

SKYWARN Detailed Documentation

NWS Terminology

Convective Outlook Categories

Risk	Description
0 - General	Delineates, to the right of a line, where a 10% or greater probability of thunderstorms is forecast during the valid period.
1 - Marginal	An area of severe storms of either limited organization and longevity, or very low coverage and marginal intensity.
2 - Slight	An area of organized severe storms, which is not widespread in coverage with varying levels of intensity.
3 - Enhanced	An area of greater (relative to Slight risk) severe storm coverage with varying levels of intensity.
4 - Moderate	An area where widespread severe weather with several tornadoes and/or numerous severe thunderstorms is likely, some of which should be intense. This risk is usually reserved for days with several supercells producing intense tornadoes and/or very large hail, or an intense squall line with widespread damaging winds.
5 - High	An area where a severe weather outbreak is expected from either numerous intense and long-tracked tornadoes or a long-lived derecho-producing thunderstorm complex that produces hurricane-force wind gusts and widespread damage. This risk is reserved for when high confidence exists in widespread coverage of severe weather with embedded instances of extreme severe (i.e., violent tornadoes or very damaging convective wind events).

Hazardous Weather Risks

Risk	Description
Advisory	An advisory is issued when a hazardous weather or hydrologic event is occurring, imminent, or likely. Advisories are for "less serious" conditions than warnings that may cause significant inconvenience, and if caution is not exercised could lead to situations that may threaten life or property. The National Weather Service may activate weather spotters in areas affected by advisories to help them better track and analyze the event.
Alert	A general alert that does not fit into the other weather risk categories.

Risk	Description
Emergency	An Emergency is issued when an event that by itself cannot pose a threat to life or property, but may indirectly cause other events to happen that may pose a threat to life or property. An example of this would be a power outage, which although not directly posing a hazard, may threaten public safety and critical services. The only existing exceptions to this are the tornado emergency and flash flood emergency, which are issued to get the attention of the public to a major tornado or flash flood.
Message	A general message that does not fit into the other weather risk categories.
Outlook	A Hazardous Weather Outlook is issued daily to indicate that a hazardous weather or hydrologic event may occur in the next seven days. Each segment of the product will contain sections outlining hazardous weather in the short term (through Day 1) and long term (for Days 2-7), and spotter information. The outlook will include information about potential severe thunderstorms, heavy rain or flooding, winter weather, extremes of heat or cold, etc., that may develop over the next seven days with an emphasis on the first 24 hours of the forecast. It is intended to provide information to those who need considerable lead time to prepare for the event (such as emergency management agencies, Skywarn spotters and media outlets). If issued for a coastal area, the outlook will contain two segments: one for the marine zones and adjacent land-based (i.e., coastal) zones, and the other for the remainder of the land-based zones.
Statement	A statement is either issued as a follow-up message to a warning, watch, or emergency, that may update, extend, or cancel the message it is following up or a notification of significant weather for which no type of advisory, watch, or warning exists.
Warning	A warning is issued when a hazardous weather or hydrologic event is occurring, imminent, or likely. A warning means weather conditions pose a threat to life or property. People in the path of the storm need to take protective action. The National Weather Service may activate weather spotters in areas affected by warnings to help them better track and analyze the event.
Watch	A watch is used when the risk of a hazardous weather or hydrologic event has increased significantly, but its occurrence, location, or timing is still uncertain. It is intended to provide enough lead time so those who need to set their plans in motion can do so. A watch means that hazardous weather is possible. People should have a plan of action in case a storm threatens and they should listen for later information and possible warnings especially when planning travel or outdoor activities. The National Weather Service may activate weather spotters in areas affected by watches to help them better track and analyze the event.

Severe Weather Alerts

Type	Description
Aviation	Aviation hazards
Coastal/lakeshore hazards	Hydrological hazards that may affect property, marine or leisure activities in areas near ocean and lake waters including high surf and coastal or lakeshore flooding, as well as rip currents.
Fire weather	Weather conditions that contribute to an increased risk and help cause the spread of wildfires.
Flooding	Hazardous hydrological events resulting in temporary inundation of land areas not normally covered by water, often caused by excessive rainfall.
Marine hazards	Hazardous events that may affect marine travel, fishing and shipping interests along large bodies of water, including hazardous seas and freezing spray.
Non-precipitation hazards	Weather hazards not directly associated with any of the above including extreme heat or cold, dense fog, high winds, and river or lakeshore flooding.
Other Hazards	Other Hazards
Severe local storms	Short-fused, small-scale hazardous weather or hydrologic events produced by thunderstorms (including large hail, damaging winds, tornadoes, and flash floods).
Temperature	Temperature
Tropical cyclone hazards	Hazardous tropical cyclone events that may affect property in inland areas or marine activities in coastal waters, resulting in wind damage, storm surge, tornadoes and flooding rain.
Windchill	Windchill
Winter storms	Weather hazards associated with freezing or frozen precipitation (freezing rain, sleet, and/or snow), or combined effects of winter precipitation and strong winds.

Severe Weather Alert Details

Type	Risk	Detail	Description
Non-precipitation hazards	Emergency	911 Telephone Outage Emergency (TOE)	Issued when 911 telephone service experiences a network outage over a geographic area or telephone exchange. Alternative phone numbers in which to reach 911 or dispatch emergency personnel will be provided to the public.

Type	Risk	Detail	Description
Non-precipitation hazards	Message	Administrative Message (ADR)	A non-emergency message providing updated information about an event that is either in progress, has expired or concluded early, pre-event preparation or mitigation activities, post-event recovery operations, or other Emergency Alert System-related administrative matters.
Other Hazards	Alert	Air quality alert (AQA)	Significant atmospheric pollution (through inhalable particulates or ozone) is expected to accumulate in a given area, and may be hazardous to people suffering from respiratory conditions. Criteria developed in conjunction with the local or state EPA and the product issued at their request.
Other Hazards	Advisory	Air stagnation advisory (NPW)	Atmospheric conditions stable enough to cause air pollutants to accumulate in a given area. Criteria is developed in conjunction with the local or state EPA and the product is issued at their request.
Aviation	Warning	Airport weather warning (AWW)	Addresses weather phenomena (including but not limited to surface wind gusts around or above 40 knots, freezing rain, heavy snow or thunderstorms producing cloud-to-ground lightning within 5 miles [8.0 km] of the airport and/or 1/2-inch [1.3 cm] hail) capable of adversely affecting ground operations at regional and international airports, intended for the use of airport managers, fixed-based operators, airline ground personnel, and other personnel responsible for the safety of ground operations.

Type	Risk	Detail	Description
Flooding	Advisory	Areal flood advisory (FLS)	<p>Minor general or areal flooding of streets, low-lying areas, urban storm drains, creeks, and small streams is occurring, imminent, or highly likely within the next one to three hours, but is not expected to substantially threaten life and property. These advisories are issued on a polygonal basis by the local Weather Forecast Office and are generally in effect for three to six hours.</p>
Flooding	Warning	Areal flood warning (FLW)	<p>General or areal flooding of streets, low-lying areas, urban storm drains, creeks, and small streams in which there is a serious threat to life or property is occurring, imminent, or highly likely. Flood warnings are usually issued for flooding that occurs more than six hours after the excessive rainfall, or when flooding is imminent/occurring but is not rapid enough to prompt a flash flood warning. These warnings are issued on a polygonal basis by the local Weather Forecast Office and are generally in effect for six to twelve hours.</p>
Flooding	Watch	Areal flood watch (FLA)	<p>Hydrometeorological conditions favor a threat of areal flooding affecting area streets, rivers, streams, and/or urban storm drains within six to 24 hours. It is intended to inform the public and cooperating agencies (including ambulance services and fire departments that may assist in water rescues) in advance of expected flood potential, even though the occurrence of flooding is neither certain nor imminent.</p>

Type	Risk	Detail	Description
Other Hazards	Advisory	Ashfall advisory (NPW)	Ash rain resulting in deposition of less than 1/4 inch (6.4 mm) of ashfall accumulation at the surface is occurring or likely. Ashfall from the large airborne ash plume may originate directly from a volcanic eruption, from the re-suspension (by wind) of a significant amount of relic ash, or by large fires. Ashfall accumulations may affect the health of people suffering from respiratory illnesses.
Other Hazards	Warning	Ashfall warning (NPW)	A volcano undergoing a major eruption is creating the likelihood of significant impact on the public (with higher risk to the health of people with respiratory illnesses) and maritime activity due to ashfall accumulation forecast to be greater than or equal to 0.25 inches (6.4 mm), significant debris, lava, or lahar flows.
Non-precipitation hazards	Warning	Avalanche Warning (AVW)	Avalanche activity—either natural or human-induced—is ongoing or imminent, and likely to affect roadways, structures or backcountry activities and threaten the lives of people within the avalanche's path. Safety precautions will be recommended or ordered as dictated by state law or local ordinance.
Non-precipitation hazards	Watch	Avalanche Watch (AVA)	Indicates conditions are forecast to favor natural or human-induced avalanches that could affect roadways, structures, or backcountry activities.
Coastal/lakeshore hazards	Statement	Beach hazards statement (SRD)	Issued for rip or longshore currents, or other hazards (including chemical or biological hazards) may create life-threatening conditions in lake or ocean waters. Beachgoers will be advised to exercise caution when in or near the water.

Type	Risk	Detail	Description
Winter storms	Warning	Blizzard warning (BZW)	Sustained winds or frequent gusts of 35 miles per hour (56 km/h) or greater, accompanying heavy snowfall, frequently reducing visibilities to 1/4 mile (0.40 km) or less is forecast to occur over a period of at least three hours. There are no temperature criteria in the definition of a blizzard, but freezing temperatures of at least 0 °C (32 °F) and 35 miles per hour (56 km/h) winds will create wind chills of at least -8.5 °C (16.7 °F). A winter storm watch for blizzard conditions is issued when conditions meeting criteria are forecast to occur within 12 to 48 hours.
Other Hazards	Advisory	Blowing dust advisory (NPW)	Considerable blowing sand or dust are expected to reduce visibilities to between 1/4 and 1 mile (0.40 and 1.61 km) or less, but greater than 1/4 mile (0.40 km) over a widespread or localized area, caused by strong sustained winds of 25 miles per hour (40 km/h) or greater.
Non-precipitation hazards	Alert	Blue Alert (BLU)	Issued by state and local authorities to warn the public of information relating to a law enforcement officer who is missing, seriously injured or was killed in the line of duty, or if there is an imminent, credible threat to an officer. Information on the suspect and safety instructions for if the suspect has been spotted within a specific community may be included. The NWS added the ability to convey these messages to its WFOs on a phased basis beginning in late 2019.
Marine hazards	Advisory	Brisk wind advisory (NPW)	Sea or lake ice is expected and may be hazardous to small marine craft. May be issued as a Small Craft Advisory with reference of being a brisk wind advisory. This advisory is not issued by WFOs serving the Great Lakes region due to the prevalence of ice floes during winter in the lake bodies.

Type	Risk	Detail	Description
Aviation	Advisory	Center weather advisory (CWA)	Advisories issued when conditions just below severe (SIGMET) criteria. CWAs are issued for thunderstorms, turbulence, icing, and ceiling and visibility limits (IFR).
Non-precipitation hazards	Emergency	Child Abduction Emergency (CAE)	An emergency message, usually issued in accordance with an AMBER Alert, informing the public and law enforcement about a missing child believed to have been abducted. Local or state law enforcement agencies investigating the abduction will provide descriptions of the missing child, suspect or vehicle used by the suspect, and ask the public to notify the requesting agency if they have information on the child's or suspect's whereabouts.
Non-precipitation hazards	Warning	Civil Danger Warning (CDW)	Assigned a higher priority than a Local Area Emergency, this indicates a hazardous event (such as the contamination of local water supply or a military or terrorist attack that is imminent or ongoing) presenting a danger to a significant civilian population, requiring specific protective action (such as evacuation or sheltering in place).
Other Hazards	Message	Civil emergency message (CEM)	A message intended to warn the public of an in-progress or imminent significant threat(s) to public safety and/or property. Although the hazard that warrants such a message to be issued is less specific than that meriting a Civil Danger Warning, it is given higher priority than the Local Area Emergency.
Coastal/lakeshore hazards	Advisory	Coastal flood advisory (CFW)	Minor coastal flooding or tidal overflow is occurring or is imminent within 12 hours. Flooding will not pose a serious threat to lives or property, but will create a nuisance for pedestrian and vehicle travel in the affected area.

Type	Risk	Detail	Description
Coastal/lakeshore hazards	Warning	Coastal flood warning (CFW)	Coastal flooding from ocean water being forced inland from the nearby body (caused by either nor'easters, tropical cyclones or thunderstorms) is occurring, imminent or highly likely within 12 to 24 hours, and poses a serious threat to life and/or property. WFOs may occasionally issue warnings valid after the second forecast period of the date of validity if a strong likelihood of the event exists or when a longer advance notice is needed for public response.
Coastal/lakeshore hazards	Watch	Coastal flood watch (CFA)	Coastal flooding from ocean water being forced inland from the nearby body is possible within 12 to 48 hours, creating significant impacts to life and/or property.
Aviation	Advisory	Convective SIGMET (SIG)	Implies severe or greater turbulence, severe icing, and low level wind shear. Issued for severe surface weather (including surface winds greater than or equal to 50 knots (93 km/h; 58 mph), hail at the surface greater than or equal to 3/4 inch (19 mm) in diameter, or tornadoes); embedded thunderstorms; line of thunderstorms; thunderstorms greater than or equal to VIP level 4 affecting 40% or more of an area at least 3,000 square miles (7,800 km ²).
Other Hazards	Advisory	Dense fog advisory (NPW)	Widespread or localized fog reducing visibilities of 1/8 to 1/4 mi (0.2 to 0.4 km) or less (up to 1 nmi [1.2 mi; 1.9 km] for marine-based advisories, depending on locally defined criteria) is occurring or is forecast within the next six to 12 hours.
Other Hazards	Advisory	Dense smoke advisory (NPW)	Widespread or localized smoke reducing visibilities to 1/4 mi (0.4 km) or less (up to 1 nmi [1.2 mi; 1.9 km] for marine-based advisories, depending on locally defined criteria) is occurring; minimum visibility criteria may be defined by the accordant NWS Regional Headquarters or local Weather Forecast Office.

Type	Risk	Detail	Description
Other Hazards	Warning	Dust storm warning (DSW)	Widespread or localized blowing dust reducing visibilities to 1/4 mi (0.4 km) or less, usually caused by sustained winds of 25 miles per hour (40 km/h) or greater, is occurring or imminent.
Non-precipitation hazards	Warning	Earthquake Warning (EQW)	Indicates earthquake activity is ongoing or imminent.
Non-precipitation hazards	Emergency	Evacuation Immediate (EVI)	Warns the public that immediate evacuation for a long-duration emergency event (such as for an approaching tropical cyclone, a wildfire or the release of flammable or explosive gas) has been recommended or ordered by state and/or local law enforcement.
Temperature	Warning	Excessive Heat Warning (NPW)	Maximum Heat Index (HI) values are forecast to meet or exceed locally defined warning criteria for more than three hours over at least two consecutive days. Excessive Heat Warning are issued within 12 hours of the onset of the following Heat Index (HI) values criteria. Specific criteria varies among local Weather Forecast Offices, due to climate variability and the effect of excessive heat on the local population. Typical HI values are maximum daytime temperatures above 105 to 110 °F (41 to 43 °C) for up to three hours per day, with minimum nighttime temperatures above 75 °F (24 °C) (criteria may vary slightly by county warning area) for two consecutive days. Warning criteria may be lowered by the issuing WFO if the heat event occurs early in the season, during a multi-day heat wave or during a widespread power outage occurs during a heat event due to severe weather phenomena (such as high winds, severe thunderstorms, or a derecho).

Type	Risk	Detail	Description
Temperature	Watch	Excessive Heat Watch (NPW)	Conditions are favorable for an excessive heat event with extreme Heat Index values during the day, combined with nighttime low temperatures of 80 °F (27 °C) or higher that limit perspiration recovery, are forecast to occur to meet or exceed local Excessive Heat Warning criteria in the next 24 to 72 hours.
Temperature	Warning	Extreme Cold Warning (NPW)	Forecast shelter temperature of –50 °F (–46 °C) or colder and air temperature remains below –40 °F (–40 °C) up to the 700 mb (21 inHg) level for three or more consecutive days. Only issued by Weather Forecast Offices in Alaska. Elsewhere, an Extreme Cold Warning can be issued by local Weather Forecast Offices as an experimental product using locally appropriate thresholds, usually with little or no wind. (The product was first used experimentally by Weather Forecast Offices in North Dakota, South Dakota and Minnesota from January until April 2011.) The Extreme Cold Warning and the Wind Chill Warning products will be consolidated into a singular Extreme Cold Warning product for use by WFOs in the rest of the conterminous United States in 2021, accounting for NWS software upgrades.
Temperature	Watch	Extreme Cold Watch (NPW)	Conditions are favorable for an extreme cold event to meet or exceed local Extreme Cold Warning criteria. Only issued by Weather Forecast Offices in Alaska.

Type	Risk	Detail	Description
Fire weather	Warning	Extreme red flag warning (FWA)	Conditions for wildland fire combustion, rapid growth and behavior are extremely dangerous, due to very dry fuels, very low humidity levels, and strong winds. Introduced in October 2019, it is analogous to particularly dangerous situation wording for severe weather watches and warnings and superseded such wording occasionally applied to red flag warnings previously.
Other Hazards	Warning	Extreme wind warning (EWW)	Strong straight-line sustained winds of 74 miles per hour (119 km/h) or above, or wind gusts over 90 miles per hour (140 km/h). Hurricane-like wind damage is expected, and severe structural damage is likely. Those in an extreme wind warning are asked to take cover immediately as if they were in a hurricane or tornado warning. A hurricane warning implies an extreme wind warning.
Tropical cyclone hazards	Warning	Extreme wind warning (EWW)	An extreme wind event producing sustained surface winds of 100 knots (120 mph; 190 km/h) or greater, associated with the eyewall of a major hurricane (Category 3 or higher on the Saffir-Simpson Scale), non-convective winds, downslope winds or a derecho is occurring or expected to occur in the specified coastal or inland area within one hour. Extreme Wind Warnings—which should be issued no prior than two hours before the onset of extreme winds—are not issued by WFOs located within the Pacific basin.
Fire weather	Warning	Fire warning (FRW)	A major, uncontrolled wildfire or structural fire is currently burning in a populated area and/or near major roadways, and evacuation is recommended by local civil authorities.

Type	Risk	Detail	Description
Fire weather	Watch	Fire weather watch (FWA)	<p>Conditions expected to become favorable for the rapid spread of wildfires in areas of dry vegetation within 12 to 48 hours or up to 72 hours if the NWS office is reasonably confident that red flag fire conditions will occur. It is issued primarily to alert fire and land management agencies of conditions ideal for the combustion and spread of wildfires. The surface relative humidity and 10-hour fuel moisture criteria meriting a fire weather watch may vary depending by state based on local vegetation, topography and distance from major water sources, though forecast sustained winds are usually expected to be 20 miles per hour (32 km/h) or greater.</p>
Severe local storms	Emergency	Flash flood emergency (FFS)	<p>A flash flood emergency is a high-end usage of the flash flood warning. The flash flood emergency term is used when widespread flooding is occurring, and either, multiple water rescues have been reported in the past few hours, or if highly populated regions are undergoing significant flash flooding likely to cause loss of life and property. This terminology is more widely used during hurricanes with high amounts of moisture (an example is Hurricane Harvey in 2017, during which multiple flash flood emergencies were issued for portions of southeast Texas and southern Louisiana, including the Houston area).</p>
Severe local storms	Statement	Flash flood statement (FFS)	<p>A hydrological weather statement issued to provide updated information on active flash flood watches and warnings to the public and emergency managers.</p>

Type	Risk	Detail	Description
Severe local storms	Warning	Flash flood warning (FFW)	Flash flooding—either indicated by Doppler weather radar or stream gauges, or reported by Skywarn spotters or local emergency officials—is occurring, imminent, or highly likely in the short term. A flash flood is a flood that occurs within six hours of excessive rainfall and poses a threat to life and/or property, especially in low-lying or flood prone areas (including urban areas with poor drainage, rivers and streams); ice jams and dam failures can also cause flash floods. These warnings are issued on a county by county (or equivalent thereof) basis by the local Weather Forecast Office and are generally in effect for two to six hours, although particularly during tropical cyclones a warning may last for a longer period of time, and occasionally last shorter than two hours.
Severe local storms	Watch	Flash flood watch (FFA)	Conditions are favorable for flash flooding or urban flooding in and close to the watch area within the next 36 hours. These watches are issued by the Weather Forecast Office and are usually issued six to 24 hours in advance of expected flood potential. (The Heavy Rainfall Warning product issued by the Meteorological Service of Canada has a similar meaning as an NWS Flash Flood Watch.)
Flooding	Statement	Flood statement (FLS)	A hydrological weather statement issued to provide updated information on ongoing flooding along major streams in which there is not a serious threat to life and/or property active or flood warnings to the public and emergency managers; information will be provided on observed (or if a dam is at risk of breaking, updates on the ongoing threat) flooding within the warning area, and current and forecast flood stages for lakes and rivers at the time of the statement's issuance.

Type	Risk	Detail	Description
Temperature	Warning	Freeze Warning (NPW/FZW)	Minimum shelter temperatures are forecast to be 32 °F (0 °C) or below over a widespread area within 12 to 36 hours, regardless of whether frost concurrently develops on plants, vegetation and other exposed surfaces. Freeze Warnings are usually issued to highlight freezes occurring during the locally defined starting and ending periods of the growing season (as determined by the average dates of the first freeze of Autumn and the last freeze of Spring), and will be intermediately issued when appropriate until the end of the growing season based on criteria set by the Weather Forecast Office.
Temperature	Watch	Freeze Watch (NPW)	Issued during the locally defined growing season when conditions are favorable for a freeze event that may damage or kill crops to meet or exceed Freeze Warning criteria within 24 to 48 hours.
Other Hazards	Advisory	Freezing fog advisory (NPW)	Widespread dense fog reducing visibility to less than 1/4 mile (400 m) that occurs in a sub-freezing environment, producing very light glazed ice accumulations on exposed surfaces.
Marine hazards	Advisory	Freezing spray advisory (MWS)	Usually issued for shipping interests when conditions are probability of accumulating frozen sea spray on vessels of less than 2 cm per hour caused by some combination of cold water, wind, air temperature, and vessel movement.

Type	Risk	Detail	Description
Temperature	Advisory	Frost Advisory (NPW)	Issued during the locally defined growing season when minimum sheltered temperatures are forecast to be near or slightly above freezing (33 to 36 °F [1 to 2 °C]) over an extensive area on nights with good radiational cooling conditions (e.g., light winds and clear skies). Widespread frost can be expected. Frost Advisories are usually issued to highlight frost events occurring during the locally defined starting and ending periods of the growing season, and will be intermediately issued when appropriate until the end of the growing season based on criteria set by the Weather Forecast Office.
Other Hazards	Warning	Gale warning (MWS)	Sustained surface winds or frequent gusts of 34 to 47 knots (39 to 54 mph; 63 to 87 km/h) is either forecast within 24 to 48 hours or is occurring in marine areas. The wind speeds must not be directly associated with a tropical cyclone.
Other Hazards	Watch	Gale watch (MWS)	A gale-force wind event affecting marine areas producing sustained surface winds or frequent gusts of 34 to 47 knots (39 to 54 mph; 63 to 87 km/h) is forecast within the next few days, but its occurrence, location and/or specific timing remains uncertain.
Temperature	Warning	Hard Freeze Warning (NPW)	Minimum shelter temperatures are forecast to be 28 °F (−2 °C) or below over a widespread area during the growing season. A hard freeze may occur with or without frost. Temperature criteria may vary slightly in some county warning areas.
Temperature	Watch	Hard Freeze Watch (NPW)	Conditions are favorable for widespread sub-freezing temperatures that would meet or exceed Hard Freeze Warning criteria within the next 12 to 48 hours during the locally defined growing season.

Type	Risk	Detail	Description
Non-precipitation hazards	Warning	Hazardous Materials Warning (HMW)	Warns the public of the release of non-radioactive hazardous material (such as a flammable gas, toxic chemical, or biological agent) that may necessitate recommendations of evacuation (for an explosion, fire or oil spill hazard) or sheltering in place (for a toxic fume hazard).
Marine hazards	Warning	Hazardous seas warning (MWS)	Significant wave heights and/or wave steepness values—independent of strong winds—are forecast to cause rough surf in the warned coastal area and adjacent waters, which could pose a serious threat to vessels that do not move to stable waters or dock. Warning criteria may vary depending on the NWS Weather Forecast Office.
Marine hazards	Watch	Hazardous seas watch (MWS)	A rough surf event—regardless of forecast wind speeds that may contribute to such an occurrence—is possible in the warned coastal area and adjacent waters, but its occurrence, location, and/or timing remains uncertain. Warning criteria may vary depending on the NWS Weather Forecast Office.

Type	Risk	Detail	Description
Temperature	Advisory	Heat Advisory (NPW)	High Heat Index (HI) values are forecast to meet or exceed locally defined warning criteria for one or two days. Specific criteria vary over different county warning areas, due to climate variability and the effect of excessive heat on the local population. Usually issued within 12 hours of the onset of conditional advisory criteria, Typical HI values are maximum daytime temperatures above 100 to 115 °F (38 to 46 °C) for up to three hours per day, with minimum nighttime temperatures falling within or above the range of 75 to 80 °F (24 to 27 °C) (depending on county warning area criteria) for two consecutive days. Warning criteria may be lowered by the issuing WFO if the heat event occurs early in the season, during a multi-day heat wave or during a widespread power outage occurring during a heat event due to severe weather phenomena (such as high winds, severe thunderstorms, or a derecho).
Marine hazards	Warning	Heavy freezing spray warning (MWS)	Usually issued for shipping interests when conditions are favorable for the rapid freezing of sea spray on vessels at a rate of more than 2 centimetres (0.79 in) per hour, caused by some appropriate combination of cold water, wind, air temperature and vessel movement.
Marine hazards	Watch	Heavy freezing spray watch (MWS)	Usually issued for shipping interests when conditions are favorable for a heavy freezing spray event meeting Heavy Freezing Spray Warning criteria but its occurrence, location, and/or timing is still uncertain.
Coastal/lakeshore hazards	Advisory	High surf advisory (SRD)	Pounding surf poses a danger to life, boating and other marine property within the surf zone; high surf criteria may vary depending on the region.

Type	Risk	Detail	Description
Coastal/lakeshore hazards	Warning	High surf warning (SRD)	Destructive, pounding surf poses an especially heightened danger to life, boating and other marine property in and near the surf zone, and may damage property near the shoreline; high surf criteria may vary depending on the region.
Coastal/lakeshore hazards	Watch	High surf watch (SRD)	A high surf event due to significant breaking wave action is possible in the next few days.
Other Hazards	Warning	High wind warning (HWW)	Strong sustained winds of 40 to 73 miles per hour (64 to 117 km/h) for one hour or longer, or wind gusts of 58 miles per hour (93 km/h) or greater for any duration that are not associated with thunderstorms are occurring or will occur within six to 12 hours. Wind speeds may pose a hazard to pedestrian and vehicular travel (including toppling or creating flying debris from unsecured outdoor objects, and the risk of pushing cars outside their lane of travel and overturning high-profile vehicles), and cause disruption of electrical utilities and wired telecommunications services (including the downing of electrical lines). Warning criteria may vary by county warning area based on local climatological strong wind frequency. A tropical storm warning implies a high wind warning.

Type	Risk	Detail	Description
Other Hazards	Watch	High wind watch (HWA)	Strong sustained winds of 40 miles per hour (64 km/h) or greater for one hour or more, or wind gusts of 58 to 114 miles per hour (93 to 183 km/h) for any duration are expected within 12 to 48 hours. Wind speeds may pose a hazard to pedestrian and vehicular travel (including toppling or creating flying debris from unsecured outdoor objects, and the risk of pushing cars outside their lane of travel and overturning high-profile vehicles), and cause disruption of electrical utilities and wired telecommunications services (including the downing of electrical lines). Watch criteria may vary depending on the county warning area based on local climatological strong wind frequency.
Other Hazards	Warning	Hurricane force wind warning (NPW)	Sustained winds or frequent gusts of 64 knots (74 mph; 119 km/h) or greater are being observed or are predicted to occur. The wind speeds must not be directly associated with a tropical cyclone.
Other Hazards	Watch	Hurricane force wind watch (NPW)	Sustained surface winds or frequent gusts of 64 kilometres per hour (40 mph; 35 kn) or greater are forecast. The expected occurrence, location and/or timing of the wind event may be uncertain but is forecast to take place within the next few days. The wind speeds must not be directly associated with a tropical cyclone.
Tropical cyclone hazards	Statement	Hurricane local statement (HLS)	Issued by NWS Weather Forecast Offices for hurricane-threatened zones within the office's Warning Area, providing detailed weather conditions, evacuation decisions made by local law enforcement and emergency management agencies, and other necessary safety precautions for residents in the cyclone's path.

Type	Risk	Detail	Description
Tropical cyclone hazards	Warning	Hurricane warning (HUW)	Hurricane conditions (sustained winds of 64 knots [74 mph; 119 km/h] or greater) are expected within the specified coastal or inland area within 36 hours in advance of the forecast onset of tropical-storm-force winds. A Hurricane Warning can remain in effect if dangerously high storm surge, or a combination of dangerous storm surge and waves continue, even when winds fall below hurricane criteria. (This product is issued as a Typhoon Warning by the NWS Forecast Office in Barrigada, Guam, which uses a 24-hour maximum lead time before the onset of tropical-storm-force winds.)
Tropical cyclone hazards	Watch	Hurricane watch (HUA)	Hurricane conditions (sustained winds of 64 knots [74 mph; 119 km/h] or greater) are possible within the specified coastal or inland area within 48 hours in advance of the forecast onset of tropical-storm-force winds. (This product is issued as a Typhoon Watch by the NWS Forecast Office in Barrigada, Guam and its partnering tropical weather forecasting agency, the Central Pacific Hurricane Center.)
Winter storms	Warning	Ice storm warning (WSW)	Heavy ice accumulations that may cause significant disruptions to travel and public utilities, and damage to trees and utility infrastructure impacting life and property are imminent. The criteria for amounts vary over different county warning areas; accumulations range from 1/4 to 1/2 inch (6.4 to 12.7 mm) or more of freezing rain on elevated horizontal flat surfaces. (Hazardous icing conditions are covered and similar warning criteria is used by the Meteorological Service of Canada for their Freezing Rain Warning product.)

Type	Risk	Detail	Description
Winter storms	Warning	Lake effect snow warning (WSW)	Very heavy lake-effect snowfall amounts of generally 6 inches (15 cm) in 12 hours or less or 8 inches (20 cm) in 24 hours or less are imminent or highly likely. Lake-effect snow squalls can significantly reduce visibilities with little notice.
Coastal/lakeshore hazards	Advisory	Lake wind advisory (NPW)	Sustained wind speeds of 20 to 29 miles per hour (32 to 47 km/h) are forecast to persist for one hour or longer on area lakes that may cause hazards for maritime travel; wind speeds meeting advisory criteria may vary depending on the county warning area. The usage of this product is locally determined by each Weather Forecast Office.
Coastal/lakeshore hazards	Warning	Lake wind warning (NPW)	Sustained wind speeds of 40 miles per hour (64 km/h) or greater are expected on area lakes that may cause impairment for maritime travel or damage small boats; wind speeds meeting warning criteria may vary depending on the county warning area. The usage of this product is locally determined by each Weather Forecast Office.
Coastal/lakeshore hazards	Watch	Lake wind watch (NPW)	Sustained wind speeds of 40 miles per hour (64 km/h) or greater are expected within the next few days or sooner on area lakes that may cause impairment for maritime travel or damage small boats; wind speeds meeting warning criteria may vary depending on the county warning area. The usage of this product is locally determined by each Weather Forecast Office.
Coastal/lakeshore hazards	Advisory	Lakeshore flood advisory (CFW)	Minor lakeshore flooding that may pose a threat to life and/or property is occurring or is imminent in the next 12 hours.
Coastal/lakeshore hazards	Warning	Lakeshore flood warning (CFW)	Lakeshore flooding that poses a serious threat to life and/or property is occurring or is imminent in the next 12 to 24 hours.

Type	Risk	Detail	Description
Coastal/lakeshore hazards	Watch	Lakeshore flood watch (CFW)	Lakeshore flooding that could pose a serious threat to life and/or property is possible within the next 12 to 48 hours.
Non-precipitation hazards	Warning	Law Enforcement Warning (LEW)	Issued by authorized law enforcement agencies to warn the public of a bomb explosion, riot, or other criminal event (e.g., a jailbreak) that may result in the blockade roads, waterways, or facilities, the evacuation or denial of access to affected areas, and the arrest of violators or suspicious persons.
Non-precipitation hazards	Emergency	Local Area Emergency (LAE)	An emergency message that defines an event of insignificant threat to public safety and/or property, which could escalate, contribute to more serious events, or disrupt critical public safety services (such as a disruption in water, electric or natural gas service, snowfall-induced road closures, or a potential terrorism threat).
Marine hazards	Advisory	Low water advisory (MWS)	Critically below average water levels over the Great Lakes, coastal marine zones or other tidal marine area, waterway, or river inlet within or adjacent to a marine zone have been observed, and potentially present a hazard to maritime navigation.
Other Hazards	Advisory	Low water advisory (MWS)	Water levels are significantly below average levels over major lakes, coastal marine zones, and tidal marine areas, waterway, or river inlet within or adjacent to a marine zone, which could create a hazard to navigation. Issued primarily for areas within the Northern Region Headquarters near the Great Lakes region.
Marine hazards	Statement	Marine weather statement (MWS)	The equivalent of a special weather statement at sea, indicating potentially hazardous marine conditions.

Type	Risk	Detail	Description
Aviation	Advisory	Non-convective SIGMET (SIG)	These SIGMETs may be issued for: severe icing; severe or extreme turbulence; dust storms and/or sand storms lowering visibilities to less than 3 miles (5 km); or volcanic ash. SIGMET advisories are issued for six hours during hurricanes and four hours for other weather-related events.
Non-precipitation hazards	Warning	Nuclear Power Plant Warning (NUW)	Warns of a hazardous materials event at a nuclear power plant classified as a Site Area Emergency (a hazardous event confined to the plant site) or General Emergency (an event affecting a less than 10-mile [16 km] radius around the plant) under Nuclear Regulatory Commission (NRC) guidelines. Authorized officials may recommend evacuation or medical treatment of exposed persons in nearby areas.
Severe local storms	Warning	Particularly dangerous situation flash flood warning (FFW)	Issued within the initial flash flood warning or as a complete re-issuance of the previously issued warning, this indicates widespread, life-threatening flash flooding—caused by excessive rainfall, ice jams or imminent dam failures—has been indicated by Doppler weather radar, emergency personnel or trained observers over a broadly populated area.
Severe local storms	Watch	Particularly dangerous situation flash flood watch (FFA)	Conditions are favorable for an extremely elevated level of severe and life-threatening flash flooding beyond the level of a normal flash flood watch in and close to the watch area. These watches are usually issued for a smaller area by the local WFOs than typical flash flood watches, which often span multiple county warning areas, and are usually valid for a longer period of time. This type of watch is usually only reserved for forecast "high-end" flash flood events.

Type	Risk	Detail	Description
Severe local storms	Warning	Particularly dangerous situation severe thunderstorm warning (SVR)	<p>Issued within the initial severe thunderstorm warning or as a complete re-issuance of the previously issued warning, a PDS severe thunderstorm warning indicates a significant severe thunderstorm has been detected by Doppler weather radar and/or observed by Skywarn spotters or other civil defense personnel, and is moving into and through the warned area with the capability of causing significant property damage, and severe injury or fatality to people or animals caught in the storm's path. These may be issued for an ongoing severe wind event (either by a derecho, or from an intense wind core or downburst within a squall line or supercell) containing winds greater than 80 mph (124 km/h or 70 knots), and/or extreme hail of 3 inches (76 mm) diameter or larger over a wide area.</p>
Severe local storms	Watch	Particularly dangerous situation severe thunderstorm watch (SVA)	<p>Conditions are favorable for the development of severe thunderstorms in and close to the watch area. Isolated tornadoes are possible but not expected to be the dominant severe weather event, hence these watches are very rarely issued. An expected severe wind event (derecho) is the mostly likely reason for a PDS severe thunderstorm watch to be issued, with widespread winds greater than 90 mph (150 km/h or 80 knots) possible. These watches are usually valid for a longer period of time and are issued for a larger area by the Storm Prediction Center in Norman, Oklahoma than a typical severe thunderstorm watch. This type of watch is usually only reserved for forecast "high-end" severe weather events. If, however, tornadoes are expected to be a major weather threat in addition to the preceding criteria, then a standard tornado watch (generally not a PDS watch) would be issued instead.</p>

Type	Risk	Detail	Description
Marine hazards	Warning	Particularly dangerous situation special marine warning (SMW)	A warning to mariners of hazardous weather conditions that present a considerable threat to life and property.
Other Hazards	Statement	Particularly dangerous situation special weather statement (SPS)	An enhanced advisory issued for hazards that do not have a specific code of their own, and pose an exceptionally high risk of damage and loss of life.
Severe local storms	Warning	Particularly dangerous situation tornado warning (TOR)	A large tornado has been confirmed to be producing damage and is moving into and through the warned area. It is usually issued as the initial tornado warning or as a complete re-issuance of the previous tornado warning. These may also include wording for a tornado emergency.
Severe local storms	Watch	Particularly dangerous situation tornado watch (TOA)	Conditions are favorable for the development of severe thunderstorms capable of producing destructive tornadoes in and close to the watch area. These watches are occasionally issued, and usually mean that a major tornado outbreak is possible, where the potential for multiple violent (EF-4 and EF-5) tornadoes exists. Usually only reserved for forecast "high-end" severe weather events, this type of watch is usually valid for a longer period of time and issued for a larger area by the Storm Prediction Center in Norman, Oklahoma, than a typical tornado watch.
Windchill	Warning	Particularly Dangerous Situation Wind Chill Warning (NPW)	Extremely low wind chills of -30°F (-34°C) or lower creating an enhanced risk of frostbite, hypothermia and death are imminent or occurring.
Non-precipitation hazards	Warning	Radiological Hazard Warning (RHW)	Indicates the loss, discovery, theft or release of a radiological hazard.

Type	Risk	Detail	Description
Fire weather	Warning	Red flag warning (FWA)	Extreme burning conditions favor the combustion and rapid spread of wildfires within 12 to 24 hours in areas that have not received precipitation for a short period or are experiencing drought conditions, and which the National Fire Danger Rating System (NFDRS) designates as having a high to extreme fire danger. It is issued primarily to alert fire department officials and firefighters of conditions ideal for the combustion and spread of wildfires. The surface relative humidity (RH) and 10-hour fuel moisture criteria meriting a Fire Weather Watch may vary by state based on local vegetation, topography and distance from major water sources, though forecast sustained winds are usually expected to be 20 miles per hour (32 km/h) or greater.
Coastal/lakeshore hazards	Statement	Rip current statement (SRD)	Describes a risk of rip currents present in the specified area; may be issued as a Beach Hazards Statement.
Flooding	Advisory	River flood advisory (FLS)	Minor flooding of streams or rivers reaching action stage is occurring, imminent, or highly likely. These advisories are issued on a county by county basis by the local Weather Forecast Office and are generally in effect for a couple of days or longer.
Flooding	Warning	River flood warning (FLS)	Flooding of streams or rivers is occurring, imminent, or highly likely. These warnings are issued either by the River Forecast Centers for the area surrounding affected streams or rivers or on a county by county basis by the local Weather Forecast Office and are generally in effect for an indeterminate period until river gauges in the affected areas record water levels receding below the water body's predetermined flood stage.

Type	Risk	Detail	Description
Coastal/lakeshore hazards	Warning	Seiche warning (CFW)	Rapid, large fluctuations in water level in the Great Lakes (similar to the sloshing in a bath tub) caused by storms or high winds, resulting in both lakeshore flooding and critically low water levels at different times. Issued as a lakeshore flood warning with reference of being a seiche warning.
Severe local storms	Emergency	Severe thunderstorm emergency (SVS)	Sent as a "severe weather statement" or a complete re-issuance of the severe thunderstorm warning, this is an unofficial, high-end severe thunderstorm warning that is occasionally issued when a significant severe thunderstorm is imminent or impacting a highly populated area. First issued in February 2018 (for a severe derecho impacting areas near Detroit, Michigan), the National Weather Service does not currently maintain a concrete criteria for issuance, although Weather Forecast Offices that issue or have issued such warnings may use the same criteria meriting a PDS Severe Thunderstorm Warning to indicate life-threatening severe weather conditions that will impact a densely populated area.

Type	Risk	Detail	Description
Severe local storms	Warning	Severe thunderstorm warning (SVR)	<p>A severe thunderstorm is indicated by Doppler weather radar or sighted by Skywarn spotters or other persons, such as local law enforcement. A severe thunderstorm contains large damaging hail of 1 inch (2.5 cm) in diameter or larger, and/or damaging winds of 58 mph (93 km/h) or greater. These warnings are currently issued on a polygonal basis, are usually issued for a duration of 30 minutes to one hour, and can be issued without a severe thunderstorm watch being already in effect. Because severe thunderstorms can produce tornadoes with little or no advance warning, a severe thunderstorm warning may be upgraded to a tornado warning if strong rotation is indicated or a tornado is sighted. Lightning frequency is not a criterion for issuing a severe thunderstorm warning. Severe thunderstorm warnings may be issued in combination with a special marine warning if the storm affects nearshore or coastal waters.</p>
Severe local storms	Watch	Severe thunderstorm watch (SVA)	<p>Conditions are favorable for the development of severe thunderstorms in and close to the watch area. A severe thunderstorm contains large damaging hail of 1 inch (25 mm) diameter or larger, and/or damaging winds greater than 58 mph (95 km/h or 50 knots) or greater. Isolated tornadoes are also possible (depending on whether atmospheric conditions are sufficient to produce tornadic activity) but not expected to be the dominant severe weather event. These watches are issued for large areas by the Storm Prediction Center in Norman, Oklahoma, and are usually valid for five to eight hours.</p>

Type	Risk	Detail	Description
Severe local storms	Statement	Severe weather statement (SVS)	A statement issued to provide updated information for active severe thunderstorm and tornado warnings to the public and emergency managers, with revised information including reports of observed severe weather and the severe thunderstorm's most recent location at the time of the statement's issuance. Severe Weather Statements may include notices of cancellation (if the warning is being discontinued entirely, or if sections of counties or county-equivalent jurisdictions are being removed from the continuing warning), or notices of a warning being allowed to expire because the prompting storm has weakened below severe criteria.
Non-precipitation hazards	Warning	Shelter in Place Warning (SPW)	Indicates an event (such as the release of hazardous materials containing toxic fumes or radioactivity harmful to residents in the warning area) in which the public is recommended to shelter in place and take necessary safety precautions.
Aviation	Advisory	SIGMET (significant meteorological information; SIG)	Advises of weather that is potentially hazardous to all aircraft and is affecting or is forecast to affect at least 3,000 square miles (8,000 km ²).
Severe local storms	Advisory	Significant weather advisory (SPS)	A strong thunderstorm below severe criteria, containing small hail below 1 inch (2.5 cm) diameter, and/or strong winds of 39–57 miles per hour (63–92 km/h), is indicated by Doppler weather radar and may create some adverse impacts on travel. These advisories are issued as special weather statements written in the style of severe thunderstorm and other short-fused warnings, usually on a county by county (or equivalent thereof) basis. Some areas use an entirely different format (most notably WFOs in the Northeast and Mid-Atlantic), denoting which locations in each county will be affected by the thunderstorm.

Type	Risk	Detail	Description
Marine hazards	Advisory	Small craft advisory (SCA)	A warning to mariners of high sustained winds or frequent gusts and/or significant sea or wave heights that may damage or capsize small boats. Only issued by WFOs in coastal regions and the Great Lakes for areas included in the Coastal Waters Forecast or Nearshore Marine Forecast products. Thresholds necessitating the issuance of small craft advisories are determined by the accordant NWS Regional Headquarters.
Marine hazards	Advisory	Small craft advisory for hazardous seas (SCAH)	An advisory to mariners of wave or sea conditions that are potentially hazardous to small boats because of wave height, wave period, steepness, or swell direction, even if wind speeds are expected to fall below locally defined small craft advisory criteria. Only issued by WFOs in coastal regions and the Great Lakes for areas included in the Coastal Waters Forecast or Nearshore Marine Forecast products. Thresholds necessitating the issuance of this type of small craft advisory vary among geographic areas within each NWS Regional Headquarters.
Marine hazards	Advisory	Small craft advisory for rough bar (SCARB)	Waves in or near harbor or river entrances are expected to be especially hazardous to mariners due to the interaction of swell, tidal and/or river currents in relatively shallow water. Thresholds governing the issuance of this type of small craft advisory vary among local geographic areas, and are based upon locally determined parameters such as wave steepness, wind speed and direction, and local bathymetry.

Type	Risk	Detail	Description
Marine hazards	Advisory	Small craft advisory for winds (SCAW)	Wind speeds may pose potential hazards for maritime activity. Wave heights must remain below standard small craft advisory criteria to merit the issuance of a wind-based advisory. Thresholds necessitating the issuance of wind-based small craft advisories are determined by the accordant NWS Regional Headquarters.
Winter storms	Warning	Snow squall warning (SQW)	An intense, generally limited duration, period of moderate to heavy snowfall has been observed by radar. Usually accompanied by strong, gusty surface winds, significantly reduced visibility up to 1/4 mile (0.40 km) or less (which may reach levels creating whiteout conditions), and possibly lightning; temperature drops behind an arctic front that are sufficient to produce flash freezes, in conjunction with a significant reduction in visibility from falling and/or blowing snow, may also serve as a warning criteria factor. Snow accumulation may be significant.
Marine hazards	Warning	Special marine warning (SMW)	A warning to mariners of short-duration hazardous weather conditions (lasting up to two hours) including thunderstorms or squalls with wind gusts of 34 knots (39 mph; 63 km/h) or more, hail 1 inch (2.5 cm) diameter or larger, or waterspouts affecting coastal areas not adequately covered by existing marine warnings. Short-duration mesoscale events (such as a strong cold front, gravity wave or squall line) expected to last two hours or less and produce criteria wind speeds, or volcanic ashfall may also warrant issuance.
Other Hazards	Statement	Special weather statement (SPS)	An advisory issued when a hazard is approaching advisory level. In some areas, it is also used in lieu of a significant weather advisory.

Type	Risk	Detail	Description
Coastal/lakeshore hazards	Warning	Storm surge warning (SSW)	<p>Localized heavy flooding associated with a tropical cyclone from storm surge waves moving inland from the shoreline is occurring or is imminent in the specified area within the next 36 hours, posing a significant threat to life and/or property. Similar criteria included in a Storm Surge Watch for conditions that would limit lead time for undertaking safety precautions and inclusion of areas that may experience isolation from surge inundation also applies to this product. Issued in collaboration between the NHC and local WFOs, Storm Surge Warnings are only issued for regions in the Atlantic and Gulf Coasts of the conterminous United States.</p>
Coastal/lakeshore hazards	Watch	Storm surge watch (SSA)	<p>Life-threatening inundation from rising water being forced inland by an ongoing or potential tropical, subtropical or post-tropical cyclone is possible within the specified area, generally within 48 hours. A watch may be issued in advance of the cyclone's landfall if other hazardous tropical conditions (such as the onset of tropical storm-force winds) are expected to limit enactment of evacuations and other safety precautions, and may also be issued for adjacent locations that could potentially be isolated by surge inundation. Issued in collaboration between the National Hurricane Center (NHC) and local Weather Forecast Offices, storm surge watches are only issued for regions in the Atlantic and Gulf Coasts of the conterminous United States.</p>

Type	Risk	Detail	Description
Other Hazards	Warning	Storm warning (MWS)	Sustained surface winds or frequent gusts of 48 to 63 knots (55 to 72 mph; 89 to 117 km/h) is either predicted within 36 hours or occurring. Expected wind speeds are likely to cause significant navigational impairment and/or damage to commercial and recreational boating within the warned area. The wind speeds must not be directly associated with a tropical cyclone.
Other Hazards	Watch	Storm watch (MWS)	Sustained surface winds or frequent gusts of 48 to 63 knots (55 to 72 mph; 89 to 117 km/h) are forecast to occur, but its occurrence, location and/or timing remains uncertain. Expected wind speeds may cause significant navigational impairment and/or damage to commercial and recreational boating. The wind speeds must not be directly associated with a tropical cyclone.

Type	Risk	Detail	Description
Severe local storms	Emergency	Tornado emergency (SVS)	<p>Sent as a "severe weather statement" or a complete re-issuance of the tornado warning, this is an unofficial, high-end tornado warning issued when a violent tornado is expected to impact a heavily populated area. Such warnings have been issued for, among other significant tornado events, the F5-rated tornado that destroyed much of Bridge Creek, Moore and portions of southeastern Oklahoma City, Oklahoma on May 3, 1999 (during which the product was conceived by the NWS Forecast Office in Norman); the EF5 tornado that destroyed much of Greensburg, Kansas on May 4, 2007; the EF4 tornado that hit Tuscaloosa, Alabama on April 27, 2011; the EF5 tornado that affected Moore and adjacent southern portions of the Oklahoma City area on May 20, 2013; the May 31, 2013 tornado system that went over the Oklahoma City area through an extremely densely populated area of Canadian County; and the EF4 tornado that affected western portions of the Kansas City area on May 28, 2019. This enhanced form of a tornado warning is issued mainly by Weather Forecast Offices within the National Weather Service's Central and Southern Region Headquarters; a tornado emergency is the highest level of a three-tiered Impact Based Warning system for tornadoes used by all WFOs within the Central Region Headquarters, and eight others within the Eastern, Southern and Western Regions.</p>

Type	Risk	Detail	Description
Severe local storms	Warning	Tornado warning (TOR)	Strong rotation in a thunderstorm has been indicated by Doppler weather radar or a tornado has been sighted by Skywarn spotters or other persons (such as local law enforcement). These warnings are currently issued on a polygonal basis, are usually issued for a duration of 30 minutes (but can run for as long as one hour), and can be issued without either a tornado watch or a severe thunderstorm watch being already in effect. Tornado warnings may be issued in combination with a Special Marine Warning if the storm affects nearshore or coastal waters.
Severe local storms	Watch	Tornado watch (TOA)	Conditions are favorable for the development of severe thunderstorms and tornadoes in and close to the watch area. These watches are issued for large areas by the Storm Prediction Center in Norman, Oklahoma, and are usually valid for five to eight hours.
Tropical cyclone hazards	Warning	Tropical storm warning (TRW)	Tropical storm conditions (gale- and storm-force sustained winds of 34 to 63 knots [39 to 72 mph; 63 to 117 km/h]) are expected within the specified coastal or inland area within 36 hours (24 hours for Guam, as locally defined by the Barrigada-based WFO) in advance of the forecast onset of tropical-storm-force winds. These winds may be accompanied by storm surge, and coastal and/or river flooding. Tropical Storm Warnings may also be issued in association with a subtropical or post-tropical cyclone.

Type	Risk	Detail	Description
Tropical cyclone hazards	Watch	Tropical storm watch (TRA)	Tropical storm conditions (gale- and storm-force sustained winds of 34 to 63 knots [39 to 72 mph; 63 to 117 km/h]) are possible within the specified coastal or inland area within 48 hours in advance of the forecast onset of tropical-storm-force winds. These winds may be accompanied by storm surge, and coastal and/or river flooding. Tropical Storm Watches may also be issued in association with a subtropical or post-tropical cyclone.
Non-precipitation hazards	Advisory	Tsunami Advisory	A tsunami with the potential to generate strong currents or waves dangerous to those in or very near the water is imminent, expected, or occurring. The threat may continue for several hours after initial arrival, but significant inundation of land and adjacent property is not expected.
Non-precipitation hazards	Warning	Tsunami Warning (TSW)	A tsunami with the potential of causing widespread coastal flooding accompanied by powerful currents and inundation and/or significant damage to adjacent property is imminent, expected or occurring and may continue for several hours after the wave's initial arrival.
Non-precipitation hazards	Watch	Tsunami Watch (TSA)	A tsunami is forecast to impact the specified area.

Type	Risk	Detail	Description
Flooding	Advisory	Urban and small stream flood advisory	<p>Ponding of water on streets, low-lying areas, highways, underpasses, urban storm drains, and elevation of creek and small stream levels is occurring or imminent. Urban and small stream flood advisories are issued for flooding that occurs within three hours after the excessive rainfall. These advisories are issued on a polygonal basis by the local Weather Forecast Office and are generally in effect for three to four hours. (The watch/warning/advisory display map on the NWS's national and local Forecast Office websites does not display the advisory as an area-specific polygon, instead indicating the affected counties and/or county-equivalent subdivisions.)</p>
Aviation	Advisory	Volcanic ash advisories (VAA)	<p>Advisory issued for all ash plumes detected by satellite imagery, including the location of the volcano, location/description of ash plume, forecast (at 6, 12 and 18 hours), and a graphic of the ash plume location/forecast. VAAs are issued by Volcanic Ash Advisory Centers in Anchorage (Alaska) and Washington (Contiguous United States, Caribbean, Central America, most of the North Pacific, and South America north of 10°S).</p>
Non-precipitation hazards	Warning	Volcano Warning (VOW)	<p>Indicates volcanic activity that is ongoing or imminent.</p>

Type	Risk	Detail	Description
Other Hazards	Advisory	Wind advisory (NPW)	<p>Strong sustained winds of 31 to 39 miles per hour (50 to 63 km/h) for one hour or longer and/or wind gusts of 46 to 57 miles per hour (74 to 92 km/h) for any duration are expected within the next 12 to 24 hours. Wind speeds may pose a hazard to pedestrian and vehicular travel, topple and/or create flying debris from unsecured outdoor objects, and potentially disrupt public utilities and down electrical lines. Advisory criteria may vary by county warning area depending on local climatology; winds of the standard criteria magnitude occurring over an area that frequently experiences such wind speeds will not necessarily trigger a wind advisory.</p>
Windchill	Advisory	Wind Chill Advisory (NPW)	<p>Dangerous wind chills making it feel very cold are imminent or occurring. The apparent temperature and wind speed criteria varies significantly over different county warning areas based on climate variability.</p>
Windchill	Warning	Wind Chill Warning (NPW)	<p>Extreme wind chills, capable of causing life-threatening medical conditions (such as severe frostbite and hypothermia) or death associated with accelerated heat loss from exposed skin, are imminent or occurring. The apparent temperature and wind speed criteria varies significantly over different county warning areas based on climate variability.[39] This product will be deprecated sometime in 2021, and be superseded by the Extreme Cold Warning product, which will include dual criteria for extreme wind chill and actual temperature values, and have its use expanded to WFOs elsewhere in the conterminous United States.</p>

Type	Risk	Detail	Description
Windchill	Watch	Wind Chill Watch (NPW)	Extreme wind chills that are capable of causing life-threatening medical conditions associated with accelerated heat loss from exposed skin are possible within the next 12 to 48 hours; the apparent temperature and wind speed criteria varies significantly over different county warning areas.
Winter storms	Warning	Winter storm warning (WSW)	Hazardous winter weather conditions that pose a threat to life and/or property are occurring, imminent, or highly likely within 12 to 48 hours. The generic term, Winter Storm Warning, is used for a combination of two or more of the following winter weather events: heavy snow, freezing rain, sleet, and strong winds. The forecast accumulation criteria for each frozen precipitation type vary significantly over different county warning areas. The National Weather Service has deprecated the Heavy Snow Warning and Sleet Warning products in favor of issuing a Winter Storm Warning for Heavy Snow or a Winter Storm Warning for Heavy Sleet, respectively.
Winter storms	Watch	Winter storm watch (WSA)	Hazardous winter weather conditions including significant accumulations of snow and/or freezing rain and/or sleet are possible generally within 24 to 48 hours. The generic term, Winter Storm Watch, is used for a combination of two or more of the following winter weather events: heavy snow, freezing rain, sleet, and strong winds. The forecast accumulation criteria for each frozen precipitation type vary significantly over different county warning areas. These watches are issued by local National Weather Service Forecast Offices.

Type	Risk	Detail	Description
Winter storms	Advisory	Winter weather advisory (WSW)	<p>Hazardous winter weather conditions are occurring, imminent, or likely. Conditions will cause a significant inconvenience and if caution is not exercised, may result in a potential threat to life and/or property. The generic term, Winter Weather Advisory (which replaced the previously used "Travelers Advisory"), is used for a combination of two or more of the following events; snow, freezing rain or freezing drizzle, sleet, and blowing snow. The forecast accumulation criteria—defined below locally designated warning criteria or based on NWS impact-driven advisory criteria—for at least one of the frozen precipitation elements within a defined 12 or 24 hour period vary significantly over different county warning areas. The National Weather Service has deprecated the snow advisory and blowing snow advisory in favor of issuing a winter weather advisory for snow or a winter weather advisory for snow and blowing snow, respectively.</p>

SKYWARN Submission

Observation Types

Type	Description
Flooding	Flooding
Hurricane	Hurricane
Marine	Marine
Other	Other
SKYWARN Net	SKYWARN Net Event or Checkin
Storm	Storm
Temperature	Temperature Extremes
Tornado	Tornado

Type	Description
Wind	Wind
Winter	Winter Weather

Observation Subtypes

Type	Detail	Description	NWS
Flooding	Evacuations	Flooding - Resulting in Evacuations	yes
Flooding	Roads Impassable	Flooding - Roads Impassable or Closed Due to High Water	yes
Flooding	Streams or Rivers Overflowing	Flooding - Small Streams or Rivers Overflowing Their Banks	yes
Flooding	Water Rapidly Rising	Flooding - Water Rapidly Rising, or Entering Homes	yes
Flooding	Water Rescues	Flooding - Water Rescues from Cars, Roofs, or Trees	yes
Hurricane	Lowest Pressure	Hurricane - Lowest Observed Barometric Pressure	yes
Hurricane	Category 1	Hurricane - Wind - Category 1 - 74-95 MPH	yes
Hurricane	Category 2	Hurricane - Wind - Category 2 - 96-110 MPH	yes
Hurricane	Category 3	Hurricane - Wind - Category 3 - 111-129 MPH	yes
Hurricane	Category 4	Hurricane - Wind - Category 4 - 130-156 MPH	yes
Hurricane	Category 5	Hurricane - Wind - Category 5 - 157+ MPH	yes
Marine	Heavy Freezing Spray	Marine - Heavy Freezing Spray	yes
Marine	High Surf	Marine - High Surf	yes
Marine	Minor Coastal Flooding	Marine - Minor Coastal Flooding	no
Marine	Moderate Coastal Flooding	Marine - Moderate Coastal Flooding	yes

Type	Detail	Description	NWS
Marine	Moderate Lakeshore Flooding	Marine - Moderate Lakeshore Flooding	yes
Marine	Rogue Wave Height	Marine - Rogue Wave Height	yes
Marine	Squall Lines	Marine - Squall Lines	yes
Marine	Tsunami	Marine - Tsunami	yes
Marine	Unforecasted Hydrometeorological Phenomena	Marine - Unforecasted Hydrometeorological Phenomena	yes
Marine	Waterspouts	Marine - Waterspouts	yes
Marine	Wave Heights and Winds	Marine - Wave Heights and Winds	yes
Other	Dense Fog	Other - Dense Fog - Visibility of 1/4 Mile or Less	yes
Other	Dust Storms	Other - Dust Storms - Visibility of 1/4 Mile or Less	yes
Other	Volcanic Ash	Other - Volcanic Ash	yes
Other	Weather Injury or Fatality	Other - Weather Injury or Fataility	yes
SKYWARN Net Event or Checkin	SKYWARN Net Checkin	SKYWARN Net - Checkin	no
SKYWARN Net Event or Checkin	SKYWARN Net Ended	SKYWARN Net - Ended	no
SKYWARN Net Event or Checkin	SKYWARN Net Started	SKYWARN Net - Started	no
Storm	Damage - Power Lines Downed	Storm - Damage to Power Lines Downed	yes
Storm	Damage - Structures	Storm - Damage to Structures	yes
Storm	Damage - Tree - Many Large Limbs Downed	Storm - Damage to Tress, Many Large Limbs Downed	yes
Storm	Damage - Tree - Uprooted or Downed	Storm - Damage to Tress, Uprooted or Downed	yes

Type	Detail	Description	NWS
Storm	Hail - Over 2 Inches	Storm - Hail - Over Hen Egg (2 Inches) Size	yes
Storm	Hail - Over 1 Inch	Storm - Hail - Over Quarter (1 inch) Size	yes
Storm	Hail - Pea Sized or Greater	Storm - Hail Pea Sized or Greater	yes
Storm	Lightning	Storm - Lightning	no
Storm	Lightning - Causing Damage or Injury	Storm - Lightning - Causing Damage or Injury	yes
Storm	Rain - Less Than 1 Inch Per Hour	Storm - Rain - Less Than 1 inch Per Hour	no
Storm	Rain - Over 1 Inch Per Hour	Storm - Rain - Rate of Over 1 Inch Per Hour	yes
Temperature Extremes	High or Low	Temperature - Extreme High or Low Temperature	yes
Tornado	Funnel Cloud	Tornado - Funnel Cloud	yes
Tornado	Persistent Rotation	Tornado - Persistent Rotation	yes
Tornado	Tornado Sighted	Tornado - Tornado Sighted	yes
Tornado	Wall Cloud	Tornado - Wall Cloud	yes
Tornado	EF0	Tornado - Wind - EF0 - 65-85 MPH	yes
Tornado	EF1	Tornado - Wind - EF1 - 86-110 MPH	yes
Tornado	EF2	Tornado - Wind - EF2 - 111-135 MPH	yes
Tornado	EF3	Tornado - Wind - EF3 - 136-165 MPH	yes
Tornado	EF4	Tornado - Wind - EF4 - 166-200 MPH	yes
Tornado	EF5	Tornado - Wind - EF5 - 201+ MPH	yes
Wind	Gale Force	Wind - Gale Force - 39-54 MPH	yes
Wind	Peak Gust 39 MPH or Greater	Wind - Peak Gust 39 MPH or Greater	yes

Type	Detail	Description	NWS
Wind	Peak Gust (Under 39 MPH)	Wind - Peak Gust Under 39 MPH	no
Wind	Storm Force	Wind - Storm Force - 55-73 MPH	yes
Wind	Tornado or Hurricane Force	Wind - Tornado or Hurricane Force - 74+ MPH	yes
Winter Weather	Freezing Rain/Drizzle	Winter Weather - Freezing Rain/Drizzle	yes
Winter Weather	Ice - Accumulation	Winter Weather - Ice - Accumulation	yes
Winter Weather	Ice - Damage	Winter Weather - Ice - Damage	yes
Winter Weather	Sleet	Winter Weather - Sleet	yes
Winter Weather	Snow - 1 Inch or More Snow in 24 Hours	Winter Weather - Snow - 1 Inch or More Snow in 24 Hour Period	yes
Winter Weather	Snow - 1 Inch or More Snow in Past Hour	Winter Weather - Snow - 1 Inch or More Snow in Past Hour	yes
Winter Weather	Snow - Blizzard Conditions - Winds 35+ MPH Less Than 1/4 Mile Visibility	Winter Weather - Snow - Blizzard Conditions - Winds 35+ MPH Less Than 1/4 Mile Visibility	yes
Winter Weather	Snow - Under 1 Inch	Winter Weather - Snow Under 1 Inch	no