

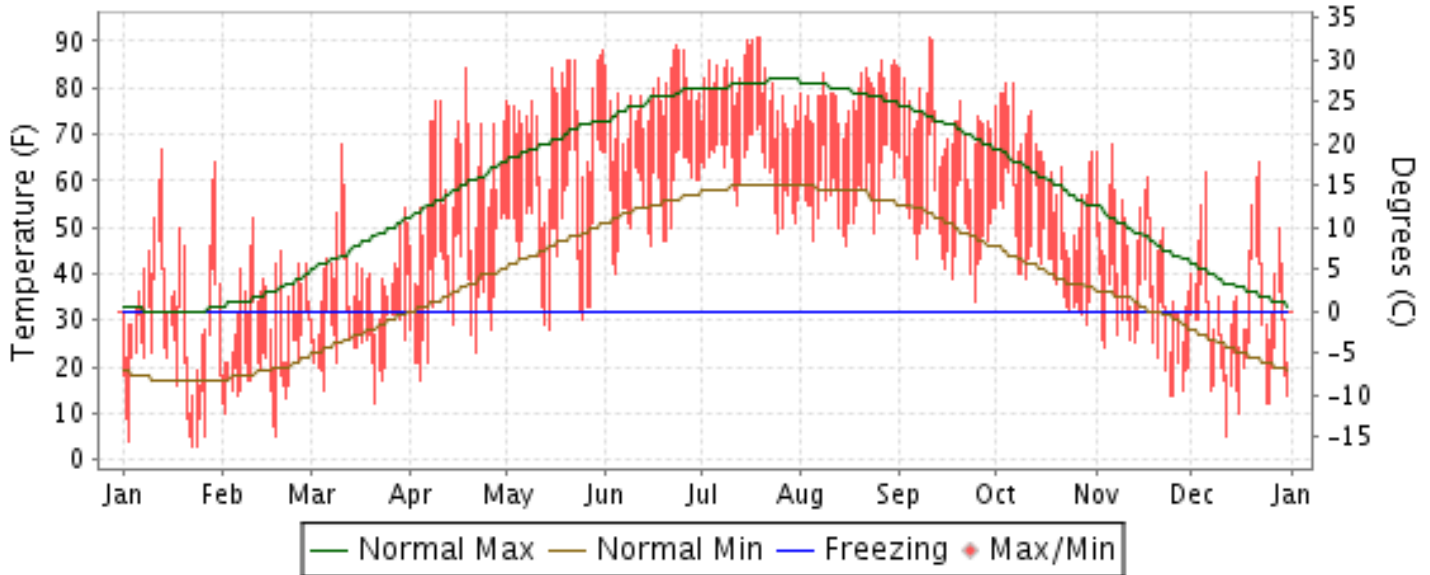


# 2013 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

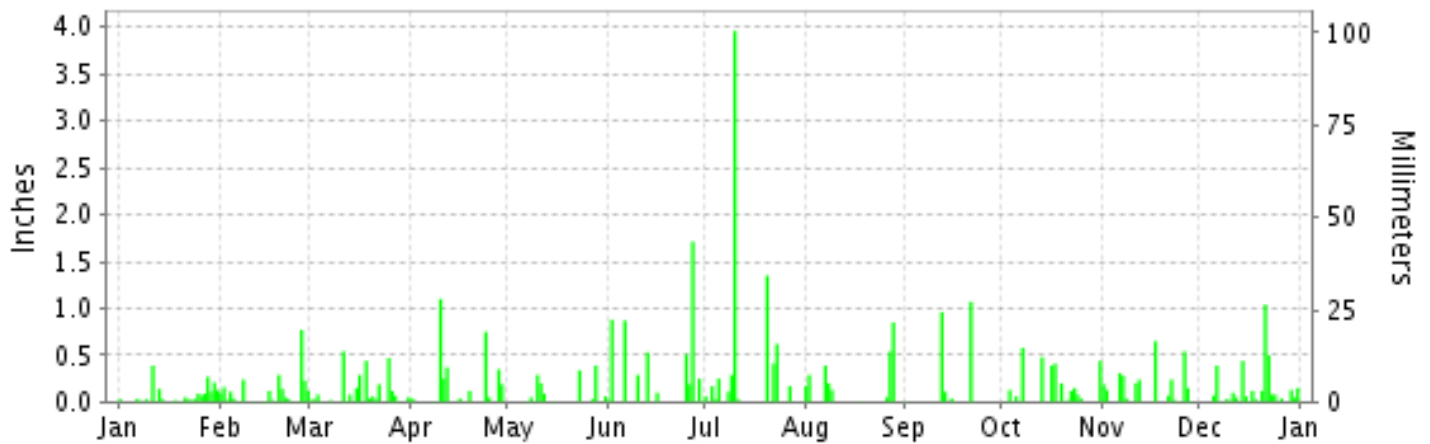
ISSN 0198-4039

## YOUNGSTOWN/WARREN, OHIO (KYN9)

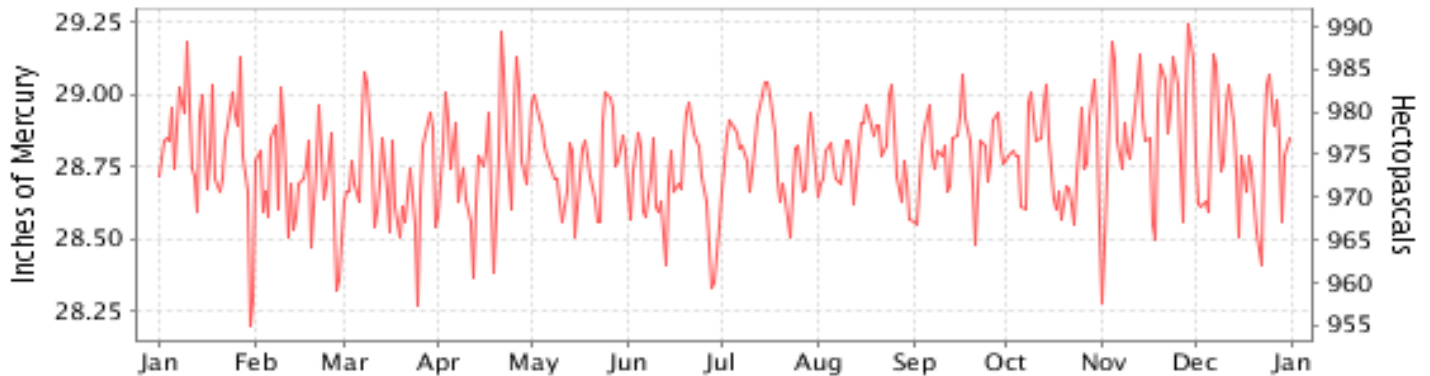
### Daily Max/Min Temperature



### Daily Precipitation



### Daily Station Pressure



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ASHEVILLE, NORTH CAROLINA

*Thomas R. Karl*  
DIRECTOR  
NATIONAL CLIMATIC DATA CENTER

# METEOROLOGICAL DATA FOR 2013

## YOUNGSTOWN/WARREN (KYNG)

LATITUDE: 41° 15'N      LONGITUDE: 80° 40'W      ELEVATION (FT): GRND: 1180 BARO: 1193      TIME ZONE: EASTERN (UTC -5)      WBAN: 14852

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	36.6	33.2	40.2	60.8	73.3	77.5	80.7	78.9	72.8	63.5	45.0	37.1	58.3	
	HIGHEST DAILY MAXIMUM	67	52	68	84	88	89	91	86	91	81	68	64	91	
	DATE OF OCCURRENCE	13	11	10	18	31	23	19+	30+	10	06+	06	22	SEP 10	
	MEAN DAILY MINIMUM	22.0	18.9	26.4	36.3	49.0	56.1	62.1	57.3	50.5	43.6	29.6	24.0	39.7	
	LOWEST DAILY MINIMUM	3	5	12	17	28	40	49	46	34	29	14	5	3	
	DATE OF OCCURRENCE	24+	18	21	04	14	04	25	15	24	29	25+	12	JAN 24+	
	AVERAGE DRY BULB	29.3	26.1	33.3	48.6	61.2	66.8	71.4	68.1	61.6	53.5	37.3	30.5	49.0	
	MEAN WET BULB	27.4	24.3	29.6	42.7	53.5	61.6	66.2	62.9	57.5	49.4	33.3	28.4	44.7	
	MEAN DEW POINT	21.8	19.2	23.9	34.7	46.4	57.8	63.5	59.5	54.1	45.5	27.1	23.4	39.7	
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	0	0	0	0	0	4	0	2	0	0	0	6
	MAXIMUM <= 32°	12	12	6	0	0	0	0	0	0	0	4	14	48	
MINIMUM <= 32°	24	27	28	12	4	0	0	0	0	4	18	25	142		
MINIMUM <= 0°	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/C	HEATING DEGREE DAYS	1097	1082	974	494	190	56	13	25	151	369	824	1062	6337	
	COOLING DEGREE DAYS	0	0	0	7	81	118	220	126	57	21	0	0	630	
RH	MEAN (PERCENT)	72	74	71	62	62	75	79	76	78	77	68	74	72	
	HOUR 01 LST	74	77	77	71	75	89	92	89	90	87	73	75	81	
	HOUR 07 LST	76	80	78	68	68	80	83	83	84	85	75	77	78	
	HOUR 13 LST	65	67	63	49	44	58	61	57	58	58	59	68	59	
	HOUR 19 LST	71	72	71	59	58	73	80	78	82	79	67	73	72	
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	4	2	0	1	0	4	1	2	1	0	1	0	16	
	THUNDERSTORMS	1	0	0	3	4	10	9	5	4	1	0	0	37	
PR	MEAN STATION PRESS. (IN.)	28.81	28.69	28.70	28.77	28.78	28.68	28.80	28.80	28.79	28.78	28.89	28.79	28.77	
	MEAN SEA-LEVEL PRESS. (IN.)	30.11	30.00	30.00	30.06	30.04	29.93	30.05	30.05	30.05	30.05	30.19	30.09	30.05	
WINDS	RESULTANT SPEED (MPH)	6.2	3.4	3.2	3.1	2.6	1.9	1.5	1.0	0.3	3.3	4.2	5.3	2.7	
	RES. DIR. (TENS OF DEGS.)	23	23	28	20	17	26	22	28	16	21	24	23	23	
	MEAN SPEED (MPH)	9.7	9.4	9.1	9.4	8.9	6.9	5.6	5.4	6.3	6.9	9.8	9.2	8.1	
	PREVAIL.DIR.(TENS OF DEGS.)	25	25	27	13	12	20	21	22	21	23	22	23	12	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	35	35	31	35	30	29	36	23	22	25	33	32	36	
	DIR. (TENS OF DEGS.)	27	26	12	28	22	33	06	33	33	22	27	24	06	
	DATE OF OCCURRENCE	20	11	18	10	10	25	10	13	16	26	17	22	JUL 10	
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	46	47	40	46	44	52	61	28	29	37	51	43	61	
DIR. (TENS OF DEGS.)	27	25	25	29	21	24	21	33	33	23	19	16	21		
DATE OF OCCURRENCE	20	11	19	10	10	25	10	13	16	26	01	22	JUL 10		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	1.81	2.49	2.71	3.29	1.47	5.37	7.45	2.63	2.21	3.10	3.08	3.52	39.13	
	GREATEST 24-HOUR (IN.)	0.39	0.96	0.55	1.35	0.42	1.71	4.22	1.37	1.07	0.58	0.65	1.25	4.22	
	DATE OF OCCURRENCE	11	26-27	11-12	10-11	27-28	27	09-10	27-28	21	07	17	21-22	JUL 09-10	
	NUMBER OF DAYS WITH:														
PRECIPITATION 0.01	21	20	20	12	10	12	12	9	7	13	15	21	172		
PRECIPITATION 0.10	6	10	7	7	4	9	9	7	3	9	10	9	90		
PRECIPITATION 1.00	0	0	0	1	0	1	2	0	1	0	0	1	6		
SNOWFALL	SNOW,ICE PELLETS,HAIL	12.7	20.3	19.9	0.6	T	T	0.0	0.0	0.0	1.2	12.9	20.5	88.1	
	TOTAL (IN.)	2.4	3.9	4.7	0.4	T	T	0.0	0.0	0.0	0.8	5.4	4.3	5.4	
	GREATEST 24-HOUR (IN.)	25	02	25	01	13	25				24	26	14	NOV 26	
	DATE OF OCCURRENCE	9	5	3	0	0	0	0	0	0	0	7	5	9	
	MAXIMUM SNOW DEPTH (IN.)	01	06+	25+								29+	19+	JAN 01	
	DATE OF OCCURRENCE														
	NUMBER OF DAYS WITH:														
SNOWFALL >= 1.0	6	8	9	0	0	0	0	0	0	0	4	8	35		

# NORMALS, MEANS, AND EXTREMES YOUNGSTOWN/WARREN (KYNG)

**LATITUDE:** 41° 15'N      **LONGITUDE:** 80° 40'W      **ELEVATION (FT):** GRND: 1180 BARO: 1193      **TIME ZONE:** EASTERN (UTC -5)      **WBAN: 14852**

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
<b>TEMPERATURE °F</b>	NORMAL DAILY MAXIMUM	30	32.5	36.1	45.8	59.0	68.9	77.4	81.4	79.9	72.4	60.6	48.9	36.5	58.3
	MEAN DAILY MAXIMUM	85	33.4	34.9	45.6	57.3	69.7	77.9	82.5	80.9	73.4	62.1	48.4	37.0	58.6
	HIGHEST DAILY MAXIMUM	70	71	73	82	88	92	99	100	97	99	87	80	76	100
	YEAR OF OCCURRENCE		1950	2000	1986	1990	1962	1988	1988	1988	1954	2007	1961	1982	JUL 1988
	MEAN OF EXTREME MAXS.	104	55.4	57.0	70.7	80.0	84.7	89.7	91.2	89.6	86.7	78.5	68.9	58.3	75.9
	NORMAL DAILY MINIMUM	30	19.0	20.7	27.7	38.0	46.7	55.4	59.7	58.3	51.4	41.5	33.9	24.0	39.7
	MEAN DAILY MINIMUM	85	19.1	19.2	27.4	36.2	47.1	55.6	60.3	58.8	51.7	42.0	33.0	23.7	39.5
	LOWEST DAILY MINIMUM	70	-22	-14	-10	11	24	30	40	32	29	20	1	-12	-22
	YEAR OF OCCURRENCE		1994	1979	1980	1950	1970	1972	2001	1982	1991	1988	1976	1989	JAN 1994
	MEAN OF EXTREME MINS.	104	-1.9	-0.2	8.5	21.6	31.5	40.5	47.1	44.9	36.4	27.3	17.1	5.4	23.2
	NORMAL DRY BULB	30	25.8	28.4	36.7	48.5	57.8	66.4	70.5	69.1	61.9	51.0	41.4	30.3	49.0
	MEAN DRY BULB	85	26.3	27.1	36.5	46.8	58.4	66.9	71.4	69.9	62.6	52.1	40.7	30.4	49.1
	MEAN WET BULB	30	23.3	24.7	31.5	40.9	51.0	59.9	63.7	62.8	56.5	45.7	36.3	27.4	43.6
	MEAN DEW POINT	30	21.4	22.3	29.0	38.1	48.8	58.1	62.1	61.4	55.0	43.8	34.3	25.6	41.7
	NORMAL NO. DAYS WITH: MAXIMUM >= 90	30	0.0	0.0	0.0	0.0	0.0	0.9	2.2	1.7	0.2	0.0	0.0	0.0	5.0
	MAXIMUM <= 32	30	15.4	10.7	4.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	1.7	10.9	43.5
MINIMUM <= 32	30	26.8	23.6	21.4	8.6	1.0	0.0	0.0	0.0	0.1	3.7	13.1	24.7	123.0	
MINIMUM <= 0	30	2.1	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.7	
<b>H/C</b>	NORMAL HEATING DEG. DAYS	30	1217	1025	876	503	253	69	13	25	145	438	708	1077	6349
	NORMAL COOLING DEG. DAYS	30	0	0	1	8	30	110	185	152	52	6	0	0	544
<b>RH</b>	NORMAL (PERCENT)	30	76	73	70	65	68	72	73	76	77	73	74	77	73
	HOURLY 01 LST	30	78	77	75	73	79	85	87	89	87	81	78	80	81
	HOURLY 07 LST	30	80	80	79	76	79	83	86	90	90	85	81	81	83
	HOURLY 13 LST	30	71	67	61	55	54	57	57	59	61	60	67	72	62
	HOURLY 19 LST	30	74	70	65	59	60	63	64	69	75	73	73	76	68
<b>S</b>	PERCENT POSSIBLE SUNSHINE														
	MEAN NO. DAYS WITH: HEAVY FOG (VISIB <= 1/4 MI) THUNDERSTORMS	50 66	1.7 0.3	1.9 0.4	1.7 1.6	1.1 3.4	2.0 5.1	1.8 7.1	2.1 7.2	3.6 5.5	3.0 3.4	2.2 1.3	2.0 0.7	2.3 0.2	25.4 36.2
<b>CLOUDINESS</b>	MEAN: SUNRISE-SUNSET (OKTAS) MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH: CLEAR PARTLY CLOUDY CLOUDY														
<b>PR</b>	MEAN STATION PRESSURE (IN)	30	28.77	28.76	28.76	28.71	28.73	28.73	28.76	28.79	28.81	28.80	28.80	28.79	28.77
	MEAN SEA-LEVEL PRES. (IN)	30	30.07	30.07	30.05	29.98	29.99	29.98	30.00	30.04	30.07	30.07	30.09	30.09	30.04
<b>WINDS</b>	MEAN SPEED (MPH)	30	10.3	9.9	9.9	9.7	8.3	7.3	6.9	6.5	7.1	8.2	9.4	9.8	8.6
	PREVAIL. DIR. (TENS OF DEGS)	39	25	25	32	24	23	23	23	24	19	23	24	25	25
	MAXIMUM 2-MINUTE: SPEED (MPH)	18	47	44	48	51	46	41	49	36	45	38	41	47	51
	DIR. (TENS OF DEGS)		25	25	25	33	24	25	34	31	23	24	26	23	33
	YEAR OF OCCURRENCE		2008	2012	2002	1996	1997	2005	1999	2009	2008	2001	2003	2006	APR 1996
	MAXIMUM 3-SECOND SPEED (MPH)	18	58	59	63	63	57	58	66	52	61	51	53	63	66
	DIR. (TENS OF DEGS)		26	24	23	26	25	26	31	34	21	27	28	23	31
YEAR OF OCCURRENCE		2012	2012	2002	2000	1997	2005	2006	2002	2008	2001	2003	2006	JUL 2006	
<b>PRECIPITATION</b>	NORMAL (IN)	30	2.55	2.15	2.94	3.36	3.79	3.88	4.31	3.24	3.75	2.77	3.18	2.99	38.91
	MAXIMUM MONTHLY (IN)	70	7.64	5.83	6.38	7.29	9.87	10.66	10.40	7.86	7.08	8.59	9.11	6.53	10.66
	YEAR OF OCCURRENCE		1950	2008	2008	1998	1946	1986	2003	1956	2011	1954	1985	1990	JUN 1986
	MINIMUM MONTHLY (IN)	70	0.73	0.55	1.07	1.01	0.78	0.71	0.66	0.51	0.27	0.43	0.82	0.88	0.27
	YEAR OF OCCURRENCE		1985	1987	1990	1982	1977	1988	1997	1969	1960	1953	2012	1958	SEP 1960
	MAXIMUM IN 24 HOURS (IN)	70	2.79	2.76	2.47	1.78	2.85	3.57	4.65	4.54	4.41	4.31	3.00	2.28	4.65
	YEAR OF OCCURRENCE		1959	1959	1954	2000	1946	1986	2003	1994	2004	1954	1985	1979	JUL 2003
	NORMAL NO. DAYS WITH: PRECIPITATION >= 0.01 PRECIPITATION >= 1.00	30 30	17.1 0.2	14.3 0.1	14.1 0.3	14.5 0.6	13.6 0.6	12.3 0.8	10.7 1.2	10.0 0.7	10.6 1.0	11.5 0.4	14.1 0.3	17.2 0.3	160.0 6.5
<b>SNOWFALL</b>	NORMAL (IN)	30	16.6	12.8	10.9	3.0	0.0	0.0	0.0	0.0	0.0	0.8	3.6	15.0	62.7
	MAXIMUM MONTHLY (IN)	69	36.4	36.3	30.9	14.8	5.4	T	T	T	T	7.7	30.6	53.1	53.1
	YEAR OF OCCURRENCE		1999	2010	1993	1987	1966	2013	2012	2011	1994	1993	1950	2010	DEC 2010
	MAXIMUM IN 24 HOURS (IN)	69	17.5	13.4	15.3	12.4	5.4	T	T	T	T	5.2	20.7	14.8	20.7
	YEAR OF OCCURRENCE		1948	1984	1993	1987	1966	2013	2012	2011	1994	1993	1950	1944	NOV 1950
	MAXIMUM SNOW DEPTH (IN)	64	18	18	11	10	2	0	0	0	0	3	25	15	25
	YEAR OF OCCURRENCE		1948	1977	1984	1987	1966					1962	1950	2010	NOV 1950
NORMAL NO. DAYS WITH: SNOWFALL >= 1.0	30	5.4	4.3	2.7	0.6	0.0	0.0	0.0	0.0	0.0	0.3	1.1	4.8	19.2	

**PRECIPITATION (inches) 2013 YOUNGSTOWN/WARREN (KYNG)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1984	1.20	2.40	2.90	2.43	5.84	3.72	4.18	3.84	2.53	2.28	3.55	2.92	37.79
1985	0.73	1.22	5.77	1.76	3.06	2.88	6.01	3.07	2.40	1.34	9.11	2.07	39.42
1986	0.87	2.29	1.38	2.03	3.62	10.66	8.31	1.72	5.83	3.05	2.92	3.42	46.10
1987	1.89	0.55	3.25	2.97	2.54	6.57	3.19	6.77	3.71	2.62	1.55	2.73	38.34
1988	1.05	2.60	1.62	2.43	3.39	0.71	5.31	3.43	3.50	2.62	3.04	1.93	31.63
1989	1.96	1.90	3.64	1.56	6.24	10.09	3.33	1.68	6.11	2.90	2.47	1.45	43.33
1990	2.06	4.56	1.07	3.21	4.60	3.05	6.93	3.04	5.19	4.23	2.24	6.53	46.71
1991	2.13	1.51	2.56	3.02	1.57	1.51	4.04	0.86	3.00	1.11	1.40	2.53	25.24
1992	2.22	1.66	3.60	3.94	2.03	0.99	9.68	3.86	4.60	2.48	4.21	3.50	42.77
1993	3.75	1.94	4.31	2.74	0.90	4.04	3.47	1.79	3.49	2.85	4.93	2.58	36.79
1994	2.77	1.48	3.91	6.06	1.77	2.21	2.49	6.60	3.30	1.74	2.60	2.99	37.92
1995	2.43	1.53	1.48	2.80	4.43	3.32	3.15	1.57	1.07	4.95	2.56	1.79	31.08
1996	2.84	2.05	3.02	5.12	3.91	4.05	3.19	1.93	6.35	3.66	2.75	2.86	41.73
1997	1.03	1.47	2.99	2.86	4.59	4.12	0.66	4.40	3.90	1.16	3.42	2.71	33.31
1998	4.88	1.85	2.84	7.29	1.94	3.44	1.83	3.36	2.37	3.41	1.99	2.36	37.56
1999	4.63	2.82	2.18	4.55	2.82	2.78	5.56	3.52	4.28	2.75	4.18	2.36	42.43
2000	2.32	1.82	1.85	4.60	4.04	4.72	4.10	2.76	3.18	2.28	1.80	3.16	36.63
2001	1.24	1.51	2.10	2.70	2.70	1.89	2.12	3.87	2.61	3.62	3.14	2.03	29.53
2002	2.44	2.20	3.17	3.86	6.20	3.75	4.14	4.13	2.72	2.01	3.18	2.92	40.72
2003	1.63	2.31	2.37	1.82	6.83	3.03	10.40	3.32	5.62	3.03	3.00	2.64	46.00
2004	3.60	1.01	3.75	3.29	7.03	3.46	4.23	4.07	6.67	2.03	2.46	3.62	45.22
2005	5.86	2.80	1.64	5.38	3.16	2.77	3.19	3.86	4.16	2.55	3.63	1.41	40.41
2006	2.71	1.97	1.71	2.51	5.69	5.97	7.06	2.75	6.73	5.85	2.46	2.93	48.34
2007	5.20	1.64	3.20	3.28	1.70	3.67	1.61	5.56	1.44	3.04	3.69	5.73	39.76
2008	2.62	5.83	6.38	2.29	3.95	3.18	6.67	2.63	3.11	2.25	3.18	3.63	45.72
2009	3.30	2.00	4.01	3.13	2.28	2.68	3.52	4.11	2.15	3.70	0.92	3.41	35.21
2010	2.78	2.91	2.56	1.93	5.32	4.09	3.17	2.48	2.14	3.16	4.45	3.81	38.80
2011	2.15	5.03	5.14	6.87	8.32	2.05	2.93	2.67	7.08	3.19	4.16	4.42	54.01
2012	4.51	3.21	2.37	1.60	3.54	2.72	6.01	4.48	4.79	5.85	0.82	5.19	45.09
2013	1.81	2.49	2.71	3.29	1.47	5.37	7.45	2.63	2.21	3.10	3.08	3.52	39.13
POR= 103 YRS	2.67	2.18	3.00	3.31	3.53	3.64	4.00	3.32	3.23	2.70	2.73	2.77	37.08

WBAN : 14852

**AVERAGE TEMPERATURE (°F) 2013 YOUNGSTOWN/WARREN (KYNG)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1984	19.9	35.5	29.4	48.7	54.9	69.2	68.8	71.0	60.4	56.2	39.3	36.2	49.1
1985	19.2	24.1	39.1	53.4	59.6	62.2	68.3	67.9	64.0	52.9	45.2	24.4	48.4
1986	25.9	28.6	39.1	50.5	60.2	65.2	70.8	66.9	64.2	52.6	39.1	31.4	49.5
1987	26.0	29.1	39.0	49.4	61.6	68.9	74.1	68.2	61.9	45.6	44.5	33.5	50.2
1988	24.4	26.0	36.4	47.1	59.0	66.2	73.9	71.7	61.2	45.1	42.4	29.7	48.6
1989	33.0	24.8	37.9	44.2	56.1	66.0	71.8	69.1	62.8	52.6	39.1	18.1	48.0
1990	35.0	34.0	41.5	49.7	55.1	66.0	69.3	68.3	61.9	53.5	44.6	35.1	51.2
1991	26.6	31.8	40.8	52.1	66.2	69.4	72.1	71.7	62.3	54.0	39.2	32.5	51.6
1992	28.8	31.6	35.1	47.8	56.8	62.9	69.8	65.5	60.8	47.9	40.8	32.2	48.3
1993	31.1	24.8	34.2	47.3	57.7	66.1	73.2	71.2	59.8	49.3	40.4	29.3	48.7
1994	18.4	25.7	34.8	50.2	53.4	68.9	71.9	67.1	60.9	50.9	45.4	35.0	48.6
1995	29.5	24.9	39.7	45.7	58.2	70.2	73.4	75.5	59.7	53.4	35.9	24.8	49.2
1996	23.8	25.8	31.1	45.9	56.0	67.9	67.5	67.8	61.4	50.8	34.6	33.4	47.2
1997	24.9	32.8	37.0	44.3	51.4	66.7	68.8	66.0	60.7	51.7	37.5	32.3	47.8
1998	34.1	37.0	39.9	48.8	63.2	65.5	69.2	71.1	65.1	52.0	42.7	36.0	52.1
1999	25.9	32.6	33.0	50.1	60.0	67.3	74.1	66.9	62.4	50.3	44.3	32.0	49.9
2000	25.8	32.5	42.4	47.7	60.2	67.3	67.0	67.3	61.4	53.6	38.6	21.7	48.8
2001	26.9	31.9	32.8	51.2	58.8	66.8	69.6	71.6	60.4	53.5	47.7	35.7	50.6
2002	33.5	32.6	37.6	50.1	54.5	68.6	73.1	71.5	65.5	49.0	39.5	29.1	50.4
2003	19.3	22.7	37.9	49.4	56.1	63.7	69.0	69.9	60.8	48.9	44.9	31.7	47.9
2004	19.2	28.0	39.3	48.7	61.8	64.6	68.7	66.2	63.5	51.4	42.7	30.2	48.7
2005	25.8	28.9	32.3	49.2	53.7	70.5	72.7	71.6	65.2	52.7	43.7	26.8	49.4
2006	36.8	28.9	37.0	51.3	57.2	64.4	72.4	70.2	60.3	48.7	44.0	37.3	50.7
2007	29.9	18.1	39.5	45.3	61.3	67.4	68.9	71.4	65.0	58.4	39.8	31.6	49.7
2008	29.2	26.4	33.1	51.9	54.9	68.9	71.5	67.8	63.9	49.8	39.3	30.7	49.0
2009	18.8	29.5	38.6	50.0	58.9	65.4	67.4	70.3	63.5	49.4	46.6	29.5	49.0
2010	25.0	27.1	42.8	55.1	61.9	68.3	72.8	71.9	63.2	51.5	41.1	24.4	50.4
2011	21.6	28.0	34.6	49.0	61.0	66.9	74.8	69.6	63.7	50.8	46.3	35.8	50.2
2012	31.2	34.1	49.6	47.4	64.5	68.7	74.8	68.8	60.8	51.8	38.6	36.3	52.2
2013	29.3	26.1	33.3	48.6	61.2	66.8	71.4	68.1	61.6	53.5	37.3	30.5	49.0
POR= 85 YRS	26.3	27.1	36.5	46.8	58.4	66.9	71.4	69.9	62.6	52.1	40.7	30.4	49.1

**HEATING DEGREE DAYS (base 65°F) 2013 YOUNGSTOWN/WARREN (KYNG)**

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1984-85	16	13	182	271	763	885	1417	1137	796	383	200	111	6174
1985-86	10	17	141	365	589	1255	1207	1014	799	437	186	86	6106
1986-87	9	64	105	381	772	1036	1201	999	802	464	185	43	6061
1987-88	6	44	118	594	611	971	1252	1123	878	532	206	91	6426
1988-89	11	29	134	618	675	1086	983	1119	837	618	306	48	6464
1989-90	0	20	130	382	772	1446	925	863	731	488	306	75	6138
1990-91	20	6	141	357	603	918	1183	927	745	399	102	26	5427
1991-92	0	3	165	360	766	999	1115	960	919	515	264	108	6174
1992-93	12	55	168	523	721	1005	1044	1121	950	526	239	70	6434
1993-94	3	8	192	481	732	1099	1438	1091	929	452	364	58	6847
1994-95	5	39	156	429	581	922	1096	1113	776	572	213	20	5922
1995-96	20	0	169	353	869	1238	1273	1134	1043	567	318	33	7017
1996-97	29	12	141	434	904	971	1236	894	862	617	415	52	6567
1997-98	19	45	148	435	817	1007	951	781	790	478	111	106	5688
1998-99	2	7	83	401	663	892	1208	902	987	439	170	76	5830
1999-00	7	21	139	450	614	1016	1208	936	697	515	197	65	5865
2000-01	28	33	175	350	785	1334	1174	921	990	427	205	66	6488
2001-02	27	1	171	360	511	902	968	898	844	479	337	39	5537
2002-03	6	8	68	511	758	1108	1412	1179	834	466	275	96	6721
2003-04	7	13	135	491	597	1028	1412	1066	788	498	160	90	6285
2004-05	7	52	85	417	661	1074	1209	1005	1008	467	347	26	6358
2005-06	0	8	42	386	631	1178	866	1005	862	403	270	73	5724
2006-07	7	3	150	498	626	851	1082	1307	786	585	158	47	6100
2007-08	12	17	87	247	747	1026	1100	1115	984	387	316	32	6070
2008-09	0	16	72	465	767	1056	1427	989	811	471	209	53	6336
2009-10	18	19	80	472	548	1098	1233	1056	682	320	153	30	5709
2010-11	11	7	119	414	711	1252	1341	1032	935	478	185	48	6533
2011-12	0	10	111	431	553	900	1042	892	479	527	101	41	5087
2012-13	0	6	184	406	785	882	1097	1082	974	494	190	56	6156
2013-	13	25	151	369	824	1062							

WBAN : 14852

**COOLING DEGREE DAYS (base 65°F) 2013 YOUNGSTOWN/WARREN (KYNG)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1984	0	0	0	6	18	151	141	207	53	6	0	0	582
1985	0	0	0	41	39	33	119	111	118	0	1	0	462
1986	0	0	2	9	44	97	196	136	90	5	0	0	579
1987	0	0	0	5	84	167	294	153	33	0	1	0	737
1988	0	0	0	0	27	136	295	246	25	7	0	0	736
1989	0	0	4	0	37	84	219	153	71	8	0	0	576
1990	0	0	10	35	9	112	159	117	56	8	0	0	506
1991	0	0	0	18	144	165	227	216	89	23	0	0	882
1992	0	0	0	5	16	52	166	75	49	0	0	0	363
1993	0	0	0	0	18	111	261	209	41	1	0	0	641
1994	0	0	0	15	12	182	224	112	39	0	0	0	584
1995	0	0	0	0	9	185	287	332	16	0	0	0	829
1996	0	0	0	0	46	128	116	107	37	0	0	0	434
1997	0	0	0	0	0	110	143	86	28	30	0	0	397
1998	0	0	19	0	61	128	139	201	95	3	0	0	646
1999	0	0	0	0	21	152	298	84	66	0	0	0	621
2000	0	0	0	0	56	141	95	113	76	2	0	0	483
2001	0	0	0	20	21	125	177	214	41	8	0	0	606
2002	0	0	0	38	20	155	266	220	89	21	0	0	809
2003	0	0	0	5	8	62	138	170	17	0	1	0	401
2004	0	0	0	14	65	86	128	96	47	0	0	0	436
2005	0	0	0	0	2	195	244	220	51	11	0	0	723
2006	0	0	0	0	37	62	244	173	16	0	0	0	532
2007	0	0	1	0	51	123	141	224	93	51	0	0	684
2008	0	0	0	2	10	155	210	110	51	0	0	0	538
2009	0	0	0	28	26	72	100	189	42	0	0	0	457
2010	0	0	0	30	65	137	262	226	72	1	0	0	793
2011	0	0	0	5	68	110	309	160	79	0	0	0	731
2012	0	0	7	5	89	154	309	130	64	3	0	0	761
2013	0	0	0	7	81	118	220	126	57	21	0	0	630

**SNOWFALL (inches) 2013 YOUNGSTOWN/WARREN (KYNG)**

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1984-85	0.0	0.0	0.0	0.0	4.6	9.4	21.2	9.1	1.7	5.8	0.0	0.0	51.8
1985-86	0.0	0.0	0.0	0.0	T	16.4	7.0	9.9	7.4	3.2	T	0.0	43.9
1986-87	0.0	0.0	0.0	0.0	6.8	3.2	20.3	3.7	20.6	12.4	0.0	0.0	67.0
1987-88	0.0	0.0	0.0	0.2	4.6	29.5	10.4	17.4	14.4	1.2	0.0	0.0	77.7
1988-89	0.0	0.0	0.0	0.9	2.4	13.0	3.7	9.6	11.1	1.9	0.3	0.0	42.9
1989-90	0.0	0.0	0.0	2.3	3.0	14.6	11.7	8.4	2.3	3.5	T	0.0	45.8
1990-91	0.0	0.0	T	0.0	0.5	6.6	9.3	12.2	1.6	0.4	0.0	0.0	30.6
1991-92	T	0.0	0.0	0.0	2.3	8.3	18.3	3.0	21.1	1.5	0.0	0.0	54.5
1992-93	0.0	0.0	0.0	4.0	6.8	14.0	8.7	17.6	30.9	0.5	0.0	0.0	82.5
1993-94	0.0	0.0	0.0	7.7	1.4	17.4	27.2	15.6	9.2	2.5	0.0	0.0	81.0
1994-95	0.0	0.0	T	0.0	1.5	3.6	8.8	12.4	6.3	1.1	T	0.0	33.7
1995-96	0.0	0.0	0.0	0.0		18.6	13.9	5.6	4.9	2.8			
1996-97													
1997-98				0.8	8.2	13.5	6.3	T	14.3	T	0.0	T	
1998-99	0.0	0.0	T	T	0.1	10.0	36.4	8.8	14.3	T	0.0	0.0	69.6
1999-00	0.0	0.0	0.0	0.0	7.2	8.3	15.0	7.7	3.0	1.7	0.0	0.0	42.9
2000-01	0.0	0.0	0.0	0.6	6.6	19.7	9.2	6.2	11.1	1.1	0.0	0.0	54.5
2001-02	T	0.0	0.0	1.6	0.3	2.4	12.7	14.7	10.6	0.8	T	0.0	43.1
2002-03	0.0	0.0	0.0	0.3	5.8	14.1	25.5	26.4	5.1	0.3	T	0.0	77.5
2003-04	0.0	0.0	0.0	0.1	2.5	19.2	30.3	4.6	13.9	3.0	0.0	0.0	73.6
2004-05	0.0	0.0	0.0	0.0	0.4	20.7	18.2	16.4	10.7	14.8	T	0.0	81.2
2005-06	0.0	0.0	0.0	0.0	8.0	17.1	10.0	14.8	2.3	1.0	0.0	0.0	53.2
2006-07	T	0.0	0.0	0.6	0.6	9.2	31.5	23.9	10.4	14.0	0.0	0.0	90.2
2007-08	0.0	T	0.0	0.0	5.2	23.3	20.9	31.7	21.7	T	T	0.0	102.8
2008-09	T	0.0	0.0	2.6	17.3	13.7	35.8	13.5	2.0	1.6	0.0	0.0	86.5
2009-10	0.0	0.0	0.0	0.6	0.2	12.6	24.9	36.3	1.1	T	T	0.0	75.7
2010-11	0.0	0.0	0.0	0.0	T	53.1	30.0	20.6	14.4	0.6	T	0.0	118.7
2011-12	0.0	T	0.0	T	2.4	7.7	26.2	16.0	3.0	1.2	0.0	0.0	56.5
2012-13	T	0.0	0.0	0.0	2.9	24.3	12.7	20.3	19.9	0.6	T	T	80.7
2013-	0.0	0.0	0.0	1.2	12.9	20.5							
POR= 69 YRS	T	T	T	0.6	4.9	12.6	14.2	11.6	9.9	2.4	0.1	T	56.3

WBAN : 14852

**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

## YOUNGSTOWN/Warren

### OHIO (KYNG)

The Youngstown Municipal Airport is located in northeastern Ohio approximately 8 miles north of the city of Youngstown in Trumbull County. Airport elevation is 1,178 feet, about 200 feet higher than most communities in the Mahoning and Shenango River Valleys. There are numerous natural and man-made lakes in the region, including Lake Erie, 45 miles to the north. Drainage from the area flows southward through the Mahoning and Shenango Rivers which join to form the Beaver River at New Castle, Pennsylvania. The Beaver empties into the Ohio River at Rochester, Pennsylvania.

This entire area experiences frequent outbreaks of cold Canadian air masses which may be modified by passage over Lake Erie. This effect produces widespread cloudiness especially during the cool months of the year. The winter months are characterized by persistent cloudiness and intermittent snow flurries. The daily temperature range during most winter days is quite small. During most winters, the bulk of the snow falls as flurries of 2 inches or less per occurrence, although several snowstorms per year will produce amounts in the 4- to 10-inch range.

Destructive storms seldom occur, and tornadoes are not common. During recent years flood control projects have all but eliminated the threat of serious river flooding. Flash flooding of small streams and creeks rarely affects residential areas. Certain communities have well known areas of urban flooding during periods of prolonged heavy thunderstorms.

The climate of the Youngstown district has had an important role in the growth and development of this industrial area. Temperatures seldom reach extreme values especially during the summer months. However, high humidity during most days of the year tends to accentuate the temperature. Rainfall, reasonably well distributed throughout the year, provides a more than adequate supply of water for agriculture, industrial, and residential

Based on the 1951-1980 period, the average first occurrence of 32 degrees Fahrenheit in the fall is October 14 and the average last occurrence in the spring is May 6.

# Station History

YOUNGSTOWN/WARREN, OH

NAME	Begin Date	End Date	Latitude	Longitude	Elevation Feet	Relocation	Platform
YOUNGSTOWN MUNICIPAL AP	1969-01-01	1981-12-31	41° 15'	-80° 40'	1178		COOP, WXSVC
YOUNGSTOWN REGIONAL AP	1995-09-01	Present	41° 15'	-80° 40'	1180		ASOS, COOP
YOUNGSTOWN MUNICIPAL AP	1941-07-01	1948-01-01	41° 16'	-80° 40'	1178		AIRWAYS
YOUNGSTOWN MUNICIPAL AP	1988-02-04	1995-09-01	41° 15'	-80° 40'	1180		COOP
YOUNGSTOWN MUNICIPAL AP	1948-01-01	1969-01-01	41° 15'	-80° 40'	1178		AIRWAYS, COOP
YOUNGSTOWN MUNICIPAL AP	1981-12-31	1988-02-04	41° 15'	-80° 40'	1178		COOP

# Element History

Element	Begin Date	End Date	Frequency	Time Of Observation	Equipment *	Equipment * Modifications	Equipment Exposure
PRECIP	1970-10-01	1988-02-04	HOURLY	2400			
PRECIP	1988-02-04	1995-07-01	DAILY	2400	UNIV	RCRD	
PRECIP	1941-07-01	1970-10-01	DAILY	2400	UNIV	RCRD	
TEMP	1995-07-01	Present	DAILY	2400	HYGR		
TEMP	1970-10-01	1988-02-04	DAILY	2400			
PRECIP	1995-07-01	Present	DAILY	2400	UNIV	RCRD	
TEMP	1988-02-04	1995-07-01	DAILY	2400	HYGR		
PRECIP	1988-02-04	1995-07-01	HOURLY	2400			
TEMP	1941-07-01	1970-10-01	DAILY	2400			
PRECIP	1970-10-01	1988-02-04	DAILY	2400	UNIV	RCRD	
PRECIP	1995-07-01	Present	HOURLY	2400	UNIV	RCRD	

\* 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)