

The Weather Wire

January 2013

Volume 20 Number 1

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2012 Climate Summary Denver:

2012 will go down as one of the warmest in Denver history! The average mean temperature the entire year was 53.9 degrees which is 3.4 degrees above normal and 4th on the all time list! There were 73 days with a temperature at or above 90 degrees. Total precipitation at DIA was 10.11", 4.19" below the normal of 14.30". Although 2012 was dry it did not reach the top ten driest years. 2002 was the driest year on record with only 7.48" of precipitation recorded. Below are the climate statistics for 2012.

TEMPERATURE (F)

RECORD

HIGH 105 06/25/2012 AND 06/26/2012

LOW -29 01/09/1875

HIGHEST 105R 06/25/2012 AND 06/26/2012

LOWEST -6 01/11

		AVG	(+/-)	Last Year
AVG. MAXIMUM	68.4	64.7	3.7	64.8
AVG. MINIMUM	39.3	36.3	3.0	36.4
MEAN	53.9	50.5	3.4	50.6
DAYS MAX >= 90	73	39.6	33.4	50
DAYS MAX <= 32	19	20.0	-1.0	23
DAYS MIN <= 32	132	156.9	-24.9	158
DAYS MIN <= 0	4	5.8	-1.8	12

PRECIPITATION (INCHES)

RECORD

MAXIMUM	23.31	1196			
MINIMUM	7.29	2008		AVG (+/-)	Last Year
TOTALS			10.11	14.30 -4.19	17.31
DAILY AVG.	0.03			0.04 -0.01	0.05
DAYS >= .01	52			79.7 -27.7	80
DAYS >= .10	23			34.9 -11.9	37
DAYS >= .50	9			7.6 1.4	10
DAYS >= 1.00	1			2.3 -1.3	6
GREATEST					
24 HR. TOTAL	1.63	MM			

SNOWFALL (INCHES)

				AVG (+/-)	Last Year
TOTALS	38.5			53.8 -15.3	46.8
SINCE 7/1	12.4			22.5 -10.1	29.5
DAYS >= TRACE	36			33.3 2.7	41
DAYS >= 1.0	13			16.3 -3.3	16

DEGREE_DAYS

HEATING TOTAL	5198	6059	-861	6069
SINCE 7/1	MM	2468	MM	MM
COOLING TOTAL	1236	0	1236	964
SINCE 1/1	1236	769	467	964

FREEZE DATES

RECORD

EARLIEST 09/08/1962

LATEST 06/08/2007

EARLIEST 10/07

LATEST 05/05

WIND (MPH)

AVERAGE WIND SPEED 10.3

RESULTANT WIND SPEED/DIRECTION 3/205

HIGHEST WIND SPEED/DIRECTION 52/240 DATE 06/02

HIGHEST GUST SPEED/DIRECTION 67/250 DATE 06/02

SKY COVER

POSSIBLE SUNSHINE (PERCENT) MM

AVERAGE SKY COVER 0.50

NUMBER OF DAYS FAIR 86

NUMBER OF DAYS PC 235

NUMBER OF DAYS CLOUDY 45

AVERAGE RH (PERCENT) 44

WEATHER CONDITIONS. NUMBER OF DAYS WITH

THUNDERSTORM	42	MIXED PRECIP	0
HEAVY RAIN	4	RAIN	12
LIGHT RAIN	45	FREEZING RAIN	0
LT FREEZING RAIN	1	HAIL	3
HEAVY SNOW	4	SNOW	15
LIGHT SNOW	37	SLEET	0
FOG	73	FOG W/VIS <= 1/4 MILE	21
HAZE	51		

(-) INDICATES NEGATIVE NUMBERS, (R) INDICATES RECORD WAS SET OR TIED.

(MM) INDICATES DATA IS MISSING, (T) INDICATES TRACE AMOUNT.

2012 Climate Summary Colorado Springs:

2012 was the warmest year ever recorded in Colorado Springs! The mean temperature of 53.0 degrees surpassed the old record of 52.4 degrees set back in 1934. Not surprising that Colorado Springs set a new all time record high this year at 101 degrees on June 26th. 2012 was also a very dry year for Colorado Springs with only 8.11" of precipitation which is not even half of the normal 16.54" and ranks 4th on the all time driest years in history. Snowfall was nearly absent with only 11.7" on the year, a 26.0" deficit from the 37.7" average. There were only 3 storms that produced 1" or more of snow at the Airport. Below are the complete climate statistics for 2012:

TEMPERATURE (F)

RECORD

HIGH	101	06/26/2012		
LOW	-27	02/01/1951		
HIGHEST	101R	06/26		
LOWEST	-3	12/10		
			AVG	
AVG. MAXIMUM	67.2		62.2	5.0
AVG. MINIMUM	38.7		35.8	2.9
MEAN	53.0		49.0	4.0
DAYS MAX >= 90	49			
DAYS MAX <= 32	13			
DAYS MIN <= 32	136			
DAYS MIN <= 0	1			

PRECIPITATION (INCHES)

MAXIMUM	27.58	1999		
MINIMUM	6.07	1939		
			AVG	
TOTALS	8.11		16.54	-8.43
DAILY AVG.	0.02		0.05	-0.03
DAYS >= .01	59			
DAYS >= .10	15			

DAYS >= .50 4

DAYS >= 1.00 2

GREATEST 24 HR. TOTAL 1.81 07/30 TO 07/31

SNOWFALL (INCHES)

RECORDS

TOTAL 96.4 1957

0.6 1922

24 HR TOTAL 22.0 01/15/1987 TO 01/15/1987

SNOW DEPTH 20 10/26/1997

		AVG	
2012 TOTALS	11.7	37.7	-26.0

SINCE 7/1	6.3	13.5	-7.2
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DAYS >= TRACE	47	29.2	17.8
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DAYS >= 1.0	3	11.6	-8.6
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24 HR TOTAL 3.3 12/09 TO 12/09

DEGREE_DAYS

HEATING TOTAL	5186	6292	-1106
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SINCE 7/1	2284	2572	-288
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COOLING TOTAL	873	455	418
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SINCE 1/1	873	455	418
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FREEZE DATES

EARLIEST 09/03/1961

LATEST 06/03/1951

EARLIEST 10/08

LATEST 05/09

WIND (MPH)

AVERAGE WIND SPEED 9.5

RESULTANT WIND SPEED/DIRECTION 1/073

HIGHEST WIND SPEED/DIRECTION 48/210 DATE 03/26

HIGHEST GUST SPEED/DIRECTION 66/250 DATE 01/18

SKY COVER

POSSIBLE SUNSHINE (PERCENT) MM

AVERAGE SKY COVER 0.30

NUMBER OF DAYS FAIR 257

NUMBER OF DAYS PC 93

NUMBER OF DAYS CLOUDY 16

AVERAGE RH (PERCENT) 44

WEATHER CONDITIONS. NUMBER OF DAYS WITH

THUNDERSTORM	53	MIXED PRECIP	1
HEAVY RAIN	6	RAIN	14
LIGHT RAIN	83	FREEZING RAIN	1
LT FREEZING RAIN	4	HAIL	5
HEAVY SNOW	4	SNOW	6
LIGHT SNOW	44	SLEET	0
FOG	67	FOG W/VIS <= 1/4 MILE	17
HAZE	67		

(-) INDICATES NEGATIVE NUMBERS, (R) INDICATES RECORD WAS SET OR TIED.

(MM) INDICATES DATA IS MISSING, (T) INDICATES TRACE AMOUNT.

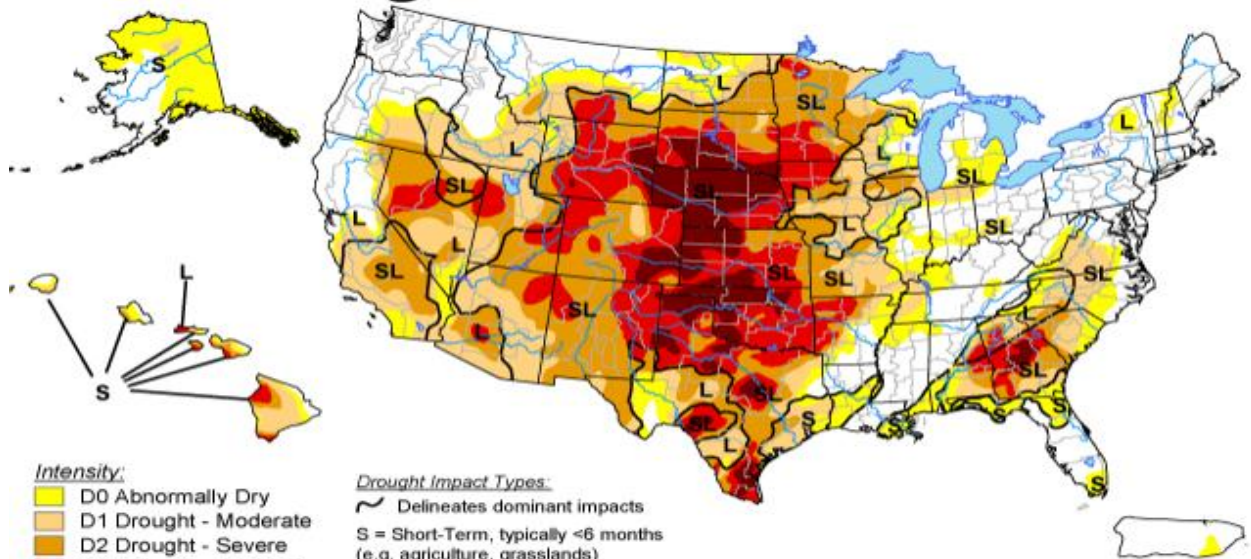
Drought Update

Severe to exceptional drought continues over the central part of the US from the Dakota's to Texas extending westward into the central and southern Rocky mountain states and into the Great Basin. The NW and the NE have seen ample moisture as of late.

U.S. Drought Monitor

January 1, 2013

Valid 7 a.m. EST



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

Drought Impact Types:

- Delineates dominant impacts
- S = Short-Term, typically <6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically >6 months (e.g. hydrology, ecology)

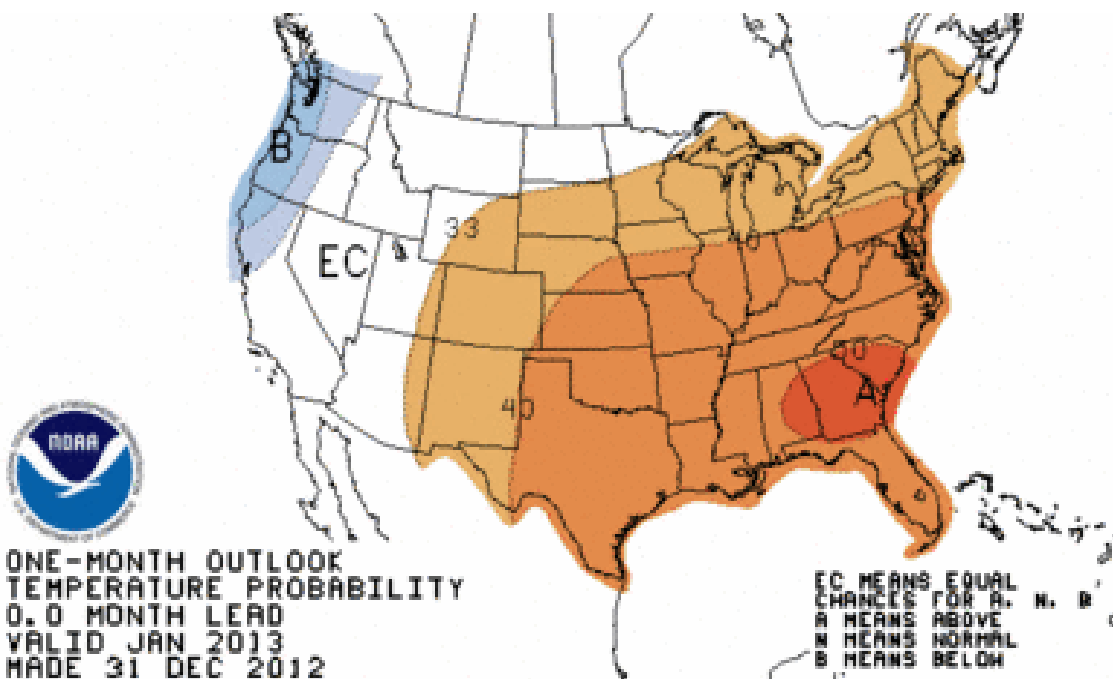
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://droughtmonitor.unl.edu/>



Released Thursday, January 3, 2013
 Author: Richard Heim, NOAA/NESDIS/NCDC

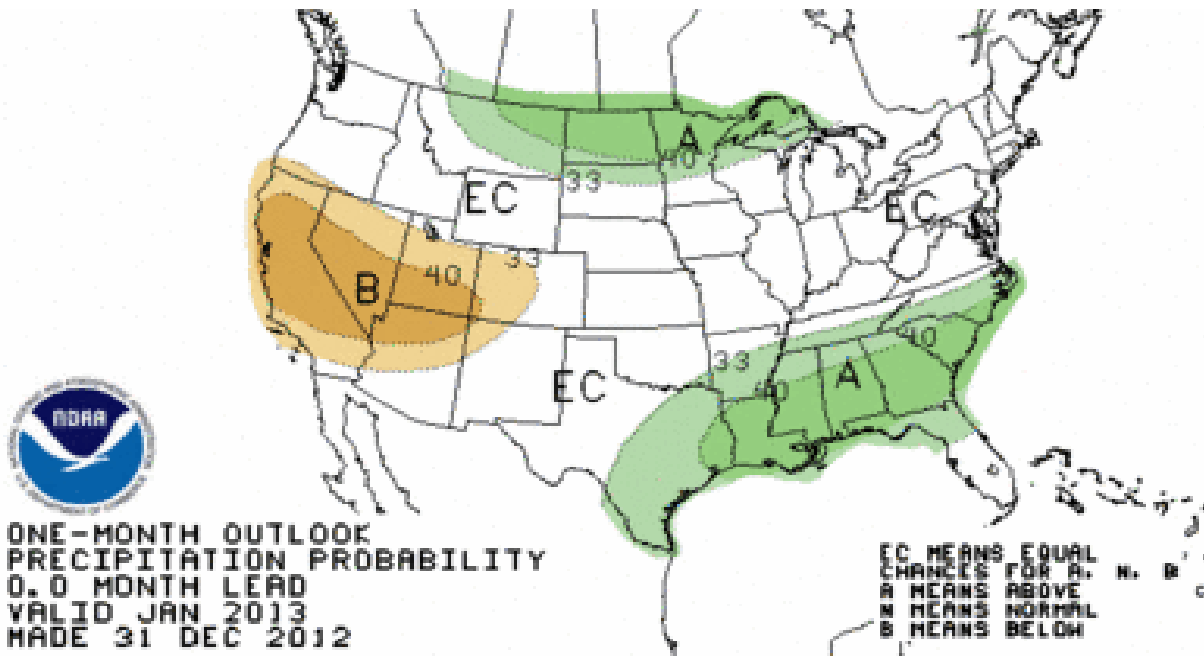
The map below shows forecasted temperature deviances for January 2013. A slight bias towards above normal temperatures are expected in January.



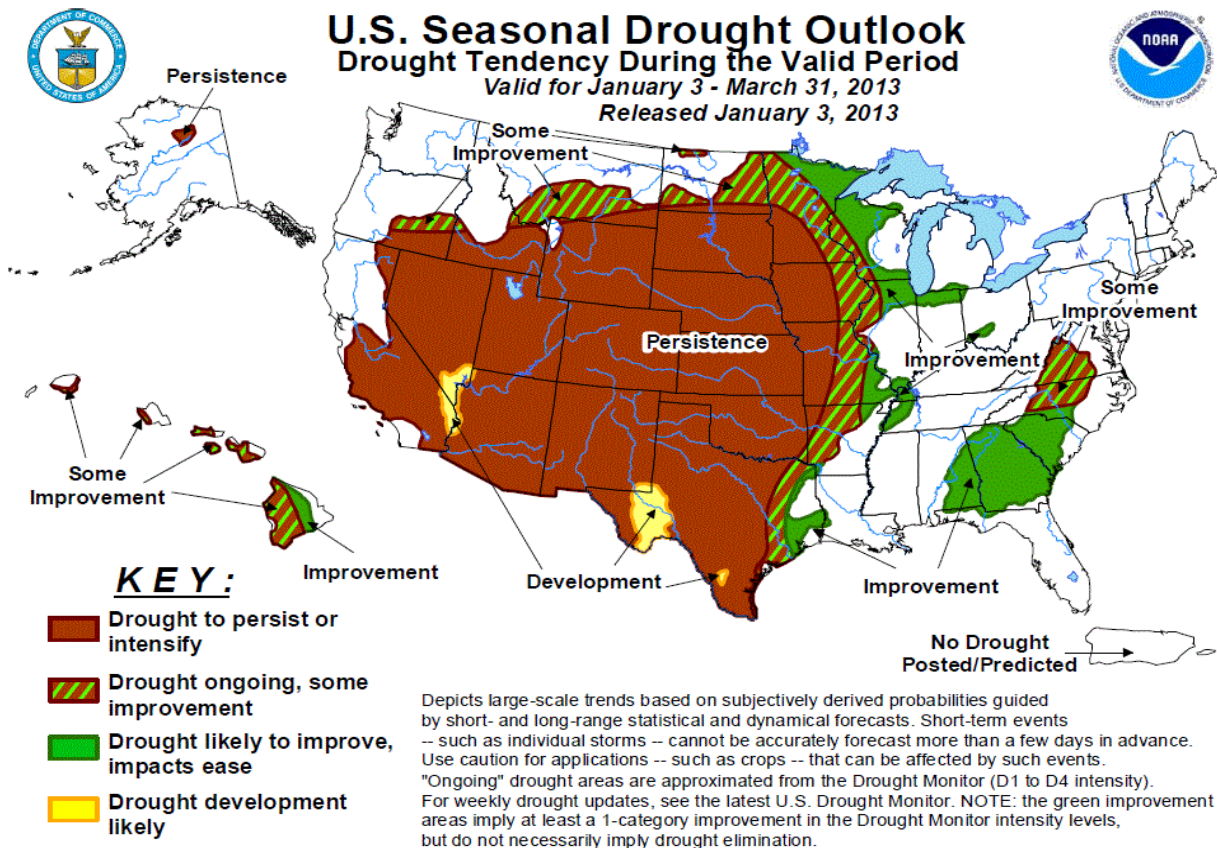
ONE-MONTH OUTLOOK
 TEMPERATURE PROBABILITY
 0.0 MONTH LEAD
 VALID JAN 2013
 MADE 31 DEC 2012

EC MEANS EQUAL CHANCES FOR A, N, B
 A MEANS ABOVE
 N MEANS NORMAL
 B MEANS BELOW

The map below shows forecasted precipitation deviances for January 2013. Above normal precipitation is more likely over the northern plains states and the southeast US. The trend of normal to below normal precipitation is expected to continue in Colorado.



Drought conditions are forecast to persist over much of the Country including Colorado with some improvement along the Mississippi River and over the southeastern US.



December Summary

December started out with a continuation of mild temperatures as the first 4 out of 5 days in the month recorded a temperature of 60 or above. A cold front would cool temperatures down to 25 degrees for a high on the 9th at DIA and there was relatively unsettled weather from the 8th to the end of the month as numerous storm systems would impact the state. Snowfall was most abundant in the mountains along and west of the continental Divide as much needed snow finally accumulated in our ski resorts across the state. A rare white Christmas was had by all in the state of Colorado as a storm system would bring snow in the evening hours on Christmas Eve into early Christmas morning. As the storm cleared temperatures remained cold through the end of the month with 6 out of the last 7 days reporting a high temperature below freezing with a high of only 39 in that stretch. Thanks to the cold weather at the end of the month temperatures were just slightly above normal by 1.2 degrees with a mean monthly temperature of 31.2 degrees. Despite the somewhat active weather the snow storms that moved through produced only minor snows with 5.2" reported at DIA. Anywhere from 5-10" of snow was common in the Denver suburbs with the higher amounts towards the Littleton and Golden areas. The 5.2" of snow was 3.2" below the normal of 8.4" and now results in a deficit of 10.0" since the start of the snow season in September. Only 12.4" of snow has been measured so far at DIA. Precipitation was also below normal with 0.27" reported compared to 0.35" on average. For the year DIA only reported 10.11" of precipitation, 4.19" below the normal of 14.30".

December Stats

TEMPERATURE (IN DEGREES F)

AVERAGE MAX	44.2	NORMAL 42.8	DEPARTURE 1.4
AVERAGE MIN	18.3	NORMAL 17.1	DEPARTURE 1.2
MONTHLY MEAN	31.2	NORMAL 30.0	DEPARTURE 1.2
HIGHEST	69	on the 5 th	
LOWEST	-2	on the 26 th	

DAYS WITH MAX 90 OR ABOVE	0	NORMAL	0
DAYS WITH MAX 32 OR BELOW	8	NORMAL	6
DAYS WITH MIN 32 OR BELOW	28	NORMAL	29
DAYS WITH MIN ZERO OR BELOW	2	NORMAL	2

TEMPERATURE RECORDS

No temperature records tied or broken.

HEATING DEGREE DAYS

MONTHLY TOTAL	1038	NORMAL 1086	DEPARTURE -48
SEASONAL TOTAL	2233	NORMAL 2468	DEPARTURE -235

COOLING DEGREE DAYS

MONTHLY TOTAL	0	NORMAL 0	DEPARTURE 0
YEARLY TOTAL	1236	NORMAL 769	DEPARTURE 467

PRECIPITATION (IN INCHES)

MONTHLY TOTAL	0.27	NORMAL 0.35	DEPARTURE -0.08
YEARLY TOTAL	10.11	NORMAL 14.30	DEPARTURE -4.19
GREATEST IN 24 HOURS	0.20" on 12/24 to 12/25		
DAYS WITH MEASURABLE PRECIP.	5		

SNOWFALL (IN INCHES)

MONTHLY TOTAL	5.2	NORMAL 8.4	DEPARTURE -3.2
SEASONAL TOTAL	12.4	NORMAL 22.4	DEPARTURE -10.0
GREATEST IN 24 HOURS	2.6" on the 12/24 to 12/25		
GREATEST DEPTH	NA		

WIND (IN MILES PER HOUR)

AVERAGE SPEED	9.9mph
PEAK WIND GUST	48mph from the WNW

MISCELLANEOUS WEATHER

NUMBER OF DAYS WITH THUNDERSTORM	0	NORMAL	0
NUMBER OF DAYS WITH HEAVY FOG	3	NORMAL	1
NUMBER OF DAYS WITH HAIL	0		
NUMBER OF SUNNY DAYS	1		
NUMBER OF PARTLY CLOUDY DAYS	22		
NUMBER OF CLOUDY DAYS	8		
AVERAGE RELATIVE HUMIDITY	49%		

January Preview

January is the second coldest month of the year on average just slightly warmer than December with a mean temperature of 30.7 degrees. High temperatures on average are 43 degrees to start the month and 44 to end the month. Average low temperatures are 17-18 degrees. As we all know “normal” does not frequently occur here unless we are between storms with generally higher or lower temperatures on any given day. January is the time of year where arctic air masses can make frequent visits with high temperatures below freezing and nighttime lows sub zero. The coldest temperature ever recorded in Denver was on January 9, 1875 with a low of -29 degrees. The record high is 76 degrees set back on January 27, 1888. The record high and record low combine to create a temperature spread of 105 degrees! Snowfall in January is usually dry and powdery with low water content that can typically be swept away with a broom. There are around 3-5 snow events on average producing 7.0” of snow and 0.41” of precipitation. Only two storms on average produce 1” or more of snow. For January 2013 normal to slightly below normal snowfall and precipitation is expected. Temperatures on the other hand are expected to be near normal to possibly slightly above normal.

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

TEMPERATURE

AVERAGE HIGH	44.0
AVERAGE LOW	17.4
MONTHLY MEAN	30.7
DAYS WITH HIGH 90 OR ABOVE	0
DAYS WITH HIGH 32 OR BELOW	6
DAYS WITH LOW 32 OR BELOW	29
DAYS WITH LOWS ZERO OR BELOW	2

PRECIPITATION

MONTHLY MEAN	0.41”
DAYS WITH MEASURABLE PRECIPITATION	4
AVERAGE SNOWFALL IN INCHES	7.0”
DAYS WITH 1.0 INCH OF SNOW OR MORE	2

MISCELLANEOUS AVERAGES

HEATING DEGREE DAYS	1063
COOLING DEGREE DAYS	0
WIND SPEED (MPH)	8.6
WIND DIRECTION	South
DAYS WITH THUNDERSTORMS	0
DAYS WITH DENSE FOG	1
PERCENT OF SUNSHINE POSSIBLE	71%

EXTREMES

RECORD HIGH	76 on 1/27/1888
RECORD LOW	-29 on 1/9/1875

WARMEST	40.3 in 1986
COLDEST	16.9 in 1930
WETTEST	2.35" in 1883
DRIEST	0.01" in 1933
SNOWIEST	24.3" in 1992
LEAST SNOWIEST	TR in 1934, 2003

Sunrise/Sunset (January - June Denver area)

	JAN	FEB	MAR	APR	MAY	JUN	
	SR - SS	SR - SS	SR - SS	SR - SS	SR - SS	SR - SS	
01	0720-0445	0706-0517	0631-0550	0642-0722	0559-0752	0532-0820	01
02	0720-0446	0705-0518	0630-0551	0641-0723	0558-0753	0532-0821	02
03	0720-0447	0704-0520	0628-0552	0639-0724	0556-0754	0532-0822	03
04	0720-0448	0703-0521	0627-0553	0637-0725	0555-0755	0531-0823	04
05	0720-0449	0702-0522	0625-0554	0636-0726	0554-0756	0531-0823	05
06	0720-0449	0701-0523	0624-0555	0634-0727	0553-0757	0531-0824	06
07	0720-0450	0700-0524	0622-0556	0633-0728	0552-0758	0531-0824	07
08	0720-0451	0659-0526	0621-0557	0631-0729	0551-0759	0530-0825	08
09	0720-0452	0658-0527	0619-0558	0630-0730	0550-0800	0530-0826	09
10	0719-0453	0657-0528	0717-0700	0628-0731	0549-0801	0530-0826	10
11	0719-0454	0656-0529	0716-0701	0627-0732	0548-0802	0530-0827	11
12	0719-0456	0654-0530	0714-0702	0625-0733	0547-0803	0530-0827	12
13	0719-0457	0653-0532	0713-0703	0624-0734	0546-0804	0530-0828	13
14	0718-0458	0652-0533	0711-0704	0622-0735	0545-0805	0530-0828	14
15	0718-0459	0651-0534	0710-0705	0621-0736	0544-0806	0530-0828	15
16	0717-0500	0649-0535	0708-0706	0619-0737	0543-0807	0530-0829	16
17	0717-0501	0648-0536	0706-0707	0618-0738	0542-0808	0530-0829	17
18	0717-0501	0647-0537	0705-0708	0616-0739	0541-0809	0530-0829	18
19	0716-0502	0645-0539	0703-0709	0615-0740	0540-0810	0530-0830	19
20	0715-0503	0644-0540	0702-0710	0613-0741	0540-0811	0531-0830	20
21	0715-0504	0643-0541	0700-0711	0612-0742	0539-0812	0531-0830	21
22	0714-0505	0641-0542	0658-0712	0611-0743	0538-0812	0531-0830	22
23	0714-0507	0640-0543	0657-0713	0609-0744	0537-0813	0531-0831	23
24	0713-0508	0639-0544	0655-0714	0608-0745	0537-0814	0532-0831	24
25	0712-0509	0637-0545	0653-0715	0606-0746	0536-0815	0532-0831	25
26	0711-0510	0636-0546	0652-0716	0605-0747	0535-0816	0532-0831	26
27	0711-0511	0634-0548	0650-0717	0604-0748	0535-0817	0533-0831	27
28	0710-0513	0633-0549	0649-0718	0603-0749	0534-0817	0533-0831	28
29	0709-0514		0647-0719	0601-0750	0534-0818	0533-0831	29
30	0708-0515		0645-0720	0600-0751	0533-0819	0534-0831	30
31	0707-0516		0644-0721		0533-0820		31

Images

Icy roadways in Castle Rock from the 12/8/2012 storm in Douglas County looking North



CDOT snow plows plowing on Highway 83 north of Franktown on 12/19/2012



Snowfall

Oct 2012 to Apr 2013

City	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Total
Aurora (Central)	4.7	1.0	5.6					11.3
Brighton	5.6	3.0	2.0					10.6
Broomfield	5.9	2.0	4.8					12.7
Castle Rock	4.0	0.2	10.8					15.0
Colo Sprgs Airport	Trace	0.3	5.4					5.7
Denver DIA	5.5	1.7	5.2					12.4
Denver Downtown	4.8	0.7	4.9					10.4
Golden	5.8	1.4	10.7					17.9
Fort Collins	4.5	0.4	5.8					10.7
Highlands Ranch	4.9	1.2	11.3					17.4
Lakewood	4.9	1.0	5.8					11.7
Littleton	4.5	1.5	10.3					16.3
Parker	3.8	2.0	9.1					14.9
Sedalia - Hwy 67	4.0	TR	10.0					14.0
Thornton	6.2	2.0	4.5					12.7
Westminster	5.2	2.0	6.1					13.3
Wheatridge	4.4	1.3	5.7					11.4

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