

The Weather Wire

November 2015

Volume 22 Number 11

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Winter Weather Watches/Warnings and Advisories

It is that time of year again to review what the NWS Winter Weather Watches, Warnings and Advisories mean. Although we have not had any meaningful snow as of yet along the I-25 corridor the slow start to the snow season is expected to pick up steam late November through January and finish strong from February through April. We will certainly see Winter Weather highlights coming from the NWS soon. Below are the common types of Watches, Warnings and Advisories we see here along the Front Range:

WATCHES AND WARNINGS

SNOW:

WINTER STORM WATCH is issued when hazardous winter storm conditions are possible within the next 3 to 4 days, but the timing, intensity, or occurrence may still be uncertain.

BLIZZARD WATCH is issued when blizzard conditions are possible in the next 12 to 36 hours.

WINTER STORM WARNING is issued for the occurrence of heavy snow or any combination of heavy snow and other events. Other events include such things as blowing snow or very cold wind chill temperatures.

WARNING CRITERIA for HEAVY SNOW is defined by the following amounts.

IN THE MOUNTAINS...8 inches of snow in 12 hours, or 12 inches or more in 24 hours.

ON THE PLAINS...6 inches in 12 hours, or 8 inches or more in 24 hours.

BLIZZARD WARNING is issued for the *plains* when the following conditions are expected to occur for at least 3 hours:

- Sustained winds of 35 mph or greater
- considerable falling and/or drifting snow
- with visibilities frequently less than 1/4 mile

A **BLIZZARD WARNING** is issued in the *mountains and foothills* for the conditions above, but with winds in excess of 50 mph at the higher elevations.

WIND:

HIGH WIND WARNING is issued for the following conditions:

MOUNTAINS and FOOTHILLS

- sustained winds of 50 mph or more for at least 1 hour...or gusts of at least 75 mph for any duration.

LOWER ELEVATIONS

- sustained winds of 40 mph or more for at least 1 hour...or gusts of at least 58 mph for any duration.

HIGH WIND WATCH is issued when high wind conditions are expected to develop in the next 12 to 36 hours.

WIND CHILL WARNING will be issued for the following wind chill temperatures...when combined with sustained winds of at least 10 mph.

MOUNTAINS...minus 35 degrees Fahrenheit or colder

LOWER ELEVATIONS...minus 25 degrees Fahrenheit or colder

WIND CHILL WATCH is issued when wind chill warning criteria are possible in the next 12 to 36 hours.

ADVISORIES:

Advisories for winter weather are issued for *potentially* hazardous conditions.

WINTER WEATHER ADVISORY is issued when:

MOUNTAINS...4 to 8 inches of snow falls in 12 hours, or 6 to 12 inches in 24 hours

LOWER ELEVATIONS...3 to 6 inches of snow falls in 12 hours, or 4 to 8 inches in 24 hours

Or when the following conditions are expected:

- When falling snow is accompanied by blowing snow to cause travel problems due to lower visibilities.
- When wind blown snow will occasionally reduce visibilities and create a hazard for travelers.

- For freezing drizzle or a mix of precipitations types, such as snow and sleet, that will impact travel conditions.

WIND CHILL ADVISORY is issued when the following is expected:

MOUNTAINS...wind chills between 25 below and 34 below zero

LOWER ELEVATIONS...wind chills between 18 below and 24 below zero

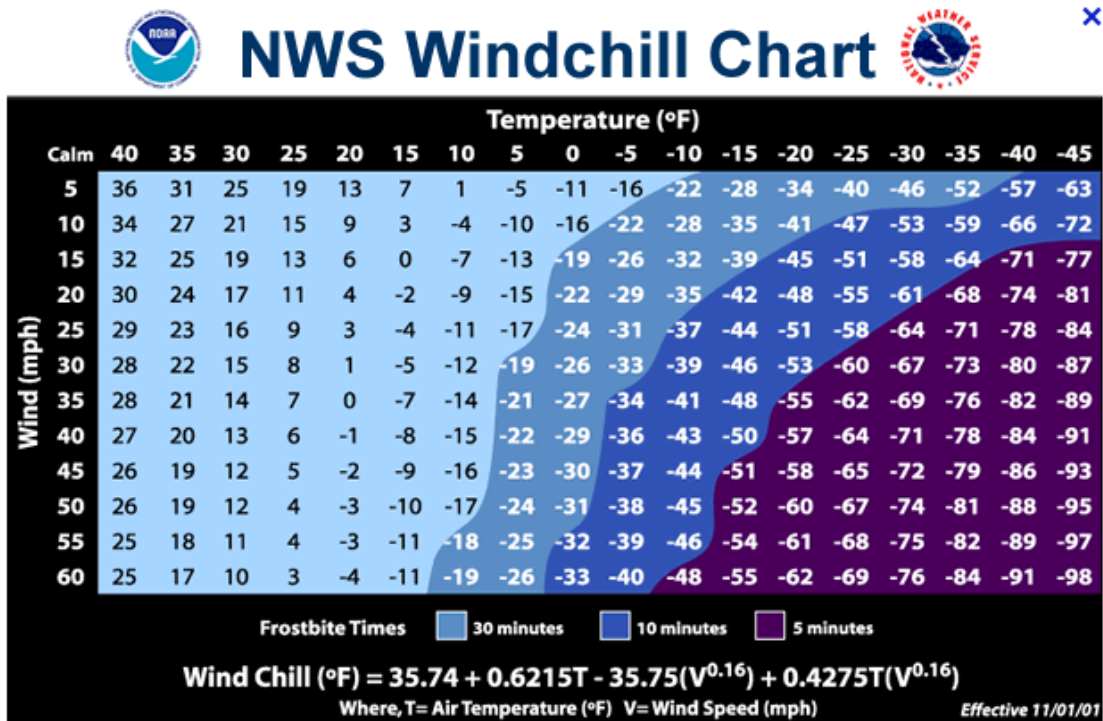
DENSE FOG ADVISORY is issued for fog reducing visibilities to 1/4 mile or less.

SUMMARY:

Watches: Indicates that conditions are favorable for the particular weather event in and near the Watch area, and which may pose a risk to life and property. Watches are issued up to 48 hours in advance with forecaster confidence around 50%.

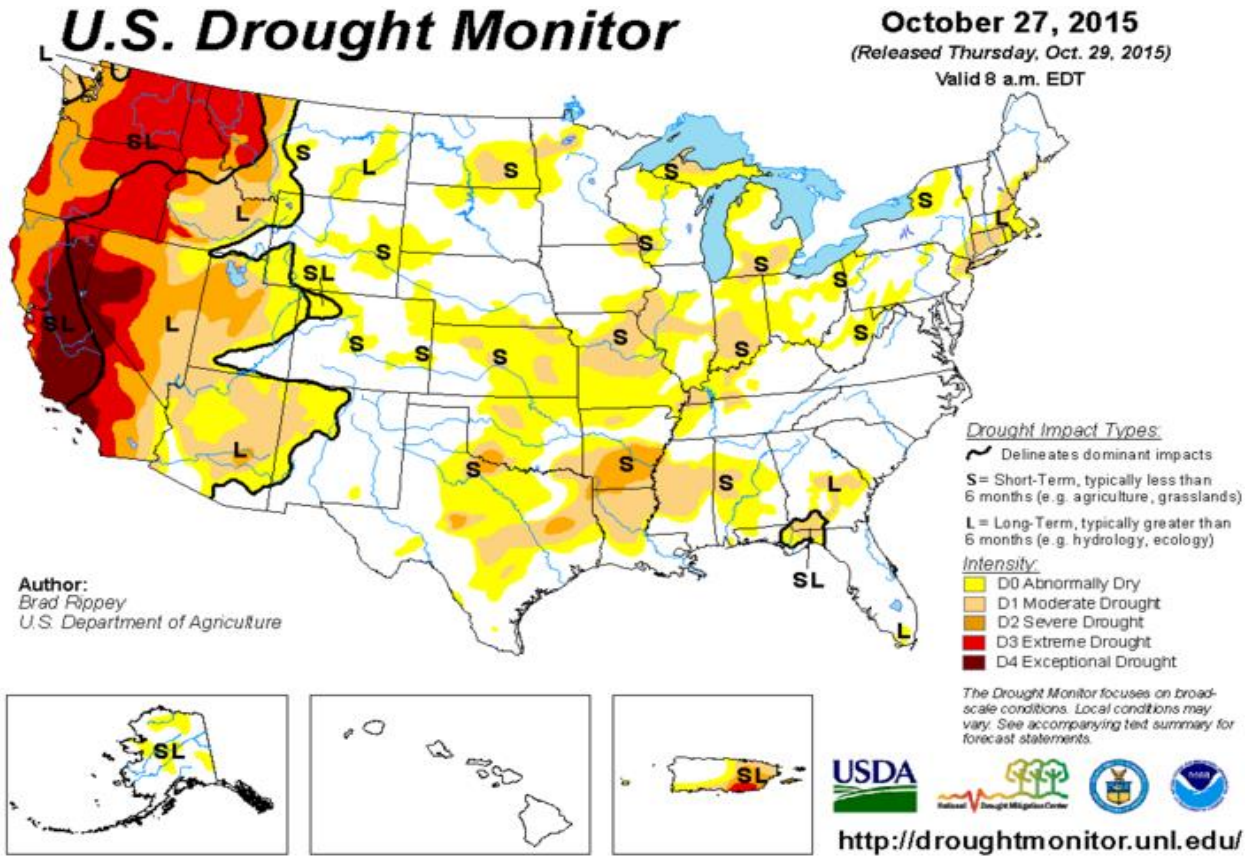
Warning/Advisory: Indicates that a particular weather event is imminent or occurring. **Advisories** are issued if the weather event will lead to nuisance conditions, while **Warnings** are issued for significant weather events which will pose a risk to life and property. Warnings and Advisories are issued up to 48 hours in advance with forecaster confidence of at least 80%.

Wind Chill Chart:

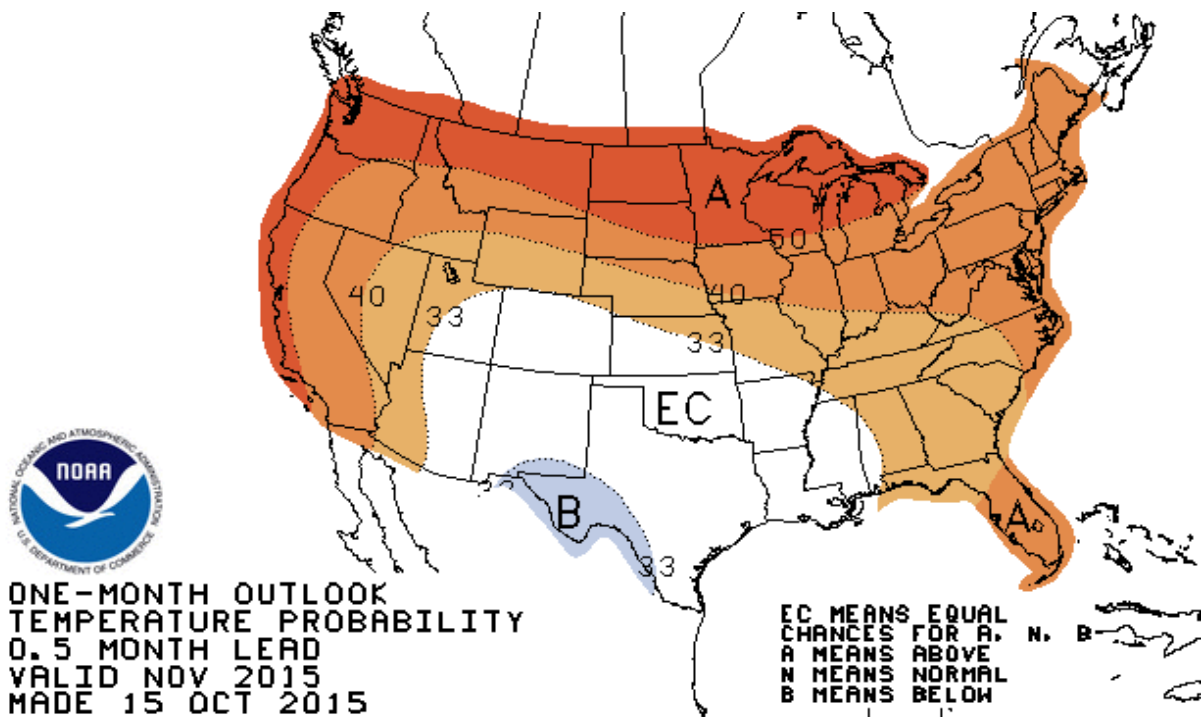


Drought Update

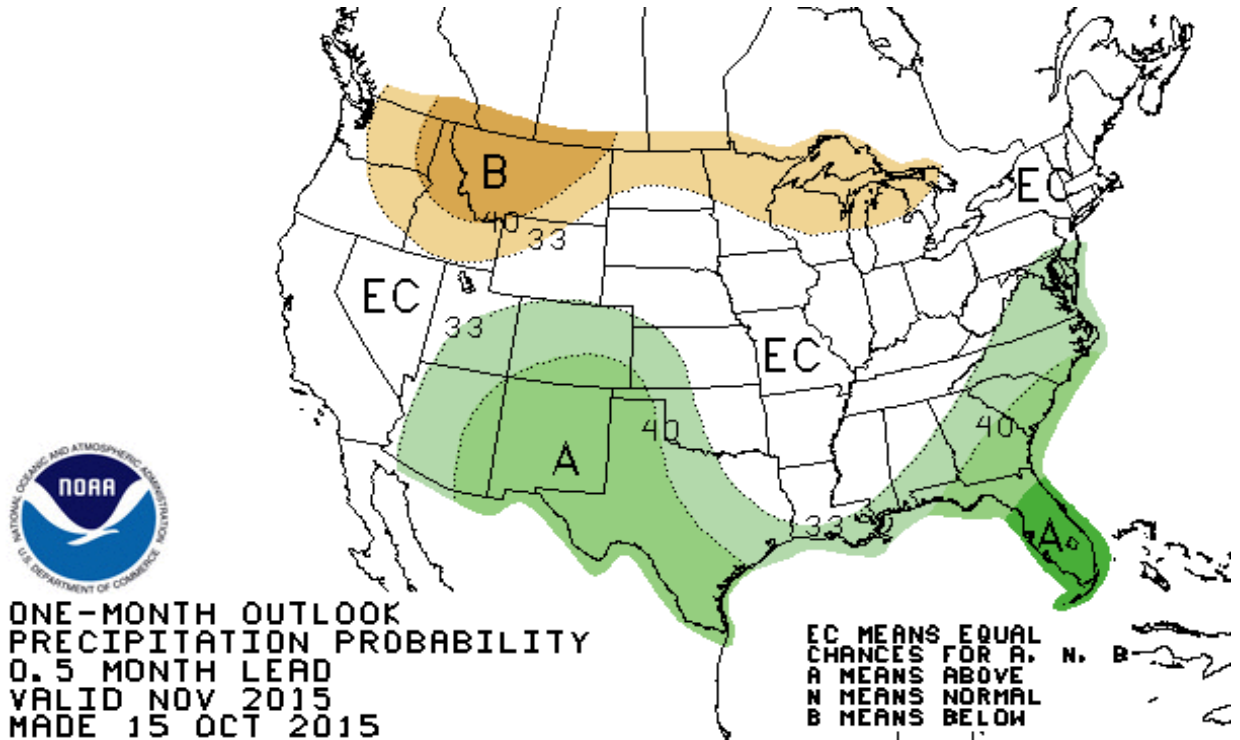
The state of Colorado remains drought free but there are abnormally dry areas starting to develop over parts of the state due to the lack of moisture in August and September.



The map below shows forecasted temperature deviances for November 2015. Colorado is in an area of equal chances for above or below normal temperature.



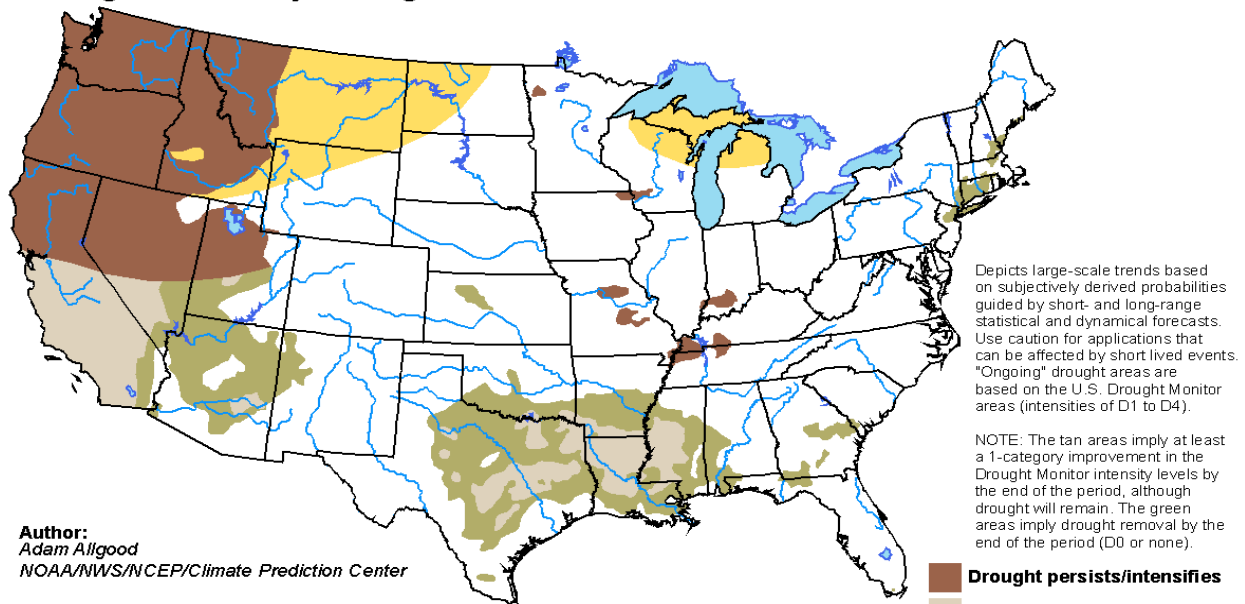
The map below shows forecasted precipitation deviances for November 2015. There is a slight bias towards above normal precipitation favoring southern Colorado.



No drought is forecast for Colorado in the near term. Drought looks to persist or intensify over the parts of the Pacific NW with some improvement or removal of drought for parts of the desert SW into Texas.

U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period

Valid for October 15 - January 31, 2016
Released October 15, 2015



October Summary

After following the warmest September in Denver history October of 2015 was unusually warm as well. October of 2015 remained just outside of the top 5 warmest Octobers in Denver history ranking at 6th place all time. The only temperature below freezing during the entire month occurred on the morning of the 28th with a reading of 28 degrees. Average high temperatures were around 70 degrees with a monthly high temperature of 87 on the 11th. Average low temperatures were 42.8 degrees which was 6.2 degrees above the normal of 36.6 degrees. The highs and lows combined for a monthly mean temperature of 56.5 degrees which was 5.6 degrees above the normal of 50.9 degrees. Of course without the cold weather there was a lack of snow with no snow being reported below 6,500' during the month from Fort Collins to Colorado Springs. Despite the lack of cold weather there was some moisture with above normal precipitation of 1.76" reported at DIA. Many other communities in and around Denver received between 1.50-2.25" for the month. Yearly precipitation for DIA now stands at 15.47" which is 2.04" above the normal of 13.43". There were 3 days with thunderstorms reported at DIA and 3 days with fog creating visibilities of ¼ mile or less. Of the 31 days during the month 6 days were considered sunny with 21 days partly cloudy and only 4 cloudy days.

October Stats

TEMPERATURE (IN DEGREES F)

| | | | |
|--------------|-----------------|-------------|---------------|
| AVERAGE MAX | 70.1 | NORMAL 65.3 | DEPARTURE 4.8 |
| AVERAGE MIN | 42.8 | NORMAL 36.6 | DEPARTURE 6.2 |
| MONTHLY MEAN | 56.5 | NORMAL 50.9 | DEPARTURE 5.6 |
| HIGHEST | 87 on the 10/11 | | |
| LOWEST | 28 on 10/28 | | |

| | | | |
|-----------------------------|---|--------|---|
| DAYS WITH MAX 90 OR ABOVE | 0 | NORMAL | 0 |
| DAYS WITH MAX 32 OR BELOW | 0 | NORMAL | 0 |
| DAYS WITH MIN 32 OR BELOW | 1 | NORMAL | 9 |
| DAYS WITH MIN ZERO OR BELOW | 0 | NORMAL | 0 |

TEMPERATURE RECORDS

NA

HEATING DEGREE DAYS

| | | | |
|----------------|-----|------------|----------------|
| MONTHLY TOTAL | 274 | NORMAL 440 | DEPARTURE -166 |
| SEASONAL TOTAL | 301 | NORMAL 581 | DEPARTURE -280 |

COOLING DEGREE DAYS

| | | | |
|---------------|-----|------------|---------------|
| MONTHLY TOTAL | 16 | NORMAL 5 | DEPARTURE 11 |
| YEARLY TOTAL | 877 | NORMAL 769 | DEPARTURE 108 |

PRECIPITATION (IN INCHES)

| | | | | | |
|------------------------------|-------------------------|--------|-------|-----------|------|
| MONTHLY TOTAL | 1.76 | NORMAL | 1.02 | DEPARTURE | 0.74 |
| YEARLY TOTAL | 15.47 | NORMAL | 13.43 | DEPARTURE | 2.04 |
| GREATEST IN 24 HOURS | 0.87" on 10/21 to 10/22 | | | | |
| DAYS WITH MEASURABLE PRECIP. | | | | | 6 |

SNOWFALL (IN INCHES)

| | | | | | |
|----------------------|-----|--------|-----|-----------|------|
| MONTHLY TOTAL | 0.0 | NORMAL | 4.0 | DEPARTURE | -4.0 |
| SEASONAL TOTAL | 0.0 | NORMAL | 5.3 | DEPARTURE | -5.3 |
| GREATEST IN 24 HOURS | NA | | | | |
| GREATEST DEPTH | NA | | | | |

WIND (IN MILES PER HOUR)

| | |
|----------------|--------------------|
| AVERAGE SPEED | 8.8mph |
| PEAK WIND GUST | 40mph/Direction NA |

MISCELLANEOUS WEATHER

| | | | |
|-------------------------------|----|--------|---|
| NUMBER OF DAYS WITH TSTORM | 2 | NORMAL | 4 |
| NUMBER OF DAYS WITH HEAVY FOG | 3 | NORMAL | 1 |
| NUMBER OF DAYS WITH HAIL | 0 | | |
| NUMBER OF SUNNY DAYS | 6 | | |
| NUMBER OF PARTLY CLOUDY DAYS | 21 | | |
| NUMBER OF CLOUDY DAYS | 4 | | |
| AVERAGE RELATIVE HUMIDITY | NA | | |

November Preview

If you remember last year we did not have a meaningful snow through the end of October and then winter arrived during the month of November. A similar scenario is expected play out this month with the season's first significant snowfall taking place in the coming weeks. Temperatures begin to cool significantly in November with average highs in the low 50s and average lows in the mid 20s. There are typically 3 days during the month where the high temperature does not break freezing and 23 days with temperatures drops to at least freezing overnight with 1 of those nights dropping below zero. Precipitation drops from October with average November precipitation of 0.61" but most if not all of that falls as snow with 8.7" of snow averaged out over a period of years. November is the 2nd snowiest month of the year for the Denver Metro area behind March. There are usually around 3 snow events during the month with 1" or more of snow but one strong storm can easily deposit a whole months worth of snow or more. November of 2015 is expected to be above normal in temperature and precipitation and normal to possibly above normal in snowfall as some storms may begin as rain before changing over to snow.

DENVER'S NOVEMBER CLIMATOLOGICALLY NORMAL (NORMAL PERIOD 1981-2010 DIA Data)

TEMPERATURE

| | |
|------------------------------|------|
| AVERAGE HIGH | 52.1 |
| AVERAGE LOW | 24.5 |
| MONTHLY MEAN | 38.3 |
| DAYS WITH HIGH 90 OR ABOVE | 0 |
| DAYS WITH HIGH 32 OR BELOW | 3 |
| DAYS WITH LOW 32 OR BELOW | 23 |
| DAYS WITH LOWS ZERO OR BELOW | 1 |

PRECIPITATION

| | |
|------------------------------------|-------|
| MONTHLY MEAN | 0.61" |
| DAYS WITH MEASURABLE PRECIPITATION | 5 |
| AVERAGE SNOWFALL IN INCHES | 8.7" |
| DAYS WITH 1.0 INCH OF SNOW OR MORE | 3 |

MISCELLANEOUS AVERAGES

| | |
|------------------------------|--------|
| HEATING DEGREE DAYS | 801 |
| COOLING DEGREE DAYS | 0 |
| WIND SPEED (MPH) | 8.2mph |
| WIND DIRECTION | South |
| DAYS WITH THUNDERSTORMS | 0 |
| DAYS WITH DENSE FOG | 1 |
| PERCENT OF SUNSHINE POSSIBLE | 64% |

EXTREMES

| | |
|-------------|-------------------|
| RECORD HIGH | 80 on 11/8/2006 |
| RECORD LOW | -18 on 11/29/1877 |
| WARMEST | 50.9 in 1949 |

COLDEST
WETTEST
DRIEST
SNOWIEST
LEAST SNOWIEST

22.0 in 1880
3.21" in 1946
TR in 1949, 1901, 1899
42.6" in 1946
0.0" in 1949

Snowfall

October 2015 to April 2016

| City | Oct | Nov | Dec | Jan | Feb | Mar | Apr | Total |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-------|
| Aurora (Central) | 0.0 | | | | | | | 0.0 |
| Brighton | 0.0 | | | | | | | 0.0 |
| Broomfield | 0.0 | | | | | | | 0.0 |
| Castle Rock | 0.0 | | | | | | | 0.0 |
| Colo Sprgs Airport | 0.0 | | | | | | | 0.0 |
| Denver DIA | 0.0 | | | | | | | 0.0 |
| Denver Downtown | 0.0 | | | | | | | 0.0 |
| Golden | 0.0 | | | | | | | 0.0 |
| Fort Collins | 0.0 | | | | | | | 0.0 |
| Highlands Ranch | 0.0 | | | | | | | 0.0 |
| Lakewood | 0.0 | | | | | | | 0.0 |
| Littleton | 0.0 | | | | | | | 0.0 |
| Parker | 0.0 | | | | | | | 0.0 |
| Sedalia - Hwy 67 | 0.0 | | | | | | | 0.0 |
| Thornton | 0.0 | | | | | | | 0.0 |
| Westminster | 0.0 | | | | | | | 0.0 |
| Wheat Ridge | 0.0 | | | | | | | 0.0 |

Skyview Weather
2350 N Rocky View Rd
Castle Rock, CO 80108

Phone: (303) 688-9175
Fax: (303) 380-3338

E-mail: Tim@SkyviewWeather.com
On the web at www.SkyviewWeather.com

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