



# LOCAL CLIMATOLOGICAL DATA

U. S. DEPARTMENT OF COMMERCE - C. R. SMITH, Secretary

RICHMOND, VIRGINIA  
BYRD FIELD  
DECEMBER 1968

ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION -- ENVIRONMENTAL DATA SERVICE  
Latitude 37° 30' N Longitude 77° 20' W Elevation (ground) 164 ft. Standard time used: EASTERN

Date	Temperature (°F)						Weather types shown by code 1-9 on dates of occurrence 1 2 3 4 5 6 7 8 9 Fog, Fog, Thunderstorm, Sleet, Hail, Glaze, Duststorm, Smoke, Haze, Blowing Snow	Snow, Sleet, or Ice on ground at (In.)	Precipitation		Avg. station pressure (In.) Elev. 164 feet m.s.l.	Wind			Sunshine		Sky cover (Tenths)		Date			
	Maximum	Minimum	Average	Departure from normal	Average dew point	Degree days (Base 65°)			Total (Water equivalent) (In.)	Snow, sleet (In.)		Resultant direction	Resultant speed (m.p.h.)	Average speed (m.p.h.)	Speed (m.p.h.)	Direction	Total (Hours and tenths)	Percent of possible		Sunrise to sunset	Midnight to midnight	
1	48	28	38	-5	32	27	1	0	.10	0	30.16	04	4.1	5.2	9	E	2.2	22	10	8	1	2
2	64	42	53	10	45	12	1	0	.19	0	29.86	28	3.5	5.2	9	N	7.1	72	5	8	8	2
3	56	42	49	7	43	16	2	8	.02	0	29.84	07	3.7	4.8	22	SE	0.0	0	10	10	3	3
4	60	43	52	10	45	13	1	0	.04	0	29.31	25	7.8	12.4	20	W	0.9	9	10	8	4	5
5	57	34	46	4	21	19	0	0	0	0	29.31	25	12.5	13.7	32	NW	7.8	81	3	1	1	4
6	49	30	40	-1	14	23	0	0	0	0	29.88	25	7.2	7.8	15	W	9.0	93	4	4	6	6
7	44	25	35	-6	21	30	1	0	.16	2.8	29.92	05	4.7	7.6	17	N	0.9	9	9	8	7	7
8	39	23	31	-9	17	34	0	2	0	0	30.01	30	8.9	9.1	21	NW	6.3	65	3	1	1	8
9	40	24	32	-8	13	33	0	1	0	0	30.20	30	9.7	10.2	16	NW	9.7	100	2	1	1	9
10	32	16	24	-16	5	41	0	1	0	0	30.37	01	8.8	9.1	18	NE	7.5	78	7	5	2	10
11	35	12*	24	-16	9	41	0	1	0	0	30.37	35	2.5	3.7	5	NE	9.4	97	3	2	1	11
12	49	17	33	-7	16	32	0	0	0	0	30.23	18	6.0	6.2	13	SW	8.9	93	4	4	4	12
13	63	34	49	9	34	16	0	T	0	0	30.02	19	8.3	8.5	17	SW	4.6	47	8	9	9	13
14	55	31	43	4	42	22	1	0	.50	T	29.67	01	5.3	10.9	26	N	0.0	0	10	10	10	14
15	34	20	27	-12	12	38	0	0	T	T	29.61	33	14.5	15.0	26	NW	5.2	54	9	6	15	15
16	37	17	27	-12	6	38	0	0	0	0	29.74	27	10.1	10.5	22	NW	9.4	97	3	1	1	16
17	45	21	33	-6	13	32	0	0	0	0	29.95	27	7.0	7.8	14	W	9.6	100	4	1	1	17
18	48	19	34	-5	19	31	0	8	0	0	30.01	18	2.9	3.3	9	SW	0.9	9	9	6	18	18
19	59	34	47	8	33	18	0	0	T	T	29.78	19	6.3	6.8	12	SW	0.2	2	10	9	19	19
20	54	31	43	4	33	22	0	0	0	0	29.66	26	8.0	10.1	18	SW	3.8	40	6	4	20	20
21	47	25	36	-3	25	29	0	0	0	0	30.07	01	4.1	5.8	11	N	7.7	80	4	4	4	21
22	38	27	33	-6	32	32	1	8	.65	0	29.99	10	1.6	4.8	9	SE	0.0	0	10	10	22	22
23	53	32	43	4	35	22	1	0	.07	0	29.45	26	8.7	11.1	24	NW	4.1	43	8	6	23	23
24	36	24	30	-9	13	35	0	0	0	0	29.75	28	10.6	11.1	19	NW	8.9	93	2	1	1	24
25	33	13	23	-16	6	42	0	0	0	0	30.02	32	4.4	7.2	17	NW	9.5	99	1	1	1	25
26	31	19	25	-14	10	40	0	0	0	0	30.19	13	2.1	4.3	6	S	1.4	15	9	9	26	26
27	53	27	40	1	23	23	0	0	T	T	29.93	18	7.8	8.1	13	S	6.3	66	8	9	27	27
28	68*	45	57	18	47	8	1	0	.17	0	29.34	21	13.5	14.7	40	SW	2.8	29	8	6	28	28
29	48	28	38	-1	25	27	0	0	0	0	29.66	28	11.3	12.4	25	W	9.6	100	1	1	1	29
30	40	18	29	-10	21	36	0	0	0	0	30.16	05	2.2	4.5	10	NE	8.1	84	8	6	30	30
31	42	32	37	-2	35	28	1	8	.38	0	29.99	20	4.0	4.9	8	NW	0.0	0	10	10	31	31

Sum	1457	833				864	80	Temperature: 2.28	2.8	29.89	27	3.4	8.3	40	SW	161.8	% for month	198	169
Avg.	47.0	26.9	37.0	-2.7	24	26.4	2.5	Dep.	-0.69					Date: 28	Possible	298.4	54	6.4	5.8

\* Extreme for the month. May be the last of more than one occurrence.  
 - Below zero temperatures or negative departure from normal.  
 T In columns 9, 10, and 11 and in the Hourly Precipitation table indicates an amount too small to measure.  
 X Heavy fog — visibility 1/4 mile or less.  
 ‡ ≥ 70° at Alaskan stations. + Also on an earlier date, or dates.

### HOURLY PRECIPITATION (Liquid in Inches)

Date	A. M. Hour ending at												P. M. Hour ending at												Date	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12		
1																	.01	T	.01		.02	T	.04	.02	1	
2		.02	.02	.02	.07	.05	.01										T	.01	.01	T				T	2	
3																									T	3
4		T	.02	T			.01	T	.01	T	T	T													T	4
5																										5
6																										6
7																	.01	.05	.03	.03	.02	.01	.01			7
8																										8
9																										9
10																										10
11																										11
12																										12
13																										13
14							.02	.06	.12	.13	.13	.02		T	T	T	.01	.01	T	T		T	T		14	
15		T	T																							15
16																										16
17																										17
18																										18
19																										19
20																										20
21																										21
22																										22
23		.01	.01	.02	.02	.01	T	T	T					.03	T	.04	.04	.07	.06	.05	.10	.13	.05	.04	.03	23
24																										24
25																										25
26																										26
27																										27
28		T								.02	.11	.04			T										T	28
29																										29
30																	.01	.01	.03	.05	.02	.05	.09	.07	T	30
31							T	T		.02	.02	.01				.01	.01	.03	.05	.02	.05	.09	.07	T		31

Data in columns 6, 12, 13, 14, and 15 are based on 8 observations per day at 3-hour intervals. Wind directions are those from which the wind blows. Resultant wind is the vector sum of wind directions and speeds divided by the number of observations. Figures for directions are tens of degrees from true North; i.e., 09 = East, 18 = South, 27 = West, 36 = North, and 00 = Calm. When directions are in tens of degrees in Col. 17, entries in Col. 16 are fastest observed 1-minute speeds. If the / appears in Col. 17, speeds are gusts. Any errors detected will be corrected and changes in summary data will be annotated in the annual Summary if published.

### AVERAGES BY HOURS

Hour (Local time)	Sky cover (In tenths)	Station press. (In.)	Dry bulb (°F)	Wet bulb (°F)	Rel. hum. %	Dew point (°F)	Wind speed (m.p.h.)	Direction	Resultant wind Speed (m.p.h.)
01	4	29.90	33	30	68	23	6.9	26	3.1
04	4	29.90	32	30	71	24	7.1	25	2.8
07	6	29.91	32	29	71	23	6.4	25	2.8
10	6	29.93	39	34	59	25	9.9	26	4.0
13	7	29.86	45	37	50	25	10.9	27	4.6
16	6	29.85	45	37	48	24	9.7	27	4.6
19	3	29.88	38	34	39	24	7.6	29	3.0
22	3	29.89	36	32	64	24	7.5	29	2.9

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