



The Weather Wire

February 2016

Volume 23 Number 2

Contents:

- **Major Winter Storm to Start February 2016**
- **Current Colorado Snow Pack**
- **Drought Monitor**
- **January Summary/Statistics**
- **February Preview**
- **Sunrise/Sunset**
- **Snowfall Totals**

Major Winter Storm to Start February 2016

February 2016 has started off with a bang as a powerful low pressure system resulted in significant snowfall across a large portion of Eastern Colorado from January 31 through February 2. The heaviest snowfall occurred across the Colorado Springs area during the daytime hours February 1, before the heavier snowfall shifted to Denver/Boulder/Ft. Collins during the evening hours of February 1. Snowfall was quite significant for many areas, most notably Colorado Springs where widespread snowfall amounts of 11-18" were recorded. The higher totals actually favored southern portions of the city, which is fairly atypical. Farther north, the heaviest snowfall occurred across the Boulder to Ft. Collins areas, where snowfall amounts of 11-18" were also common, and in the adjacent foothills where up to 2 feet fell. Across the Denver metro area and Douglas County, snowfall totals generally ranged from 7-14" with 11.6" reported at DIA.

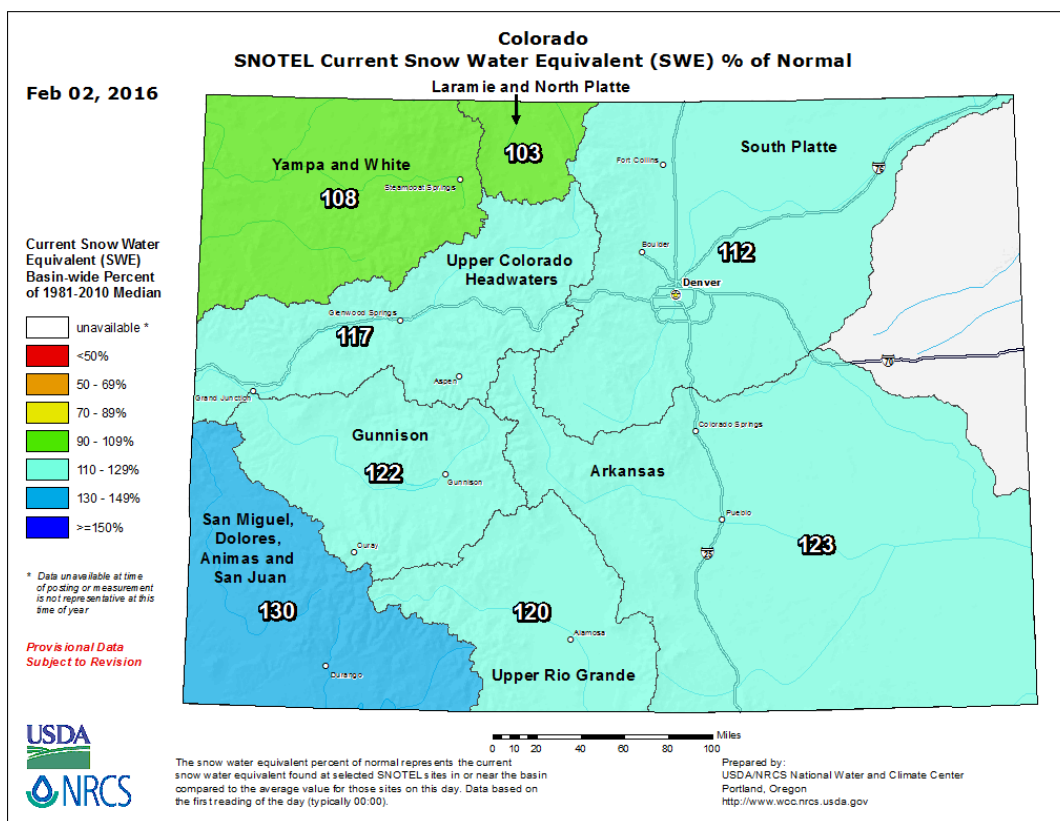
Interestingly enough, this storm has continued the trend of heavier February snowfalls in the Denver area in recent years than what has historically been typical. Historically, February has been one of Denver's drier months and is just the 6th snowiest month on average. However, that has not been the case in the past 5-6 years when February has been much snowier than usual. On the first day of the month in February 2016, DIA has already surpassed its monthly average snowfall total. Not counting this year (since the month is just underway), 3 of the past 4 February's have landed in Denver's top 20 snowiest February's of all-time, including last February which was the snowiest February in Denver history (going by the "official" records anyways). At 10.8" so far this month, we only need 2.8" more for the entire rest of the month to crack the top 20 snowiest Februaries yet again.

Here is a brief overview of the most impressive February snow events at DIA over the past five years:

- 15.9” – Feb 2-4, 2012
- 11.6” – Feb 1-2, 2016
- 10.5” – Feb 20-23, 2015
- 9.1” – Feb 24, 2013

Colorado Snowpack Updates

Colorado’s snowpack remains in great shape statewide, especially after a significant period of snowfall from January 30-February 2 which really boosted the mountain snowpack. All of the major river basins are now above average for early February, with the deepest snowpack relative to average existing across southern portions of the state, from the San Juan Range to the Elk Range, as well as the Southern Sawatch and Sangre de Cristo Ranges. Ski resorts all across the state are enjoying a fantastic winter so far, and the above-average snowpack is also great news for reservoir storage as well as river and stream health as we head into the spring and summer months.



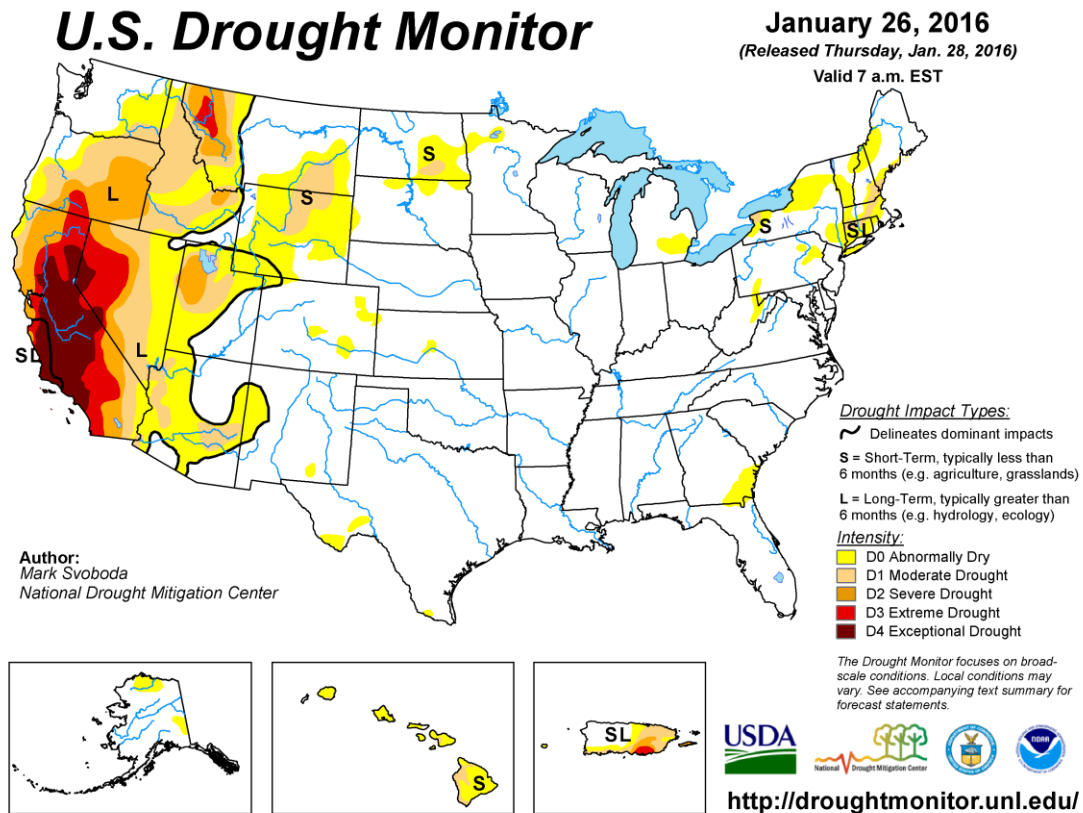
Precipitation maps can be found at:

<http://droughtmonitor.unl.edu/SupplementalInfo/Forecasts.aspx>

Colorado Snow Water Equivalent maps can be found on the web at:

Drought Update

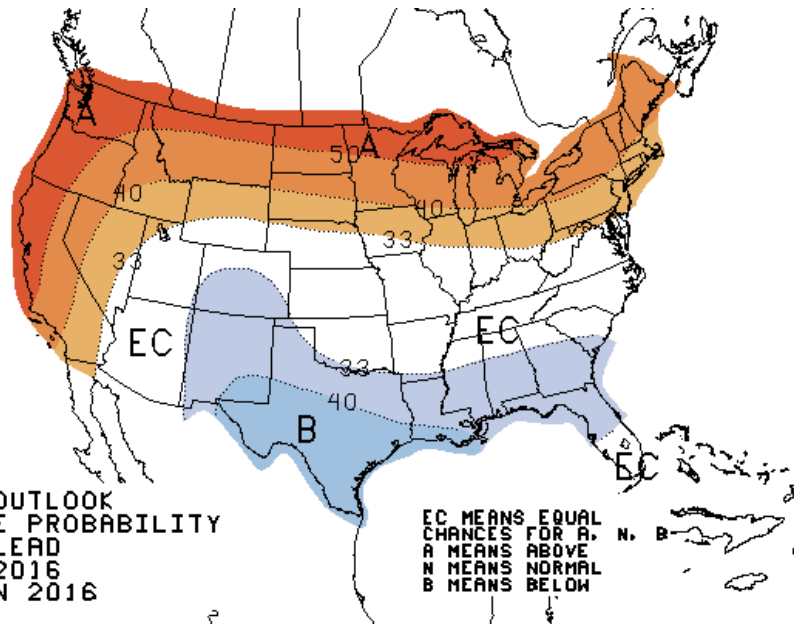
Colorado remains drought-free although a few pockets of abnormally dry areas still exist due to a lack of moisture in August and September. Large areas of severe to exceptional drought still remain across much of California and western Nevada. Drought conditions have improved across Oregon and nearly all of Washington is now drought-free.



The map below shows forecasted temperature deviances for February 2016. There is a slight bias toward below normal temperatures across the southern two-thirds of Colorado, while far northern and far eastern Colorado have equal chances of experiencing below normal or above normal temperatures.



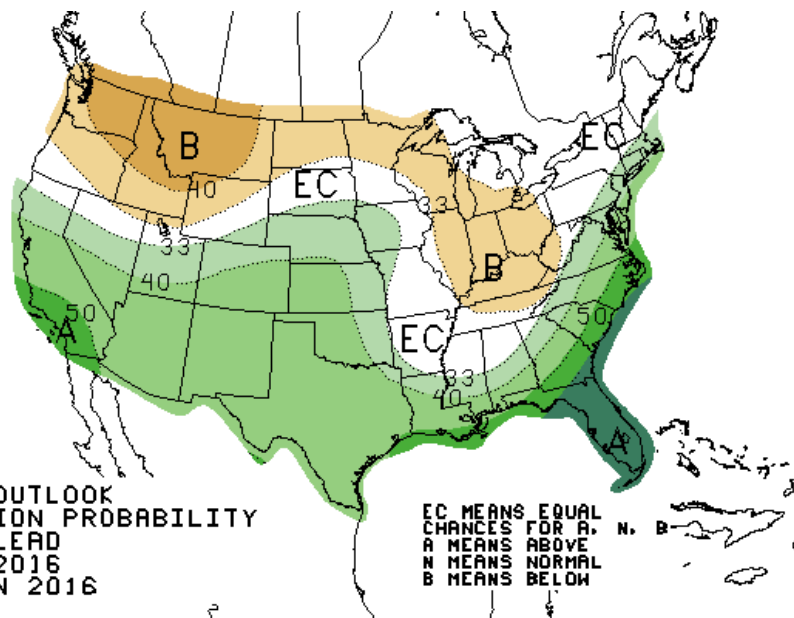
ONE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.0 MONTH LEAD
VALID FEB 2016
MADE 31 JAN 2016



The map below shows forecasted precipitation deviances for February 2016. All of Colorado has a bias toward above normal precipitation, with the strongest bias across southern, central, and eastern portions of the state. The Feb 1-2 storm likely factored in heavily with this projection, though.



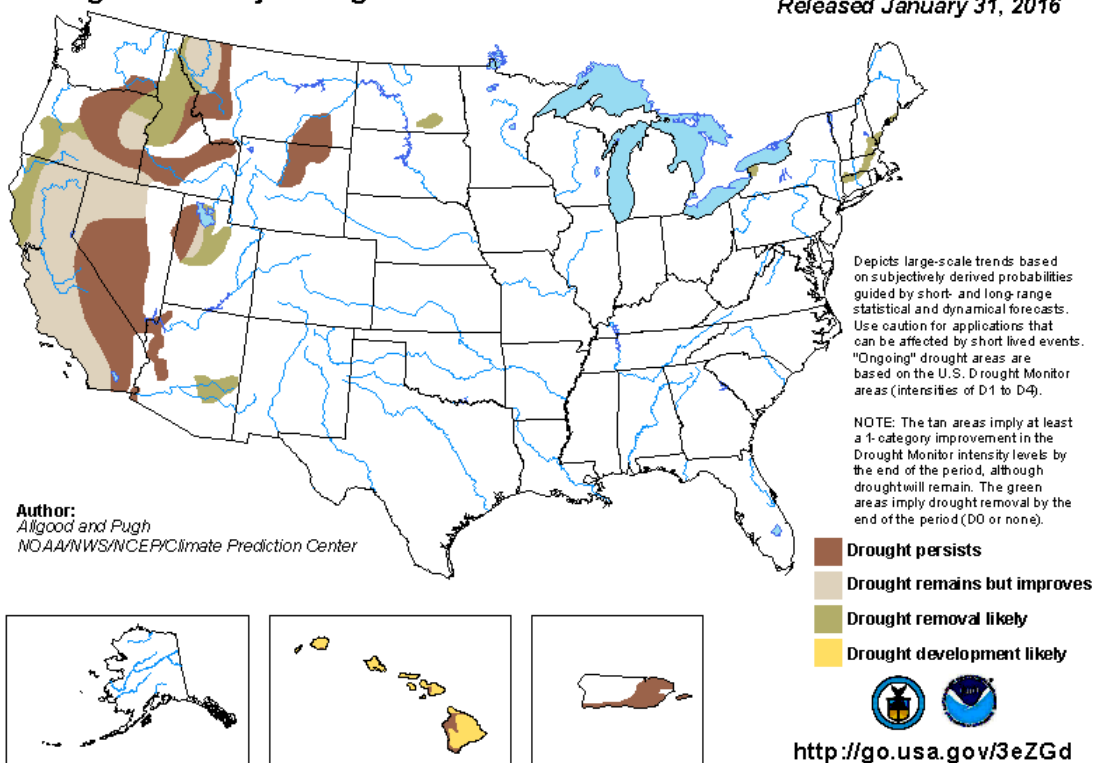
ONE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.0 MONTH LEAD
VALID FEB 2016
MADE 31 JAN 2016



No drought is forecast for Colorado in the near term. Drought is expected to persist across desert regions of California, Nevada, and Oregon, as well as the Snake River Plain in Idaho and portions of Montana and Wyoming. Drought improvement is expected across a large portion of California, as well as parts of northern Nevada, southern Oregon, and northwestern Montana. Drought removal is likely across the northern coast of California as well as northern/central Idaho.

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

Valid for February 2016
Released January 31, 2016



January Summary

January 2016 ended up slightly warmer than average with below average snowfall. The first half of the month featured colder than average temperatures and one decent snowfall event on the 7th-8th, before the pattern changed over the second half of the month featuring above-average temperatures and little snowfall. The first six days of January were dry with near average temperatures, before a storm system on the 7th-8th resulted in a general 2-5" across the Denver metro area, and up to 7" around Ft. Collins. The coldest temperature of the month occurred on the 10th with a low of 5 at DIA. Subzero temperatures have still not occurred yet at DIA this year, although it did hit zero twice in December. Snowfall was minimal for the remainder of the month until a large storm system began to impact the area starting on the 31st. Several minor "nuisance" snow events did occur during the middle and second half of the months however, but accumulations were spotty and light, and tended to favor southern portions of the metro area near the Palmer Divide. A light snow event on the night of the 30th did result in 0.5-

3" across the metro area, and a stronger storm began to produce snowfall on the 31st, but most of the accumulation occurred on Feb 1st-2nd. The period from January 22-30 featured a shift to above average warmth, which resulted in the monthly average rising to just above normal by the end of the month. The high temperature for the month was 65 degrees, which occurred on the 30th. The average high for the month was 43.5 and the average low for the month was 20.1 with an overall average temperature of 31.8, which is 1.1 degrees above normal. Snowfall totaled 4.6" for the month at DIA, which is 2.4" below normal. By the end of the month, seasonal snowfall was slightly below average at DIA, although this was not particularly representative of the rest of the metro area, with many areas still above average. Snowfall would not stay below average at DIA for long, though, thanks to a significant snow on Feb 1st-2nd. Interestingly enough, precipitation totaled 0.50", which is 0.09" above normal, owing to higher-moisture-content snowfalls on the 7th-8th and 30th, compared to the typical lighter-density snowfalls that occur in January.

January Stats

TEMPERATURE (IN DEGREES F)

AVERAGE MAX	43.5	NORMAL 44.0	DEPARTURE -0.5
AVERAGE MIN	20.1	NORMAL 17.4	DEPARTURE 2.7
MONTHLY MEAN	31.8	NORMAL 30.7	DEPARTURE 1.1
HIGHEST	65	on 1/30	
LOWEST	5	on 1/10	

DAYS WITH MAX 90 OR ABOVE	0	NORMAL 0
DAYS WITH MAX 32 OR BELOW	3	NORMAL 5.5
DAYS WITH MIN 32 OR BELOW	30	NORMAL 29.4
DAYS WITH MIN ZERO OR BELOW	0	NORMAL 1.7

TEMPERATURE RECORDS

N/A

HEATING DEGREE DAYS

MONTHLY TOTAL	1021	NORMAL 1063	DEPARTURE -42
SEASONAL TOTAL	3208	NORMAL 3531	DEPARTURE -323

COOLING DEGREE DAYS

MONTHLY TOTAL	0	NORMAL 0	DEPARTURE 0
YEARLY TOTAL	0	NORMAL 0	DEPARTURE 0

PRECIPITATION (IN INCHES)

MONTHLY TOTAL 0.50 NORMAL 0.41 DEPARTURE 0.09
YEARLY TOTAL 0.50 NORMAL 0.41 DEPARTURE 0.09
GREATEST IN 24 HOURS 0.32" on 1/7-1/8
DAYS WITH MEASURABLE PRECIP 5

SNOWFALL (IN INCHES)

MONTHLY TOTAL 4.6 NORMAL 7.0 DEPARTURE -2.4
SEASONAL TOTAL 27.2 NORMAL 29.5 DEPARTURE -2.4
GREATEST IN 24 HOURS 2.3" on 1/8
GREATEST DEPTH 2" on 1/8

WIND (IN MILES PER HOUR)

AVERAGE SPEED 8.5 mph
PEAK WIND GUST 38mph from the W on 1/14

MISCELLANEOUS WEATHER

NUMBER OF DAYS WITH THUNDERSTORM 0 NORMAL 0
NUMBER OF DAYS WITH HEAVY FOG 2 NORMAL 1
NUMBER OF DAYS WITH HAIL 0
NUMBER OF SUNNY DAYS 6
NUMBER OF PARTLY CLOUDY DAYS 19
NUMBER OF CLOUDY DAYS 6
AVERAGE RELATIVE HUMIDITY 57%

February Preview

The month of February is the third coldest month on average in Denver with an average high of 46.2 and average low of 18.9. The coldest temperature on record during February is -25, which occurred in both 1936 and 1951. The warmest temperature on record in February is 77, which occurred in 1980 and was tied in 2006. Historically, February is a drier month in Denver with an average of 5.7" of snow, making it only the 6th snowiest month on average. However, that has not been the case in recent years, as February has been one of the snowier months over the past 6 years. Already, snowfall is above average for February 2016 just a few days into the month, after an impressive winter storm brought significant snowfall to the Denver area on Feb 1-2 with DIA recording 11.6". February 2015 was the snowiest February in Denver's history when 22.5" of snow fell. The majority of this snow occurred during the second half of the month, following an unseasonably warm start to month when the temperature topped 70 degrees four times over the first two weeks. The record-breaking snow over the final two weeks of the month was quite a turn-around! The largest single snowfall event in February also occurred recently on Feb 2-4, 2012 when 15.9" fell at DIA, with even higher totals across most of the city. Average precipitation during February is only 0.32", making it one of driest months of the year historically, and also owing to the typical lower-moisture content snow that falls. February 2016 will already end up above average in both precipitation and snowfall thanks to the single big snowfall event on the 1st-2nd, but we are now entering a much drier pattern that is likely to persist through mid-month. The chances for a more active weather pattern should increase over the second half of the month, with another 1-2 appreciable snow events possible through the end of the month.

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

TEMPERATURE

AVERAGE HIGH	46.2
AVERAGE LOW	18.9
MONTHLY MEAN	32.5
DAYS WITH HIGH 90 OR ABOVE	0
DAYS WITH HIGH 32 OR BELOW	4
DAYS WITH LOW 32 OR BELOW	27
DAYS WITH LOWS ZERO OR BELOW	1

PRECIPITATION

MONTHLY MEAN	0.32"
DAYS WITH MEASURABLE PRECIPITATION	5
AVERAGE SNOWFALL IN INCHES	5.7"
DAYS WITH 1.0 INCH OF SNOW OR MORE	NA

MISCELLANEOUS AVERAGES

HEATING DEGREE DAYS	908
COOLING DEGREE DAYS	0
WIND SPEED (MPH)	8.8mph
WIND DIRECTION	South
DAYS WITH THUNDERSTORMS	0
DAYS WITH DENSE FOG	2
PERCENT OF SUNSHINE POSSIBLE	70%

EXTREMES

RECORD HIGH	77 on 2/4/1980, 2/28/2006
RECORD LOW	-25 on 2/8/1936, 2/1/1951
WARMEST	43.7 in 1954
COLDEST	17.6 in 1899
WETTEST	2.01" in 1934
DRIEST	0.01" in 1970
SNOWIEST	22.5" in 2015
LEAST SNOWIEST	TR in 2009

Snowfall

October 2015 to April 2016

City	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Total
Aurora (Central)	0.0	18.3	14.5	3.4				36.2
Brighton	0.0	13.9	15.9	5.4				35.2
Broomfield	0.0	17.0	17.4	4.2				38.6
Castle Rock	0.0	30.8	16.7	8.1				55.6
Colo Sprgs Airport	0.0	5.6	4.3	5.0				14.9
Denver DIA	0.0	11.3	11.3	4.4				27.0
Denver Downtown	0.0	17.1	13.8	4.6				36.0
Golden	0.0	18.5	17.6	5.1				41.2
Fort Collins	0.0	8.4	16.0	6.2				30.6
Highlands Ranch	0.0	24.1	14.5	4.0				42.6
Lakewood	0.0	13.3	13.2	6.3				32.8
Littleton	0.0	21.9	15.4	5.5				42.8
Parker	0.0	23.4	12.4	5.4				41.2
Sedalia - Hwy 67	0.0	31.1	12.2	7.3				50.6
Thornton	0.0	18.2	18.4	4.8				41.4
Westminster	0.0	18.2	15.0	5.6				38.8
Wheat Ridge	0.0	14.5	15.9	5.7				36.1

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