



# LOCAL CLIMATOLOGICAL DATA

U. S. DEPARTMENT OF COMMERCE - MAURICE H. STANS, Secretary

RICHMOND, VIRGINIA  
BYRD FIELD  
MARCH 1969

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			Precipitation		Avg. station pressure (In.)	Wind			Sunshine		Sky cover (Tenths)		Date						
	Maximum	Minimum	Average	Departure from normal	Degree days (Base 65°)		Fog	Thunderstorm	Sleet	Snow	Snow, sleet, or ice on ground at 07AM (In.)	Water equivalent (In.)		Snow, sleet (In.)	Resultant direction	Resultant speed (m.p.h.)	Average speed (m.p.h.)	Fastest mile	Hours and tenths	Percent of possible		Sunrise to sunset	Midnight to midnight				
					Heating	Cooling							1-9 on dates of occurrence											123 456 789	13	14	15
1	34	31	33	-10	31	32	0	1			.70	7.0	29.81	04	10.4	24	N	0.0	0	10	10	1					
2	37	30	34	-9	29	31	0	1			.11	.9	29.67	36	15.2	15.5	26	N	0.0	0	10	10	2				
3	47	28	38	-5	23	27	0				0	0	29.72	33	7.7	8.1	15	NW	10.2	89	4	4	3				
4	48	28	38	-6	20	27	0				0	0	29.71	35	7.5	7.9	17	NW	10.4	91	6	5	4				
5	47	26	37	-7	13	28	0				0	0	29.91	36	5.3	7.5	14	N	11.5	100	1	1	5				
6	51	28	40	-5	30	25	0	1			.51	0	29.65	18	4.7	7.2	15	NW	0.3	3	10	9	6				
7	48	33	41	-4	29	24	0	1	4		.34	1.2	29.37	33	9.9	12.7	22	NW	9.0	78	6	6	7				
8	53	24	39	-6	27	26	0				0	0	29.68	20	4.1	5.0	13	SW	10.2	88	7	6	8				
9	39	28	34	-12	32	31	0	1			.42	2.8	29.37	02	7.3	8.6	19	NE	0.0	0	10	10	9				
10	44	25	35	-11	23	30	0	1			0	0	29.50	31	9.4	10.2	18	NW	10.1	86	5	5	10				
11	39	23	31	-15	11	34	0				0	0	29.57	31	13.1	13.8	25	NW	11.5	97	4	2	11				
12	45	20	33	-14	10	32	0				0	0	29.72	31	7.9	9.5	18	NW	11.8	100	0	0	12				
13	50	21	36	-11	18	29	0				0	0	29.77	35	6.0	6.5	17	NW	11.8	100	0	0	13				
14	51	20*	36	-11	18	29	0				0	0	29.93	30	8.7	9.1	19	W	11.7	99	1	0	14				
15	49	24	37	-11	17	28	0				0	0	30.06	33	8.0	9.5	17	NW	11.9	100	1	1	15				
16	58	21	40	-8	19	25	0				0	0	30.07	25	2.3	4.5	14	NW	11.1	93	4	3	16				
17	65	25	45	-3	24	20	0				0	0	30.03	12	2.3	4.6	8	SW	11.9	99	1	3	17				
18	62	38	50	1	35	15	0				T	0	29.84	19	3.4	4.8	6	S	9.2	26	10	10	18				
19	68	45	57	8	38	8	0				.12	0	29.67	03	6.8	8.2	17	NE	9.6	79	2	4	19				
20	73	34	54	5	40	11	0	1			0	0	29.84	14	7.7	8.5	17	S	10.6	87	7	5	20				
21	72	49	61	11	38	4	0				0	0	29.73	23	9.9	12.5	21	SW	9.7	79	7	6	21				
22	61	32	47	-3	23	18	0				0	0	29.94	34	4.8	5.6	16	NW	11.1	91	4	3	22				
23	63	27	45	-5	25	20	0				0	0	30.01	15	4.6	4.9	14	SE	10.9	89	3	4	23				
24	61	41	51	0	46	14	0	1	3		.92	0	29.62	14	9.5	9.9	20	SE	0.0	0	10	10	24				
25	64	46	55	4	46	10	0	1	3		.73	0	29.31	26	9.9	11.1	26	W	5.9	48	7	7	25				
26	53	38	46	-5	29	19	0				T	0	29.55	26	11.0	11.4	25	NW	9.2	74	7	4	26				
27	51	32	42	-9	23	23	0				0	0	29.80	26	9.5	10.1	14	W	8.7	70	5	3	27				
28	59	24	42	-10	23	23	0	1			0	0	30.07	21	4.8	6.8	16	SW	12.3	100	0	0	28				
29	75*	43	59	7	39	6	0	1			.10	0	29.98	22	7.9	11.4	22	SW	8.9	71	5	5	29				
30	58	34	46	-6	36	19	0	1			0	0	30.12	02	2.4	7.1	19	NE	8.8	70	6	5	30				
31	51	25	38	-15	18	27	0				0	0	30.25	36	2.0	6.0	13	NW	12.6	100	1	1	31				
Sum	Sum	Sum	Sum	Sum	Total	Total	Total	Number of days			Total	Total	For the month:			Total	%	Sum	Sum				Sum	Sum			
1676	943				695	0		Precipitation			3.95	11.9	29.78	31	2.9	8.7	26	W	265.1	for	154	142					
Avg.	Avg.	Avg.	Dep.	Avg.	Dep.	Dep.	Precipitation			Dep.							Date: 25+	Possible	month	Avg.	Avg.						
54.1	30.4	42.3	-5.4	27	149		Snow, sleet			0.53								370.9	71	5.0	4.6						
Season to date							Snow, sleet			Greatest in 24 hours and dates			Greatest depth on ground of snow, sleet or ice and date														
Number of days							Total			Precipitation			Snow, Sleet														
Maximum Temp.							Minimum Temp.			Thunderstorms																	
≤ 32°							≥ 90° †			≤ 32°			≤ 0°			Heavy fog X											
0							0			21			0			270											

### HOURLY PRECIPITATION (Water equivalent 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						T	T	T		.04	.06	.06	.06	.06	.04	.04	.04	.04	.03	.03	.04	.04	.04	.04	1	
2	.06	.02	.01	.01	.01	T	T	T																	2	
3																									3	
4																									4	
5																									5	
6																									6	
7	.06	.07	.04	.04	.05	.05	.03	T											.01	.03	.07	.11	.14	.15	7	
8																									8	
9					T	T		T				.03	.08	.06	.07	.05	.06	.05	.02						9	
10																									10	
11																									11	
12																									12	
13																									13	
14																									14	
15																									15	
16																									16	
17																									17	
18																									18	
19	.01	T	T	.01	.04	.02	.04	T														T	T	T	19	
20																									20	
21																									21	
22																									22	
23																									23	
24	.10	.30	.16	.07	.06	.04	.06	.03	T	.02	.02	.01	T	.02	.04	.02	T	T	T	T	T		.11	.59	24	
25																									25	
26																									26	
27																									27	
28																									28	
29																						.06	.02	T	.02	29
30																									30	
31																									31	

\* Extreme temperatures for the month. May be the last of more than one occurrence.

- Below zero temperature or negative departure from normal.

† ≥ 70° at Alaskan stations.

+ Also on an earlier date, or dates.

X Heavy fog restricts visibility to 1/4 mile or less.

T In the Hourly Precipitation table and in columns 9, 10, and 11 indicates an amount too small to measure.

The season for degree days begins with July for heating and with January for cooling.

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.

### SUMMARY BY HOURS

Subscription Price: Local Climatological Data \$1.00 per year including annual Summary if published. Single copy: 10 cents for monthly Summary; 15 cents for annual Summary. Checks or money orders should be made payable and remittances and correspondence should be sent to the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402.

I certify that this is an official publication of the Environmental Science Services Administration, and is compiled from records on file at the National Weather Records Center, Asheville, North Carolina 28801.

*William J. Haggard*

Director, National Weather Records Center

Hour (Local time)	AVERAGES										Resultant wind	
	Sky cover (in tenths)	Station pressure (In.)	Dry bulb (°F)	Wet bulb (°F)	Rel. hum. (%)	Dew point (°F)	Wind speed (m.p.h.)	Direction	Speed (m.p.h.)	Direction	Speed (m.p.h.)	
01	4	29.78	37	33	69	27	7.3	34	1.2			
04	4	29.77	35	32	74	27	7.5	34	2.			

OBSERVATIONS AT 3-HOUR INTERVALS

Table with columns for HOUR, SKY COVER, CEILING, WIND, WEATHER, DRY BULB, WET BULB, REL. HUM., DEW PT., DIR., WIND SPEED, WIND DIRECTION, and WIND VELOCITY. It is organized into 31 days, each with 24 3-hour intervals.

NOTES

CEILING COLUMN-- UNL indicates an unlimited ceiling.

CIR indicates a cirriform cloud ceiling of unknown height.

WEATHER COLUMN--

- List of weather codes: T (Tornado), TS (Thunderstorm), Q (Squall), R (Rain), RW (Rain showers), ZR (Freezing rain), L (Drizzle), LZ (Freezing drizzle), S (Snow), SZ (Snow pellets), SP (Snow showers), IC (Ice crystals), SW (Snow showers), SG (Snow grains), E (Sleet), A (Hail), AP (Small hail), F (Fog), IF (Ice fog), GF (Ground fog), BD (Blowing dust), BN (Blowing sand), BS (Blowing snow), BY (Blowing spray), K (Smoke), H (Haze), D (Dust).

WIND COLUMNS--

Directions are those from which the wind blows, indicated in tens of degrees from true North; i. e., 09 for East, 18 for South, 27 for West. Entry of 00 in the direction column indicates calm. Speed is expressed in knots; multiply by 1.15 to convert to miles per hour.

ADDITIONAL DATA Other observational data contained in records on file can be furnished at cost via microfilm or microfiche copies of the original records. Inquiries as to availability and costs should be addressed to: Director, National Weather Records Center, Federal Building, Asheville, N. C. 28801

STATION: RICHMOND VA YEAR & MONTH: 69 03