is a more precise way to assess tornado damage. The scale ranges from 0 through 5 (EF Number)—the higher the number, the stronger the winds from the tornado. The enhanced F-scale still is a set of wind estimates (not measurements) based on damage. It uses three-second gusts estimated at the point of damage based on a judgment of eight levels of damage to 28 damage indicators. Thunderstorms often produce large hail, strong winds, and tornadoes.

Tornado Watch vs. Tornado Warning

It is important to know the difference between *tornado watches* and *warnings*. A *tornado watch* means that tornadoes are possible in the area and that you should remain alert for approaching storms. A *tornado warning* means a tornado has been sighted or indicated by weather radar. If a tornado warning is issued for the area and the sky appears threatening, move to a pre-designated place of safety and follow the “Tornado Safety in Schools” information listed on page 1 of this document.

Tornado Danger Signs

Occasionally, tornadoes develop so rapidly that advance warning is not possible.

- Look out for—
 - dark, often greenish sky
 - large hail
 - wall cloud
 - loud roar, similar to a freight train
- Caution—
 - Some tornadoes are clearly visible.
 - Some tornadoes may be obscured by rain or nearby low-hanging clouds.
 - Before a tornado hits, the wind may die down and the air may become very still.
 - A cloud of debris can mark the location of a tornado even if a funnel is not visible.
 - Tornadoes generally occur near the trailing edge of a thunderstorm.
 - It is not uncommon to see clear, sunlit skies behind a tornado.

Immediate Response

If a tornado warning is issued or threatening weather approaches, immediately seek safety.

- Quickly move students, staff, and visitors from relocatable/portable classrooms and outside activities to the main building.
- When practical, go to the basement or an inside hallway at the lowest level.
- Avoid places with wide-span roofs such as auditoriums, cafeterias, or large hallways.
- Get under a piece of sturdy furniture such as a workbench or heavy table or desk and hold on to it.
- If the tornado warning is issued during school arrival or dismissal times, initiate a Severe Weather Shelter procedure and hold students and staff in the interior hallways of the main building until it is safe to release them.
- The National Weather Service has recommended that in the event of an actual tornado, students should be instructed to assume the tornado protection position; i.e., on the floor in a tucked position with hands folded behind head. Use arms to protect head and neck.
- Stay away from windows. Do not open the windows.
- Consideration should be given to delay lunches or assemblies in large rooms; i.e., gymnasium, cafeteria, and auditorium, when warnings are issued.
- If caught outside or in a vehicle with no safe place to go, the National Weather Service recommends lying flat in a nearby ditch or depression. Be aware of the potential for flooding.

Additional information about tornado safety can be found at the FEMA website—<http://www.ready.gov/tornadoes>. Also attached is a NOAA tornado safety in schools guide sheet discussing good shelter locations and a protective tuck position.



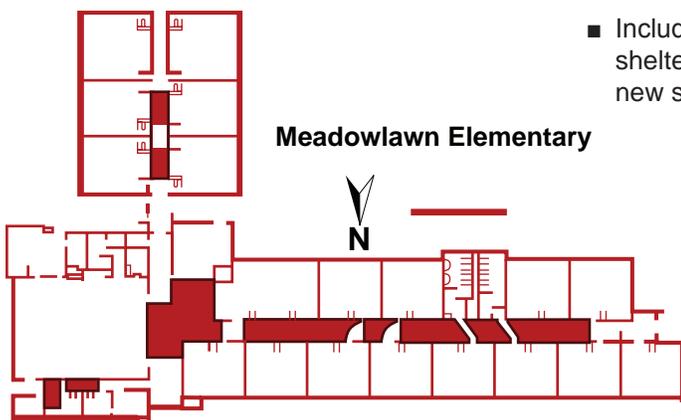
American Red Cross

Hospitals, nursing homes, and other institutions should develop similar severe weather safety plans.

Tornado Safety in Schools

Every School Should Have a Plan

- Develop a severe weather safety plan that ensures everyone will take cover within 60 seconds. Conduct frequent tornado drills. Include provisions for all after-hours, school-related activities.
- Every school should be inspected and tornado shelter areas designated by a registered engineer or architect. Rooms with exterior walls should never be used as tornado shelters.
- Basements offer the best protection. Schools without basements should use interior rooms and hallways on the lowest floor, away from windows.
- Delay lunches or assemblies in large rooms if severe weather is anticipated. Rooms with large roof spans (e.g., gymnasiums, cafeterias, and auditoriums) offer little or no protection from tornado-strength winds.
- Ensure students and staff know the protective position (shown below). Everyone should sit facing an interior wall, elbows to knees, and with hands over the back of their heads.
- Each school should have a NOAA Weather Radio with battery back-up. Remember, the NWS issues a Tornado Watch when conditions are *favorable for tornado development* and a Tornado Warning when a tornado *has been spotted or indicated by radar*.
- If the school's alarm system relies on electricity, have an alternative method to notify teachers and students in case of power failure.
- Make special provisions for faculty and students with disabilities, those in portable classrooms, and those outdoors. They should be notified first of approaching severe weather.
- Keep children at school beyond regular hours during a Tornado Warning. School bus drivers should identify protective areas along each part of their route where they and their passengers can take cover if overtaken by a tornado or high winds.
- Include properly designed tornado shelters when planning additions or new school buildings.



■ = "BEST AVAILABLE" Tornado Shelter

