

**San Joaquin Valley  
Weather Forecast Office  
Watch, Warning, and Advisory Criteria**

**Thunderstorms and Tornadoes**

<b>Severe Thunderstorm Warning</b>	Thunderstorm producing hail equal to or greater than 3/4" in diameter and/or wind gusts of at least 50 knots (58 MPH) occurring or imminent.
<b>Tornado Warning</b>	Tornado occurring or imminent.

**Winds**

<b>HIGH WIND WARNING</b> (Issued up to 36 hrs in advance of event)	<b>ALL AREAS</b>	Sustained winds of 40+ MPH (35+ KTS) and/or gusts of 58+ MPH (50+ KTS) for 2-3 hours out of a 4-6 hour period.
<b>DUST STORM WARNING</b> (Issued up to 36 hrs in advance of event)	Same criteria as High Wind Warning, but with visibilities reduced to 1/8 mile or less.	
<b>WIND ADVISORY</b> (Issued up to 36 hrs in advance of event)	<b>SAN JOAQUIN VALLEY</b>	Sustained winds of 25-39 MPH (22-34 KTS) and/or gusts of 35-57 MPH (30-49 KTS) for 2-3 hours out of a 4-6 hour period.
	<b>MOUNTAINS DESERTS</b>	Sustained winds of 30-39 MPH (26-34 KTS) and/or gusts of 45-57 MPH (39-49 KTS) for 2-3 hours out of a 4-6 hour period.
<b>BLOWING DUST ADVISORY</b> (Issued up to 36 hrs in advance of event)	Same criteria as Wind Advisory, but with visibilities reduced to 1/8 mile or less.	
<b>LAKE WIND ADVISORY</b> (Issued up to 36 hrs in advance of an event)	Lake winds of <b>25 mph</b> or greater lasting for at least three hours. (Only issued if winds not reaching Wind Advisory criteria or greater in the surrounding area.)	
<b>HIGH WIND WATCH</b> (Issued 12-48 hrs in advance of event)	Issued to give advance notice of the possibility of high winds. Same criteria as High Wind Warning.	
<b>HIGH WIND OUTLOOK</b> (Issued 3-7 days in advance of event)	Issued to give more advance notice of the possibility of high winds. Same criteria as High Wind Warning.	

**Flash Floods**

<b>Flash Flood Warning</b>	Flash-flooding is imminent or occurring, or a dam break is imminent or occurring.
<b>Flash Flood Watch</b> (Normally issued 6-48 hours in advance of an event)	Issued to give advance notice of the possibility of flash flooding, or there is concern about the safety of a dam, but a break is not imminent.

<b>Temperatures</b>	
<b>Freeze Warning</b> (Issued up to 36 hrs in advance of an event)	When either of the following criteria are expected to be widespread:  Minimum temperatures below 28°F; or  All or nearly all dew point temperatures are expected to be below 30°F.
<b>Frost Advisory</b> (Issued up to 36 hrs in advance of an event)	When both of the following criteria are expected:  Minimum temperatures between 28°F and 32°F; and  Dew point temperatures are at or above 30°F at the time of the forecast.
<b>Freeze Watch</b> (Issued 36-48 hrs in advance of an event)	Issued to give advance notice of the possibility of freezing temperatures. Criteria match those of a Freeze Warning.
<b>Freeze Outlook</b> (Issued 3-7 days in advance of an event)	Issued to give more advance notice of the possibility of freezing temperatures. Criteria match those of a Freeze Warning.
<b>Heat Advisory</b> (Issued 0-36 hrs in advance of an event)	When the following is expected across a significant portion of the affected Zone:  Heat Index $\geq$ 110°F or greater for at least 2 hours; <b>OR</b> , Heat Index $\geq$ 80°F all night
<b>Excessive Heat Warning</b> (Issued 0-36 hrs in advance of an event)	When the following is expected across a significant portion of the affected Zone for at least 2 consecutive days:  Heat Index $\geq$ 110°F or greater for at least 2 hours; <b>AND</b> , Heat Index $\geq$ 80°F all night
<b>Excessive Heat Watch</b> (Issued 36-48 hours in advance of an event.)	Issued to give advance notice of the possibility of excessively hot conditions. Criteria match those of an Excessive Heat Warning. (The potential for Heat Advisory conditions should be covered in a Special Weather Statement, using the SPSHNX AWIPS header.)
<b>Excessive Heat Outlook</b> (Issued 3-7 days in advance of an event.)	Issued to give more advance notice of the possibility of excessively hot conditions. Criteria match those of an Excessive Heat Warning. (The potential for Heat Advisory conditions should be covered in a Special Weather Statement, also using the SPSHNX AWIPS header.)

<b>Fog</b>	
<b>Dense Fog Advisory</b> (Issued up to 36 hrs in advance of an event)	Visibilities 1/8 <sup>th</sup> mile or less expected or occurring over a significant or critical portion of the advisory area.

<b>Air Quality</b>	
<b>Air Stagnation Advisory</b> (Issued to match effective time of valley air district Health Advisory)	Issued when the valley air district has declared a Health Advisory and no other advisory, watch, or warning is already in place.

Winter Weather			
<b>WINTER STORM WARNING</b> (Issued up to 36 hrs in advance of event)	<b>FIRST STORM</b> of the season	Any elevation	4+"/>12 hours or
			6+"/>24 hours or
			Where snow accumulations are rare
	<b>SUBSEQUENT STORMS</b> of the season	Below 3000 feet	5+"/>12 hours or
			7+"/>24 hours
		3000 to 7000 feet	8+"/>12 hours or
12+"/>24 hours			
Above 7000 feet	12+"/>12 hours or		
	18+"/>24 hours		
<b>WINTER WEATHER ADVISORY</b> (Issued up to 36 hrs in advance of event)	<b>FIRST STORM</b> of the season	Below 3000 feet	1"-2"/>12 hours or
			2"-4"/>24 hours
		Above 3000 feet	2"-4"/>12 hours or
	4"-6"/>24 hours		
	<b>SUBSEQUENT STORMS</b> of the season	Below 3000 feet	2"-4"/>12 hours or
			4"-6"/>24 hours
		3000 to 7000 feet	4"-7"/>12 hours or
			6"-11"/>24 hours
Above 7000 feet		7"-11"/>12 hours or	
	8"-17"/>24 hours		
Any elevation	Where snow accumulations are rare		
<b>BLIZZARD WARNING</b> (Issued up to 36 hrs in advance of event)		Sustained winds or frequent gusts of 35 mph or more with the visibility frequently below 1/4 mile in snow or blowing snow for at least 3 hours.	
<b>WIND CHILL WARNING</b> (Issued up to 36 hrs in advance of event)		Wind Chill forecasted or observed at or below - 20° F. (See Wind Chill Chart, on last page.)	
<b>WINTER STORM WATCH</b> (Issued 12-48 hrs in advance of event)		Issued to give advance notice of the possibility of hazardous winter weather. Criteria match those of warnings. Notice about the potential for a winter storm 3-7 days in advance of the event will be via a Special Weather Statement.	

## Wildfires

<p><b>Red Flag Warning</b> (Issued up to 24 hrs in advance of an event)</p>	<p>For mountain areas, when critically dry fuels are accompanied by the following expected conditions:</p> <ul style="list-style-type: none"><li>• Sustained 10-minute winds (measured at 20 feet) of 25+ mph and/or frequently gusting to 35+ mph <b>and</b> relative humidities of 15 percent or lower, both lasting for at least 6 hours, <b>OR</b></li><li>• Relative humidities of 10 percent or lower, lasting for at least 10 hours, <b>OR</b></li><li>• Widespread dry lightning.</li></ul> <p>For desert areas, when the following conditions are expected:</p> <ul style="list-style-type: none"><li>• Sustained 10-minute winds (measured at 20 feet) of 25+ mph <b>and</b> relative humidities of 15 percent or lower, both lasting for at least 8 hours, <b>and</b> a HIGH fire danger rating.</li></ul>
<p><b>Fire Weather Watch</b> (Issued 24-72 hrs in advance of an event)</p>	<p>Issued to give advance notice of the possibility of a Red Flag Warning.</p>

# Heat Index (apparent temperature)

## Relative Humidity (%)

Temperature (F)	Relative Humidity (%)																				
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
122	107	112	119	126	135	143															
119	106	109	115	121	128	136															
116	104	107	112	117	123	130	138	146													
113	102	105	109	112	116	123	129	137	145												
110	99	102	105	108	112	117	123	130	137	143	152										
107	96	99	101	104	107	112	117	122	128	134	141										
104	94	96	99	101	104	107	111	115	120	126	132	138	144								
101	92	94	97	98	100	102	105	109	113	118	123	130	135								
98	89	91	93	94	95	98	100	103	106	109	113	118	123	130	137						
95	87	88	90	91	92	93	95	98	99	103	106	110	114	119	124	130	136				
92	85	85	87	88	88	89	90	92	94	97	99	102	105	108	113	117	122	127	131		
89	82	83	84	84	85	86	87	88	89	91	93	95	97	100	103	106	110	114	118	122	126
86	79	80	82	82	83	83	84	85	85	87	88	90	92	94	96	97	100	103	105	108	112
83	76	77	78	79	80	81	81	82	82	83	84	85	86	88	90	91	94	95	96	99	103
80	73	74	75	76	77	77	78	79	79	80	81	81	82	83	85	86	86	87	88	89	91
77	71	71	72	73	74	74	75	75	76	77	77	78	79	79	80	81	82	83	84	84	85

### Heat Index/Heat Disorders: possible heat disorders for people in higher risk groups

**HEAT INDEX 90 to 104**, sunstroke, heat cramps, and heat exhaustion possible

**HEAT INDEX 105 to 129**, sunstroke, heat cramps, and heat exhaustion likely; heat stroke possible

**HEAT INDEX > 129**, heat stroke or sunstroke likely with continued exposure

*Important: Since HI values were devised for shady, light wind conditions, exposure to full sunshine can increase HI values by up to 15°F. Also, strong winds, particularly with very hot, dry air, can be extremely hazardous.*



## Wind Chill Chart

