

2002

LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



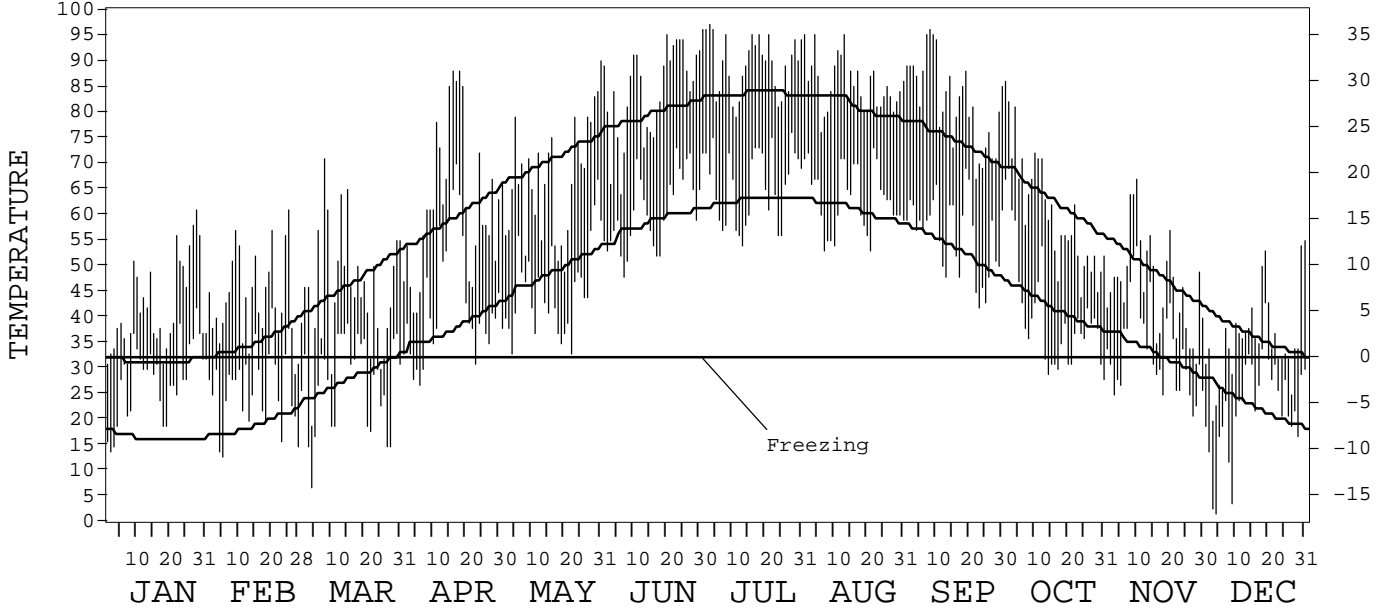
ISSN 0198-4012

TOLEDO,
OHIO (TOL)

Daily Data

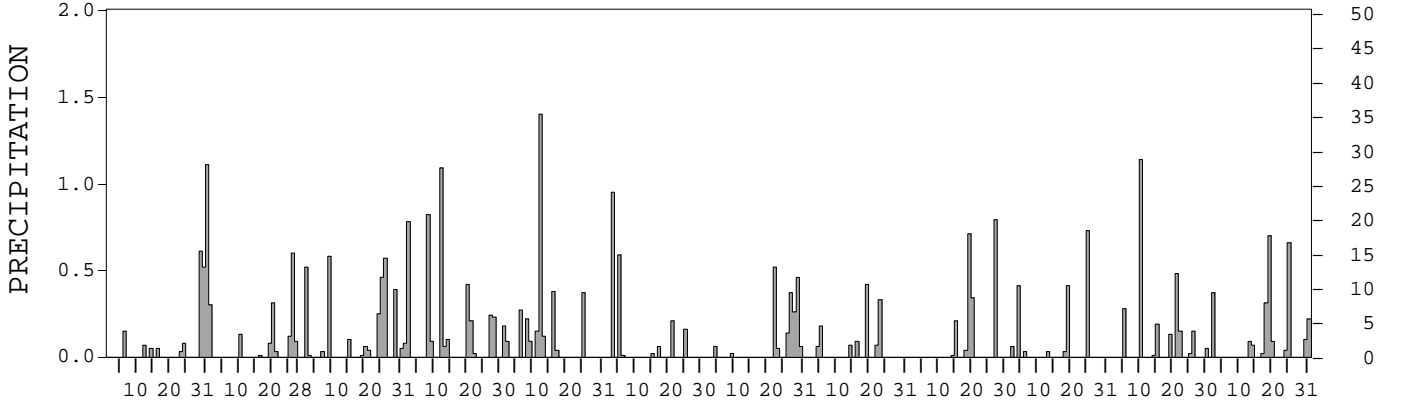
Fahrenheit

Celsius



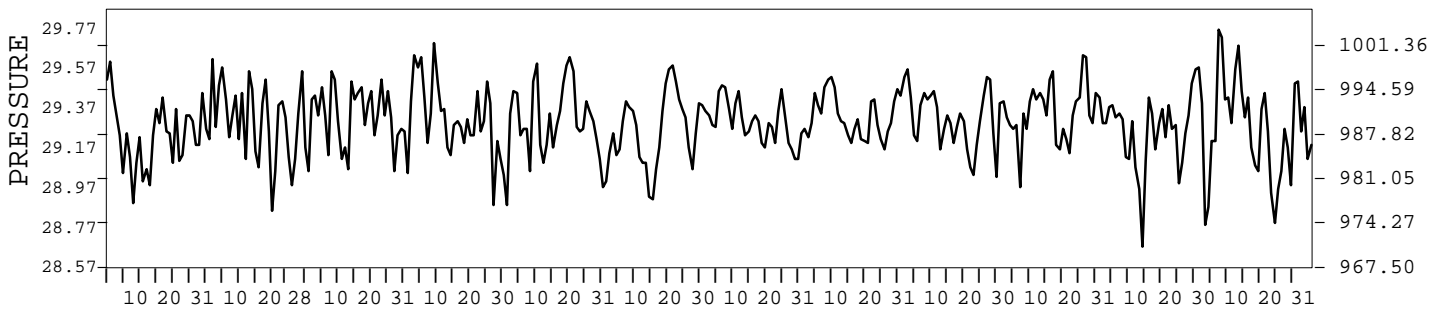
Inches

Millimeters



Inches of Mercury

Hectopascals



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NATIONAL
OCEANIC AND
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ENVIRONMENTAL SATELLITE, DATA,
AND INFORMATION SERVICE

NATIONAL
CLIMATIC DATA CENTER
ASHEVILLE, NORTH CAROLINA

DIRECTOR
NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 2002

TOLEDO, OH (TOL)

LATITUDE: 41° 35' 19" N LONGITUDE: 83° 48' 05" W ELEVATION (FT): GRND: 690 BARO: 693 TIME ZONE: EASTERN (UTC + 5) WBAN: 94830

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	42.3	43.7	45.5	61.9	67.2	84.0	89.4	85.3	82.0	60.5	46.5	35.8	62.0	
	HIGHEST DAILY MAXIMUM	61	61	71	88	90	95	97	95	96	86	67	55	97	
	DATE OF OCCURRENCE	28	25	08	18+	31	20	03	13+	08	01	10	31	JUL 03	
	MEAN DAILY MINIMUM	28.1	26.1	27.6	42.9	45.4	60.4	65.7	63.1	56.0	40.7	33.7	22.8	42.7	
	LOWEST DAILY MINIMUM	14	13	7	27	33	48	54	53	42	28	21	2	2	
	DATE OF OCCURRENCE	02	05	04	06	22+	07	13	21+	23	31	27	04	DEC 04	
	AVERAGE DRY BULB	35.2	34.9	36.6	52.4	56.3	72.2	77.6	74.2	69.0	50.6	40.1	29.3	52.4	
	MEAN WET BULB		30.9	33.0	46.8	50.7	64.4		67.1	61.2	46.4	37.0	27.4		
	MEAN DEW POINT		24.5	27.1	40.7	44.3	59.4		63.1	56.0	41.3	32.4	22.7		
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	1	10	18	5	4	0	0	0	0	38
	MAXIMUM ≤ 32°	3	2	5	0	0	0	0	0	0	0	1	10	21	
	MINIMUM ≤ 32°	23	23	20	5	0	0	0	0	0	9	16	28	124	
	MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/C	HEATING DEGREE DAYS	915	833	874	420	293	16	0	0	39	469	740	1099	5698	
	COOLING DEGREE DAYS	0	0	0	50	32	240	398	290	165	29	0	0	1204	
RH	MEAN (PERCENT)	73	68	70	67	66	67	63	71	68	72	75	75	70	
	HOUR 01 LST	75	75	77	78	76	80	76	85	83	81	80	77	79	
	HOUR 07 LST	81	76	80	81	77	81	78	87	88	85	82	80	81	
	HOUR 13 LST	64	57	62	55	56	51	48	55	48	56	65	69	57	
	HOUR 19 LST	70	66	65	59	57	54	52	62	60	69	72	74	63	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	0	1	4	1	3	1	0	0	2	1	0	1	14	
	THUNDERSTORMS	0	0	0	1	2	4	6	3	1	0	0	0	18	
CLOUDINESS	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.)	29.23	29.29	29.33	29.32	29.29	29.25	29.30	29.34	29.30	29.34	29.22	29.29	29.29	
	MEAN SEA-LEVEL PRESS. (IN.)			30.09	30.07	30.03	29.98		30.07	30.04	30.09		30.05		
WINDS	RESULTANT SPEED (MPH)		8.1	3.3	3.1	2.0	3.2		0.6	0.8	1.1	5.9	4.8		
	RES. DIR. (TENS OF DEGS.)		24	24	25	28	26		21	20	30	25	24		
	MEAN SPEED (MPH)	10.4	11.8	11.2	9.6	9.2	7.0	6.9	6.4	5.5	7.5	10.5	10.2	8.8	
	PREVAIL. DIR. (TENS OF DEGS.)	22	23	23	19	23	23	23	20	20	05	21	23	23	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	31	32	46	44	39	31	30	31	31	32	33	32	46	
	DIR. (TENS OF DEGS.)	24	23	24	26	25	24	22	24	25	28	24	24	24	
	DATE OF OCCURRENCE	14	20+	09	24	09	14+	22	13	19	06	29	21	MAR 09	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	36	46	69	54	46	44	39	36	37	39	40	41	69	
DIR. (TENS OF DEGS.)	24	33	23	25	24	25	26	27	26	28	24	25	23		
DATE OF OCCURRENCE	14+	12+	09	24	09	14	29	16	19	06	29	20	MAR 09		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	2.67	1.67	3.07	4.14	3.31	2.00	1.94	1.22	2.10	1.70	2.60	2.67	29.09	
	GREATEST 24-HOUR (IN.)	1.11	0.72	0.58	1.10	1.53	0.95	0.62	0.42	0.84	0.73	1.14	0.89	1.53	
	DATE OF OCCURRENCE	31	25-26	09	12-13	11-12	03	27-28	19	19-20	25	10	18-19	MAY 11-12	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	9	9	13	12	11	7	9	7	6	7	10	11	111	
PRECIPITATION ≥ 0.10	4	5	7	8	8	4	5	3	4	3	7	6	64		
PRECIPITATION ≥ 1.00	1	0	0	1	1	0	0	0	0	0	1	0	4		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)														
	GREATEST 24-HOUR (IN.)														
	DATE OF OCCURRENCE														
	MAXIMUM SNOW DEPTH (IN.)														
	DATE OF OCCURRENCE														
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0															

NORMALS, MEANS, AND EXTREMES

TOLEDO, OH (TOL)

LATITUDE: 41° 35' 19" N LONGITUDE: 83° 48' 05" W ELEVATION (FT): GRND: 690 BARO: 693 TIME ZONE: EASTERN (UTC + 5) WBAN: 94830

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	31.4	35.1	46.5	58.9	70.7	79.5	83.4	81.0	74.0	62.1	48.3	36.0	58.9
	MEAN DAILY MAXIMUM	47	31.0	34.8	45.6	59.2	70.6	79.9	83.8	81.9	75.0	62.9	48.5	35.9	59.1
	HIGHEST DAILY MAXIMUM	47	65	71	81	88	95	104	104	99	98	91	78	70	104
	YEAR OF OCCURRENCE		1995	2000	1998	2002	1962	1988	1995	1993	1978	1963	1987	2001	JUL 1995
	MEAN OF EXTREME MAXS.	47	51.5	56.0	70.3	80.8	87.4	92.9	94.5	92.0	89.7	80.5	68.5	57.4	76.8
	NORMAL DAILY MINIMUM	30	16.4	18.9	27.9	37.7	48.6	58.2	62.6	60.7	52.9	41.6	32.6	22.3	40.0
	MEAN DAILY MINIMUM	47	16.2	18.9	26.8	37.4	47.5	56.9	61.2	59.4	51.8	40.7	31.8	21.4	39.2
	LOWEST DAILY MINIMUM	47	-20	-14	-6	8	25	32	40	34	26	15	2	-19	-20
	YEAR OF OCCURRENCE		1984	1982	1984	1982	1974	1972	1988	1982	1974	1976	1958	1989	JAN 1984
	MEAN OF EXTREME MINS.	47	-5.1	-1.1	9.0	21.2	32.4	42.6	48.6	46.5	35.2	24.9	16.0	0.6	22.6
	NORMAL DRY BULB	30	22.5	25.2	36.2	47.6	58.6	67.9	72.1	69.9	63.0	51.2	40.0	27.9	48.5
	MEAN DRY BULB	47	23.7	26.8	36.3	48.4	59.1	68.4	72.6	70.6	63.2	51.7	40.1	28.8	49.1
	MEAN WET BULB	15	23.5	26.2	33.4	43.6	53.6	62.6	66.6	65.4	58.0	47.5	37.6	28.3	45.5
	MEAN DEW POINT	15	19.1	21.0	26.9	36.7	47.7	57.5	62.5	62.0	54.2	43.0	33.0	24.4	40.7
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.0	0.9	3.5	5.3	2.8	1.1	*	0.0	0.0	13.6	
MAXIMUM ≤ 32°	30	17.5	13.2	4.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.8	12.3	49.5	
MINIMUM ≤ 32°	30	29.2	25.5	22.5	11.4	1.7	*	0.0	0.0	0.4	7.1	17.4	26.8	142.0	
MINIMUM ≤ 0°	30	4.9	3.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	10.2	
H/C	NORMAL HEATING DEG. DAYS	30	1281	1079	878	517	224	45	6	18	129	431	745	1107	6460
	NORMAL COOLING DEG. DAYS	30	0	0	1	7	42	148	248	190	73	6	0	0	715
RH	NORMAL (PERCENT)	30	74	73	70	66	66	69	72	76	76	72	76	79	72
	HOUR 01 LST	30	77	77	77	76	78	82	84	88	88	82	80	81	81
	HOUR 07 LST	30	79	79	80	79	80	82	86	91	91	85	83	82	83
	HOUR 13 LST	30	69	66	60	54	52	54	55	59	58	57	66	73	60
	HOUR 19 LST	30	73	70	65	58	56	58	61	67	72	70	74	78	67
S	PERCENT POSSIBLE SUNSHINE	40	41	46	50	52	60	64	65	63	61	54	37	33	52
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG(VISBY≤1/4 MI)	47	1.8	1.8	1.8	0.8	0.7	1.0	0.8	1.8	1.8	2.0	1.6	2.3	18.2
	THUNDERSTORMS	47	0.2	0.5	2.0	3.6	4.7	6.4	17.4	14.5	7.2	2.0	4.5	5.8	68.8
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)														
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH:														
	CLEAR	0			2.0		2.0								
	PARTLY CLOUDY	0			1.0										
	CLOUDY	1	1.0	1.0	2.0										
PR	MEAN STATION PRESSURE(IN)	30	29.31	29.33	29.27	29.23	29.25	29.25	29.27	29.31	29.33	29.33	29.31	29.32	29.29
	MEAN SEA-LEVEL PRES. (IN)	16	30.09	30.10	30.06	29.98	29.99	30.01	30.00	30.04	30.06	30.10	30.08	30.11	30.05
WINDS	MEAN SPEED (MPH)	34	11.1	10.4	11.1	10.9	9.6	8.2	7.7	7.1	7.7	8.7	10.3	10.2	9.4
	PREVAIL.DIR(TENS OF DEGS)	28	24	24	07	07	23	23	23	24	24	24	24	24	24
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	7	43	46	46	48	46	41	38	43	38	45	45	48	48
	DIR. (TENS OF DEGS)		24	26	24	25	25	24	03	26	24	24	24	30	30
	YEAR OF OCCURRENCE		1996	2001	2002	1997	2000	1997	2001	1998	2001	1996	1998	1998	DEC 1998
	MAXIMUM 5-SECOND:														
SPEED (MPH)	7	56	56	69	59	68	48	47	54	47	59	66	56	69	
DIR. (TENS OF DEGS)		25	26	23	25	27	28	29	26	23	25	24	31	23	
YEAR OF OCCURRENCE		1996	2001	2002	1997	1999	2001	1998	1998	2001	1996	1998	1998	MAR 2002	
PRECIPITATION	NORMAL (IN)	30	1.93	1.88	2.62	3.24	3.14	3.80	2.80	3.19	2.84	2.35	2.78	2.64	33.21
	MAXIMUM MONTHLY (IN)	47	4.61	5.39	5.70	6.10	6.80	8.48	6.75	8.47	8.10	6.26	6.86	6.81	8.48
	YEAR OF OCCURRENCE		1965	1990	1985	1977	2000	1981	1969	1965	1972	2001	1982	1967	JUN 1981
	MINIMUM MONTHLY (IN)	47	0.27	0.27	0.58	0.88	0.96	0.27	0.34	0.40	0.58	0.28	0.55	0.54	0.27
	YEAR OF OCCURRENCE		1961	1969	1958	1962	1964	1988	1995	1976	1963	1964	1976	1958	JUN 1988
	MAXIMUM IN 24 HOURS (IN)	47	1.78	2.59	2.60	3.43	2.34	3.21	4.39	2.42	3.97	3.21	3.17	3.53	4.39
	YEAR OF OCCURRENCE		1959	1990	1985	1977	1991	1978	1969	1972	1972	1988	1982	1967	JUL 1969
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	13.5	10.8	13.2	12.7	11.9	10.4	9.5	9.1	9.9	9.5	11.8	14.7	137.0	
PRECIPITATION ≥ 1.00	30	0.1	0.1	0.2	0.3	0.4	0.7	0.8	0.8	0.6	0.2	0.4	0.4	5.0	
SNOWFALL	NORMAL (IN)	30	10.8	8.5	5.6	1.3	0.1	0.0	0.0	0.0	0.2	2.6	8.3	37.4	
	MAXIMUM MONTHLY (IN)	42	30.8	16.6	17.7	12.0	1.3	T	T	T	T	2.0	17.9	24.2	30.8
	YEAR OF OCCURRENCE		1978	1994	1993	1957	1989	1995	1992	1994	1993	1989	1966	1977	JAN 1978
	MAXIMUM IN 24 HOURS (IN)	42	10.4	7.7	9.7	9.8	1.3	T	T	T	T	1.8	8.3	13.9	13.9
	YEAR OF OCCURRENCE		1978	1981	1993	1957	1989	1995	1992	1994	1993	1989	1966	1974	DEC 1974
	MAXIMUM SNOW DEPTH (IN)	40	17	19	8	10	1	0	0	0	0	1	8	16	19
	YEAR OF OCCURRENCE		1978	1978	1993	1957	1989					1989	1966	1977	FEB 1978
NORMAL NO. DAYS WITH:															
SNOWFALL ≥ 1.0	30	3.3	2.8	1.7	0.4	0.0	0.0	0.0	0.0	0.0	0.1	1.0	2.5	11.8	

PRECIPITATION (inches) 2002 TOLEDO, OH (TOL)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1973	1.63	1.05	4.20	1.79	2.85	6.51	3.17	1.18	1.09	2.76	3.27	3.17	32.67
1974	2.27	2.00	2.93	2.55	4.18	3.31	0.68	1.61	1.41	0.70	3.57	3.41	28.62
1975	2.57	2.57	1.90	2.34	3.83	4.21	4.99	5.52	2.70	2.42	2.17	3.35	38.57
1976	2.80	4.43	3.56	2.79	1.72	3.70	2.08	0.40	3.68	2.14	0.55	0.93	28.78
1977	1.29	1.99	4.43	6.10	1.53	3.48	1.83	5.79	4.27	1.77	2.72	3.56	38.76
1978	3.14	0.54	2.34	3.74	2.48	5.34	1.86	1.67	3.19	1.65	2.48	3.31	31.74
1979	1.24	0.70	2.55	4.03	3.15	4.23	3.96	4.71	2.90	2.02	4.25	2.46	36.20
1980	0.74	0.96	3.65	3.13	2.93	3.26	4.49	5.89	1.63	1.79	0.97	2.48	31.92
1981	0.48	3.27	0.63	3.54	2.38	8.48	3.72	2.28	6.05	3.79	0.84	2.93	38.39
1982	3.61	1.15	3.74	1.53	2.61	2.01	1.97	1.38	2.03	1.14	6.86	3.48	31.51
1983	0.88	0.59	1.86	4.28	3.98	4.06	3.39	2.15	1.42	3.59	5.56	3.91	35.67
1984	0.99	1.18	2.95	5.15	3.48	1.49	2.30	3.87	2.02	1.75	2.74	3.22	31.14
1985	2.02	3.23	5.70	1.40	1.85	2.90	3.86	4.30	2.53	3.05	5.89	1.62	38.35
1986	0.99	2.46	2.16	2.81	2.72	5.32	3.37	5.93	4.75	4.78	1.66	1.87	38.82
1987	1.87	0.53	1.78	1.72	2.32	5.62	1.51	4.45	2.31	2.21	2.59	3.80	30.71
1988	1.17	1.33	1.69	1.45	1.37	0.27	3.76	5.11	1.80	4.37	4.27	1.96	28.55
1989	1.80	0.74	2.03	3.50	4.87	6.74	6.31	3.59	3.30	1.36	1.89	1.29	37.42
1990	2.18	5.39	3.46	2.09	4.63	3.14	1.89	3.32	1.72	2.63	2.27	5.69	38.41
1991	1.41	1.42	1.42	4.29	4.82	1.51	0.52	1.94	0.73	5.53	2.15	1.51	27.25
1992	1.70	1.68	3.05	3.41	3.18	1.28	6.51	2.40	4.01	1.77	4.45	3.60	37.04
1993	3.17	1.71	3.46	3.06	1.13	4.60	1.60	1.15	4.50	1.51	2.73	1.25	29.87
1994	2.83	1.88	2.06	4.86	1.11	3.63	2.14	3.05	0.93	1.00	2.69	3.01	29.19
1995	3.07	0.57	1.59	4.52	2.96	4.46	0.34	2.72	1.41	3.71	2.72	0.89	28.96
1996	2.22	0.95	2.67	3.85	2.62	4.91	1.81	0.74	2.74	1.75	2.79	2.92	29.97
1997	2.35	4.27	2.53	1.55	6.76	3.70	2.63	4.07	4.74	1.24	2.16	2.07	38.07
1998	2.96	3.77	3.32	4.54	2.07	1.73	2.70	5.44	0.96	2.13	1.63	0.61	31.86
1999	3.17	1.67	1.42	4.89	4.93	1.86	2.87	1.40	1.50	1.92	1.46	1.71	28.80
2000	1.19	1.08	1.84	3.55	6.80	5.52	2.29	4.15	4.98	2.83	1.36	2.53	38.12
2001	0.52	2.45	0.64	2.47	5.06	2.87	1.87	2.48	4.72	6.26	2.11	1.96	33.41
2002	2.67	1.67	3.07	4.14	3.31	2.00	1.94	1.22	2.10	1.70	2.60	2.67	29.09
POR= 132 YRS	2.16	1.93	2.58	2.93	3.22	3.48	2.89	2.90	2.64	2.34	2.39	2.40	31.86

WBAN : 94830

AVERAGE TEMPERATURE (°F) 2002 TOLEDO, OH (TOL)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1973	28.2	25.2	44.1	48.3	55.7	70.1	72.3	71.3	64.4	55.7	41.9	27.5	50.4
1974	26.1	23.2	36.2	48.8	56.0	65.4	72.5	71.5	59.6	49.5	40.4	28.9	48.2
1975	29.2	28.3	33.3	42.7	62.5	69.0	70.8	72.0	57.4	51.9	45.3	28.9	49.3
1976	19.8	32.8	41.6	49.3	56.0	69.3	72.2	68.2	60.5	45.6	32.3	19.9	47.3
1977	9.6	24.3	41.6	53.3	63.6	65.0	74.6	69.3	65.0	49.3	41.0	24.7	48.4
1978	16.7	11.8	28.7	45.8	58.9	67.6	70.9	70.4	68.0	49.8	40.3	30.1	46.6
1979	17.6	15.1	38.7	45.5	57.9	67.7	70.1	68.8	63.0	51.3	40.6	32.1	47.4
1980	24.3	21.4	32.4	46.8	59.5	65.5	73.6	73.3	63.8	46.8	37.4	26.0	47.6
1981	17.6	28.5	36.5	49.9	55.4	68.4	71.7	69.8	61.3	47.7	39.6	27.4	47.8
1982	15.8	20.2	33.4	42.7	64.4	64.3	72.6	67.5	61.9	52.7	41.8	36.6	47.8
1983	27.6	30.5	37.9	44.2	54.8	67.9	74.7	73.8	64.2	51.9	41.3	20.0	49.1
1984	16.6	33.0	27.6	46.8	54.4	71.2	69.8	71.2	60.8	55.2	38.7	34.0	48.3
1985	19.5	22.6	39.3	53.5	61.6	64.8	73.2	69.1	64.0	53.3	43.9	22.3	48.9
1986	25.6	25.0	39.2	50.0	60.3	66.8	73.8	67.0	65.3	53.2	37.2	31.6	49.6
1987	25.8	30.0	39.7	50.3	62.5	70.8	74.9	71.0	63.8	45.4	44.4	33.0	51.0
1988	23.8	23.3	37.5	48.1	61.0	69.3	75.9	73.9	62.5	45.2	41.8	28.0	49.2
1989	33.1	24.5	36.7	45.5	57.2	68.2	73.2	69.8	61.8	52.2	38.5	16.8	48.1
1990	34.3	32.4	41.1	49.4	56.6	69.1	71.8	70.0	63.7	51.8	44.3	33.1	51.5
1991	25.2	31.6	40.3	52.6	67.0	72.6	74.6	73.0	62.9	55.0	37.9	33.0	52.1
1992	28.8	31.9	36.1	47.4	57.9	65.1	70.1	67.8	61.9	49.6	40.8	32.9	49.2
1993	30.2	24.7	34.3	48.3	60.6	68.1	76.1	74.3	61.1	49.8	39.7	29.5	49.7
1994	17.1	23.0	36.7	50.8	57.2	71.0	72.6	67.1	64.1	53.6	45.9	35.7	49.6
1995	28.2	25.7	40.5	46.8	60.1	72.3	76.5	78.5	62.8	55.8	36.6	25.4	50.8
1996	23.7	26.9	31.7	46.1	57.5	70.8	70.5	72.3	64.3	53.1	34.4	31.6	48.6
1997	21.9	31.4	38.6	46.2	52.5	68.8	71.7	67.3	62.4	52.1	36.6	31.3	48.4
1998	33.0	36.3	40.0	50.0	66.0	70.2	73.3	72.2	67.2	53.5	42.9	35.1	53.3
1999	24.4	33.6	34.4	50.7	62.6	70.8	77.3	69.7	65.1	51.5	44.8	31.0	51.3
2000	23.8	33.3	43.8	48.2	61.8	69.0	70.3	70.2	62.5	55.4	39.9	18.3	49.7
2001	26.0	30.4	35.2	51.5	61.4	68.7	72.7	73.4	63.1	53.6	48.5	37.0	51.8
2002	35.2	34.9	36.6	52.4	56.3	72.2	77.6	74.2	69.0	50.6	40.1	29.3	52.4
POR= 129 YRS	25.7	27.2	36.0	47.6	59.1	68.7	73.2	71.0	64.2	52.7	40.5	29.5	49.6

HEATING DEGREE DAYS (base 65°F) 2002 TOLEDO, OH (TOL)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1973-74	3	16	114	289	686	1157	1197	1166	885	483	295	71	6362
1974-75	2	0	190	478	730	1108	1104	1021	974	664	148	45	6464
1975-76	7	6	227	406	585	1110	1393	927	717	497	277	16	6168
1976-77	1	33	162	596	976	1393	1708	1135	718	381	135	91	7329
1977-78	3	29	71	481	713	1241	1490	1484	1121	573	243	43	7492
1978-79	11	11	74	466	732	1076	1461	1390	808	577	259	42	6907
1979-80	16	33	121	440	724	1009	1258	1256	1005	542	199	83	6686
1980-81	0	3	113	560	822	1206	1464	1015	879	450	309	24	6845
1981-82	7	15	169	529	754	1160	1522	1250	972	665	81	76	7200
1982-83	3	47	148	386	690	871	1154	958	833	624	311	55	6080
1983-84	8	0	127	407	705	1389	1494	920	1151	545	341	9	7096
1984-85	11	15	173	297	782	951	1404	1182	791	368	158	58	6190
1985-86	0	16	138	356	626	1316	1216	1113	793	449	185	54	6262
1986-87	2	54	87	365	828	1027	1209	972	778	439	173	20	5954
1987-88	5	34	89	601	611	986	1269	1202	845	498	159	53	6352
1988-89	4	5	104	613	691	1141	979	1127	869	578	270	29	6410
1989-90	0	14	159	396	789	1488	947	907	742	492	262	31	6227
1990-91	4	3	125	415	612	981	1228	928	758	377	115	7	5553
1991-92	0	0	167	315	806	986	1116	953	889	525	245	62	6064
1992-93	7	25	146	473	719	987	1072	1123	943	493	156	48	6192
1993-94	0	3	151	465	756	1095	1479	1170	868	442	272	34	6735
1994-95	0	34	87	344	566	897	1137	1091	753	537	160	6	5612
1995-96	3	0	124	287	846	1221	1272	1099	1027	559	279	11	6728
1996-97	6	0	100	365	911	1027	1329	937	813	557	382	44	6471
1997-98	4	22	112	430	848	1037	985	795	783	447	63	72	5598
1998-99	0	3	52	363	655	920	1255	871	942	425	113	39	5638
1999-00	0	7	85	411	599	1047	1272	911	652	495	163	43	5685
2000-01	1	12	149	296	746	1445	1201	963	919	409	144	54	6339
2001-02	7	0	117	352	490	860	915	833	874	420	293	16	5177
2002-	0	0	39	469	740	1099							

WBAN : 94830

COOLING DEGREE DAYS (base 65°F) 2002 TOLEDO, OH (TOL)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1973	0	0	0	5	3	163	237	222	103	9	0	0	742
1974	0	0	0	4	25	91	243	206	34	5	0	0	608
1975	0	0	0	0	79	172	197	230	7	7	0	0	692
1976	0	0	0	31	10	155	230	137	34	2	0	0	599
1977	0	0	0	37	95	99	309	167	77	0	0	0	784
1978	0	0	0	0	58	128	200	184	170	1	0	0	741
1979	0	0	0	0	46	127	182	158	67	22	0	0	602
1980	0	0	0	3	35	106	275	265	84	4	0	0	772
1981	0	0	1	2	17	132	220	170	64	0	0	0	606
1982	0	0	0	0	68	61	245	132	62	11	0	0	579
1983	0	0	0	4	2	148	311	279	109	11	0	0	864
1984	0	0	0	5	17	203	168	214	51	1	0	0	659
1985	0	0	0	29	60	58	263	147	116	0	0	0	673
1986	0	0	1	4	48	113	282	125	103	4	0	0	680
1987	0	0	0	5	105	202	318	225	59	0	4	0	918
1988	0	0	0	0	43	190	350	286	39	5	0	0	913
1989	0	0	2	0	34	132	259	168	69	5	0	0	669
1990	0	0	7	32	11	164	222	164	91	14	0	0	705
1991	0	0	0	14	185	244	305	256	111	13	0	0	1128
1992	0	0	0	3	32	66	170	120	59	2	0	0	452
1993	0	0	0	0	26	148	351	297	41	1	0	0	864
1994	0	0	0	22	39	222	245	104	66	1	0	0	699
1995	0	0	0	0	16	230	367	426	64	8	0	0	1111
1996	0	0	0	2	53	191	184	234	85	2	0	0	751
1997	0	0	0	0	0	163	215	101	41	34	0	0	554
1998	0	0	13	0	100	233	263	236	126	11	0	0	982
1999	0	0	0	2	46	220	386	161	95	2	0	0	912
2000	0	0	2	0	69	168	170	182	82	6	0	0	679
2001	0	0	0	10	40	171	254	268	64	6	0	0	813
2002	0	0	0	50	32	240	398	290	165	29	0	0	1204

SNOWFALL (inches) 2002 TOLEDO, OH (TOL)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1973-74	0.0	0.0	0.0	0.0	0.2	13.8	7.5	11.6	2.9	1.1	T	0.0	37.1
1974-75	0.0	0.0	0.0	T	2.8	23.9	5.4	5.5	5.3	1.8	0.0	0.0	44.7
1975-76	0.0	0.0	0.0	0.0	5.7	12.2	14.5	8.4	4.0	1.3	0.0	0.0	46.1
1976-77	0.0	0.0	0.0	T	1.3	11.1	17.2	8.7	15.0	0.6	0.0	0.0	53.9
1977-78	0.0	0.0	0.0	0.0	6.6	24.2	30.8	9.0	2.5	T	0.0	0.0	73.1
1978-79	0.0	0.0	0.0	0.0	2.8	2.3	7.6	5.1	1.2	4.0	0.0	0.0	23.0
1979-80	0.0	0.0	0.0	T	1.6	1.5	4.1	6.4	3.4	0.5	T	0.0	17.5
1980-81	0.0	0.0	0.0	0.9	3.5	11.6	6.9	11.2	3.6	0.0	0.0	0.0	37.7
1981-82	0.0	0.0	0.0	T	0.8	14.9	18.4	14.3	10.7	9.1	0.0	0.0	68.2
1982-83	0.0	0.0	0.0	T	2.2	1.2	0.7	4.1	3.6	0.7	0.0	0.0	12.5
1983-84	0.0	0.0	0.0	0.0	3.4	13.4	12.2	6.3	9.8	T	T	0.0	45.1
1984-85	0.0	0.0	0.0	0.0	2.4	5.1	14.0	12.4	2.6	2.0	0.0	0.0	38.5
1985-86	0.0	0.0	0.0	0.0	2.5	8.7	6.6	10.2	2.2	0.2	0.0	0.0	30.4
1986-87	0.0	0.0	0.0	T	4.5	1.3	20.5	0.5	10.0	2.4	0.0	0.0	39.2
1987-88	0.0	0.0	0.0	T	0.1	11.1	8.3	14.3	4.2	T	0.0	0.0	38.0
1988-89	0.0	0.0	0.0	T	2.3	6.6	2.4	4.8	2.6	0.7	1.3	0.0	20.7
1989-90	0.0	0.0	0.0	2.0	2.3	6.5	2.5	10.4	3.5	0.3	0.0	0.0	27.5
1990-91	0.0	0.0	0.0	0.0	T	8.2	5.0	10.1	T	T	0.0	0.0	23.3
1991-92	0.0	0.0	0.0	T	1.7	2.5	10.5	3.0	12.5	0.1	0.0	0.0	30.3
1992-93	T	0.0	0.0	1.0	0.2	5.2	6.3	10.2	17.7	0.8	0.0	0.0	41.4
1993-94	0.0	T	T	0.8	1.1	6.9	20.2	16.6	4.2	7.0	0.0	T	56.8
1994-95	0.0	T	0.0	0.0	T	4.8	13.6	1.2	2.6	0.1	0.0	T	22.3
1995-96	0.0	0.0	0.0	0.0	6.8	7.0	11.0	2.5	4.4	T	0.0	0.0	31.7
1996-97									2.1				
1997-98													
1998-99						0.5	22.5	7.3	12.7				
1999-00													
2000-01													
2001-02													
2002-													
POR= 40 YRS	T	T	T	0.1	2.9	8.2	9.8	7.9	6.1	1.6	0.0	T	36.6

WBAN : 94830

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. NORMALS ARE 30-YEAR AVERAGES (1961 - 1990). 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.</p>	<p>GENERAL CONTINUED: 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. 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.</p> <p>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.</p>
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2002
TOLEDO,
OHIO (TOL)

Toledo is located on the western end of Lake Erie at the mouth of the Maumee River. Except for a bank up from the river about 30 feet, the terrain is generally level with only a slight slope toward the river and Lake Erie. The city has quite a diversified industrial section and excellent harbor facilities, making it a large transportation center for rail, water, and motor freight. Generally rich agricultural land is found in the surrounding area, especially up the Maumee Valley toward the Indiana state line.

Rainfall is usually sufficient for general agriculture. The terrain is level and drainage rather poor, therefore, a little less than the normal precipitation during the growing season is better than excessive amounts. Snowfall is generally light in this area, distributed throughout the winter from November to March with frequent thaws.

The nearness of Lake Erie and the other Great Lakes has a moderating effect on the temperature, and extremes are seldom recorded. On average, only fifteen days a year experience temperatures of 90 degrees or higher, and only eight days when it drops to zero or lower. The growing season averages 160 days, but has ranged from over 220 to less than 125 days.

Humidity is rather high throughout the year in this area, and there is an excessive amount of cloudiness. In the winter months the sun shines during only about 30 percent of the daylight hours. December and January, the cloudiest months, sometimes have as little as 16 percent of the possible hours of sunshine.

Severe windstorms, causing more than minor damage, occur infrequently. There are on the average twenty-three days per year having a sustained wind velocity of 32 mph or more.

Flooding in the Toledo area is produced by several factors. Heavy rains of 1 inch or more will cause a sudden rise in creeks and drainage ditches to the point of overflow. The western shores of Lake Erie are subject to flooding when the lake level is high and prolonged periods of east to northeast winds prevail.

STATION LOCATION

TOLEDO, OHIO

LOCATION	Occupied From	Occupied To	Airline Distances and Directions from previous Location	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE										AUTOMATIC OBSERVING EQUIPMENT *	* TYPE M = AMOS T = AUTOB S = ASOS W = AWOS REMARKS
						GROUND											
						SEA LEVEL	WIND INSTRUMENT	EXTREME THERMOMETERS	PSYCHROMETER	SUNSHINE SWITCH	TIPPING GAUGE BUCKET	WEIGHING RAIN GAGE	8 INCH RAIN GAGE	HYGROMETER			
AIRPORT																	
Toledo Municipal AP Transcontinental Hangar 9 miles SE of Federal Building	6/03/28	9/08/38		41°34'	83°28'	621	47	5	5							WB observations to 11/2/33, CAA thereafter.	
Toledo Municipal AP Administration Hangar	9/08/38	1/12/55	350 ft. W	41°34'	83°28'	622	47	5	5		a4	a4	a3	c		CAA observations to 1/1/39, WB thereafter.	
Toledo Express Airport Administration Building	1/12/55	12/01/95	15 mi. W	41°36'	83°48'	h669	d30	g19 i30	g19 i30	74	18 i30	18 i30	18 i30	c4	NA	c. Telepsychrometer (5') 7/1/49-1/22/55, (19') 1/12/55 until 10/1/59. Hygro. comm. 10/1/59. d. 72 feet to 11/8/58 and 20 feet to 11/1/68. g. Standby after 10/1/1959	
Toledo Express Airport	12/01/95	Present	NA	41°35'	83°48'	j690									S	h. 676 feet to 10/1/59. i. Effective 4/1/76. ASOS Commissioned 12/01/95 j. Ground Elevation	

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* NOTES: For earlier station history see previous edition.