

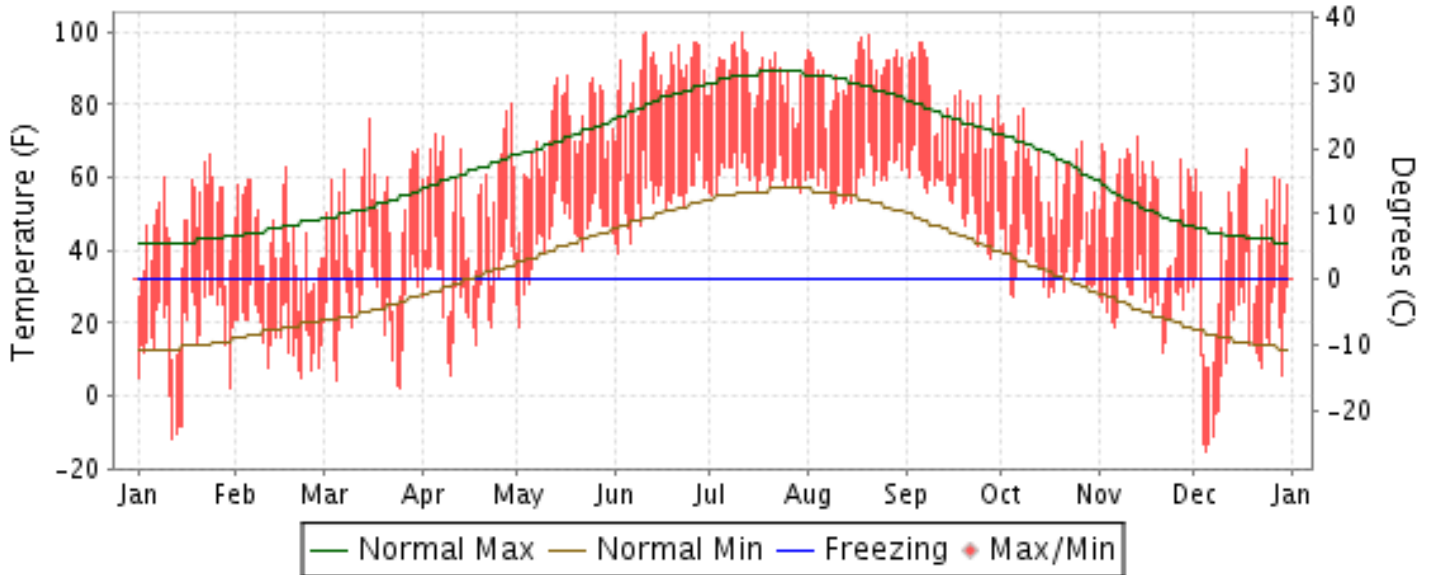


# 2013 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

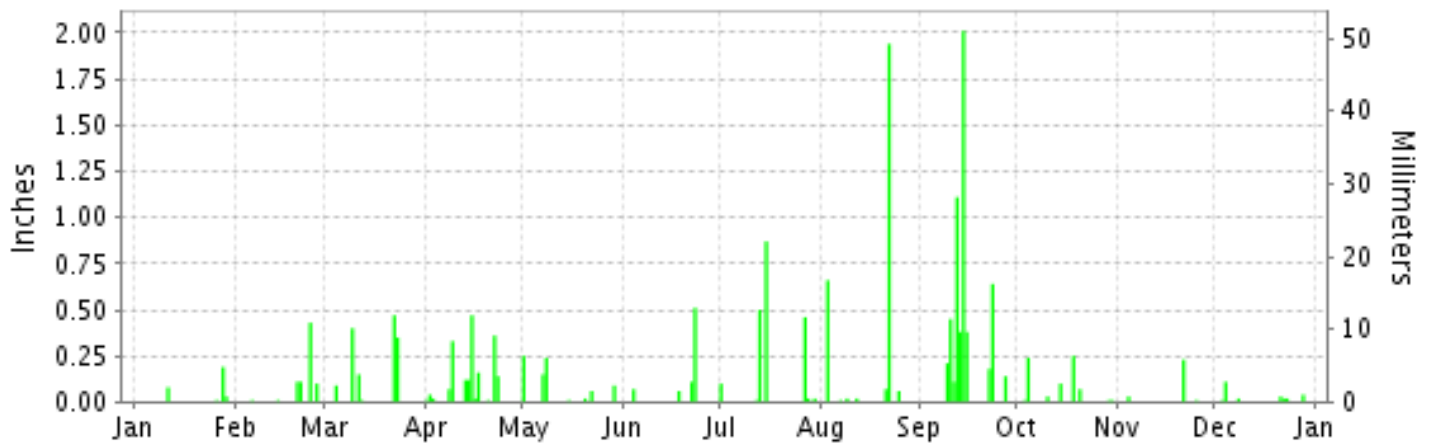
ISSN 0198-7682

## DENVER, COLORADO (KDEN)

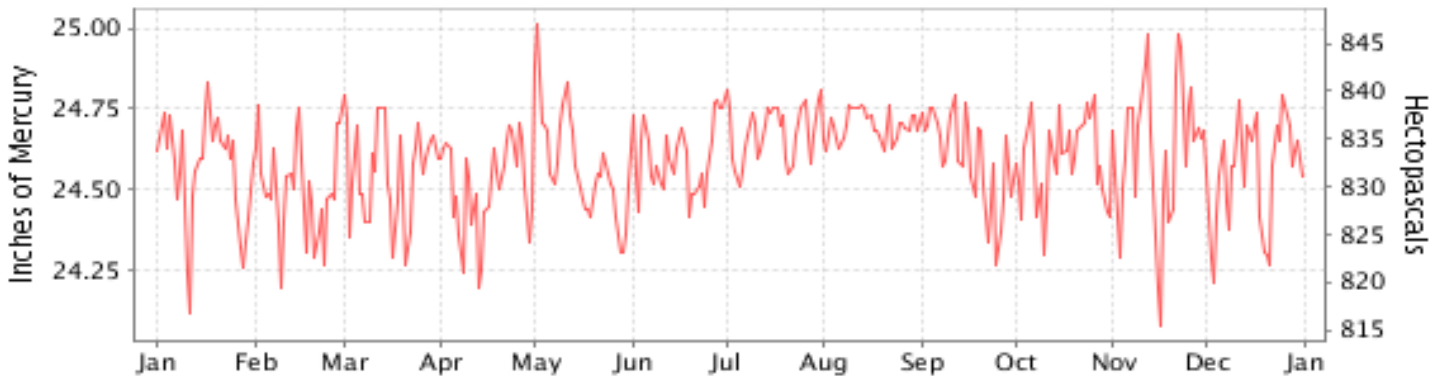
### Daily Max/Min Temperature



### Daily Precipitation



### Daily Station Pressure



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AND INFORMATION SERVICE

NATIONAL  
CLIMATIC DATA CENTER  
ASHEVILLE, NORTH CAROLINA

*Thomas R. Karl*  
DIRECTOR  
NATIONAL CLIMATIC DATA CENTER

# METEOROLOGICAL DATA FOR 2013

## DENVER (KDEN)

LATITUDE: 39° 49'N      LONGITUDE: 104° 39'W      ELEVATION (FT): GRND: 5414 BARO: 5382      TIME ZONE: MOUNTAIN (UTC -7)      WBAN: 03017

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	44.6	43.3	50.7	54.7	71.7	87.8	88.2	89.4	78.6	60.0	55.1	42.9	63.9	
	HIGHEST DAILY MAXIMUM	66	63	76	80	88	100	100	99	97	79	71	68	100	
	DATE OF OCCURRENCE	24	17	15	29	17	11	11	20	06+	08	13	18	JUL 11	
	MEAN DAILY MINIMUM	16.0	16.9	24.6	28.7	44.1	54.3	60.4	59.8	54.2	35.5	26.7	14.0	36.3	
	LOWEST DAILY MINIMUM	-12	5	2	6	19	39	55	52	38	27	12	-15	-15	
	DATE OF OCCURRENCE	12	22	25	10	02	02	02	09	28	16+	21	05	DEC 05	
	AVERAGE DRY BULB	30.3	30.1	37.7	41.7	57.9	71.1	74.3	74.6	66.4	47.7	40.9	28.4	50.1	
	MEAN WET BULB	23.3	23.6	30.5	33.4	46.3	54.1	59.7	58.9	55.3	39.8	32.1	22.5	40.0	
	MEAN DEW POINT	9.6	11.7	19.6	21.7	34.6	39.8	50.5	49.1	47.4	32.0	19.7	11.5	28.9	
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	0	0	0	14	17	16	7	0	0	0	54	
	MAXIMUM <= 32°	6	6	3	4	0	0	0	0	0	0	2	8	29	
MINIMUM <= 32°	30	28	24	17	4	0	0	0	0	12	25	29	169		
MINIMUM <= 0°	5	0	0	0	0	0	0	0	0	0	0	6	11		
H/C	HEATING DEGREE DAYS	1067	972	840	690	253	29	0	0	83	525	715	1128	6302	
	COOLING DEGREE DAYS	0	0	0	0	42	221	295	308	133	0	0	0	999	
RH	MEAN (PERCENT)	47	53	53	52	48	39	50	47	58	61	49	54	51	
	HOUR 05 LST	53	62	63	68	64	56	67	66	71	74	61	61	64	
	HOUR 11 LST	34	37	38	37	30	23	35	29	43	46	32	40	35	
	HOUR 17 LST	48	49	51	45	36	24	36	39	54	57	47	55	45	
	HOUR 23 LST	54	60	61	62	62	48	62	58	66	70	58	61	60	
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	2	2	4	5	0	0	1	2	3	8	1	1	29	
	THUNDERSTORMS	0	0	0	1	11	8	14	17	8	1	0	0	60	
PR	MEAN STATION PRESS. (IN.)	24.57	24.50	24.56	24.51	24.58	24.60	24.68	24.70	24.61	24.59	24.63	24.56	24.59	
	MEAN SEA-LEVEL PRESS. (IN.)	30.05	29.97	29.99	29.90	29.87	29.81	29.90	29.92	29.86	29.96	30.05	30.03	29.94	
WINDS	RESULTANT SPEED (MPH)	4.2	1.7	0.9	0.8	1.8	2.3	2.6	3.2	2.2	0.9	2.6	3.1	1.8	
	RES. DIR. (TENS OF DEGS.)	20	23	23	01	24	16	16	21	18	19	20	23	21	
	MEAN SPEED (MPH)	8.8	10.3	10.1	11.0	10.2	10.7	10.3	8.8	9.2	8.8	9.0	9.3	9.7	
	PREVAIL.DIR.(TENS OF DEGS.)	22	16	23	23	22	21	16	23	17	23	23	21	22	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	38	35	38	49	39	40	45	43	53	40	31	33	53	
	DIR. (TENS OF DEGS.)	29	36	01	29	29	20	05	11	23	27	04	01	23	
	DATE OF OCCURRENCE	24	15	09	14	30	23	20	03	22	10	20	28	SEP 22	
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	45	44	47	55	53	53	58	55	64	48	38	42	64	
DIR. (TENS OF DEGS.)	29	01	30	35	22	25	04	06	22	27	03	29	22		
DATE OF OCCURRENCE	24	15	18	08	26	16	20	03	22	10	20	15	SEP 22		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	0.31	0.77	1.47	1.87	0.82	0.75	1.98	2.78	5.61	0.72	0.27	0.25	17.60	
	GREATEST 24-HOUR (IN.)	0.22	0.43	0.82	0.50	0.33	0.51	0.87	1.95	2.39	0.25	0.23	0.12	2.39	
	DATE OF OCCURRENCE	28-29	24	22-23	22-23	07-08	23	15	21-22	14-15	18	21	03-04	SEP 14-15	
	NUMBER OF DAYS WITH:														
PRECIPITATION 0.01	4	6	6	13	7	4	7	7	10	8	3	7	82		
PRECIPITATION 0.10	1	4	4	7	3	2	4	2	10	3	1	1	42		
PRECIPITATION 1.00	0	0	0	0	0	0	0	1	2	0	0	0	3		
SNOWFALL	SNOW,ICE PELLETS,HAIL														
	TOTAL (IN.)	4.6	14.1	23.5	20.4	3.4	0.0	0.0	0.0	0.0	1.4	2.0	4.7	74.1	
	GREATEST 24-HOUR (IN.)	2.7	9.1	6.2	7.0	3.2	0.0	0.0	0.0	0.0	1.4	2.0	2.8	9.1	
	DATE OF OCCURRENCE	28	24	23	15	01					18	21	04	FEB 24	
	MAXIMUM SNOW DEPTH (IN.)	1	9	6	7	1	0	0	0	0	1	2	2	9	
	DATE OF OCCURRENCE	30+	25	12	16	02					18	21	05	FEB 25	
	NUMBER OF DAYS WITH:														
SNOWFALL >= 1.0	2	4	5	5	1	0	0	0	0	1	1	1	20		

# NORMALS, MEANS, AND EXTREMES DENVER (KDEN)

LATITUDE:  
39° 49'N

LONGITUDE:  
104° 39'W

ELEVATION (FT):  
GRND: 5414 BARO: 5382

TIME ZONE:  
MOUNTAIN (UTC -7)

WBAN: 03017

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	44.0	46.2	54.4	61.5	71.5	82.4	89.4	87.2	78.5	65.3	52.1	42.8	64.6
	MEAN DAILY MAXIMUM	18	44.3	45.1	54.8	60.8	71.0	81.8	89.9	87.4	78.2	64.3	53.4	43.1	64.5
	HIGHEST DAILY MAXIMUM	18	72	77	82	88	94	105	105	104	97	89	80	72	105
	YEAR OF OCCURRENCE		1997	2006	2010	2012	2003	2012	2005	2008	2013	2005	2006	2007	JUN 2012
	MEAN OF EXTREME MAXS.	18	65.3	65.6	75.4	80.5	88.8	95.0	99.8	97.4	92.2	83.6	73.4	64.9	81.8
	NORMAL DAILY MINIMUM	30	17.4	18.9	26.4	33.3	42.7	52.3	58.9	57.9	48.3	36.6	24.5	17.1	36.2
	MEAN DAILY MINIMUM	18	18.3	19.2	26.7	33.2	43.1	51.8	60.1	58.2	49.1	36.5	26.2	17.7	36.7
	LOWEST DAILY MINIMUM	18	-16	-18	-4	6	19	31	44	42	25	3	-3	-19	-19
	YEAR OF OCCURRENCE		2010	2007	2002	2013	2007	1997	2004	1996	1997	2003	2008	2008	DEC 2008
	MEAN OF EXTREME MINS.	18	-3.8	-1.8	9.5	18.6	28.9	39.9	51.9	48.7	35.7	21.2	5.9	-3.4	20.9
	NORMAL DRY BULB	30	30.7	32.5	40.4	47.4	57.1	67.4	74.2	72.5	63.4	50.9	38.3	30.0	50.4
	MEAN DRY BULB	18	31.3	32.2	40.8	47.0	57.0	67.5	75.0	72.8	63.7	50.4	39.8	30.4	50.7
	MEAN WET BULB	18	20.1	21.2	26.4	32.7	41.9	48.6	54.8	53.5	45.5	35.6	26.3	20.5	35.6
	MEAN DEW POINT	18	19.7	20.2	25.8	31.9	41.5	48.5	53.1	52.7	44.5	33.6	25.6	18.7	34.7
	NORMAL NO. DAYS WITH: MAXIMUM >= 90	30	0.0	0.0	0.0	0.0	0.8	7.9	16.0	11.5	3.4	0.0	0.0	0.0	39.6
	MAXIMUM <= 32	30	5.5	3.9	1.9	0.3	0.0	0.0	0.0	0.0	0.0	0.4	2.3	5.8	20.1
MINIMUM <= 32	30	29.4	26.9	23.6	13.0	1.9	0.0	0.0	0.0	0.8	8.5	23.4	29.4	156.9	
MINIMUM <= 0	30	1.7	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.0	5.7	
H/C	NORMAL HEATING DEG. DAYS	30	1063	908	763	529	265	62	6	10	125	440	801	1086	6058
	NORMAL COOLING DEG. DAYS	30	0	0	0	1	21	133	289	244	76	5	0	0	769
RH	NORMAL (PERCENT)	30													
	hour 05 LST	30													
	hour 11 LST	30													
	hour 17 LST	30													
	hour 23 LST	30													
S	PERCENT POSSIBLE SUNSHINE														
W/O	MEAN NO. DAYS WITH: HEAVY FOG(VISBY <= 1/4 MI)	18	2.9	2.9	3.5	3.0	2.5	1.1	0.9	0.9	1.2	2.4	2.5	1.7	25.5
	THUNDERSTORMS	18	0.0	0.1	0.5	2.3	7.3	10.9	12.5	11.2	5.2	1.1	0.1	0.0	51.2
CLOUDINESS	MEAN: SUNRISE-SUNSET (OKTAS)														
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH: CLEAR	1	3.0	10.0	9.0	6.0	10.0	12.0	2.0	7.0	6.0	9.0		13.0	
	PARTLY CLOUDY	1	4.0	2.0	6.0	4.0	5.5	9.0	2.0	9.0	6.0			1.0	
	CLOUDY	1	3.0	6.0	10.0	13.0	5.5	5.0	1.0	3.0	5.0	2.0		2.0	
PR	MEAN STATION PRESSURE(IN)	18	24.56	24.53	24.54	24.51	24.55	24.60	24.68	24.69	24.66	24.61	24.60	24.56	24.59
	MEAN SEA-LEVEL PRES. (IN)	18	30.02	29.98	29.91	29.85	29.84	29.82	29.88	29.91	29.93	29.96	30.01	30.02	29.93
WINDS	MEAN SPEED (MPH)	18	9.6	9.9	10.6	11.6	10.4	10.3	9.6	9.4	9.3	9.6	9.4	9.7	10.0
	PREVAIL.DIR(TENS OF DEGS)	17	22	22	22	21	23	17	22	23	23	22	22	22	22
	MAXIMUM 2-MINUTE: SPEED (MPH)	18	43	49	53	53	52	53	54	49	53	49	52	54	54
	DIR. (TENS OF DEGS)		35	17	28	33	22	26	13	28	23	21	32	28	28
	YEAR OF OCCURRENCE		2009	2012	1995	2001	2010	2009	1999	2001	2013	2011	2005	2005	DEC 2005
	MAXIMUM 3-SECOND SPEED (MPH)	18	51	60	58	63	64	72	68	61	64	63	61	64	72
	DIR. (TENS OF DEGS)		33	36	19	36	22	20	30	29	22	20	32	28	20
YEAR OF OCCURRENCE		2012	2007	2012	2009	2010	2011	2011	2001	2013	2011	2005	2005	JUN 2011	
PRECIPITATION	NORMAL (IN)	30	0.41	0.37	0.92	1.71	2.12	1.98	2.16	1.69	0.96	1.02	0.61	0.35	14.30
	MAXIMUM MONTHLY (IN)	18	0.78	0.90	3.05	5.86	4.79	4.86	5.92	4.03	5.61	3.03	0.72	1.21	5.92
	YEAR OF OCCURRENCE		2001	2012	2003	1999	2011	2009	1998	2008	2013	2007	2001	2006	JUL 1998
	MINIMUM MONTHLY (IN)	18	0.03	.02	0.03	0.23	.71	0.12	0.24	0.11	0.06	0.08	0.05	0.04	0.02
	YEAR OF OCCURRENCE		2003	2005	2012	2002	2005	2006	2008	2012	2010	2001	2003	2004	FEB 2005
	MAXIMUM IN 24 HOURS (IN)	18	0.51	0.75	1.64	2.10	2.00	2.43	3.06	1.95	2.39	2.65	0.47	0.84	3.06
	YEAR OF OCCURRENCE		2001	2012	2003	2007	2000	2003	1997	2013	2013	2007	2011	2006	JUL 1997
	NORMAL NO. DAYS WITH: PRECIPITATION >= 0.01	30	4.1	5.3	5.9	9.1	9.4	8.4	8.3	8.6	6.5	5.3	4.7	4.1	79.7
PRECIPITATION >= 1.00	30	0.0	0.0	0.1	0.5	0.2	0.3	0.7	0.3	0.1	0.1	0.0	0.0	2.3	
SNOWFALL	NORMAL (IN)	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
	MAXIMUM MONTHLY (IN)	8	15.9	20.2	23.5	20.4	3.4	T	T	T	T	17.2	9.3	29.4	29.4
	YEAR OF OCCURRENCE		2007	2012	2013	2013	2013	2012	2011	2009	2012	2009	2009	2006	DEC 2006
	MAXIMUM IN 24 HOURS (IN)	8	6.5	12.5	8.0	7.0	3.2	T	T	T	T	8.0	3.8	17.4	17.4
	YEAR OF OCCURRENCE'		2011	2012	2010	2013	2013	2012	2011	2009	2012	2011	2009	2006	DEC 2006
	MAXIMUM SNOW DEPTH (IN)	8	14	11	8	7	T	0	0	0	0	5	5	21	21
	YEAR OF OCCURRENCE		2007	2012	2010	2013	2013	2013	2011	2009	2012	2011	2009	2006	DEC 2006
NORMAL NO. DAYS WITH: SNOWFALL >= 1.0	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

**PRECIPITATION (inches) 2013 DENVER (KDEN)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1995			0.28	2.44	4.67	3.07	2.31	1.04	2.28	0.72	0.31	0.06	
1996	0.29	0.09	0.77	0.33	2.40	1.77	1.01	0.56	2.34	0.39	0.38	0.06	10.39
1997	0.26	0.54	0.26	1.30	1.57	2.57	5.60	3.52	0.97	1.87	0.61	0.50	19.57
1998	0.05	0.23	0.86	2.47	1.73	0.73	5.92	1.19	0.73	1.20	0.40	0.42	15.93
1999	0.38	0.15	0.19	5.86	2.37	2.52	3.84	3.37	1.20	0.31	0.47	0.29	20.95
2000	0.24	0.23	1.96	0.71	3.09	0.79	1.42	3.06	1.52	0.52	0.61	0.27	14.42
2001	0.78	0.64	1.10	1.20	3.80	1.53	4.76	0.71	1.00	0.08	0.72	0.14	16.46
2002	0.48	0.32	0.53	0.23	0.94	1.45	1.39	0.78	0.58	0.49	0.24	0.05	7.48
2003	0.03	0.47	3.05	2.22	1.91	3.95	0.54	1.24	0.26	0.08	0.05	0.12	13.92
2004	0.23	0.21	0.14	1.76	1.30	2.33	2.51	2.84	1.99	0.86	0.45	0.04	14.66
2005	0.37	0.02	0.59	2.45	0.71	3.99	0.27	1.33	0.07	2.16	0.48	0.35	12.79
2006	0.28	0.15	0.56	0.67	0.94	0.12	1.37	1.13	0.84	1.03	0.34	1.21	8.64
2007	0.55	0.36	0.57	2.65	1.79	0.52	0.43	2.76	0.54	3.03	0.20	0.60	14.00
2008	0.08	0.18	0.14	0.32	1.56	0.73	0.24	4.03	1.04	1.44	0.18	0.24	10.18
2009	0.13	0.04	0.83	3.22	1.30	4.86	3.56	1.14	0.74	1.36	0.49	0.45	18.12
2010	0.07	0.30	0.80	2.51	1.52	1.60	3.70	1.05	0.06	0.54	0.49	0.22	12.86
2011	0.61	0.42	0.35	1.07	4.79	2.43	3.41	0.30	0.89	1.79	0.47	0.78	17.31
2012	0.26	0.90	0.03	1.39	1.01	1.22	0.48	0.11	2.95	1.22	0.27	0.27	10.11
2013	0.31	0.77	1.47	1.87	0.82	0.75	1.98	2.78	5.61	0.72	0.27	0.25	17.60
POR= 18 YRS	0.30	0.33	0.76	1.82	2.01	1.94	2.35	1.73	1.35	1.04	0.39	0.33	14.35

WBAN : 03017

**AVERAGE TEMPERATURE (°F) 2013 DENVER (KDEN)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1995			39.3	42.9	50.0	62.2	70.9	75.3	61.7	48.5	41.8	33.0	
1996	27.0	33.9	36.0	48.0	58.1	68.2	73.4	71.6	60.8	50.9	37.2	33.0	49.8
1997	27.9	30.0	42.1	40.5	56.6	67.8	73.1	69.7	64.3	49.7	34.8	27.9	48.7
1998	32.7	33.9	36.9	44.8	59.1	63.0	74.3	71.7	68.0	50.2	42.1	28.9	50.5
1999	33.7	38.6	43.7	42.6	54.8	64.2	73.9	71.2	59.2	52.5	47.3	33.8	51.3
2000	33.0	39.2	40.4	49.8	59.2	67.0	76.7	74.5	63.6	50.5	28.9	28.3	50.9
2001	30.0	28.3	39.8	49.6	57.1	69.4	76.7	73.5	66.8	51.5	40.9	31.7	51.3
2002	29.3	33.6	33.8	50.0	56.1	71.1	76.3	71.5	63.6	44.0	37.5	33.6	50.0
2003	36.9	27.6	39.9	50.4	57.5	62.1	76.9	73.7	59.3	55.1	36.2	32.5	50.7
2004	31.9	30.4	46.4	47.5	59.3	63.7	70.8	68.2	62.7	50.9	37.2	34.9	50.3
2005	32.5	35.8	39.4	46.4	57.0	66.0	77.7	71.6	67.2	52.0	42.5	30.2	51.5
2006	37.4	30.9	38.4	51.5	60.4	72.8	76.2	72.8	58.9	49.5	40.5	31.7	51.8
2007	20.8	29.1	46.1	46.8	58.0	68.8	76.4	75.4	65.1	53.5	41.4	26.7	50.7
2008	27.9	33.9	39.6	46.1	55.9	67.4	77.6	71.5	61.8	52.1	43.1	26.7	50.3
2009	34.9	37.3	41.8	45.9	59.0	64.4	70.3	70.3	63.5	42.9	42.6	24.2	49.8
2010	30.3	29.1	41.0	47.8	54.0	68.9	74.4	73.8	67.0	55.3	38.3	34.3	51.2
2011	30.0	29.1	43.3	48.4	53.1	68.2	75.9	77.0	64.3	52.6	39.5	26.7	50.7
2012	36.0	28.4	49.2	53.3	60.5	75.1	78.9	75.0	66.3	49.1	43.5	31.5	53.9
2013	30.3	30.1	37.7	41.7	57.9	71.1	74.3	74.6	66.4	47.7	40.9	28.4	50.1
POR= 18 YRS	31.3	32.2	40.8	47.0	57.0	67.5	75.0	72.8	63.7	50.4	39.8	30.4	50.7

**HEATING DEGREE DAYS (base 65°F) 2013 DENVER (KDEN)**

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1994-95									788	655	457	132	
1995-96	26	2	188	505	686	981	1166	894	893	230	29	0	5600
1996-97	0	4	192	444	824	985	1142	975	704	728	264	35	6297
1997-98	2	11	92	475	895	1142	996	865	865	597	186	137	6263
1998-99	1	1	46	453	680	1113	962	731	654	666	311	85	5703
1999-00	1	3	194	383	528	962	984	744	754	446	215	61	5275
2000-01	0	5	149	447	1074	1131	1079	1021	775	455	256	46	6438
2001-02	0	4	65	416	717	1026	1098	870	961	448	302	26	5933
2002-03	0	5	118	643	816	966	865	1041	770	430	260	107	6021
2003-04	0	10	192	312	858	1001	1022	998	569	519	192	99	5772
2004-05	17	31	131	431	830	926	999	810	786	552	274	84	5871
2005-06	3	19	54	412	670	1075	848	948	817	398	192	4	5440
2006-07	7	8	195	487	727	1028	1361	1001	582	544	223	45	6208
2007-08	0	0	76	354	701	1181	1143	895	781	558	303	64	6056
2008-09	0	28	116	393	651	1179	926	764	711	566	204	78	5616
2009-10	13	9	117	676	664	1260	1069	999	737	509	350	38	6441
2010-11	3	0	32	300	793	944	1080	999	666	492	372	26	5707
2011-12	0	0	95	400	757	1182	891	1055	483	352	178	6	5399
2012-13	0	0	69	488	638	1030	1067	972	840	690	253	29	6076
2013-	0	0	83	525	715	1128							

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**COOLING DEGREE DAYS (base 65°F) 2013 DENVER (KDEN)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1995			0	0	0	55	212	327	98	0	0	0	
1996	0	0	0	3	26	133	269	215	71	13	0	0	730
1997	0	0	0	0	11	126	260	160	77	8	0	0	642
1998	0	0	0	0	13	88	296	215	143	0	0	0	755
1999	0	0	0	0	2	69	283	203	30	2	0	0	589
2000	0	0	0	0	43	127	368	305	115	5	0	0	963
2001	0	0	0	0	18	184	373	274	125	5	0	0	979
2002	0	0	0	7	34	218	355	214	84	0	0	0	912
2003	0	0	0	0	36	28	376	289	29	13	0	0	771
2004	0	0	0	0	23	67	204	138	67	0	0	0	499
2005	0	0	0	0	34	119	405	230	125	14	0	0	927
2006	0	0	0	0	56	247	363	261	20	14	0	0	961
2007	0	0	0	5	15	167	359	329	86	2	0	0	963
2008	0	0	0	0	28	144	395	232	26	0	0	0	825
2009	0	0	0	0	26	68	181	180	78	0	0	0	533
2010	0	0	0	0	16	163	303	280	100	8	0	0	870
2011	0	0	0	0	9	126	346	382	78	23	0	0	964
2012	0	0	0	6	45	314	438	319	113	1	0	0	1236
2013	0	0	0	0	42	221	295	308	133	0	0	0	999

**SNOWFALL (inches) 2013 DENVER (KDEN)**

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
2005-06							3.6	3.0	8.6	0.3	0.2	T	
2006-07	0.0	T	0.0	9.8	4.4	29.4	15.9	7.4	4.8	0.9	0.0	0.0	72.6
2007-08	0.0	0.0	0.0	3.0	2.5	20.9	1.9	5.1	4.5	2.9	3.4	T	44.2
2008-09	T	T	0.0	T	1.7	10.3	4.9	T	13.8	7.4	0.0	T	38.1
2009-10	0.0	T	0.0	17.2	9.3	11.1	2.6	5.8	12.8	0.5	1.3	T	60.6
2010-11	T	0.0	0.0	0.0	1.5	3.3	8.0	5.3	2.5	1.2	1.0	T	22.8
2011-12	T	0.0	0.0	8.5	4.5	16.5	4.9	20.2	T	1.0	T	T	55.6
2012-13	0.0	0.0	T	5.5	1.7	5.2	4.6	14.1	23.5	20.4	3.4	0.0	78.4
2013-	0.0	0.0	0.0	1.4	2.0	4.7							
POR= 8 YRS	T	T	T	5.7	3.5	12.7	5.8	7.6	8.8	4.3	1.2	T	49.6

WBAN : 03017

**REFERENCE NOTES :**

<p>PAGE 1: THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).</p> <p>PAGE 2 AND 3: H/C INDICATES HEATING AND COOLING DEGREE DAYS. RH INDICATES RELATIVE HUMIDITY W/O INDICATES WEATHER AND OBSTRUCTIONS S INDICATES SUNSHINE. PR INDICATES PRESSURE. CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).</p> <p>GENERAL: T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE. + INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES. BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA. ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM. PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH. POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING. WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED. 0.* OR * INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05. CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON-ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME-AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS.</p> <p>GENERAL CONTINUED: WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH. RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION. AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2. SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN</p>	<p>PRECIPITATION, INCLUDING HAIL. A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65 F. DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR. DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY. WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY. ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTHS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER. STATION HISTORY STOPPED WITH THE 2009 ANNUAL. IF YOU NEED STATION HISTORY INFORMATION GO TO "Historical Observing Metadata Repository", URL IS: <a href="http://www.ncdc.noaa.gov/homr/">http://www.ncdc.noaa.gov/homr/</a> SNOWFALL STOPPED MONTH &amp; YEAR INDICATED ABOVE. NO FURTHER YEARS INCLUDED UNLESS RESTARTED.</p> <p><b>NOTE:</b> The "Period of Record:(POR)" for all "averages" is based on "Summary of the Day First Order Station" and "Cooperative Summary of the Day" archives.</p>
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# 2013 DENVER COLORADO (KDEN)

Denver enjoys the invigorating climate that prevails over much of the central Rocky Mountain region, without the extremely cold mornings of the high elevations during winter, or the hot afternoons of summer at lower altitudes. Extremely warm or cold weather in Denver is usually of short duration.

Situated a long distance from any moisture source, and separated from the Pacific Ocean by several high mountain barriers, Denver enjoys low relative humidity, light precipitation, and abundant sunshine.

Air masses from four different sources influence Denver weather. These include arctic air from Canada and Alaska, warm, moist air from the Gulf of Mexico, warm, dry air from Mexico and the southwestern deserts, and Pacific air modified by its passage over mountains to the west.

In winter, the high altitude and mountains to the west combine to moderate temperatures in Denver. Invasions of cold air from the north, intensified by the high altitude, can be abrupt and severe. However, many of the cold air masses that spread southward out of Canada never reach the altitude of Denver, but move off over the lower plains to the east. Surges of air from the west are moderated in their descent down the east face of the Rockies, and reach Denver in the form of chinook winds that often raise temperatures into the 60s, even in midwinter.

In spring, polar air often collides with warm, moist air from the Gulf of Mexico and these collisions result in frequent, rapid and drastic weather changes. Spring is the cloudiest, windiest, and wettest season in the city. Much of the precipitation falls as snow, especially in March and early April. Stormy periods are interspersed with stretches of mild, sunny weather that quickly melt previous snow cover.

Summer precipitation falls mainly from scattered thunderstorms during the afternoon and evening. Mornings are usually clear and sunny, with clouds forming during early afternoon to cut off the sunshine at what would otherwise be the hottest part of the day. Severe thunderstorms, with large hail and heavy rain occasionally occur in the city, but these conditions are more common on the plains to the east.

Autumn is the most pleasant season. Few thunderstorms occur and invasions of cold air are infrequent. As a result, there is more sunshine and less severe weather than at any other time of the year.

Based on the 1951-1980 period, the average first occurrence of 32 degrees Fahrenheit in the fall is October 8 and the average last occurrence in the spring is May 3.

# Station History

DENVER, CO

NAME	Begin Date	End Date	Latitude	Longitude	Elevation Feet	Relocation	Platform
DENVER INTL AP	1995-02-28	2004-01-05	39° 49'	-104° 39'	5414		ASOS, COOP
DENVER INTL AP	2004-01-05	Present	39° 49'	-104° 39'	5414		ASOS, COOP

# Element History

Element	Begin Date	End Date	Frequency	Time Of Observation	Equipment *	Equipment * Modifications	Equipment Exposure
TEMP	1995-07-01	1997-09-11	DAILY	2400	HYGR		
PRECIP	1997-09-11	2004-01-05	HOURLY	2400	AHTB	RCRD;HTD	
PRECIP	1997-09-11	2004-01-05	DAILY	2400	PCPNX		
TEMP	2004-01-05	2009-03-19	DAILY	2400	HYGR		
PRECIP	1995-02-28	1995-07-01	HOURLY	2400			
PRECIP	1995-02-28	1995-07-01	DAILY	2400	TB	RCRD	
WIND	2009-03-19	Present	DAILY	VAR	WINDX		
PRECIP	2009-03-19	Present	DAILY	2400	PCPNX		
TEMP	1995-02-28	1995-07-01	DAILY	2400	HYGR		
PRECIP	1995-07-01	1997-09-11	HOURLY	2400	TB	RCRD	
TEMP	1997-09-11	2004-01-05	DAILY	2400	HYGR		
PRECIP	2004-01-05	2009-03-19	DAILY	2400	PCPNX		
TEMP	2009-03-19	Present	DAILY	2400	HYGR		
PRECIP	1995-07-01	1997-09-11	DAILY	2400	TB	RCRD	
PRECIP	2004-01-05	2009-03-19	HOURLY	2400	AHTB	SHLD;RCRD;HTD	
PRECIP	2009-03-19	Present	HOURLY	2400	AWPAG	RCRD;HTD	
WIND	2004-01-05	2009-03-19	DAILY	2400	WINDX		

\* For explanation of codes and abbreviations see Station Metadata link below.

Other Station Information can be found at:

ASOS Implementation by NWS: <http://www.nws.noaa.gov/ops2/Surface/asosimplementation.htm>

Station Metadata website: <http://www.ncdc.noaa.gov/homr>

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TDD : (828) 271-4010

Email : [ncdc.orders@noaa.gov](mailto:ncdc.orders@noaa.gov)

NOAA/National Climatic Data Center

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151 Patton Avenue

Asheville, NC 28801-5001

Visit our Web Site for other weather data: [www.ncdc.noaa.gov](http://www.ncdc.noaa.gov)