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Public Information Statement

National Weather Service Boston/Norton MA

147 PM EDT Mon Apr 27 2020

...SEVERE WEATHER PREPAREDNESS WEEK - DEFINITION OF A SEVERE THUNDERSTORM...

The National Weather Service (NWS) Boston, MA has declared April 27 through May 1 as Severe Weather Preparedness Week. Each day this week we will highlight a different preparedness topic.

A severe thunderstorm is defined as a thunderstorm that produces wind gusts of at least 58 mph and/or hail 1.00 inches in diameter or larger, the size of a quarter. Severe thunderstorms can and occasionally do spawn tornadoes.

A Severe Thunderstorm Watch is issued by the Storm Prediction Center in Norman Oklahoma for large portions of the region when the potential exists for severe thunderstorms. A severe thunderstorm warning is issued by the local National Weather Service forecast office, such as in Taunton, when severe thunderstorms are imminent based on radar or already occurring based on spotter observations.

Note that torrential downpours of rain that cause flooding are not part of the definition of severe weather. They would prompt the issuance of Flood or Flash Flood Warnings, but not Severe Thunderstorm Warnings. It is important to note that frequent lightning also is not a criterion for what is termed severe weather. Of course, lightning can be extremely dangerous, but every thunderstorm has lightning. That is what causes the thunder. It is not practical to issue a warning for every thunderstorm, thus we issue Severe Thunderstorm Warnings for those storms that could produce large hail and/or damaging winds.

NOAA Weather radios, with warning alarm tones, will alert you when a Severe Thunderstorm Warning is issued. However, they will not sound an alarm for non-severe thunderstorms, which still can produce deadly lightning. We recommend that lifeguards at beaches and pools have hand-held lightning detectors. The same is true for athletic coaches, camp directors, and parks and recreation workers. Even without equipment, you can protect yourself by moving indoors to a place of safety at the first rumble of thunder. If you can hear the thunder, the storm is usually close enough for you to have the potential to be struck by lightning.

For more information, visit Weather.gov/safety/thunderstorm

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Public Information Statement
National Weather Service Boston/Norton MA
826 AM EDT Tue Apr 28 2020

...SEVERE WEATHER PREPAREDNESS WEEK...WAYS TO RECEIVE SEVERE
WEATHER ALERTS...

The National Weather Service (NWS) Boston, MA has declared
April 27 through May 1 as Severe Weather Preparedness Week. Each
day this week we will highlight a different preparedness topic.

Today's Topics: Ways to receive severe weather alerts

One of the keys to staying safe during the severe weather season
is making sure that you have a way to receive life saving severe
weather watches and warnings. There are many methods and tools,
some of which are available with no cost or fees, that you can
use to receive these important life saving alerts no matter where
you are - at home, at school, or at work. Here is a partial list
of these methods and tools.

NOAA Weather Radio (NWR): NWR is a nationwide network of radio
stations broadcasting continuous weather information from the
nearest National Weather Service office. Specially built
radios receive the NWR broadcast 24 hours a day, 7 days a week,
and sound an audible alert when official watches and warnings are
issued for your area. Think of these radios as a smoke detector
for severe weather alerts.

Wireless Emergency Alerts (WEA): With WEA, emergency alerts can
be sent to your cell phone or mobile device when you may be in

harm's way, without need to download an app or subscribe to a service. In addition to other alert types such as AMBER Alerts, this free service will transmit extreme weather warnings such as Tornado and Flash Flood warnings to your cell phone. The alerts will look like a text message, and will typically show the type and time of the alert, any action you should take. WEA messages include a special tone and vibration. If you receive a WEA message, you should follow any action advised by the emergency message. Seek more details from your favorite TV or radio station, NOAA Weather Radio, news website, desktop application, mobile application, or other trusted source of information.

Cell phone apps: There are many great cell phone apps that provide real-time NWS warnings and alerts, some of which are free to download and use, and others that may charge a small fee. A simple search of your app provider will reveal many of these apps.

Emergency Alert System (EAS) and your favorite TV and radio stations: EAS is the message dissemination pathway that sends warnings via broadcast, cable, satellite, and wireline services. EAS may be used by state and local authorities, including the National Weather Service, in cooperation with the broadcast community, to deliver important emergency information such as severe weather information, AMBER alerts, and local incident information targeted to specific areas. In short, when severe weather strikes, it's a good idea to tune to your favorite local TV or radio station or website for detailed information about the severe weather threat.

In addition to the aforementioned alerting system, many communities also offer free emergency alert notifications through their own systems, such as reverse 911 phone systems. Be sure to check with your local emergency management agency to learn what is available in your area.

Be sure to take some time this week to learn more about severe weather safety. Learning and practicing severe weather safety when the weather is good will allow you to react more quickly when the weather turns bad.

For more information, visit Weather.gov/safety/thunderstorm

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Public Information Statement
National Weather Service Boston/Norton MA
1125 AM EDT Wed Apr 29 2020

...SEVERE WEATHER PREPAREDNESS WEEK - STAYING SAFE DURING HAIL
AND DAMAGING WINDS...

The National Weather Service (NWS) Boston, MA has declared April 27 through May 1 as Severe Weather Preparedness Week. Each day this week we will highlight a different preparedness topic.

While hail and straight-line winds generally do not garner the same attention or respect as tornadoes, they can be just as deadly! Hail can exceed the size of softballs and fall at speeds of over 100 mph, seriously injuring or killing anyone in its path.

Straight-line winds can topple trees onto cars, houses, and power lines. Many deaths from straight-line winds are the result of trees falling onto the person, whether they are outside, in their house, or driving in their car. Strong straight-line wind events can even destroy buildings, especially mobile homes and manufactured homes.

When damaging straight-line thunderstorm winds or large hail is expected, the National Weather Service will issue a Severe Thunderstorm Warning. When a Severe Thunderstorm Warning is issued for your area, or when threatening thunderstorms approach your area, you should seek shelter immediately! To stay safe during high winds, the same safety rules that are used for tornadoes also apply during straight-line wind events, namely, you should seek shelter in an interior room on the lowest floor of a sturdy building or shelter, get away from windows, and get down low to protect yourself from possible flying debris and falling trees. During large hail situations, you should move indoors and stay away from windows. Wind-blown hail can shatter windows. If you are driving during a large hail episode, pull over into a parking lot or gas station and use blankets or coats to cover yourself in case the windshield shatters and hail enters the vehicle.

While not as notorious, or perhaps as spectacular to witness as a tornado, straight-line winds are responsible for most thunderstorm wind damage, especially across southern New England.

A downburst is a strong, relatively small, area of rapidly descending air beneath a thunderstorm. It can result from stronger winds aloft being transported downward to the surface, or it can result as air within the downburst is cooled significantly as rain evaporates into initially drier air. This cool, thus dense, air sinks rapidly to the surface. A downburst is differentiated from common thunderstorm winds because the downburst winds have the potential to cause damage near the ground. Surface damage patterns have shown that whether the winds are straight or even a little bit curved, they tend to spread out, or diverge, considerably as they reach the surface. Conversely, damage patterns resulting from a tornado generally converge toward a narrow central track.

Intense downbursts can be phenomenal. Speeds have been clocked as high as 175 mph near Morehead City North Carolina and at 158 mph at Andrews Air Force Base in Maryland. Closer to home, 104 mph downburst winds were measured at both Worcester Massachusetts on May 31 1998 and Whitman Massachusetts on May 21 1996. Strong downbursts will definitely cause roaring sounds and people may often refer to a sound like a freight train, terms typically associated with tornadoes. Although downbursts are not tornadoes, they can cause damage equivalent to that of a small to medium tornado. After all, wind is wind.

Downbursts are classified as either macrobursts or microbursts, depending on the areal extent of the damaging wind swath. A macroburst's damage extends horizontally for more than 2.5 miles. A microburst is a small downburst with its damaging winds extending 2.5 miles or less. The small horizontal scale and short time span of a microburst makes it particularly hazardous to aviation.

The National Weather Service issues Severe Thunderstorm Warnings for thunderstorms that are expected to produce damaging wind gusts of 58 mph or greater, or hail that is one inch or greater in diameter.

Be sure to take some time this week to learn more about severe weather safety. Learning and practicing severe weather safety when the weather is good will allow you to react more quickly when the weather turns bad.

For more information, visit Weather.gov/safety/thunderstorm

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Public Information Statement
National Weather Service Boston/Norton MA
810 AM EDT Thu Apr 30 2020

...SEVERE WEATHER PREPAREDNESS WEEK - TORNADOES IN SOUTHERN NEW
ENGLAND 2018...

The National Weather Service (NWS) Boston/Norton, MA has declared
April 27 through May 1 as Severe Weather Preparedness Week. Each
day this week we will highlight a different preparedness topic.

In a typical summer season, our southern New England averages
2 or 3 tornadoes. Last year was above normal in NWS Boston/Norton's
jurisdiction with 5 tornadoes: 1 in CT, 3 in MA, and 1 in RI. All
were on the weaker side with EF-0 and EF-1 rankings on the
Enhanced Fujita Damage Scale, which ranges from 0 to 5.

Cape Cod Tornadoes:

July 23, 2019 - A waterspout moved onshore just west of Kalmus
Beach in Barnstable, MA at 1157 AM EDT (1057 AM EST). Winds
gusted to 91 mph at a mesonet observation site at Kalmus. They had
shifted from southeast to west-northwest with the passage of the
tornado. The tornado continued moving northeastward at about 35
mph. The damage was discontinuous but where the tornado touched
down, the damage was quite significant, with winds estimated as
high as 110 mph. The roof of a motel on the south side of Main
Street in West Yarmouth was completely peeled off. Additional
significant tornado damage occurred just southwest of the Dennis-
Yarmouth Regional High School, particularly along Hazelmoor Road
from Violet Glen Road to Vine Brook Road. Dozens of large trees
were uprooted and a few were snapped off. Another house had a hole
in the roof from a fallen tree. The tornado then lifted. However,
severe straight-line wind damage was observed from West Dennis
eastward to West Harwich. Numerous large trees were uprooted,

consistent with 90 mph gusts or greater. Amazingly, no injuries were reported with the storm. Cleanup of roads cost approximately \$434,000 in Yarmouth. That does not count damage to homes or private claims.

July 23, 2019 - A brief and narrow tornado occurred in West Yarmouth and was on the ground at the very same time as another tornado was moving toward South Yarmouth! The tornado touched down on Yacht Avenue and Schooner Street in West Yarmouth and traveled east approximately one-quarter mile before lifting on Egg Harbor Road, just after Pine Cone Drive. The path width was approximately 50 yards. Numerous pine trees were snapped near their bases. Tree tops appeared twisted. Residents reported seeing swirling motion. NWS Doppler Radar showed a tornado debris signature with this storm, indicating that some trees and branches were lofted into the air. This tornado was only on the ground for one minute, between noon and 1201 PM EDT (1100 and 1101 AM EST). It lifted as it approached the south end of the Bass River. Although a brief and very shallow waterspout was observed over the southern part of the Bass River, the damage in West Dennis just to the east of Wrinkle Point was considered to be from strong straight line downburst winds.

July 23, 2019 - The same supercell storm that produced the Barnstable-Yarmouth tornado went on to touch down again near the center of Harwich, MA at 1210 PM EDT (1110 AM EST). The initial touchdown was just east of Harwich Elementary School, just south of Parallel Street. It moved northeast through Harwich Center, passing just south of a golf course, and lifted in East Harwich in the vicinity of Queen Anne Road. At least 150 hardwood trees were either uprooted or snapped. A few homes also had shingles that were ripped off. Wind gusts were estimated as high as 110 mph, which is on the high end of the Enhanced Fujita EF-1 ranking. Harwich spent \$1.2 million on cleanup of roads. That figure is estimated to be one-third of the total costs, when individual homeowner claims are taken into account. The tornado then lifted. However, severe straight-line wind damage was observed in Chatham. Numerous large trees were uprooted, consistent with 90 mph gusts or greater.

September 4, 2019 - An EF-1 tornado moved through a portion of Tolland County between 540 and 549 PM EDT (440 and 449 PM EST), with maximum estimated wind speeds of 85-90 mph. The tornado traveled in a southeast direction and had a discontinuous path. It first touched down on North River Road in Coventry, then went through the Skungamaug River Golf Club on Folly Lane (where it damaged many trees). A tree and wires were down on Merrow Road. It then lifted before touching down again near Brigham Tavern Road, where it then crossed U.S. Route 44 near Depot Road in Mansfield. The tornado lifted after going across a corn field near the

intersection of Plains Road and Stafford Road (Route 32). The majority of the damage was to trees. Only very minor damage to buildings was noted, with a sign at a daycare center on Depot Road blown over. Scattered branches and wires were downed on Ravine Road, just beyond where the tornado had lifted.

October 2, 2019 - A small EF-0 tornado produced damage in Portsmouth, RI and lasted for only about one minute. Most of the damage was concentrated in the area from Prospect Farm Road to Sea Meadow Drive. The damage consisted of a few uprooted and snapped trees but there was also damage to the wall of a garage that was bowed out when the wind entered the garage through an open garage door. Eyewitnesses reported lawn furniture and tree limbs lofted into the air which were thrown several hundred feet away. This was also the area where several videos showed a funnel touching down. Sporadic straight-line wind damage occurred for a half mile farther south on Ethel Drive, Fairview Lane, and Sherwood Drive where there were a few downed trees and large tree limbs. The tornado formed at the collision of two boundaries, one which came in from the north and the other which came in from the east.

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For more information, visit our Severe Weather Preparedness Week webpage at www.weather.gov/boston/severe_safety

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Public Information Statement
National Weather Service Boston/Norton MA
854 AM EDT Fri May 1 2020

...SEVERE WEATHER PREPAREDNESS WEEK CONTINUES -- TORNADO SAFETY AND MAKING A PLAN

The National Weather Service (NWS) Boston, MA has declared April 27 through May 1 as Severe Weather Preparedness Week. Each day this week we will highlight a different preparedness topic.

We know that tornadoes do occur here, such as the EF3 in Monson and Springfield, Massachusetts in 2011, the EF2 in Revere,

Massachusetts in 2014, and 17 EF0 and EF1 tornadoes in southern New England in 2018. The question is, are people prepared? Take these steps to ensure that you and your family are safe during a Tornado Warning.

When your area is under a Tornado Warning, or if you see a tornado approaching, you should seek shelter immediately! Most injuries associated with high winds are from flying debris, so remember to protect your head. The following are safety tips for seeking shelter during high winds and tornadoes.

If you are in a structure such as a residence, small building, school, nursing home, hospital, factory, shopping center, or high-rise building:

1. Go to a pre-designated area such as a safe room, basement, storm cellar, or the lowest building level. If there is no basement, go to the center of a small interior room on the lowest level (such as a closet, bathroom, or interior hallway) away from corners, windows, doors, and outside walls. Put as many walls as possible between you and the outside. Get under a sturdy table and use your arms to protect your head and neck.
2. In a high-rise building, go to a small interior room or hallway on the lowest floor possible.
3. Do not open windows.

If you are in a manufactured home or office:

Get out immediately and go to a pre-identified location such as the lowest floor of a sturdy, nearby building or a storm shelter. Mobile homes, even if tied down, offer little protection from tornadoes.

If you are outside with no shelter available, there is no single research-based recommendation for what last-resort action to take, because many factors can affect your decision. Possible actions include:

1. Immediately get into a vehicle, buckle your seat belt and try to drive to the closest sturdy shelter. If your vehicle is hit by flying debris while you are driving, pull over and park and cover your head with your arms and a blanket, coat or other cushion if possible.
2. Lie in an area noticeably lower than the level of the roadway and cover your head with your arms and a blanket, coat or other cushion if possible.
3. Do not get under an overpass or bridge. You are safer in a

low, flat location.

4. Never try to outrun a tornado in urban or congested areas in a car or truck. Instead, leave the vehicle immediately for safe shelter.

Make sure that you know the difference between a Tornado Watch and a Tornado Warning. A Tornado Watch means that you should be prepared because conditions are such that a tornado could form, somewhere within the large Watch area. However, a Tornado Warning means that you need to take action! A tornado is either occurring, or is imminent, based on radar or spotter observations!

During a Tornado Watch, check for forecast updates, keep an eye to the sky, and know where to take shelter. During a Tornado Warning, take shelter immediately! Seek further forecast information on NOAA Weather Radio, the NWS website, or local media outlets for the latest updates.

The first step in making sure that you and your family are prepared for severe weather is pledging to prepare. This includes developing a family emergency and communications plan. In short, know what to do before severe weather strikes by creating an emergency plan today.

Your family may not be together when a disaster strikes, so it is important to plan in advance: how you will get to a safe place; how you will contact one another; how you will get back together; and what you will do in different situations.

Planning for severe weather also includes:

Ensuring that you and your family members know about your surroundings and severe weather risks specific to your area.

Having an emergency plan in place and knowing what to do before severe weather strikes. Stay informed by having multiple sources for weather alerts. Exercise the plan with your family.

History teaches that a lack of awareness and preparation are common threads among all major weather disasters. Knowing your vulnerability and what actions you should take can save your life and others. During this preparedness week, we ask you to be a force of nature. Know your risk, take action and be an example by sharing what you have done to prepare, with your friends, family, neighbors, and co-workers, and encourage them to do the same.

For more information, visit [Weather.gov/safety/thunderstorm](https://www.weather.gov/safety/thunderstorm) or [Ready.gov/make-a-plan](https://www.ready.gov/make-a-plan)

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