

# Watch, Warning, and Advisory Definitions

The National Weather Service issues a variety of products to keep our customers informed of unusual, inconvenient and hazardous, weather conditions. A multi-tier concept is employed to accomplish this task with Outlooks, Watches, Warnings, and Advisories to point out specific conditions.

- **Basic Definitions**
- **Convective Definitions**
- **Hydrology/Flooding Definitions**
- **Winter Weather Definitions**
- **Non-Precipitation Definitions**
- **Fire Weather Definitions**

# Basic Definitions

## *Outlook:*

Used to give considerable lead time that a hazardous event may develop.

## *Watch:*

Issued when the risk of a hazardous weather or hydrologic event has increased significantly, but its occurrence, location, and/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.

## *Warning:*

Issued when a hazardous event is occurring or has a very high probability of occurrence. Warnings advise of a threat to life or property.

## *Advisory:*

Issued when a hazardous event is occurring or has a very high probability of occurrence. Advisories describe events that cause significant inconvenience.

# Convective Definitions

## *Tornado Watch:*

The Storm Prediction Center (SPC) issues Public Tornado Watches to alert the public, media and emergency managers to organized thunderstorms forecast to produce three or more tornadoes or any tornado which could produce EF2 or greater damage. The forecast event minimum thresholds should be at least 2 hours over an area of at least 8,000 square miles.

## *Severe Thunderstorm Watch:*

The Storm Prediction Center (SPC) issues Public Severe Thunderstorm Watches to alert the public, media and emergency managers to organized thunderstorms forecast to produce six or more hail events of 1 inch (quarter) diameter or greater, or damaging winds of 50 knots (58 mph) or greater. The forecast event minimum thresholds should be at least 2 hours over an area of at least 8,000 square miles.

## *Tornado Warning:*

Tornado Warnings are issued when there is radar indication and/or reliable spotter reports of a tornado.

## *Severe Thunderstorm Warning:*

Severe Thunderstorm Warnings are issued when there is radar indication and/or reliable spotter reports of hail of 1 inch (quarter) diameter or greater, and/or wind gusts of 50 knots (58 mph) or greater.

# Hydrology/Flooding Definitions

## *Flood Watch:*

Flood Watches inform the public of hydrometeorological conditions which may cause flooding when the flooding is neither certain or imminent. Flood Watches may cover states, counties, rivers, portions of states, portions of counties, or portions of rivers (e.g., one or more forecast points.) Flood Watches provide advance notice and up-to-date information of flooding within 36 hours.

## *Flash Flood Warning:*

Flash Flood Warnings are issued when flooding is imminent. This product will be reserved for those short-term events which require immediate action to protect lives and property, such as dangerous small stream flooding or urban flooding, and dam or levee failures. Flash Flood Warnings may cover counties, portions of counties, well-known geographical areas (e.g., deserts, valleys), or river basins.

## *Flood Warning:*

Flood Warnings are issued for any high flow, overflow, or inundation not covered by flash flood warning products. There are two general types of flood warnings – areal flood warnings and river flood warnings issued for specific forecast points.

## *Urban and/or Small Stream Advisories*

Flood statements issued to provide information on elevated river/stream flows or ponding of water in urban or other areas, when such events warrant notification of the public in a product less urgent than a warning.

# Winter Weather Definitions

## For Watches and Warnings:

### ***Blizzard:***

Sustained winds of 35 mph or greater and/or frequent gusts of 35 mph and visibility frequently below  $\frac{1}{4}$  mile for 3 hours or more.

### ***Winter Storm:***

Below 3500 feet: 2 inches or more in 12 hours or 3 inches or more in 24 hours.

3500 – 7000 feet: 6 inches or more in 12 hours or 10 inches or more in 24 hours.

Above 7000 feet: 8 inches or more in 12 hours or 12 inches or more in 24 hours.

These snow totals in combination with gusty winds (not meeting Blizzard Warning criteria), low wind chill readings, and blowing and drifting snow.

### ***Heavy Snow:***

Below 3500 feet: 2 inches or more in 12 hours or 3 inches or more in 24 hours.

3500 – 7000 feet: 6 inches or more in 12 hours or 10 inches or more in 24 hours.

Above 7000 feet: 8 inches or more in 12 hours or 12 inches or more in 24 hours.

Heavy snow accumulations are the only hazard expected.

### ***Ice Storm:***

A significant, and possibly damaging, accumulation of ice. Any accumulation caused by freezing rain, freezing drizzle, or sleet.

# Winter Weather Definitions cont.

## For Warnings only:

### *Wind Chill:*

Wind chill readings at or below -20 degrees (F).

### *Avalanche:*

Issued upon the request of the BLM when the avalanche hazard outside of controlled ski areas is extreme.

## For Advisories:

### *Winter Weather Advisory for Snow:*

Below 3500 feet: Up to 3 inches in less than 24 hours with no more than 2 inches in 12 hours.

3500 – 7000 feet: 3 – 5 inches in 12 hours or 5 – 9 inches in 24 hours.

Above 7000 feet: 4 – 7 inches in 12 hours or 7 – 11 inches in 24 hours.

### *Winter Weather Advisory:*

Combination of two or more of the following: snowfall amounts meeting advisory criteria, sleet, freezing rain or drizzle, and low wind chill.

### *Blowing/Drifting Snow Criteria:*

Visibility at or below  $\frac{1}{4}$  of a mile due to considerable blowing snow and/or significant drifting snow (visibility not a requirement for drifting snow).

# Non-Precipitation Definitions

## For Watches and Warnings:

### ***Wind:***

Inyo County: *Above 5000 feet:* Sustained wind speeds of 50 mph (43 knots) or more lasting 1 hour or longer and/or gusts of 70 mph (61 knots) or more of any duration.

*5000 feet and below:* Sustained winds of 40 mph (35 knots) or more lasting 1 hour or longer and/or gusts of 58 mph (50 knots) or more any duration.

Rest of Area: *Above 7000 feet:* Sustained wind speeds of 50 mph (43 knots) or more lasting 1 hour or longer and/or gusts of 70 mph (61 knots) or more of any duration.

*7000 feet and below:* Sustained winds of 40 mph (35 knots) or more lasting 1 hour or longer and/or gusts of 58 mph (50 knots) or more any duration.

# Non-Precipitation Definitions cont.

## For Watches and Warnings:

### *Excessive Heat:*

Excessive Heat Watches/Warnings will be issued for elevations below 4000 feet when the forecast high temperature in Las Vegas is:

- 105 degrees or higher from 9/12 to 6/2.
- From 6/3 to 9/11 see chart.

### Excessive Heat Warning Criteria

	May	June	July	August	September
1	105	105	112	112	107
2	105	105	112	112	107
3	105	106	112	112	107
4	105	106	112	112	107
5	105	106	112	112	107
6	105	106	112	112	106
7	105	107	112	111	106
8	105	107	112	111	106
9	105	107	112	111	106
10	105	108	112	111	106
11	105	108	112	111	106
12	105	108	112	111	105
13	105	109	112	110	105
14	105	109	112	110	105
15	105	110	112	110	105
16	105	110	112	110	105
17	105	110	112	110	105
18	105	111	112	110	105
19	105	111	112	109	105
20	105	111	112	109	105
21	105	111	112	109	105
22	105	111	112	109	105
23	105	112	112	109	105
24	105	112	112	109	105
25	105	112	112	108	105
26	105	112	112	108	105
27	105	112	112	108	105
28	105	112	112	108	105
29	105	112	112	108	105
30	105	112	112	108	105
31	105		112	107	

# Non-Precipitation Definitions cont.

## For Warnings only:

### *Dust/Sandstorm:*

Visibility less than or equal to  $\frac{1}{4}$  mile for any duration.

### *Smoke/Volcanic Ash:*

Visibility less than or equal to  $\frac{1}{4}$  mile for any duration caused by geologic, industrial, or manmade pollutants.

### *Freeze:*

Critically low temperatures for plants; seasonally dependent. Also, consider anytime temperatures are expected below 20 degrees (F) for elevations less than 2500 feet.

# Non-Precipitation Definitions cont.

## For Advisories:

### *Wind:*

- Inyo County: *Above 5000 feet:* Sustained wind speeds 40-49 mph (35-42 knots) and/or winds gusting from 58-69 mph (50-60 knots) for a period of at least 3 hours.  
*5000 feet and below:* Sustained wind speeds of 30-39 mph (26-34 knots) and/or winds gusting from 40-57 mph (35-49 knots) for a period of at least 3 hours.
- Rest of Area: *Above 7000 feet:* Sustained wind speeds of 40-49 mph (35-42 knots) and/or winds gusting from 58-69 mph (50-60 knots) for a period of at least 3 hours.  
*7000 feet and below:* Sustained winds of 30-39 mph (26-34 knots) and/or winds gusting from 40-57 mph (35-49 knots) for a period of at least 3 hours.

### *Dense Fog:*

Visibility less than or equal to  $\frac{1}{4}$  mile for any duration.

# Fire Weather Definitions

## Fire Weather Watch/Red Flag Warning:

### *Arizona Strip*

It the Eastern Great Basin GACC 7-Day Outlook shows the Arizona Strip zone to be “Very Dry” AND  
Wind gusts Greater than or Equal to 35 mph are forecast to occur for 3+ hours. AND  
Relative Humidity is expected to be Less than or Equal to 15% OR  
Dry Lightning event\* over the Arizona Strip.

### *The Rest of Arizona:*

If the Forecast Fire Danger Class is High (yellow) or higher AND  
Relative Humidity is 15% or lower AND  
20 foot (10-min avg) sustained winds of 20 mph or great or gusting to 35 mph or greater.

**\*Dry Lightning Event:** Thunderstorms, isolated or greater in coverage (i.e. GTE 15%) are forecast to develop and produce little or no rain (the typical threshold is less than 0.10”) over the fire weather zone.

# Fire Weather Definitions cont.

## Fire Weather Watch/Red Flag Warning:

**California narrative zone 229 (lower Colorado River valley): If the following three criteria are expected for a period of at least 3+ hours:**

It the South Ops GACC 7-Day Outlook shows our areas to be “Very Dry” AND  
Relative Humidity 15% or lower. AND  
20 foot (10-min avg) sustained winds of 20 mph or great or gusting to 35 mph or greater.

**California narrative zones 226, 227, and 228, (high deserts): If the following criteria are expected for a period of at least 6+ hours:**

If the South Ops GACC 7-Day Outlook shows our areas or be “Very Dry” AND  
Relative Humidity is less than 15% AND  
Wind gusts Greater than or Equal to 35 mph.

OR

***Dry Lightning Event:*** Thunderstorms, isolated or greater in coverage (i.e. GTE 15%) are forecast to develop and produce little or no rain (the typical threshold is less than 0.10”) over over the fire weather zone. Death Valley does NOT REQUIRE Red Flag Warnings for dry lightning.

# Fire Weather Definitions cont.

## Fire Weather Watch/Red Flag Warning:

### Nevada Red Flag Criteria

It the Western Great Basin GACC 7-Day Outlook shows our areas to be “Very Dry” AND Relative Humidity less than 15%. AND Wind gusts Greater than or Equal to 35 mph forecast to occur for 3+ hours.

OR

Dry Lightning event \* over southern Nevada

***\*Dry Lightning Event:*** Thunderstorms, isolated or greater in coverage (i.e. GTE 15%) are forecast to develop and produce little or no rain (the typical threshold is less than 0.10”) over over the fire weather zone.