

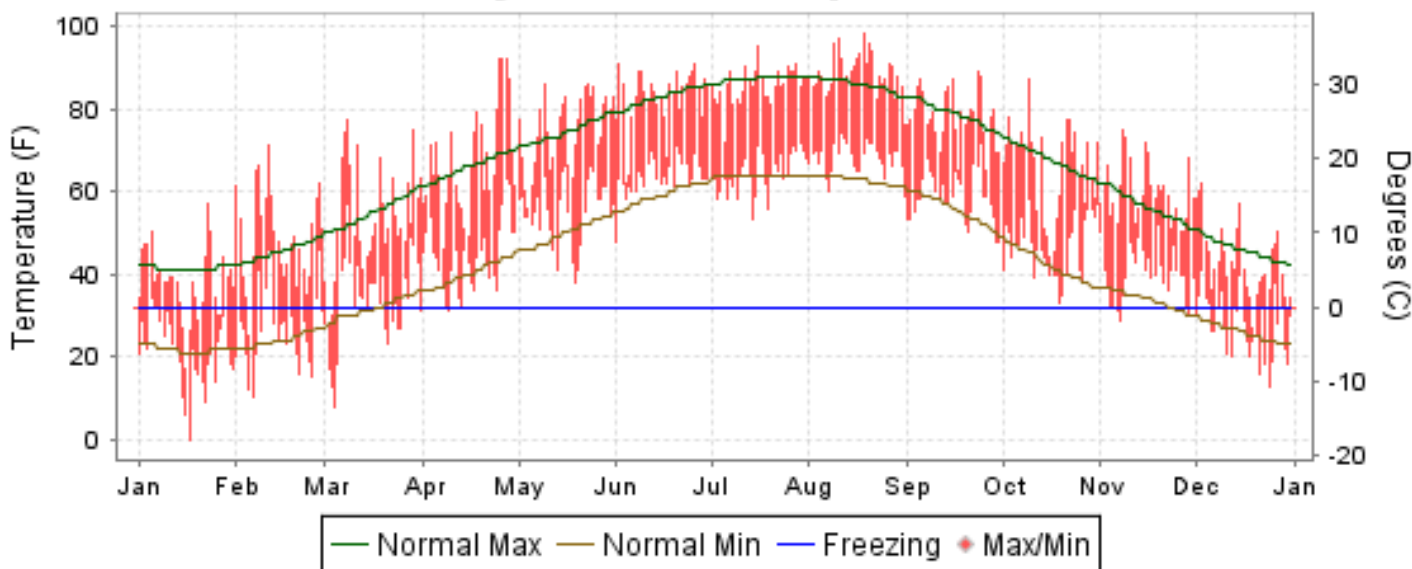


# 2009 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

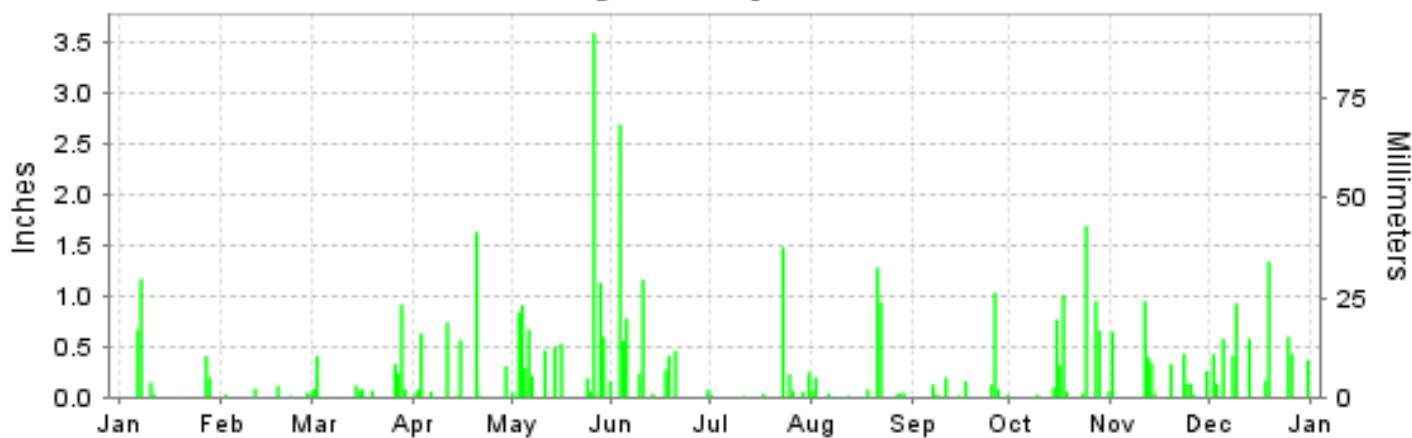
WASHINGTON,  
D.C. (KIAD)

ISSN 0198-120X

## Daily Max/Min Temperature



## Daily Precipitation



## Daily Station Pressure



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NATIONAL  
CLIMATIC DATA CENTER  
ASHEVILLE, NORTH CAROLINA

*Thomas R. Karl*  
DIRECTOR  
NATIONAL CLIMATIC DATA CENTER

# METEOROLOGICAL DATA FOR 2009

## WASHINGTON (KIAD)

LATITUDE: 38° 56'N      LONGITUDE: -77° 26'W      ELEVATION (FT): GRND: 290    BARO: 309      TIME ZONE: EASTERN (UTC -5)      WBAN: 93738

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	38.0	48.8	53.8	67.5	74.8	82.6	85.5	88.6	77.9	66.1	59.7	42.9	65.5	
	HIGHEST DAILY MAXIMUM	57	71	77	92	86	91	95	98	89	87	75	62	98	
	DATE OF OCCURRENCE	23	11	08	27+	23+	26+	16	18	23	09	08	03	AUG 18	
	MEAN DAILY MINIMUM	21.2	27.1	33.5	44.2	55.2	63.6	64.3	68.1	58.9	46.6	40.0	27.5	45.9	
	LOWEST DAILY MINIMUM	0	10	8	31	38	48	53	59	48	33	29	13	0	
	DATE OF OCCURRENCE	17	06	04	09	19	01	14	31	30+	19	07	24	JAN 17	
	AVERAGE DRY BULB	29.6	38.0	43.7	55.9	65.0	73.1	74.9	78.4	68.4	56.4	49.9	35.2	55.7	
	MEAN WET BULB	25.4	32.2	38.5	48.3	58.8	65.6	66.1	69.5	61.3	50.8	45.2	31.9	49.5	
	MEAN DEW POINT	16.1	21.5	29.8	39.8	53.7	61.1	60.3	64.9	56.3	45.3	39.7	24.5	42.8	
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	0	3	0	2	4	12	0	0	0	0	0	21
	MAXIMUM <= 32°	6	1	2	0	0	0	0	0	0	0	0	2	11	
MINIMUM <= 32°	30	22	13	3	0	0	0	0	0	0	6	24	98		
MINIMUM <= 0°	1	0	0	0	0	0	0	0	0	0	0	0	1		
H/C	HEATING DEGREE DAYS	1089	752	655	306	86	9	0	0	19	268	447	917	4548	
	COOLING DEGREE DAYS	0	0	2	40	92	259	313	416	129	8	0	0	1259	
RH	MEAN (PERCENT)	60	54	62	60	71	69	63	66	68	69	71	66	65	
	HOUR 01 LST	66	63	70	72	83	81	77	82	82	80	79	67	75	
	HOUR 07 LST	68	66	71	66	76	71	66	72	75	76	81	74	72	
	HOUR 13 LST	49	39	49	44	56	54	46	48	52	53	57	57	50	
	HOUR 19 LST	60	51	58	56	69	67	62	66	67	69	68	67	63	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	0	0	6	2	1	1	0	0	0	0	4	7	21	
	THUNDERSTORMS	0	0	0	4	7	5	3	7	0	1	0	0	27	
CLOUDNESS	SUNRISE-SUNSET: (OKTAS)														
	CEILOMETER (<= 12,000 FT.)														
	SATELLITE (> 12,000 FT.)														
	MIDNIGHT-MIDNIGHT: (OKTAS)														
	CEILOMETER (<= 12,000 FT.)														
SATELLITE (> 12,000 FT.)															
NUMBER OF DAYS WITH:															
CLEAR															
PARTLY CLOUDY															
CLOUDY															
PR	MEAN STATION PRESS. (IN.)	29.70	29.75	29.82	29.63	29.69	29.51	29.60	29.67	29.74	29.68	29.75	29.74	29.69	
	MEAN SEA-LEVEL PRESS. (IN.)	30.06	30.10	30.17	29.98	30.04	29.86	29.95	30.01	30.08	30.04	30.11	30.11	30.04	
WINDS	RESULTANT SPEED (MPH)	2.8	5.0	1.5	1.9	1.4	1.6	2.1	1.1	1.6	1.7	3.7	3.6	1.9	
	RES. DIR. (TENS OF DEGS.)	31	28	31	27	21	31	24	30	01	31	34	30	30	
	MEAN SPEED (MPH)	6.6	9.9	7.4	7.8	6.6	6.0	5.5	5.0	6.0	6.8	6.4	7.1	6.8	
	PREVAIL.DIR.(TENS OF DEGS.)	31	31	19	19	18	32	19	33	32	33	36	31	31	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	28	36	36	33	29	29	26	24	29	32	33	33	36	
	DIR. (TENS OF DEGS.)	31	31	31	28	18	36	31	31	20	30	30	31	31	
	DATE OF OCCURRENCE	13	12	09	03	14	09	31	21	28	07	27	29	MAR 09	
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	37	49	45	43	38	36	36	32	38	45	43	48	49	
DIR. (TENS OF DEGS.)	31	32	30	28	18	36	31	30	19	28	30	29	32		
DATE OF OCCURRENCE	28	12	09	03	14	09	31	21	28	07	27	29	FEB 12		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	2.64	0.35	2.41	4.12	10.26	6.69	2.18	2.75	1.83	5.70	3.71	5.98	48.62	
	GREATEST 24-HOUR (IN.)	1.61	0.12	1.13	1.63	3.65	2.76	1.48	2.09	1.10	1.73	1.02	1.34	3.65	
	DATE OF OCCURRENCE	06-07	18	27-28	20	25-26	03-04	23	21-22	26-27	23-24	11-12	19+	MAY 25-26	
	NUMBER OF DAYS WITH:														
	PRECIPITATION 0.01	7	6	10	13	18	10	8	10	10	12	11	11	126	
PRECIPITATION 0.10	5	1	5	5	13	8	3	3	5	7	9	11	75		
PRECIPITATION 1.00	1	0	0	1	2	2	1	1	1	2	0	1	12		
SNOWFALL	SNOW,ICE PELLETS,HAIL														
	TOTAL (IN.)	2.0	T	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.4	29.4	
	GREATEST 24-HOUR (IN.)	2.0	T	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0	16.0	
	DATE OF OCCURRENCE	27	28+	02									19	DEC 19	
	MAXIMUM SNOW DEPTH (IN.)	0	0	4	0	0	0	0	0	0	0	0	18	18	
	DATE OF OCCURRENCE			02									20	DEC 20	
NUMBER OF DAYS WITH:															
SNOWFALL >= 1.0	1	0	1	0	0	0	0	0	0	0	0	3	5		

# NORMALS, MEANS, AND EXTREMES WASHINGTON (KIAD)

**LATITUDE:**  
38 ° 56'N

**LONGITUDE:**  
-77 ° 26'W

**ELEVATION (FT):**  
GRND: 290 BARO: 309

**TIME ZONE:**  
EASTERN (UTC -5)

**WBAN: 93738**

	ELEMENT	POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	41.4	45.5	55.0	65.9	74.6	82.8	87.4	85.9	78.9	67.7	56.5	45.9	65.6
	MEAN DAILY MAXIMUM	47	41.3	44.8	54.6	65.8	74.5	82.7	87.1	85.9	78.9	67.6	56.6	45.5	65.4
	HIGHEST DAILY MAXIMUM	47	75	79	89	93	97	100	104	104	99	94	84	79	104
	YEAR OF OCCURRENCE		1975	2000	1998	2002	1969	1964	1988	1983	1983	2007	1982	1998	JUL 1988
	MEAN OF EXTREME MAXS.	47	63.7	65.9	76.9	85.2	88.7	93.4	95.9	95.1	91.4	83.5	74.8	65.6	81.7
	NORMAL DAILY MINIMUM	30	21.9	24.1	31.8	40.2	49.9	59.0	64.0	62.8	55.6	42.3	33.8	26.0	42.6
	MEAN DAILY MINIMUM	47	22.7	24.4	32.3	41.2	50.5	59.7	64.8	63.5	55.9	43.0	34.7	26.6	43.3
	LOWEST DAILY MINIMUM	47	-18	-14	-1	17	28	36	41	38	30	15	9	-4	-18
	YEAR OF OCCURRENCE		1984	1979	1993	1969	1970	1977	1988	1982	1974	1969	1989	1989	JAN 1984
	MEAN OF EXTREME MINS.	47	3.2	7.0	15.4	25.7	35.1	45.3	52.1	50.3	39.6	27.6	19.0	10.0	27.5
	NORMAL DRY BULB	30	31.7	34.8	43.4	53.1	62.3	70.9	75.7	74.4	67.3	55.0	45.2	36.0	54.2
	MEAN DRY BULB	47	32.1	34.6	43.5	53.5	62.5	71.4	76.0	74.8	67.4	55.3	45.7	36.0	54.4
	MEAN WET BULB	26	28.7	30.5	37.0	46.6	56.0	64.7	68.5	67.4	61.0	50.0	40.7	32.0	48.6
	MEAN DEW POINT	26	24.1	25.6	32.0	41.6	52.8	62.0	66.3	65.2	58.5	46.8	36.5	27.5	44.9
	NORMAL NO. DAYS WITH: MAXIMUM >= 90	30	0.0	0.0	0.0	0.3	1.0	5.0	12.0	8.7	2.9	*	0.0	0.0	29.9
	MAXIMUM <= 32	30	6.4	3.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	3.1	14.0
MINIMUM <= 32	30	25.6	21.6	16.7	5.6	0.3	0.0	0.0	0.0	0.1	4.9	14.7	23.0	112.5	
MINIMUM <= 0	30	1.1	0.4	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.6	
H/C	NORMAL HEATING DEG. DAYS	30	1025	847	670	362	139	21	1	4	60	323	589	884	4925
	NORMAL COOLING DEG. DAYS	30	0	0	4	11	60	203	345	302	132	15	3	0	1075
RH	NORMAL (PERCENT)	30	68	67	64	63	71	73	74	75	76	74	70	70	70
	HOURLY 01 LST	30	75	74	72	73	84	88	88	90	89	86	79	77	81
	HOURLY 07 LST	30	77	78	77	76	83	84	86	89	90	89	82	79	83
	HOURLY 13 LST	30	59	54	51	48	55	56	55	55	56	54	54	58	55
	HOURLY 19 LST	30	66	62	57	54	63	66	67	70	73	72	67	68	65
S	PERCENT POSSIBLE SUNSHINE	1	51												
W/O	MEAN NO. DAYS WITH: HEAVY FOG(VISBY <= 1/4 MI)	46	2.9	2.2	1.8	1.1	2.1	1.6	1.7	2.2	2.3	2.9	2.0	2.7	25.5
	THUNDERSTORMS	47	0.2	0.1	1.0	2.6	4.1	6.2	6.1	4.9	2.0	0.9	0.5	0.1	28.7
CLOUDNESS	MEAN: SUNRISE-SUNSET (OKTAS)	34	5.4	5.2	5.3	5.1	5.1	5.0	4.7	4.7	4.6	4.3	5.0	5.2	5.0
	MIDNIGHT-MIDNIGHT (OKTAS)	32	5.1	4.9	5.0	4.9	4.8	4.7	4.7	4.4	4.4	4.1	4.7	5.0	4.7
	MEAN NO. DAYS WITH: CLEAR	34	7.4	7.4	6.7	7.0	7.0	6.4	7.8	8.2	8.6	10.6	7.2	7.3	91.6
	PARTLY CLOUDY	34	6.9	6.2	8.3	9.0	9.5	11.8	10.8	10.7	9.4	8.3	7.8	6.7	105.4
	CLOUDY	34	16.7	14.7	16.1	14.0	14.5	11.8	12.5	12.2	12.1	12.1	14.9	17.0	168.6
PR	MEAN STATION PRESSURE(IN)	26	29.75	29.74	29.71	29.64	29.65	29.64	29.65	29.69	29.73	29.75	29.77	29.77	29.71
	MEAN SEA-LEVEL PRES. (IN)	26	30.11	30.10	30.06	29.98	29.99	29.98	29.99	30.03	30.07	30.10	30.12	30.12	30.05
WINDS	MEAN SPEED (MPH)	26	7.7	7.9	8.4	8.0	6.9	6.3	5.9	5.6	6.0	6.1	6.9	7.0	6.9
	PREVAIL.DIR.(TENS OF DEGS)	39	32	32	33	33	20	21	20	19	19	33	33	32	32
	MAXIMUM 2-MINUTE: SPEED (MPH)	13	39	37	44	44	35	46	39	43	37	35	43	38	46
	DIR. (TENS OF DEGS)		31	30	28	32	30	09	30	34	08	30	29	31	09
	YEAR OF OCCURRENCE		2000	2002	2001	2008	2002	2007	2006	1997	2003	2006	2003	2008	JUN 2007
	MAXIMUM 3-SECOND SPEED (MPH)	13	52	58	51	56	48	61	54	63	48	61	52	59	63
	DIR. (TENS OF DEGS)		29	26	28	30	24	14	30	33	09	16	30	29	33
	YEAR OF OCCURRENCE		2000	2008	2001	2007	1999	2007	2005	1997	2003	2007	2003	2008	AUG 1997
PRECIPITATION	NORMAL (IN)	30	3.05	2.77	3.55	3.22	4.22	4.07	3.57	3.78	3.82	3.37	3.31	3.07	41.80
	MAXIMUM MONTHLY (IN)	46	6.61	6.27	7.65	7.35	10.26	18.19	7.85	10.71	11.26	9.22	7.83	6.74	18.19
	YEAR OF OCCURRENCE		1979	2003	1993	1973	2009	1972	2005	1984	1975	2005	1963	1969	JUN 1972
	MINIMUM MONTHLY (IN)	46	0.40	0.25	0.07	0.33	0.34	0.52	0.94	0.44	.15	T	0.24	0.42	T
	YEAR OF OCCURRENCE		1981	1978	2006	1985	2007	1988	1983	1998	2005	1963	1981	1965	OCT 1963
	MAXIMUM IN 24 HOURS (IN)	46	2.22	2.17	2.56	3.61	4.36	11.88	4.05	7.04	5.54	4.62	4.80	3.15	11.88
	YEAR OF OCCURRENCE		1998	1998	1967	2008	2008	1972	1994	1984	1966	2005	1993	1977	JUN 1972
	NORMAL NO. DAYS WITH: PRECIPITATION >= 0.01	30	10.8	9.2	10.6	10.1	12.3	10.8	10.8	9.7	9.1	7.8	9.1	9.8	120.1
	PRECIPITATION >= 1.00	30	0.6	0.8	0.9	0.7	0.8	0.9	0.9	1.0	1.0	0.9	0.8	0.5	9.8
SNOWFALL	NORMAL (IN)	30	8.1	6.2	3.4	0.4	0.0	0.0	0.0	0.0	0.0	0.1	0.8	2.2	21.2
	MAXIMUM MONTHLY (IN)	47	30.9	34.9	15.5	4.0	T	T	T	T	0.0	1.3	11.4	24.2	34.9
	YEAR OF OCCURRENCE		1996	2003	1993	1990	1963	1995	2006	2006	2006	1979	1967	1966	FEB 2003
	MAXIMUM IN 24 HOURS (IN)	47	19.8	22.8	13.9	3.8	T	T	T	T	0.0	1.3	11.4	16.0	22.8
	YEAR OF OCCURRENCE		1996	1983	1993	1990	1963	1995	2006	1993	1993	1979	1967	2009	FEB 1983
	MAXIMUM SNOW DEPTH (IN)	45	19	22	13	1	0	0	0	0	0	0	4	18	22
	YEAR OF OCCURRENCE		1987	1983	1993	1990							1987	2009	FEB 1983
	NORMAL NO. DAYS WITH: SNOWFALL >= 1.0	30	2.0	1.3	1.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	5.4

**PRECIPITATION (inches) 2009 WASHINGTON (KIAD)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1980	2.95	1.00	4.82	3.64	3.86	1.89	4.41	1.67	2.70	2.77	3.42	0.68	33.81
1981	0.40	4.10	0.99	3.05	4.36	3.86	4.05	3.55	2.07	3.00	0.24	2.46	32.13
1982	2.10	4.09	3.47	2.82	3.57	5.49	2.11	3.36	4.22	2.21	2.87	2.25	38.56
1983	1.40	3.74	4.21	7.24	3.63	4.01	0.94	1.34	2.95	6.00	5.06	5.66	46.18
1984	1.42	4.13	5.81	5.01	4.23	2.19	2.46	10.71	1.49	1.73	3.64	1.25	44.07
1985	2.32	3.73	1.70	0.33	4.82	1.14	2.34	3.35	2.96	4.06	5.27	0.92	32.94
1986	1.58	3.16	1.12	3.01	1.19	1.40	1.86	5.72	1.04	1.30	4.17	4.83	30.38
1987	4.53	2.47	1.46	4.61	2.33	3.38	3.04	0.96	8.11	2.51	5.02	2.35	40.77
1988	2.47	2.06	2.31	2.35	10.26	0.52	7.12	3.92	1.80	1.60	4.48	0.92	39.81
1989	2.65	2.50	4.01	2.70	7.71	5.75	5.99	0.76	3.14	4.73	2.68	1.72	44.34
1990	3.14	1.65	2.78	5.06	4.37	1.77	5.42	5.56	1.49	6.53	2.56	5.00	45.33
1991	2.67	0.81	5.16	1.80	1.51	6.58	2.64	0.99	3.25	1.37	2.70	4.54	34.02
1992	2.13	2.26	3.23	3.15	3.82	2.88	7.23	1.33	5.55	2.81	5.24	4.73	44.36
1993	2.72	2.74	7.65	5.62	2.85	1.77	2.06	4.68	4.66	2.15	6.28	3.78	46.96
1994	4.12	3.61	6.71	1.71	3.19	5.82	5.75	4.62	3.40	1.05	1.86	2.42	44.26
1995	4.18	1.80	1.39	2.14	5.13	3.25	4.24	2.02	2.74	6.51	4.75	2.05	40.20
1996	5.61	2.62	3.52	3.69	7.07	4.88	5.89	4.16	7.72	3.97	3.75	5.21	58.09
1997	2.16	2.16	4.78	2.18	2.87	2.36	1.38	5.32	3.16	2.75	5.48	1.92	36.52
1998	5.43	5.83	5.60	2.92	4.52	5.87	1.31	0.44	1.25	1.50	1.21	1.53	37.41
1999	5.39	2.62	3.44	2.68	2.22	3.00	2.56	5.43	9.32	2.55	1.72	2.67	43.60
2000	2.50	1.92	3.35	4.36	2.57	4.02	4.28	5.92	4.20	0.06	1.57	2.06	36.81
2001	2.54	1.68	4.14	2.15	5.68	4.83	4.24	4.52	3.39	1.42	0.81	1.56	36.96
2002	1.22	0.46	3.48	3.45	4.73	3.61	2.64	2.91	2.84	5.04	4.13	3.61	38.12
2003	2.69	6.27	3.69	2.71	8.71	8.33	6.06	5.55	7.26	4.63	5.20	4.57	65.67
2004	1.41	1.93	2.05	5.04	3.06	3.73	3.72	3.79	5.80	1.04	4.11	3.01	38.69
2005	3.14	1.41	3.93	4.34	4.86	1.92	7.85	2.32	0.15	9.22	2.49	2.92	44.55
2006	2.39	2.38	0.07	4.86	1.80	11.79	2.45	1.24	7.12	4.82	5.31	1.74	45.97
2007	2.11	2.54	2.93	3.38	0.34	2.92	1.75	1.67	1.40	3.52	1.49	2.97	27.02
2008	1.26	2.67	2.47	6.22	9.38	4.21	2.18	2.48	7.18	1.31	2.01	2.61	43.98
2009	2.64	0.35	2.41	4.12	10.26	6.69	2.18	2.75	1.83	5.70	3.71	5.98	48.62
POR= 47 YRS	2.78	2.57	3.35	3.24	4.20	4.21	3.59	3.73	3.80	3.27	3.22	3.13	41.09

WBAN : 93738

**AVERAGE TEMPERATURE (°F) 2009 WASHINGTON (KIAD)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1980	32.7	31.0	41.9	55.6	65.8	69.2	77.3	77.1	70.8	54.1	42.7	34.9	54.4
1981	27.8	38.5	41.4	57.0	60.9	73.5	75.1	71.9	66.7	52.5	45.9	34.1	53.8
1982	26.2	36.5	43.7	51.3	66.8	70.8	77.0	72.3	66.9	57.3	48.4	42.6	55.0
1983	34.7	35.0	46.0	50.2	59.4	70.0	74.6	75.3	66.2	54.7	44.7	30.4	53.4
1984	25.8	38.9	37.5	50.9	59.8	71.2	72.0	74.2	63.0	61.8	42.6	43.3	53.4
1985	28.1	35.8	45.0	57.1	63.8	69.7	75.9	73.4	67.7	58.4	52.6	33.2	55.1
1986	32.5	32.1	44.3	53.6	64.2	73.4	79.0	72.5	68.2	56.8	43.2	36.8	54.7
1987	31.2	33.1	43.5	51.7	64.3	73.7	79.1	75.4	68.7	49.9	47.8	38.6	54.8
1988	27.6	34.5	43.9	52.2	63.5	70.9	78.7	78.4	66.4	49.2	46.0	35.8	53.9
1989	36.3	35.2	43.7	51.7	61.4	73.8	76.0	74.4	68.6	57.3	43.7	23.1	53.8
1990	40.8	42.2	48.1	54.3	61.6	72.0	76.9	73.8	66.1	58.7	48.6	41.3	57.0
1991	34.0	39.5	46.1	56.0	69.3	72.3	77.9	77.0	67.6	56.6	45.7	38.5	56.7
1992	35.0	38.0	41.9	53.1	59.7	68.6	75.9	70.4	66.0	52.2	45.7	36.8	53.6
1993	36.8	31.7	39.3	52.6	64.5	72.0	79.7	78.0	68.7	54.2	45.3	34.0	54.7
1994	26.1	33.3	42.7	60.1	59.9	76.1	79.5	73.8	66.7	53.9	49.1	40.3	55.1
1995	37.2	31.3	46.1	52.6	62.7	71.5	78.2	77.6	67.1	58.3	39.7	33.0	54.6
1996	30.0	34.7	39.7	54.6	59.7	72.8	72.9	72.7	67.1	55.7	39.3	38.3	53.1
1997	32.5	40.5	44.6	50.3	58.8	69.1	75.8	73.3	65.1	53.7	43.6	37.2	53.7
1998	40.1	41.0	45.5	54.9	66.0	70.4	75.3	76.2	72.7	56.2	45.6	40.9	57.1
1999	35.0	37.5	41.4	53.0	62.8	70.8	78.5	75.4	67.0	53.1	50.1	38.2	55.2
2000	32.5	39.2	47.9	53.3	64.6	72.2	71.8	72.8	65.0	57.0	42.5	27.8	53.9
2001	32.1	38.5	40.5	55.5	62.6	72.4	72.2	76.5	65.4	55.8	50.7	41.3	55.3
2002	39.1	38.9	45.4	56.8	61.9	72.6	77.3	78.1	69.1	55.0	44.1	33.4	56.0
2003	28.4	30.3	44.1	53.5	59.8	69.3	75.4	76.2	67.1	53.8	50.0	36.0	53.7
2004	28.0	34.8	46.3	54.8	69.8	70.9	75.9	73.6	68.8	55.6	48.4	37.8	55.4
2005	34.8	37.4	40.9	55.3	59.7	73.7	77.9	77.7	71.9	58.8	47.8	33.4	55.8
2006	41.8	36.0	45.9	57.4	62.8	72.6	78.6	78.1	65.6	54.9	48.6	41.9	57.0
2007	39.1	28.6	46.4	52.2	66.1	74.1	77.3	78.7	71.2	63.6	46.1	38.4	56.8
2008	35.5	37.3	45.9	56.0	61.1	74.4	76.8	73.8	69.4	55.2	44.3	38.3	55.7
2009	29.6	38.0	43.7	55.9	65.0	73.1	74.9	78.4	68.4	56.4	49.9	35.2	55.7
POR= 47 YRS	32.1	34.6	43.5	53.5	62.5	71.4	76.0	74.8	67.4	55.3	45.7	36.0	54.4

**HEATING DEGREE DAYS (base 65°F) 2009 WASHINGTON (KIAD)**

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1980-81	0	0	33	342	664	928	1145	735	728	254	170	6	5005
1981-82	0	6	63	388	563	952	1196	790	653	407	56	8	5082
1982-83	0	13	41	266	504	687	934	832	581	449	204	16	4527
1983-84	3	1	103	325	600	1066	1209	750	845	414	194	19	5529
1984-85	4	0	137	130	664	664	1136	814	617	261	94	20	4541
1985-86	0	0	73	217	368	977	995	915	636	336	114	10	4641
1986-87	0	31	52	296	648	868	1039	888	660	398	113	4	4997
1987-88	0	5	21	464	508	810	1152	873	646	381	107	49	5016
1988-89	7	0	50	485	564	899	881	825	670	399	167	0	4947
1989-90	0	7	60	260	633	1295	740	634	547	347	124	8	4655
1990-91	1	0	79	236	482	728	952	706	579	290	53	8	4114
1991-92	0	0	69	280	577	814	921	779	708	359	181	20	4708
1992-93	0	4	79	391	572	869	870	929	787	366	79	19	4965
1993-94	0	0	64	330	587	952	1201	884	684	187	196	5	5090
1994-95	0	0	28	342	474	762	857	936	580	378	118	4	4479
1995-96	0	0	61	236	754	987	1075	874	778	330	220	7	5322
1996-97	0	0	41	288	765	820	998	680	625	433	205	54	4909
1997-98	0	0	69	369	633	855	765	665	630	298	60	33	4377
1998-99	0	1	25	269	577	743	924	765	725	355	96	15	4495
1999-00	2	1	50	364	442	823	1001	742	520	348	98	9	4400
2000-01	0	1	112	256	670	1144	1015	736	752	304	106	13	5109
2001-02	5	0	80	293	426	727	796	724	600	294	163	2	4110
2002-03	0	0	17	341	621	972	1127	963	641	347	178	31	5238
2003-04	0	0	35	339	452	891	1142	872	574	336	47	12	4700
2004-05	0	2	13	298	493	836	929	766	744	295	178	9	4563
2005-06	0	0	12	221	506	971	715	803	589	232	132	4	4185
2006-07	0	0	54	322	486	708	795	1012	580	392	87	3	4439
2007-08	0	0	28	142	559	818	908	795	586	274	154	0	4264
2008-09	0	0	24	314	615	820	1089	752	655	306	86	9	4670
2009-	0	0	19	268	447	917							

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**COOLING DEGREE DAYS (base 65°F) 2009 WASHINGTON (KIAD)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1980	0	0	0	0	100	165	391	380	211	12	0	0	1259
1981	0	0	2	20	49	268	320	227	120	5	0	0	1011
1982	0	0	0	6	120	191	381	248	103	34	11	2	1096
1983	0	0	0	12	40	173	307	328	149	10	0	0	1019
1984	0	0	0	0	38	215	228	292	82	39	0	0	894
1985	0	1	4	32	65	169	344	267	160	20	5	0	1067
1986	0	0	3	0	93	266	441	273	151	49	0	0	1276
1987	0	0	0	5	97	270	446	335	138	0	0	0	1291
1988	0	0	1	2	71	231	439	423	96	5	0	0	1268
1989	0	0	16	9	63	270	343	305	176	27	1	0	1210
1990	0	0	30	31	26	223	376	279	118	49	0	0	1132
1991	0	0	0	23	196	234	408	379	153	24	3	0	1420
1992	0	0	0	8	24	131	343	180	116	1	0	0	803
1993	0	0	0	2	71	233	464	407	183	2	6	0	1368
1994	0	0	0	49	45	345	456	277	88	2	4	0	1266
1995	0	0	0	12	55	208	415	395	132	37	0	0	1254
1996	0	0	0	27	61	248	253	247	113	4	0	0	953
1997	0	0	0	0	22	185	340	265	79	28	0	0	919
1998	1	0	35	3	97	204	326	358	259	3	0	3	1289
1999	0	0	0	0	34	198	426	332	120	1	0	0	1111
2000	0	0	0	5	92	229	220	248	119	15	0	0	928
2001	0	0	0	26	41	245	235	366	98	15	4	0	1030
2002	0	0	0	55	73	237	386	414	147	35	0	0	1347
2003	0	0	0	8	22	165	328	356	105	0	9	0	993
2004	0	0	0	37	203	197	344	278	133	9	0	0	1201
2005	0	0	0	11	17	273	409	401	226	35	0	0	1372
2006	0	0	3	9	70	239	418	411	80	14	1	0	1245
2007	0	0	8	15	128	280	389	434	220	108	0	0	1582
2008	0	0	0	12	39	290	375	278	160	17	0	0	1171
2009	0	0	2	40	92	259	313	416	129	8	0	0	1259

**SNOWFALL (inches) 2009 WASHINGTON (KIAD)**

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1980-81	0.0	0.0	0.0	0.0	T	0.4	4.0	T	T	0.0	0.0	0.0	4.4
1981-82	0.0	0.0	0.0	0.0	0.9	5.7	14.3	5.7	0.3	2.6	0.0	0.0	29.5
1982-83	0.0	0.0	0.0	0.0	0.0	11.9	0.1	27.2	T	T	0.0	0.0	39.2
1983-84	0.0	0.0	0.0	0.0	0.3	T	10.5	0.8	10.8	0.0	0.0	0.0	22.4
1984-85	0.0	0.0	0.0	0.0	T	T	13.8	0.7	T	0.3	0.0	0.0	14.8
1985-86	0.0	0.0	0.0	0.0	0.0	0.2	1.9	16.0	T	T	0.0	0.0	18.1
1986-87	0.0	0.0	0.0	0.0	0.0	T	28.8	12.0	1.4	0.5	0.0	0.0	42.7
1987-88	0.0	0.0	0.0	0.0	5.5	0.1	10.9	T	0.2	T	0.0	0.0	16.7
1988-89	0.0	0.0	0.0	0.0	0.0	1.0	6.6	1.4	0.9	0.0	0.0	0.0	9.9
1989-90	0.0	0.0	0.0	0.0	2.4	11.4	5.0	T	6.4	4.0	0.0	0.0	29.2
1990-91	0.0	0.0	0.0	0.0	0.0	4.7	6.3	0.1	3.5	T	0.0	0.0	14.6
1991-92	0.0	0.0	0.0	0.0	T	T	2.1	3.4	1.2	T	0.0	0.0	6.7
1992-93	0.0	0.0	0.0	0.0	T	2.8	3.2	8.8	15.5	T	0.0	0.0	30.3
1993-94	0.0	T	0.0	0.0	0.0	3.5	4.2	3.8	7.9	T	0.0	T	19.4
1994-95	0.0	0.0	0.0	0.0	T	0.0	4.3	7.8	1.9	0.0	0.0	T	14.0
1995-96	0.0	0.0	0.0	0.0	3.6	2.5	30.9	16.4	6.0	2.5			
1996-97					.7	1.9	5.5	8.2	1.5	0.0	0.0	0.0	
1997-98	0.0	0.0	0.0	0.0	0.0	4.7	0.5	0.7	T	0.0	T	T	5.9
1998-99	0.0	0.0	0.0	0.0	0.0	0.6	4.1	0.9	14.6	0.0	0.0	0.0	20.2
1999-00	0.0	0.0	0.0	0.0	0.0	0.2	21.4	1.4	0.0	0.2	T	0.0	23.2
2000-01	0.0	0.0	0.0	0.0	T	3.1	5.1	3.7	1.0	0.0	0.0	0.0	12.9
2001-02	0.0	0.0	0.0	0.0	0.0	0.0	2.6	T	0.0	0.0	T	0.0	2.6
2002-03	0.0	0.0	0.0	0.0	T	8.2	5.1	34.9	1.9	T	0.0	0.0	50.1
2003-04	0.0	T	0.0	0.0	0.0	11.4	6.0	T	T	0.0	0.0	0.0	17.4
2004-05	0.0	0.0	0.0	0.0	0.0	T	7.4	8.7	1.2	0.0	0.0	0.0	17.3
2005-06	0.0	0.0	0.0	0.0	T	5.7	T	8.1	T	0.0	0.0	0.0	13.8
2006-07	T	T	0.0	0.0	0.0	T	1.6	9.8	3.1	0.2	0.0	0.0	14.7
2007-08	0.0	0.0	0.0	0.0	0.0	2.5	4.0	T	0.0	T	0.0	0.0	6.5
2008-09	0.0	0.0	0.0	0.0	0.0	T	2.0	T	6.0	0.0	0.0	0.0	8.0
2009-	0.0	0.0	0.0	0.0	0.0	21.4							
POR= 46 YRS	T	T	0.0	0.0	0.8	4.0	7.0	6.7	3.1	0.3	T	T	21.9

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**REFERENCE NOTES :**

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).

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).

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.  
NORMALS ARE 30-YEAR AVERAGES (1971 - 2000).  
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 AND ON SATELLITE DATA FOR CLOUDS ABOVE 12,000 FEET.  
THE NUMBER OF DAYS WITH CLEAR, PARTLY CLOUDY, AND CLOUDY CONDITIONS FOR ASOS STATIONS IS THE SUM OF THE CEILOMETER AND SATELLITE DATA FOR THE SUNRISE TO SUNSET PERIOD.  
CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS.  
WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED.

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 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 EIGHTS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.  
STATION HISTORY STOPPED WITH THE 2009 ANNUAL. IF YOU NEED HISTORY GO TO "MULTI-NETWORK METADATA SYSTEM", URL IS: <https://mi3.ncdc.noaa.gov/mi3qry/login.cfm>

**NOTE:**  
The "Period of Record:(POR) for all "averages" is based on the "Summary of the Day First Order Station" and "Cooperative Summary of the Day" archives.

# 2009 WASHINGTON D.C. (KIAD)

Dulles International Airport is located in the Virginia Piedmont about 23 miles east of the Blue Ridge Mountains and 12 miles east of the Bull Run and Catocin Mountains. The Blue Ridge rises to about 2,500 feet above sea level and the Bull Run Mountains to about 1,500 feet at their nearest points. Field elevation is 313 feet. The terrain near the airport is mostly low rolling hills about one-fourth wooded. Ponds located on and near the airport, along with poor air drainage contribute to the formation of local ground fog. Easterly winds cause an upslope effect from the Atlantic Ocean, 140 miles east, and from the Chesapeake Bay, about 55 miles east. Westerly winds create a slight foehn effect.

Its location in the middle latitudes, where the general atmospheric flow is from west to east, favors a continental climate with four well defined seasons. Summers are warm and at times humid, Winters are mild. Generally pleasant weather prevails in spring and autumn. The coldest period, when temperatures average 21 degrees, occurs in late January. The warmest period, averaging 88 degrees, occurs in the last half of July.

Precipitation is rather evenly distributed through the year. Annual precipitation has ranged from about 25 inches to more than 55 inches. Rainfalls of over 10 inches in a 24-hour period have been recorded during the passage of tropical storms. The seasonal snowfall is nearly 24 inches, but varies greatly from season to season. Snowfalls of 4 inches or more occur only twice each winter on average. Accumulations of over 20 inches from a single storm are extremely rare.

Storm damage results mainly from heavy snows and freezing rains in winter and from hurricanes and severe thunderstorms during the other seasons. Damage may result from wind, flooding or rain.

Prevailing winds are from the south except during the winter months when they are from the northwest. The windiest period is late winter and early spring. Winds are generally less during the night and early morning hours and increase to a high in the afternoon. Winds may reach 50 to 60 miles per hour or even higher during severe summer thunderstorms, hurricanes, and winter storms.

The growing season averages 169 days. The average date for the last freeze in spring is late April and the average date for the first freeze in the fall is mid October.

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