

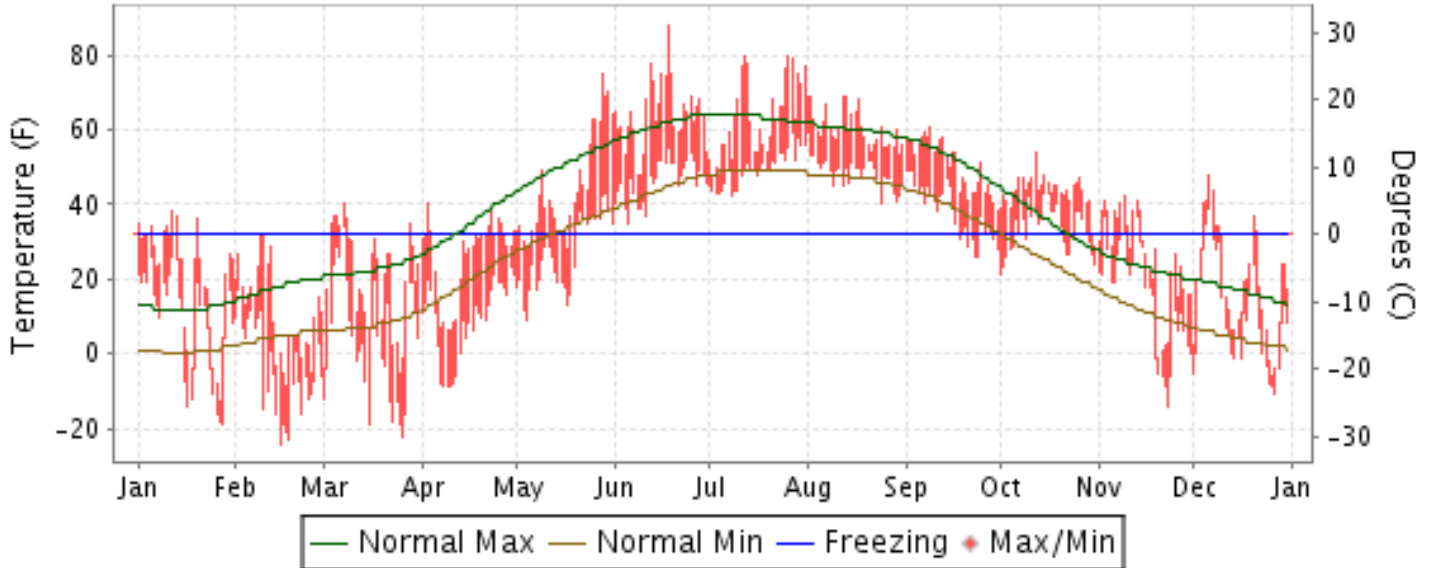


# 2013 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

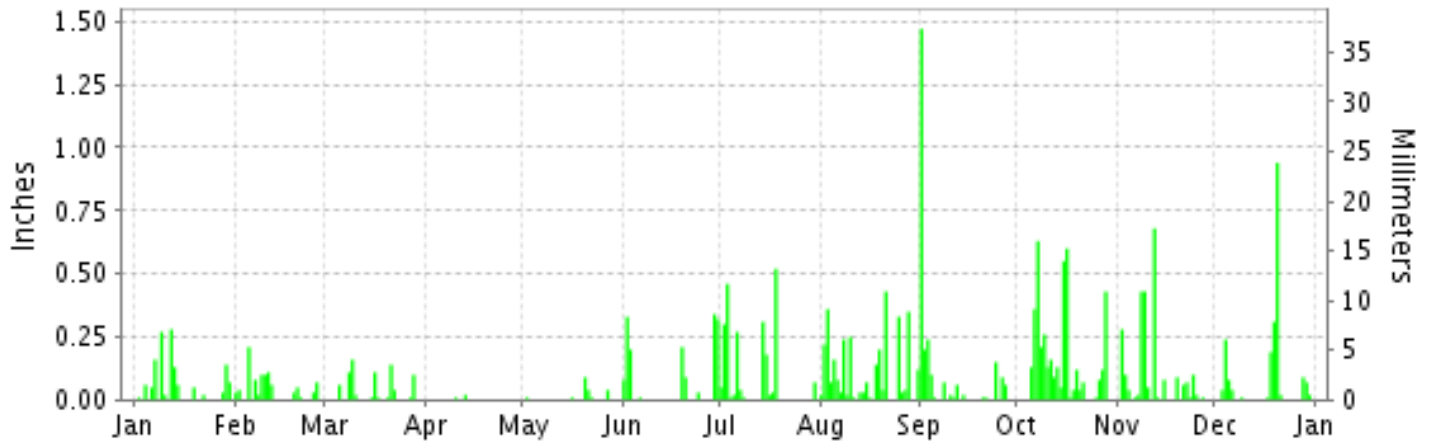
ISSN 0197-9620

## BETHEL, ALASKA (PABE)

### 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 2013

## BETHEL (PABE)

LATITUDE: 60° 47'N      LONGITUDE: 161° 49'W      ELEVATION (FT): GRND: 102 BARO: 145      TIME ZONE: ALASKA (UTC -9)      WBAN: 26615

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	20.9	11.2	20.9	25.8	44.3	64.3	63.5	60.4	50.7	43.3	26.0	19.7	37.6	
	HIGHEST DAILY MAXIMUM	38	32	40	40	75	88	80	69	61	54	42	48	88	
	DATE OF OCCURRENCE	12	10+	07	03	28	18	26+	13+	09	12	09	06	JUN 18	
	MEAN DAILY MINIMUM	8.3	-3.9	3.5	8.8	26.6	46.4	49.6	48.6	38.1	33.1	15.0	10.1	23.7	
	LOWEST DAILY MINIMUM	-19	-24	-22	-9	9	35	42	40	26	21	-14	-11	-24	
	DATE OF OCCURRENCE	28	15	26	10+	04	05	08	24	24+	01	23	27	FEB 15	
	AVERAGE DRY BULB	14.6	3.7	12.2	17.3	35.5	55.4	56.6	54.5	44.4	38.2	20.5	14.9	30.7	
	MEAN WET BULB	14.0	3.7	11.8	16.2	32.4	50.3	53.0	51.7	41.8	36.8	20.4	14.1	28.9	
	MEAN DEW POINT	10.9	0.8	8.4	12.1	27.5	45.6	50.4	49.9	38.9	35.1	18.1	11.8	25.8	
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 70	0	0	0	0	2	6	9	0	0	0	0	0	0	17
	MAXIMUM <= 32°	24	28	24	23	6	0	0	0	0	2	19	23	149	
	MINIMUM <= 32°	31	28	30	30	19	0	0	0	10	15	27	29	219	
MINIMUM <= 0°	9	16	13	7	0	0	0	0	0	0	7	11	63		
H/C	HEATING DEGREE DAYS	1556	1713	1631	1423	907	288	265	319	611	821	1328	1544	12406	
	COOLING DEGREE DAYS	0	0	0	0	0	7	11	0	0	0	0	0	18	
RH	MEAN (PERCENT)	84	83	82	78	74	73	83	88	83	90	87	86	83	
	HOUR 03 LST	85	83	84	81	85	89	95	96	93	94	89	86	88	
	HOUR 09 LST	84	85	86	81	77	78	89	94	92	94	87	87	86	
	HOUR 15 LST	82	82	77	74	62	58	73	75	69	83	84	85	75	
	HOUR 21 LST	84	84	83	78	71	64	75	87	84	91	83	86	81	
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	5	3	5	3	3	6	6	4	1	4	6	4	50	
	THUNDERSTORMS	0	0	0	0	0	0	0	0	0	0	0	0	0	
PR	MEAN STATION PRESS. (IN.)	29.48	29.36	29.81	30.05	29.85	29.81	29.89	29.58	29.48	29.38	29.81	29.76	29.69	
	MEAN SEA-LEVEL PRESS. (IN.)	29.65	29.54	29.99	30.23	30.02	29.97	30.06	29.74	29.65	29.55	29.99	29.93	29.86	
WINDS	RESULTANT SPEED (MPH)	7.5	7.7	2.3	7.6	4.5	3.1	4.5	2.8	3.1	4.5	0.0	8.2	2.1	
	RES. DIR. (TENS OF DEGS.)	04	01	36	34	31	23	21	21	33	13	14	02	36	
	MEAN SPEED (MPH)	12.1	12.8	11.7	11.0	10.5	8.1	9.2	8.3	9.2	12.3	10.5	11.8	10.6	
	PREVAIL.DIR.(TENS OF DEGS.)	03	03	02	02	32	18	19	23	32	16	02	02	02	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	40	36	35	35	28	29	31	22	31	43	36	35	43	
	DIR. (TENS OF DEGS.)	04	03	17	02	15	17	16	15	32	19	18	03	19	
	DATE OF OCCURRENCE	28	19	09	05	20	30	01	09	27	08	09	11	OCT 08	
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	47	41	43	41	35	38	38	28	37	51	46	46	51	
DIR. (TENS OF DEGS.)	04	03	17	02	15	16	15	33	33	20	19	02	20		
DATE OF OCCURRENCE	28	19	09	05	20	30	01	17	27	08	09	11	OCT 08		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	1.35	0.94	0.78	0.03	0.20	1.61	2.29	3.28	2.52	4.22	2.49	2.06	21.77	
	GREATEST 24-HOUR (IN.)	0.28	0.21	0.18	0.02	0.13	0.65	0.52	0.45	1.53	0.91	0.77	1.15	1.53	
	DATE OF OCCURRENCE	12	05	21-22	13	20-21	29-30	18	20-21	01-02	15-16	08-09	19-20	SEP 01-02	
	NUMBER OF DAYS WITH:														
PRECIPITATION 0.01	14	14	12	2	6	9	14	24	15	21	18	13	162		
PRECIPITATION 0.10	5	4	5	0	0	5	6	11	5	13	6	4	64		
PRECIPITATION 1.00	0	0	0	0	0	0	0	0	1	0	0	0	1		
SNOWFALL	SNOW,ICE PELLETS,HAIL	13.3	9.2	5.8	0.4	T	0.0	0.0	0.0	T	T	6.9	7.3	42.9	
	TOTAL (IN.)	4.8	2.0	1.6	0.3	T	0.0	0.0	0.0	T	T	2.1	3.1	4.8	
	GREATEST 24-HOUR (IN.)	09	05	09	13	20+				24+	31+	12	19	JAN 09	
	DATE OF OCCURRENCE	17	10	7	5	T	0	0	0	0	0	3	5	17	
	MAXIMUM SNOW DEPTH (IN.)	09	15+	28	02+	17+						30+	19	JAN 09	
	DATE OF OCCURRENCE														
	NUMBER OF DAYS WITH:														
SNOWFALL >= 1.0	4	3	3	0	0	0	0	0	0	0	2	2	14		

# NORMALS, MEANS, AND EXTREMES BETHEL (PABE)

LATITUDE:  
60° 47'N

LONGITUDE:  
161° 49'W

ELEVATION (FT):  
GRND: 102 BARO: 145

TIME ZONE:  
ALASKA (UTC -9)

WBAN: 26615

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	12.4	17.7	22.6	34.5	50.5	61.1	63.4	60.0	52.2	35.8	23.2	16.8	37.5
	MEAN DAILY MAXIMUM	86	13.0	16.0	21.2	33.5	49.5	60.0	62.5	59.7	51.7	36.5	23.1	14.4	36.8
	HIGHEST DAILY MAXIMUM	55	48	46	46	63	80	88	85	87	72	60	51	49	88
	YEAR OF OCCURRENCE		1963	2007	1998	2004	1993	2013	2008	2003	1979	2009	2002	2007	JUN 2013
	MEAN OF EXTREME MAXS.	86	36.6	37.0	39.8	49.0	65.7	74.6	77.7	72.4	63.1	49.9	40.2	37.1	53.6
	NORMAL DAILY MINIMUM	30	0.8	4.4	7.8	19.3	33.3	43.8	48.8	47.0	39.0	24.7	11.6	3.9	23.7
	MEAN DAILY MINIMUM	86	-0.1	2.0	4.7	17.2	32.1	42.4	47.5	46.3	38.0	24.5	10.9	1.3	22.2
	LOWEST DAILY MINIMUM	55	-48	-39	-39	-22	4	28	31	28	18	-6	-26	-37	-48
	YEAR OF OCCURRENCE		1989	1999	1964	1964	1965	1962	1959	1984	1970	2001	2008	1998	JAN 1989
	MEAN OF EXTREME MINS.	86	-25.4	-22.9	-17.9	-5.3	20.0	34.0	40.8	38.1	27.0	7.9	-9.8	-22.2	5.4
	NORMAL DRY BULB	30	6.6	11.1	15.2	26.9	41.9	52.5	56.1	53.5	45.6	30.3	17.4	10.4	30.6
	MEAN DRY BULB	86	6.4	9.1	13.0	25.4	40.8	51.4	55.0	53.0	44.9	30.5	17.1	7.9	29.5
	MEAN WET BULB	29	8.3	11.9	13.6	24.7	36.7	46.5	50.5	49.7	42.6	31.1	17.4	11.8	28.7
	MEAN DEW POINT	29	6.5	9.6	11.8	22.6	34.6	44.2	49.2	48.6	41.3	29.8	15.9	10.3	27.0
	NORMAL NO. DAYS WITH: MAXIMUM >= 70	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
MAXIMUM <= 32	30	25.5	20.8	21.5	10.4	0.7	0.0	0.0	0.0	0.1	9.7	21.0	24.1	133.8	
MINIMUM <= 32	30	30.3	27.0	30.2	26.6	12.5	0.4	0.0	0.1	5.0	24.1	28.2	29.9	214.3	
MINIMUM <= 0	30	14.7	11.0	10.4	2.9	0.0	0.0	0.0	0.0	0.0	0.3	6.5	13.3	59.1	
H/C	NORMAL HEATING DEG. DAYS	30	1810	1511	1544	1143	716	378	278	358	582	1077	1428	1694	12519
	NORMAL COOLING DEG. DAYS	30	0	0	0	0	0	1	2	1	0	0	0	0	4
RH	NORMAL (PERCENT)	30	78	76	79	79	75	74	80	85	83	83	83	80	80
	HOURLY 03 LST	30	79	78	82	85	89	89	93	93	91	87	85	82	86
	HOURLY 09 LST	30	79	77	81	82	79	78	86	90	90	87	85	82	83
	HOURLY 15 LST	30	78	75	76	69	61	58	66	73	70	73	81	81	72
	HOURLY 21 LST	30	79	77	81	79	71	67	74	83	84	84	83	81	79
S	PERCENT POSSIBLE SUNSHINE														
W/O	MEAN NO. DAYS WITH: HEAVY FOG(VISBY <= 1/4 MI)	50	2.6	2.5	3.0	3.1	3.5	2.6	3.2	5.2	4.0	4.3	3.9	3.4	41.3
	THUNDERSTORMS	65	0.0	0.0	0.0	0.0	0.2	0.6	0.6	0.3	0.0	0.0	0.0	0.0	1.7
CLOUDINESS	MEAN: SUNRISE-SUNSET (OKTAS)	34	5.3	4.7	5.0	5.5	6.1	6.6	6.6	6.8	6.4	6.2	5.7	5.3	5.9
	MIDNIGHT-MIDNIGHT (OKTAS)	22	4.6	4.1	4.6	5.3	5.7	6.3	6.4	6.6	6.0	5.7	5.0	4.9	5.4
	MEAN NO. DAYS WITH: CLEAR	34	8.0	9.9	9.3	6.4	3.6	1.7	1.7	1.5	2.2	3.5	5.5	7.6	60.9
	PARTLY CLOUDY	34	4.7	4.1	5.3	6.3	7.7	6.9	5.2	3.9	4.8	5.1	4.9	4.8	63.7
	CLOUDY	34	18.3	14.2	16.5	17.3	19.6	21.4	23.0	24.8	22.1	21.5	18.7	17.8	235.2
PR	MEAN STATION PRESSURE(IN)	30	29.51	29.56	29.63	29.66	29.71	29.73	29.77	29.71	29.56	29.52	29.51	29.44	29.61
	MEAN SEA-LEVEL PRES. (IN)	30	29.71	29.77	29.81	29.84	29.89	29.90	29.94	29.88	29.75	29.71	29.70	29.62	29.79
WINDS	MEAN SPEED (MPH)	30	14.1	13.7	13.0	11.7	10.8	9.8	9.8	10.5	10.6	11.5	12.3	12.8	11.7
	PREVAIL.DIR.(TENS OF DEGS)	33	03	03	03	03	32	21	20	19	19	02	03	03	03
	MAXIMUM 2-MINUTE: SPEED (MPH)	15	59	52	55	53	38	37	46	41	40	43	49	45	59
	DIR. (TENS OF DEGS)		15	11	21	18	15	18	16	17	19	19	04	03	15
	YEAR OF OCCURRENCE		2009	2004	2009	2005	2008	2010	2009	2000	2005	2013	2004	2004	JAN 2009
	MAXIMUM 3-SECOND SPEED (MPH)	15	71	62	64	62	47	44	56	52	48	52	61	52	71
	DIR. (TENS OF DEGS)		15	11	20	19	19	18	16	18	19	20	04	03	15
YEAR OF OCCURRENCE		2009	2004	2009	2005	2004	2012	2009	2000	2005	2006	2004	2006	JAN 2009	
PRECIPITATION	NORMAL (IN)	30	0.78	0.72	0.71	0.74	1.14	1.72	2.36	3.25	2.75	1.65	1.60	1.12	18.54
	MAXIMUM MONTHLY (IN)	55	2.53	3.03	3.44	3.89	3.63	4.30	4.19	6.81	7.05	4.45	4.26	3.49	7.05
	YEAR OF OCCURRENCE		1993	1996	1991	1979	2002	1999	2001	2001	2007	2006	2003	1992	SEP 2007
	MINIMUM MONTHLY (IN)	55	0.04	T	T	0.02	0.10	0.25	0.56	0.99	0.42	0.11	0.04	0.11	0.02
	YEAR OF OCCURRENCE		2004	1984	1986	1985	1967	1974	1988	1976	1968	1965	1969	1973	APR 1985
	MAXIMUM IN 24 HOURS (IN)	55	1.08	2.05	0.73	0.94	1.35	1.37	1.35	1.90	2.02	1.55	1.63	1.34	2.05
	YEAR OF OCCURRENCE		2008	2008	2009	1979	2002	1981	2010	1994	1971	1974	1990	1970	FEB 2008
	NORMAL NO. DAYS WITH: PRECIPITATION >= 0.01	30	9.1	7.7	8.2	9.1	11.5	13.2	15.5	18.0	17.8	12.8	12.6	10.6	146.1
PRECIPITATION >= 1.00	30	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.0	0.1	0.0	0.7	
SNOWFALL	NORMAL (IN)	30	9.6	6.9	8.2	5.7	2.1	0.0	0.0	0.0	0.6	4.4	12.9	11.4	61.8
	MAXIMUM MONTHLY (IN)	55	28.2	28.8	30.6	28.7	7.7	2.2	T	0.0	5.5	12.8	34.7	36.0	36.0
	YEAR OF OCCURRENCE		2008	1996	1991	2006	1998	1963	2007	2007	2004	1978	1994	1992	DEC 1992
	MAXIMUM IN 24 HOURS (IN)	55	7.8	7.3	8.2	4.7	6.2	1.2	T	0.0	3.7	6.3	10.0	11.0	11.0
	YEAR OF OCCURRENCE		1987	1996	1974	1975	2002	1963	1974	2004	1996	1990	2004	2004	DEC 2004
	MAXIMUM SNOW DEPTH (IN)	64	45	32	45	33	20	0	0	0	3	7	19	24	45
	YEAR OF OCCURRENCE		1952	1956	1951	1951	1977				1992	1996	1999	1994	JAN 1952
NORMAL NO. DAYS WITH: SNOWFALL >= 1.0	30	2.9	2.7	3.2	1.7	0.6	0.0	0.0	0.0	0.3	1.5	3.9	3.7	20.5	

**PRECIPITATION (inches) 2013 BETHEL (PABE)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1984	0.17	T	0.10	0.46	0.39	1.57	1.02	2.85	1.10	0.44	0.66	3.33	12.09
1985	0.93	0.24	1.76	0.02	1.73	1.84	1.24	4.17	4.47	2.14	1.33	0.86	20.73
1986	0.65	0.57	T	0.39	0.78	1.25	1.97	4.40	3.10	1.28	1.90	0.45	16.74
1987	0.72	0.30	0.23	0.05	1.20	1.45	1.89	2.43	1.41	1.43	0.53	1.48	13.12
1988	0.42	0.35	0.45	0.45	1.51	1.59	0.56	3.75	0.73	0.61	0.43	1.68	12.53
1989	1.14	1.76	0.38	0.65	1.46	2.57	1.71	3.61	2.85	1.75	0.92	1.04	19.84
1990	0.92	0.96	0.79	0.25	1.08	0.83	2.72	2.84	3.21	2.05	3.01	2.28	20.94
1991	0.23	0.15	3.44	0.30	0.79	1.20	1.51	1.94	1.72	1.55	0.72	0.91	14.46
1992	0.16	0.50	0.53	0.04	0.79	1.89	1.42	3.52	2.19	1.07	2.22	3.49	17.82
1993	2.53	0.50	0.75	0.31	0.80	1.28	0.67	3.44	4.79	2.11	2.60	0.78	20.56
1994	0.50	0.46	1.05	0.95	0.49	2.26	2.78	5.49	1.44	1.32	4.19	1.53	22.46
1995	0.42	0.72	0.07	0.53	1.59	1.49	1.61	3.59	1.94	0.94	0.10	0.46	13.46
1996	0.21	3.03	0.95	0.06	0.62	1.09	3.83	2.80	1.08	.99	2.25	.86	17.77
1997	0.33	0.40	0.18	0.30	1.14	1.60	1.11	2.50	1.47	0.15	1.53	0.87	11.58
1998	0.57	0.08	0.88	0.96	2.61	0.93	2.74	3.20	3.01	1.62	1.30	0.54	18.44
1999	0.45	0.10	0.13	1.06	0.48	4.30	3.15	2.16	2.91	0.42	0.95	0.34	16.45
2000	1.24	0.72	0.75	0.20	0.25	1.67	4.15	4.60	3.37	0.87	2.49	1.39	21.70
2001	0.76	1.13	0.71	2.28	0.47	1.08	4.19	6.81	1.66	2.35	0.07	0.46	21.97
2002	1.63	0.70	0.48	1.44	3.63	2.00	2.13	1.16	3.97	1.61	0.91	0.29	19.95
2003	0.26	1.33	0.26	1.80	1.80	2.64	2.87	4.76	1.58	0.95	4.26	0.96	23.47
2004	0.04	0.35	0.52	0.41	2.42	2.14	2.84	2.01	3.20	2.83	2.06	0.98	19.80
2005	0.43	0.98	0.23	0.19	2.02	2.05	1.23	3.80	5.40	3.23	1.57	1.44	22.57
2006	0.13	0.64	0.98	1.57	1.43	1.14	1.43	3.52	3.29	4.45	1.40	0.60	20.58
2007	0.99	0.38	0.51	0.51	1.04	1.90	3.61	3.21	7.05	1.83	1.55	1.22	23.80
2008	2.46	0.67	1.67	0.99	1.06	2.84	3.40	1.33	3.82	1.57	0.98	1.92	22.71
2009	1.88	2.47	1.06	1.24	0.68	1.34	3.93	2.72	2.09	2.85	1.19	0.27	21.72
2010	0.58	0.39	0.23	0.48	0.50	1.86	3.36	3.95	2.44	1.06	2.46	1.21	18.52
2011	0.86	1.14	0.09	0.94	0.30	0.83	2.41	3.90	0.84	1.68	2.31	1.22	16.52
2012	0.31	1.24	1.23	0.42	0.48	2.48	3.91	3.09	3.68	2.19	1.14	1.10	21.27
2013	1.35	0.94	0.78	0.03	0.20	1.61	2.29	3.28	2.52	4.22	2.49	2.06	21.77
POR= 86 YRS	0.81	0.76	0.80	0.67	0.92	1.44	2.29	3.57	2.67	1.57	1.21	1.01	17.72

WBAN : 26615

**AVERAGE TEMPERATURE (°F) 2013 BETHEL (PABE)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1984	5.7	-13.2	24.8	22.0	38.1	54.0	55.1	49.7	46.7	30.2	16.4	19.4	29.1
1985	25.7	4.9	13.8	8.3	36.5	47.7	58.8	53.6	45.5	27.0	24.4	25.4	31.0
1986	1.7	15.7	13.1	22.8	39.1	52.5	55.1	51.4	45.0	29.0	20.4	21.6	30.6
1987	9.2	11.1	19.8	23.5	39.3	50.4	55.9	56.3	42.2	34.4	12.8	1.8	29.7
1988	15.1	9.2	6.6	25.3	43.8	52.3	60.0	52.3	45.1	27.2	7.0	11.8	29.6
1989	-13.0	26.1	16.6	29.0	38.1	52.2	54.6	54.2	48.3	31.7	8.8	11.8	29.9
1990	2.7	-12.3	13.8	33.7	43.6	52.2	57.5	55.4	43.7	30.3	16.9	9.4	28.9
1991	9.2	5.9	18.1	30.1	43.9	53.5	57.4	53.7	49.6	35.8	13.5	2.0	31.1
1992	5.2	-0.3	10.2	26.0	36.4	52.6	57.4	53.3	37.7	26.7	16.9	9.1	27.6
1993	3.9	19.3	21.6	34.9	45.8	53.6	57.7	54.2	44.6	34.5	24.9	16.3	34.3
1994	7.2	10.8	7.7	29.3	44.2	52.4	55.6	52.3	45.6	27.4	16.8	7.6	29.7
1995	9.7	12.9	9.4	31.6	46.3	52.2	56.7	53.6	50.2	31.2	12.6	10.9	31.4
1996	6.9	8.2	26.7	28.9	44.9	51.2	56.0	51.6	42.0	25.5	23.0	5.1	30.8
1997	4.1	17.6	8.3	33.9	45.4	55.1	59.0	56.0	48.9	24.3	21.5	-.3	31.2
1998	.9	9.9	27.6	31.4	39.9	50.9	57.3	49.1	45.4	31.3	19.8	3.3	30.6
1999	-1.3	0.2	9.5	25.3	36.8	51.7	53.1	51.7	46.4	24.4	9.9	-10.7	24.8
2000	.9	26.1	20.5	26.8	37.7	53.3	53.6	51.0	42.5	31.5	25.8	25.2	32.9
2001	18.8	21.5	13.5	29.1	35.1	52.0	52.9	53.0	45.2	24.3	10.4	-4.6	29.3
2002	11.7	13.0	21.9	27.5	45.3	55.9	55.7	55.0	46.5	36.3	26.3	16.4	34.3
2003	12.1	22.8	15.5	33.2	42.3	54.9	56.3	55.5	44.1	35.3	25.0	6.9	33.7
2004	1.8	13.9	11.9	33.2	47.1	56.1	61.1	59.4	43.7	36.0	23.8	14.9	33.6
2005	10.9	13.8	18.5	20.9	46.2	56.0	58.1	55.9	47.1	30.2	6.3	13.8	31.5
2006	-6.9	19.0	10.6	18.8	40.9	51.2	57.1	52.2	48.7	38.5	19.0	7.3	29.7
2007	9.2	15.7	2.3	35.7	44.8	52.1	57.4	57.2	49.4	32.0	24.7	11.4	32.7
2008	4.5	-0.9	12.0	22.1	42.3	51.0	53.1	53.9	47.3	20.9	7.1	14.6	27.3
2009	3.5	11.4	11.6	23.2	41.7	51.4	56.2	52.3	46.7	33.6	8.8	17.3	29.8
2010	2.0	11.6	3.5	24.5	43.5	50.9	53.3	53.2	47.6	31.5	19.8	2.6	28.7
2011	11.6	12.3	12.8	23.1	44.4	51.0	51.4	51.1	46.6	31.7	7.2	11.3	29.5
2012	-17.2	14.7	1.9	24.9	39.1	51.0	52.3	52.3	42.6	31.4	11.4	4.1	25.7
2013	14.6	3.7	12.2	17.3	35.5	55.4	56.6	54.5	44.4	38.2	20.5	14.9	30.7
POR= 86 YRS	6.4	9.1	13.0	25.4	40.8	51.4	55.0	53.0	44.9	30.5	17.1	7.9	29.5

**HEATING DEGREE DAYS (base 65°F) 2013 BETHEL (PABE)**

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1984-85	300	464	544	1070	1450	1414	1211	1680	1583	1697	876	511	12800
1985-86	189	352	578	1169	1214	1223	1962	1379	1602	1261	794	368	12091
1986-87	303	417	594	1106	1333	1341	1732	1506	1397	1239	791	430	12189
1987-88	279	261	676	944	1565	1961	1544	1614	1804	1185	652	374	12859
1988-89	152	387	590	1164	1739	1645	2419	1084	1495	1075	826	379	12955
1989-90	319	327	495	1024	1682	1648	1934	2164	1586	935	658	378	13150
1990-91	228	290	631	1069	1438	1722	1729	1656	1448	1039	648	340	12238
1991-92	231	342	454	899	1539	1952	1854	1894	1696	1164	882	369	13276
1992-93	230	357	812	1182	1434	1732	1893	1277	1339	896	591	338	12081
1993-94	228	326	606	939	1197	1507	1791	1512	1776	1066	640	371	11959
1994-95	284	385	578	1157	1440	1776	1709	1456	1723	996	573	379	12456
1995-96	250	347	437	1040	1569	1675	1797	1647	1181	1075	616	408	12042
1996-97	273	408	683	1219	1252	1850	1882	1321	1752	927	600	291	12458
1997-98	186	271	478	1256	1298	2016	1980	1538	1152	1003	774	417	12369
1998-99	232	487	584	1039	1352	1905	2049	1807	1712	1184	865	389	13605
1999-00	361	405	551	1255	1646	2339	1980	1122	1374	1138	836	344	13351
2000-01	350	429	669	1033	1169	1225	1423	1210	1586	1068	918	382	11462
2001-02	370	363	587	1256	1631	2151	1644	1451	1327	1120	605	273	12778
2002-03	281	310	549	881	1153	1501	1634	1175	1525	946	693	296	10944
2003-04	262	301	622	913	1193	1795	1953	1474	1639	946	548	270	11916
2004-05	114	173	632	891	1231	1549	1671	1427	1433	1316	574	271	11282
2005-06	206	282	530	1071	1755	1577	2228	1282	1680	1382	738	405	13136
2006-07	239	388	484	813	1375	1779	1723	1374	1937	870	618	382	11982
2007-08	233	239	459	1015	1201	1655	1868	1908	1635	1279	696	413	12601
2008-09	377	337	524	1363	1729	1553	1900	1493	1650	1249	714	399	13288
2009-10	267	387	543	963	1681	1470	1945	1489	1899	1209	657	416	12926
2010-11	354	361	517	1029	1350	1927	1651	1469	1612	1248	630	413	12561
2011-12	414	421	544	1029	1726	1659	2541	1453	1951	1196	795	412	14141
2012-13	386	385	664	1032	1603	1881	1556	1713	1631	1423	907	288	13469
2013-	265	319	611	821	1328	1544							

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**COOLING DEGREE DAYS (base 65°F) 2013 BETHEL (PABE)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1984	0	0	0	0	0	0	0	0	0	0	0	0	0
1985	0	0	0	0	0	0	1	5	0	0	0	0	6
1986	0	0	0	0	0	2	3	0	0	0	0	0	5
1987	0	0	0	0	0	0	2	0	0	0	0	0	2
1988	0	0	0	0	0	0	4	0	0	0	0	0	4
1989	0	0	0	0	0	0	3	0	0	0	0	0	3
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	2	0	0	0	0	0	0	2
1992	0	0	0	0	0	0	0	0	0	0	0	0	0
1993	0	0	0	0	2	0	7	0	0	0	0	0	9
1994	0	0	0	0	0	0	0	0	0	0	0	0	0
1995	0	0	0	0	0	0	0	0	0	0	0	0	0
1996	0	0	0	0	0	0	0	0	0	0	0	0	0
1997	0	0	0	0	0	0	8	1	0	0	0	0	9
1998	0	0	0	0	0	0	0	0	0	0	0	0	0
1999	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	1	0	0	0	0	0	0	1
2001	0	0	0	0	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	8	0	6	0	0	0	0	14
2003	0	0	0	0	0	1	0	13	0	0	0	0	14
2004	0	0	0	0	0	9	1	7	0	0	0	0	17
2005	0	0	0	0	0	8	0	4	0	0	0	0	12
2006	0	0	0	0	0	0	2	0	0	0	0	0	2
2007	0	0	0	0	0	0	4	0	0	0	0	0	4
2008	0	0	0	0	0	0	11	0	0	0	0	0	11
2009	0	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	7	11	0	0	0	0	0	18

**SNOWFALL (inches) 2013 BETHEL (PABE)**

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1984-85	0.0	0.0	T	3.4	6.8	19.6	2.5	0.7	16.3	0.4	5.1	0.8	55.6
1985-86	0.0	0.0	T	5.3	8.7	2.3	8.7	1.7	T	2.6	4.2	0.0	33.5
1986-87	0.0	0.0	T	0.3	1.8	2.1	13.5	4.0	1.7	0.6	0.2	T	24.2
1987-88	0.0	0.0	0.0	4.7	7.3	14.3	1.7	5.1	5.3	3.1	T	0.0	41.5
1988-89	0.0	0.0	T	5.2	7.9	15.1	13.1	9.2	4.7	2.7	3.4	0.0	61.3
1989-90	0.0	0.0	0.0	4.3	11.0	8.8	10.4	12.8	8.7	2.5	T	0.0	58.5
1990-91	0.0	0.0	3.1	1.7	21.7	6.6	2.6	4.6	30.6	1.5	0.3	T	72.7
1991-92	0.0	0.0	0.0	2.2	9.1	19.2	3.6	10.3	8.3	0.7	6.2	0.0	59.6
1992-93	0.0	0.0	4.0	2.0	19.3	36.0	15.3	6.2	11.6	0.9	T	T	95.3
1993-94	0.0	0.0	T	1.4	13.0	13.2	10.8	4.3	17.3	3.4	T	0.0	63.4
1994-95	0.0	0.0	0.0	1.5	34.7	17.4	8.1	2.1	1.9	0.5	0.0	0.0	66.2
1995-96	0.0	0.0	0.0	2.2	3.1	8.2	4.2	28.8	8.3	1.3	0.2	0.2	56.5
1996-97	0.0	0.0	3.9	8.7	14.4	16.3	9.5	5.1	2.4	0.7	0.3	0.2	61.5
1997-98	0.0	0.0	0.0	1.1	15.1	15.3	12.0	1.1	10.5	10.4	7.7	0.0	73.2
1998-99	0.0	0.0	0.0	9.9	10.0	5.9	3.2	2.2	2.7	11.6	3.6	T	49.1
1999-00	0.0	0.0	0.0	4.0	19.9	6.8	19.1	7.5	11.4	2.9	0.3	0.0	71.9
2000-01	0.0	0.0	0.0	3.5	4.8	13.2	14.8	17.9	15.4	22.2	5.1	0.0	96.9
2001-02	0.0	0.0	T	10.8	1.1	9.6	22.2	16.2	11.0	9.2	7.6	T	87.7
2002-03	0.0	0.0	0.0	3.3	8.8	2.5	6.5	7.5	1.8	10.9	0.9	0.0	42.2
2003-04	0.0	0.0	0.0	0.3	15.8	14.6	4.5	12.6	12.9	4.7	T	0.0	65.4
2004-05	0.0	0.0	5.5	3.6	25.1	19.2	5.1	14.4	1.6	2.4	6.0	0.0	82.9
2005-06	0.0	0.0	T	8.6	19.9	13.5	1.9	6.7	19.3	28.7	5.2	0.0	103.8
2006-07	0.0	0.0	0.0	1.7	14.7	12.9	11.2	6.8	8.3	2.8	0.6	0.0	59.0
2007-08	T	0.0	0.0	8.0	17.7	12.2	28.2	6.2	18.1	11.7	1.0	0.0	103.1
2008-09	0.0	0.0	0.0	9.9	13.1	16.9	10.6	26.4	4.9	4.0	1.2	0.0	87.0
2009-10	0.0	0.0	T	4.2	12.8	2.6	6.6	4.0	3.6	5.4	2.5	0.0	41.7
2010-11	0.0	0.0	1.8	10.0	8.2	15.5	10.0	10.2	1.2	7.3	0.4	0.0	64.6
2011-12	0.0	0.0	0.0	4.2	29.3	10.2	5.1	17.2	12.5	4.0	2.6	0.0	85.1
2012-13	0.0	0.0	T	0.4	0.7	11.5	13.3	9.2	5.8	0.4	T	0.0	41.3
2013-	0.0	0.0	T	T	6.9	7.3							
POR= 80 YRS	T	0.0	0.4	3.9	9.0	10.1	7.8	7.5	8.8	5.2	1.7	0.1	54.5

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**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 BETHEL ALASKA (PABE)

The two main topographical features affecting the climate of Bethel are the Bering Sea, which is about 100 miles to the west and southwest, and the Kilbuck Range of mountains located about 40 miles to the east and southeast of the station. This range, averaging about 4,000 feet in height, extends, roughly, in a north-south direction in that portion nearest to Bethel. Some 160 miles southeast of the Kilbuck Range the Aleutians, extending in a northeast-southwest direction, provide an additional natural barrier to many of the storms originating on the outward end of the Aleutian Chain and moving out through the Gulf of Alaska. Both ranges tend to direct some of the storms northeastward into the Bering Sea, and thus directly affect the Bethel area. During invasions of such storms, it is not uncommon for wind velocities to exceed 50 mph. Maximum speeds usually accompany northeast winds in the winter and southeast winds in the summer. During the winter season, strong southerly winds tend to be considerably affected by the mountains to the south, producing, at times, a pronounced foehn (chinook) effect. Temperatures have risen almost 50 degrees in less than 24 hours under these conditions.

The climate is somewhat more maritime than continental in character, which tends to modify daily temperature extremes during most of the

year. However, there are usually two periods during the year when the area becomes affected by continental climatic influences. In June and July, temperatures in the area rise noticeably under the influence of warmer continental air. Around the latter part of December and early January, cold, clear continental air becomes quite dominant, and the climate of Bethel becomes quite similar to other areas located farther inland. Average temperatures through the entire winter season, however, are considerably higher than those experienced in the Alaskan interior, and temperatures for the entire summer season average considerably cooler than in the Alaskan interior. The last date of freezing temperature in spring averages late May, and the average of the first freezing temperature in autumn falls in early September, resulting in a growing season slightly over 100 days. Cabbages, potatoes, cauliflower, beets, turnips, lettuce, and carrots are successfully grown. August is usually the wettest month of the year.

Thunderstorms are rare. The few thunderstorms that do occur are generally short in duration, but rather severe. They usually develop and move out of the northeast during the months of June and July.

# Station History

BETHEL, AK

NAME	Begin Date	End Date	Latitude	Longitude	Elevation Feet	Relocation	Platform
BETHEL AIRPORT	1943-01-01	1946-09-01	60° 46'	-161° 43'			AIRWAYS
BETHEL AIRPORT	1973-01-01	1980-01-01	60° 46'	-161° 48'	125		COOP, WXSVC
BETHEL AIRPORT	1932-12-01	1943-01-01	60° 48'	-161° 45'			WXSVC
BETHEL AIRPORT	1963-01-01	1973-01-01	60° 46'	-161° 48'	125		AIRWAYS, COOP
BETHEL AIRPORT	1981-12-31	1998-11-01	60° 46'	-161° 48'	125		COOP
BETHEL AIRPORT	1998-11-01	2002-01-11	60° 47'	-161° 49'	125		ASOS, COOP
BETHEL AIRPORT	1923-09-01	1931-12-31	60° 48'	-161° 45'			WXSVC
BETHEL AIRPORT	1980-01-01	1981-12-31	60° 46'	-161° 48'	125		AIRWAYS, COOP
BETHEL AIRPORT	2002-01-11	2008-05-12	60° 47'	-161° 49'	102	.2 MI WNW	ASOS, COOP
BETHEL AIRPORT	1959-01-01	1963-01-01	60° 46'	-161° 48'	125		COOP
BETHEL AIRPORT	2008-05-12	2010-08-04	60° 47'	-161° 49'	102		ASOS, COOP
BETHEL AIRPORT	1946-09-01	1958-12-31	60° 46'	-161° 43'	16		AIRWAYS, COOP
BETHEL AIRPORT	1958-12-31	1959-01-01	60° 46'	-161° 43'	16		COOP
BETHEL AIRPORT	2010-08-04	Present	60° 47'	-161° 49'	102		AIRWAYS, ASOS, COOP

# Element History

Element	Begin Date	End Date	Frequency	Time Of Observation	Equipment *	Equipment * Modifications	Equipment Exposure
TEMP	1990-11-01	1991-04-20	DAILY	2100	TEMPX		
PRECIP	1991-04-20	1995-07-01	DAILY		SRG		
PRECIP	2008-05-12	Present	HOURLY	2400	AWPAG	RCRD;HTD	
PRECIP	1923-09-01	1990-11-01	DAILY	2400	PCPN1		
TEMP	1923-09-01	1990-11-01	DAILY	2400			
PRECIP	2002-01-11	2008-05-12	DAILY	2400	TB	RCRD	
PRECIP	1990-11-01	1991-04-20	DAILY	2100	PCPN1		
TEMP	1991-04-20	1995-07-01	DAILY	2400	HTG		
TEMP	2002-01-11	2008-05-12	DAILY	2400	HYGR		
PRECIP	2002-01-11	2008-05-12	HOURLY	2400	TB	RCRD	
TEMP	2008-05-12	Present	DAILY	2400	HYGR		
PRECIP	2008-05-12	Present	DAILY	2400	PCPNX		
PRECIP	1995-07-01	2002-01-11	DAILY	2400	SRG		
TEMP	1995-07-01	2002-01-11	DAILY	2400	HTG		

\* 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>

INQUIRES/COMMENTS CALL: (828) 271-4800, option 2

Fax Number : (828) 271-4876

TDD : (828) 271-4010

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

NOAA/National Climatic Data Center

Attn: User Engagement & Services Branch

151 Patton Avenue

Asheville, NC 28801-5001

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