



# Severe Weather And Safety Receiving Warnings



One of the most important precautions you can take to protect yourself and your family from severe weather is to remain weather aware. Being weather aware means you are informed of the weather forecast and alert to the potential hazards. Knowing what to do and where to go when watches and warnings are issued is key to your safety, but a watch or warning is only helpful if you are aware of them. How do you receive information about watches and warnings? With today's technology there are many different ways to receive this information, including the internet, commercial TV and radio, and NOAA Weather Radio. However, all these technologies have one thing in common: It is up to you to remain weather aware and actively listen for watches and warnings!

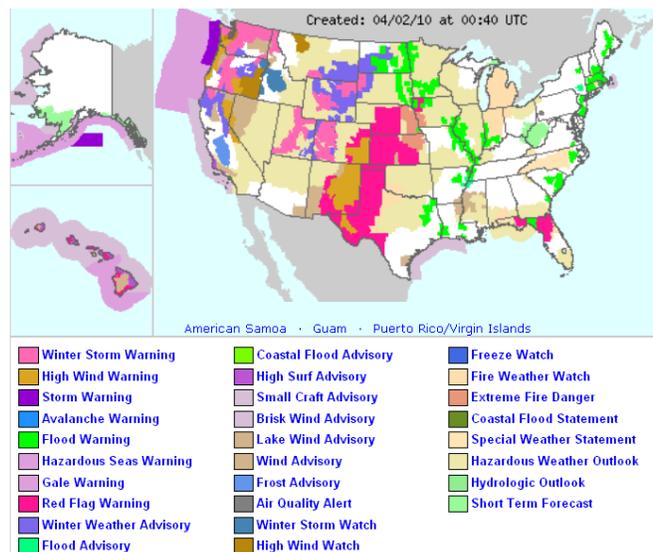
## WHAT TO LISTEN FOR:

### **Watch:**

A watch is issued to give advance notice when conditions are favorable for the development of severe weather, whether it is severe thunderstorms, tornadoes, or flash flooding. When a watch is issued for your area, it is time to *take precautions* and *make sure you are prepared* should bad weather strike.

### **Warning:**

Warnings are issued when severe weather is occurring or imminent. When a warning is issued for your area, you should *take action immediately* to protect your life and your property.



Building a Weather-Ready Nation



## BROADCAST COMMERCIAL MEDIA

The National Weather Service has a strong relationship with the broadcast media. The NWS relies on the broadcast media to help broadcast NWS warnings to the public. This is a very important relationship since most lowans get severe weather warnings from commercial media.

### TELEVISION MEDIA

Television meteorologists and broadcasters transmit NWS warnings to the public. In addition, they usually add value to the warnings with radar displays and visually explain where the threat is. Studies have discovered that local commercial TV is the primary source of warning information (Wolf, 2009) reaching the majority of people. Warning information is supplied through reading NWS warnings on the air, or by occasional scrolls providing the information. During high-end events, television stations will often go wall-to-wall with weather coverage, interrupting normal broadcasts. Warning reception from television stations is maximized during significant events in metro areas during daytime or evening hours and it is minimized during marginal severe events in rural areas at night.



### RADIO MEDIA

Radio media is another important way lowans get severe weather warnings. The radio media varies from large AM stations with a very large coverage areas to smaller stations scattered across central Iowa. Several stations will provide wall-to-wall severe weather coverage during high end events with a focus on their local area.



The Emergency Alert System (EAS) is used to broadcast severe weather warnings. When stations are closed, they use the EAS to transmit severe weather warnings directly from the NWS to the public.



# NOAA WEATHER RADIO

Known as the "Voice of the National Weather Service," NOAA All Hazards Weather Radio (NWR) is provided as a public service by the National Oceanic & Atmospheric Administration (NOAA), part of the Department of Commerce. NWR includes more than 900 transmitters, covering all 50 states, adjacent coastal waters, Puerto Rico, the U.S. Virgin Islands, and the U.S. Pacific Territories. NWR requires a special radio receiver or scanner capable of picking up the signal. Broadcasts are found in the public service band at these seven frequencies (MHz): 162.400, 162.425, 162.450, 162.475, 162.500, 162.525, 162.550.

Modern NWR Receivers are often SAME (Specific Area Message Encoding) capable, meaning they can be setup to only alert or turn on for specific areas (usually counties in the Midwest) by programming them via a small keypad on the receiver. In this manner, you won't be awakened at 3 a.m. for a warning which is not of interest to you.

All Iowans should benefit from NWR since a NWR transmitter is likely within range. It is a great way to get a warning in the middle of the night when you may be asleep, or in remote locations.

NOAA Weather Radio is one of the best indoor warning systems available. Unfortunately, studies have shown that only 5-10 percent of the population owns a weather radio (Wolf, 2009).

## WHAT IS "ALL HAZARDS" MESSAGING?

NWS forecast offices have pre-arranged agreements with emergency managers to facilitate the receipt and transmission of emergency non-weather related messages. These messages can be broadcast over the NOAA Weather Radio and may interrupt the regular broadcast using special alert tones and SAME codes. Examples of these non-weather events include:

- ❖ Toxic chemical incidents
- ❖ Nuclear power plant accidents
- ❖ AMBER Alerts



## OUTDOOR WARNING SYSTEM

When it comes to severe weather, outdoor warning systems (sometimes known as sirens) have one purpose and one purpose only - to alert people who are *outdoors* that something dangerous is happening and they should go inside. Depending on local policy, sirens may be sounded for a variety of life-threatening hazards, but always with the intent that people *outdoors* should seek shelter.



Across Iowa, local siren activation policies vary widely. The city or county government is usually in charge of siren activation policy. The National Weather Service does not have the authority to activate siren systems, but the NWS works closely with communities with severe weather warning systems, including storm sirens.

For severe weather, most communities sound sirens anytime a tornado warning is in effect for their area. Other communities have stricter policies and only activate the outdoor warning system for actual tornado sightings, while a few activate sirens for both severe thunderstorm and tornado warnings. The NWS encourages communities to activate outdoor warning sirens for high-end severe thunderstorms (wind speeds above 75 mph and/or hail of two inches or greater). To find out your community's siren policy, check with the local emergency management agency.

## CELLULAR PHONES AND MOBILE DEVICES



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People can have cell phone notification of NWS warnings. Services vary from carrier to carrier. There are several providers who offer emergency alert notifications, including severe weather warnings for a small fee. Since most people carry a cell phone, or other mobile device, receiving severe weather warnings through text messages is an excellent way to keep informed.

Free warning text messaging will be coming soon for certain cell phone providers and phones.



# THE INTERNET

In recent years, many more people receive severe weather warnings over the internet. Most people still use desk-top or laptop PC's to gain access to the internet. Internet access is expanding rapidly and now many people have internet access on their cellular phones.

People use various websites which have access to NWS warnings. The direct way to access NWS warnings is over its website at: [www.weather.gov](http://www.weather.gov). For central Iowa, add "Des Moines" to the end of the URL or: [www.weather.gov/desmoines](http://www.weather.gov/desmoines).

One major advantage in using the internet is viewing warnings graphically. Since NWS warnings are issued based on the storm and not the county, modern severe weather warnings are best viewed graphically to see exactly where the warning is in effect.

Social media websites are gaining in popularity. In the future warnings may be received on these sites as well. The number of people receiving warnings over the internet will likely continue to increase.



The screenshot shows the National Weather Service website interface. At the top, it says "National Oceanic and Atmospheric Administration's National Weather Service". Below that, there are navigation tabs for "Site Map", "News", and "Organization". A main heading reads "...50th Anniversary of the Satellite that 'Forever Changed Weather Forecasting' ...". Below this, there are several tabs: "Warnings & Forecasts", "Graphical Forecasts", "National Maps", "Radar", "Water", "Air Quality", "Satellite", and "Climate". The "Warnings & Forecasts" tab is selected, showing a map of the United States with various colored regions indicating different types of weather warnings. A legend below the map lists various warning types such as "Severe Thunderstorm Warning", "Winter Storm Warning", "High Wind Warning", etc., each with a corresponding color. The map shows several areas with these warnings, particularly in the central and eastern US. The legend also includes "Red Flag Warning", "Flood Advisory", "Heavy Freezing Spray Warning", "Severe Thunderstorm Watch", "Winter Weather Watch", "High Wind Watch", "Fire Weather Watch", "Extreme Fire Danger", "Special Weather Statement", "Hazardous Weather Outlook", "Hydrologic Outlook", "Short Term Forecast", "Small Craft Advisory", "Blisk Wind Advisory", "Lake Wind Advisory", "Wind Advisory", "Air Quality Alert", "Freeze Warning", "Winter Storm Watch", "High Wind Watch", "Fire Weather Watch", "Extreme Fire Danger", "Special Weather Statement", "Hazardous Weather Outlook", "Hydrologic Outlook", "Short Term Forecast", "Small Craft Advisory", "Blisk Wind Advisory", "Lake Wind Advisory", "Wind Advisory", "Air Quality Alert", "Freeze Warning", "Winter Storm Watch", "High Wind Watch", "Fire Weather Watch", "Extreme Fire Danger", "Special Weather Statement", "Hazardous Weather Outlook", "Hydrologic Outlook", "Short Term Forecast", "Small Craft Advisory", "Blisk Wind Advisory", "Lake Wind Advisory", "Wind Advisory", "Air Quality Alert", "Freeze Warning".

# FRIENDS AND FAMILY



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Relying on friends and family should not be your primary means of receiving a warning. However, time after time, post-storm surveys conducted by the National Weather Service and social scientists have found that one of the biggest reasons people have sought shelter from a storm is because a friend or family member called to warn them of the storm. This has been proven to save lives. If you are in the path of a storm and have moved to safety, reach out to family and friends who are also affected and encourage them to do the same. If you are not affected by a storm, but are aware of a warning covering a friend or loved one nearby, or even across the country, reach out to them and make them aware of the dangerous situation. They may not have heard the warning! Hearing from a loved one helps to personalize the threat of severe weather and encourages people to take actions to protect themselves.