

# CLIMATOLOGICAL SUMMARY

STATION: NEWARK, OHIO

LATITUDE 40°05'N  
 LONGITUDE 82°25'W  
 ELEV. (GROUND) 835 Ft.

MEANS AND EXTREMES FOR PERIOD 1936-1965

MONTH	TEMPERATURE (°F)											PRECIPITATION TOTALS (INCHES)											MONTH									
	MEANS				EXTREMES				MEAN DEGREE DAYS**	MEAN NUMBER OF DAYS				PRECIPITATION						SNOW, SLEET		MEAN NUMBER OF DAYS										
	DAILY MAXIMUM	DAILY MINIMUM	MONTHLY	RECORD HIGHEST	YEAR	DAY	RECORD LOWEST	YEAR		DAY	90° AND ABOVE	32° AND BELOW	32° AND BELOW	0° AND BELOW	MEAN	GREATEST MONTHLY	YEAR	GREATEST DAILY	YEAR	DAY	MEAN	MAXIMUM MONTHLY		YEAR	GREATEST DAILY	YEAR	DAY	.01 or MORE	.10 or MORE	.50 or MORE	1.00 or MORE	
									MAX.																							MIN.
JAN	37.7	20.1	28.9	76	50	25	-21	46	28	111.3	0	0	9	26	2	3.24	11.24	37	3.42	52	27	7.0	19.0	68	10.0	46	24	12	7	1.9	.6	JAN
FEB	40.8	21.4	31.1	72	61	24	-26	31	3	93.5	0	0	6	24	1	2.62	4.52	39	1.54	59	10	5.1	16.5	60	0.0	60	14	10	6	1.5	.3	FEB
MAR	50.4	28.7	39.9	85	45	25	-4	60	8	75.6	0	0	1	24	1	3.82	9.11	45	3.13	45	6	3.9	17.3	54	10.0	54	1	13	6	2.4	.6	MAR
APR	62.1	38.0	50.9	90	46	25	12	55	21	43.7	0	0	0	9	0	3.89	7.29	64	2.16	40	20	.2	3.6	33	2.0	53	16	13	6	2.7	.6	APR
MAY	74.4	48.1	61.2	95	62	15	23	47	10	16.6	0	0	0	1	0	3.94	6.95	56	2.23	62	24	.0	0.36	.0	0	0	0	12	6	2.5	.7	MAY
JUNE	82.4	57.2	69.6	101	52	25	35	48	1	2.6	4	0	0	0	0	4.75	9.71	35	3.30	37	21	.0	.0	.36	.0	0	0	11	7	3.2	1.3	JUNE
AUG	85.7	60.2	72.9	106	36	14	41	43	1	.5	8	0	0	0	0	3.97	7.38	58	2.32	58	23	.0	.0	.36	.0	0	0	10	7	2.6	1.0	JULY
SEPT	84.8	58.7	71.7	101	48	27	38	45	29	13	6	0	0	0	0	2.96	6.00	55	3.31	42	4	.0	.0	.36	.0	0	0	5	5	2.1	.7	AUG
OCT	78.5	51.1	64.8	103	53	3	25	42	29	10.0	3	0	0	0	0	2.61	6.30	65	2.78	36	29	.0	.0	.36	.0	0	0	7	5	1.6	.4	SEPT
NOV	67.4	40.4	53.9	90	51	3	14	52	21	35.1	0	0	0	0	0	2.40	6.97	55	1.56	39	25	.0	1.0	.52	1.0	62	26	8	5	1.4	.3	OCT
DEC	51.8	30.9	41.3	81	61	3	1	58	30	70.7	0	0	1	17	0	2.53	4.97	50	2.00	56	4	2.1	13.0	.00	5.5	58	25	11	6	1.5	.3	NOV
YEAR	63.0	39.7	51.3	106	36	14	-26	51	3	570.4	21	24	129	4	39.38	11.24	37	3.43	52	27	23.6	19.0	46	10.0	46	24	125	77	25.5	7.7	YEAR	

\*\* BASE 65° F \*Also on earlier dates, months, or years

## NARRATIVE CLIMATOLOGICAL SUMMARY

Newark is located in the southeastern quadrant of Licking County in central Ohio. Terrain within Licking County is gently rolling to hilly; the elevation of the earth's surface above sea level varies from about 730 to 1320 feet. A map of the physiographic regions of Ohio shows Licking County to be a part of Ohio's Glaciated Plateau. The glaciation which occurred in this region has reduced the steep slopes and filled the valleys, thus transforming the rough preglacial topography to one of more subdued character.

The climate of Licking County is classified as continental. Such a climate is characteristic of a land mass the size of North America and is marked by large annual, daily, and day to day ranges of temperature. Summers are moderately warm and humid with an average of 21 days with temperatures of 90°F or more. Winters are reasonably cold and cloudy with an average of 4 days with sub-zero temperatures. Weather changes occur every few days from the passing of cold or warm fronts and their associated centers of high and low pressure.

As is characteristic of continental climates, precipitation in the Newark area varies widely from year to year, however, it is normally abundant and well distributed throughout the year with fall being the driest season. The mean annual precipitation of 39.38 inches is 2 inches above the average for central Ohio. Showers and thundershowers account for most of the rainfall during the growing season. Thunderstorms occur on about 40 days each year. Most of these occur April through August. As is typical of much of Ohio, most precipitation during the winter months comes in the form of rain. Snowfall may fluctuate widely from the annual mean of 23.6 inches. During the period 1936-1967, as little as 3.2 inches of snow fell in the winter of 1949-1950 and as much as 39.9 inches was reported during the winter of 1963-1964. About 1 of 3 winters will have at least 30 inches of snow.

Evaporation is greatest during the warm months and is then most critical for agriculture. During the period 1936-1967, the driest growing season (May-September) of record is 1963. In that year, the May-September accumulated rainfall was 10.63 inches. Normal rainfall during the months May-September is 18.23 inches. When evaporation exceeds rainfall for prolonged periods, a drought may occur, however, severe droughts seldom occur in Licking County.

Mean temperature for the year is slightly more than 1 degree below the average for central Ohio. The normal daily range in temperature is greatest in late summer and least in winter. Extreme temperature range (record high minus record low) of record is 132°F. Coldest month of record is January 1940. In that month, temperature climbed above freezing on only 7 days while sub-zero temperatures were recorded on 14 days. Maximum temperatures of 32°F or less occur most frequently during the months December through February. Warmest month of record is July 1955. In that month, the daily maximum temperature exceeded 89°F on 21 days while daily lows were greater than 69°F on 5 days. A noteworthy hot

spell occurred July 8-15, 1936. On those days, the daily highs ranged between 98° and 106°F. Temperature of 90°F or higher has been recorded as early as April 26, however, such days are more common during the period June through August.

Taking the number of days between the last freezing temperature (32°F) of spring and the first freezing temperature in fall as the crop-growing season, this season averages 153 days in length. The growing season is 177 days or more in 10% of the years, 163 days or more in 30% of the years, less than 143 days in 30% of the years, and less than 129 days in 10% of the years. While spring and fall freeze dates as shown in the table below are fairly representative for the Newark area, similar dates for the remainder of Licking County may vary considerably due to the hilly terrain. The rolling terrain of Licking County influences the minimum temperatures in valleys throughout the year. This influence is greatest on clear nights with calm winds.

Heating degree days (mean degree days), as shown in the above table, are a measure of the departure of the mean daily temperature from 65°F. The daily totals are accumulated from July 1 through June 30. At any point during the year, the accumulated degree days can be used as an index of past temperature effect upon power consumption and fuel consumption for heating of homes and businesses.

Humidity, cloudiness, sunshine, and wind observations are not recorded at the Newark cooperative weather station, however, estimates of these variables can be made from observations taken at other locations. Relative humidity, the ratio between the amount of moisture in the air and the amount which could be present, without condensation, at the same temperature and pressure, is an important factor in human and animal comfort and in the growth and development of vegetation. Generally, humidity rises and falls inversely with the daily temperature and is lowest in summer and highest in winter. For the year, relative humidity averages 80% at 1 and 7 AM, 60% at 1 PM, and 65% at 7 PM. Cloudiness is greatest in winter and least in summer. This seasonal variation is most clearly illustrated by the percentage of possible sunshine which is about 70% in July and 35% in December. Heavy fog that restricts visibility to less than 1/4 mile occurs about 10 times each year and is most frequent during the cold half of the year. Death from smog is unknown. The prevailing wind direction for the year is from the southwest quadrant, averaging about 9 mph. Average wind speeds during winter are slightly higher than those of summer. Damaging winds of 35 to 80 mph occur most often during spring and summer. Such storms are usually associated with migrating thunderstorms.

The tornado, one of the most destructive of all atmospheric storms is characterized by a violently rotating column of air which is nearly always observable as a "funnel cloud". It frequently leaves great destruction along a narrow path and is usually accompanied by heavy rain and hail, and often by lightning and thunder. Since 1900, 9 such storms have been reported in Licking County. Ohio averages about 11 tornadoes per year.

### PROBABILITY OF FREEZES OCCURRING AS LATE IN THE SPRING OR AS EARLY IN THE FALL AS DATES SHOWN IN THE FOLLOWING TABLE

PERCENT CHANCE OF LATER DATE IN SPRING	TEMPERATURE LEVELS							
	16°	20°	24°	28°	32°	36°		
90	FEB 23	MAR 2	MAR 27	APR 6	APR 19	APR 30		
70	MAR 6	MAR 14	APR 4	APR 15	APR 27	MAY 7		
50	MAR 14	MAR 23	APR 9	APR 21	MAY 2	MAY 15		
30	MAR 22	APR 1	APR 15	APR 28	MAY 8	MAY 22		
10	APR 3	APR 13	APR 22	MAY 6	MAY 15	MAY 31		
PERCENT CHANCE OF EARLIER DATE IN FALL								
10		OCT 25	OCT 16	SEPT 26	SEPT 19	SEPT 13		
30		NOV 4	OCT 24	OCT 6	SEPT 27	SEPT 19		
50		NOV 11	OCT 30	OCT 14	OCT 3	SEPT 24		
70		NOV 18	NOV 5	OCT 21	OCT 8	SEPT 26		
90		NOV 28	NOV 14	OCT 30	OCT 17	OCT 5		

January 1968  
 Marvin E. Miller  
 ESSA Weather Bureau State Climatologist  
 Box 357, New Post Office Building  
 Columbus, Ohio 43216

Date	Location (From Post Office)	Elevation (Ft. MSL)	Observer
10/1934-9/1942	2.2 miles N	835	C. T. Kaiser
10/1942-6/1956	2.2 miles N	825	R. E. Price
7/1956-Present	2.2 miles N	835	W. S. Price

AVERAGE TEMPERATURE (F)

YR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL
36	23.3	28.2	43.7	47.3	53.2	70.5	76.2	75.1	68.8	54.5	38.0	35.3	51.7
37	37.6	35.8	50.1	59.4	66.7	71.9	74.1	64.3	51.6	42.6	28.2	20.6	50.6
38	30.3	37.9	45.8	52.3	60.5	68.6	73.0	70.1	64.3	54.1	47.4	32.9	52.9
39	33.6	38.8	41.2	46.7	52.2	72.0	72.3	71.9	59.3	54.4	38.5	26.8	49.2
40	14.7	29.0	35.7	45.5	57.7	70.2	72.9	72.0	62.1	53.5	40.0	35.9	52.6
41	29.5	28.0	31.2	35.4	42.3	70.6	70.4	70.3	67.1	57.8	42.1	36.0	54.2
42	29.6	31.3	31.0	35.1	41.2	71.0	71.3	71.5	64.5	50.8	38.0	26.2	50.2
43	29.6	31.3	31.0	35.1	41.2	71.0	71.3	71.5	64.5	50.8	38.0	26.2	50.2
44	21.0	22.0	21.1	24.4	27.3	62.8	72.6	71.1	57.9	51.8	42.3	29.0	51.2
45	22.0	21.3	21.1	24.4	27.3	62.8	72.6	71.1	57.9	51.8	42.3	29.0	51.2
46	31.1	32.1	45.6	45.5	55.1	69.1	69.1	66.3	64.4	55.9	45.6	34.7	52.6
47	31.1	32.1	45.6	45.5	55.1	69.1	69.1	66.3	64.4	55.9	45.6	34.7	52.6
48	13.3	30.4	43.0	53.7	68.2	68.8	73.1	70.1	64.5	49.7	46.0	31.1	51.1
49	36.6	35.2	40.9	48.4	52.1	72.6	76.9	72.0	64.5	58.2	41.5	34.5	53.3
50	40.0	35.7	38.2	46.0	62.2	67.9	71.0	68.8	63.0	56.2	36.7	24.3	50.6
51	31.6	30.6	35.9	48.8	61.8	70.0	72.5	70.9	64.1	55.6	38.8	30.9	51.2
52	28.5	34.8	32.6	41.1	51.1	70.6	72.3	69.9	66.1	48.8	41.2	34.4	51.2
53	28.5	34.8	32.6	41.1	51.1	70.6	72.3	69.9	66.1	48.8	41.2	34.4	51.2
54	31.0	35.5	41.7	48.0	64.7	72.4	74.0	71.9	64.8	52.5	41.3	26.3	52.7
55	28.2	31.6	41.2	56.3	67.1	69.9	71.7	72.7	60.0	52.0	35.3	26.3	52.1
56	28.5	33.8	32.6	41.1	51.1	70.6	72.3	69.9	66.1	48.8	41.2	34.4	51.2
57	28.5	33.8	32.6	41.1	51.1	70.6	72.3	69.9	66.1	48.8	41.2	34.4	51.2
58	28.2	32.6	34.0	45.3	65.8	70.2	75.6	79.6	67.8	54.4	39.9	35.7	52.8
59	28.1	29.6	27.2	35.0	59.1	68.7	70.4	73.3	67.0	52.8	42.0	29.0	50.3
60	23.0	35.7	44.0	46.3	56.8	67.2	72.3	72.2	65.0	52.4	43.1	31.0	51.4
61	23.0	35.7	44.0	46.3	56.8	67.2	72.3	72.2	65.0	52.4	43.1	31.0	51.4
62	23.0	35.7	44.0	46.3	56.8	67.2	72.3	72.2	65.0	52.4	43.1	31.0	51.4
63	20.6	25.8	43.1	50.7	58.0	72.1	69.5	62.6	52.6	44.7	24.5	14.5	47.5
64	20.6	25.8	43.1	50.7	58.0	72.1	69.5	62.6	52.6	44.7	24.5	14.5	47.5
65	26.0	28.8	35.2	50.3	68.5	68.0	70.9	70.9	62.0	51.6	44.2	31.2	51.8
66	23.8	30.4	42.4	49.7	57.3	68.9	74.7	71.2	61.6	50.7	43.5	31.8	50.6
67	34.1	27.6	41.7	54.5	67.0	72.0	69.1	60.7	53.8				

MONTHLY AND SEASONAL SNOWFALL

SEASON	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	TOTAL
36-37	0.0	0.0	4.5	1.5	5.0	1.0	0.0	0.0	0.0	11.0
37-38	0.0	0.0	1.0	1.2	8.2	7.7	2.0	0.0	0.0	20.4
38-39	0.0	0.0	4.1	0.0	11.0	1.2	0.0	0.0	0.0	28.0
39-40	0.0	0.0	0.0	0.0	6.5	2.9	0.0	0.0	0.0	9.5
40-41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41-42	0.0	0.0	2.0	12.5	6.5	1.6	5.6	0.0	0.0	10.9
42-43	0.0	0.0	3.0	0.0	7.4	15.7	4.5	0.0	0.0	20.1
43-44	0.0	0.0	0.0	0.0	7.4	2.5	0.0	0.0	0.0	25.6
44-45	0.0	0.0	2.0	0.0	8.5	2.5	0.0	0.0	0.0	13.0
45-46	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46-47	0.0	0.0	0.0	0.0	6.5	10.7	1.5	0.0	0.0	19.5
47-48	0.0	0.0	0.0	0.0	18.0	10.0	2.0	0.0	0.0	30.0
48-49	0.0	0.0	0.0	0.0	9.7	1.5	1.0	0.0	0.0	13.2
49-50	0.0	0.0	13.0	8.0	6.8	5.0	3.5	0.0	0.0	36.3
50-51	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51-52	0.0	0.0	1.7	14.7	4.0	0.0	0.0	0.0	0.0	22.9
52-53	0.0	0.0	3.5	1.5	4.0	0.0	3.0	0.0	0.0	15.0
53-54	0.0	0.0	2.0	4.0	6.0	17.0	0.0	0.0	0.0	29.0
54-55	0.0	0.0	0.0	2.0	4.5	9.0	4.0	0.0	0.0	19.5
55-56	0.0	0.0	7.0	0.0	5.0	11.0	0.0	0.0	0.0	24.0
56-57	0.0	0.0	3.0	6.4	7.9	2.8	2.3	0.0	0.0	23.5
57-58	0.0	0.0	6.0	7.0	4.7	3.1	6.4	0.0	0.0	21.2
58-59	0.0	0.0	6.3	9.6	16.4	2.0	0.0	0.0	0.0	37.4
59-60	0.0	0.0	9.6	16.9	11.4	11.4	0.0	0.0	0.0	59.1
60-61	0.0	0.0	5.5	19.3	9.2	10.7	0.0	0.0	0.0	54.7
61-62	0.0	0.0	1.5	9.0	5.5	8.2	8.4	0.0	0.0	33.6
62-63	0.0	1.0	13.3	11.6	11.6	7.1	1.0	0.0	0.0	59.4
63-64	0.0	0.0	11.2	17.6	7.2	3.9	0.0	0.0	0.0	39.9
64-65	0.0	0.0	1.2	8.6	7.2	3.0	0.0	0.0	0.0	21.2
65-66	0.0	0.0	1.0	14.2	6.9	1.0	1.0	0.0	0.0	23.1
66-67	0.0	0.0	2.6	6.8	1.8	13.5	9.7	0.0	0.0	34.2

TOTAL PRECIPITATION (INCHES)

YR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL
36	1.64	2.57	3.21	5.17	2.27	1.64	3.01	3.47	3.63	4.84	3.38	2.87	36.10
37	11.24	1.87	1.32	2.91	4.87	8.39	5.01	5.03	1.02	3.11	1.43	3.13	49.55
38	2.47	2.07	5.22	4.20	5.36	2.47	4.56	4.73	5.45	6.63	2.60	1.66	48.82
39	2.74	4.92	2.99	4.57	8.7	9.71	3.72	2.69	1.84	1.50	9.96	1.90	59.30
40	1.68	3.75	3.73	7.12	5.75	3.73	2.83	4.68	1.68	1.76	3.68	1.95	47.43
41	2.13	3.37	6.1	3.6	3.95	6.02	5.37	2.36	3.82	5.07	3.18	2.45	38.55
42	1.35	2.72	3.18	6.07	5.70	9.23	4.73	4.17	4.85	2.67	1.78	1.00	39.27
43	2.42	2.42	6.82	4.46	4.21	3.78	1.75	4.08	1.15	1.21	1.55	3.40	35.25
44	1.54	3.18	3.11	5.06	4.76	3.65	3.83	1.11	4.11	2.69	3.57	1.79	44.42
45	1.54	3.18	3.11	5.06	4.76	3.65	3.83	1.11	4.11	2.69	3.57	1.79	44.42
46	4.71	4.20	4.26	1.48	6.59	5.95	5.41	2.94	8.88	2.93	3.45	2.82	40.42
47	5.27	4.68	1.10	5.83	6.65	6.22	3.96	2.81	3.81	1.36	2.37	1.64	40.42
48	2.01	3.10	4.88	5.77	3.76	5.20	4.20	1.21	4.54	2.02	3.91	2.48	42.68
49	5.97	3.12	3.71	2.25	3.42	5.97	5.14	3.08	3.42	1.08	2.94	2.65	47.78
50	9.65	3.12	2.76	4.07	3.51	5.00	1.96	1.71	1.98	4.97	2.93	4.79	50.6
51	4.04	4.31	5.21	3.03	3.65	5.90	2.87	2.21	3.40	1.52	2.04	44.22	
52	6.73	7.18	4.27	4.72	3.13	2.55	7.82	2.75	2.92	1.76	1.49	2.80	38.66
53	4.74	1.77	1.11	3.53	3.74	2.12	4.30	1.60	1.80	5.94	1.04	2.52	32.82
54	2.78	3.70	4.40	4.03	2.10	2.58	2.93	4.00	1.93	3.02	1.93	38.24	
55	1.74	4.42	4.21	3.83	6.98	4.14	2.27	2.93	3.19	1.64	1.33	4.04	43.47
56	1.86	1.26	4.06	3.83	6.98	4.14	2.27	2.93	3.19	1.64	1.33	4.04	43.47
57	2.20	1.26	1.30	1.85	4.95	9.23	1.55	1.50	3.82	1.62	3.59	4.91	42.44
58	1.75	1.75	1.30	4.02	4.65	7.45	3.22	3.11	1.04	2.34	0.91	38.00	40.66
59	6.59	3.27	2.01	3.21	4.10	3.51	4.35	1.84	3.42	6.97	2.44	2.82	43.13
60	2.86	3.42	1.03	1.45	4.78	4.91	4.41	3.06	3.92	2.57	2.78	1.84	33.14
61	1.00	2.84	5.05	5.46	2.69	4.25	6.50	2.32	2.64	1.92	3.69	2.72	