



LOCAL CLIMATOLOGICAL DATA

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
ENVIRONMENTAL DATA SERVICE

RICHMOND, VIRGINIA
BYRD FIELD
FEBRUARY 1971

Latitude 37° 30' N Longitude 77° 20' W Elevation (ground) 164 ft. Standard time used: EASTERN WBAN #13740

Date	Temperature °F							Weather types on dates of occurrence 1 Fog 2 Heavy fog x 3 Thunderstorm 4 Ice pellets 5 Hail 6 Glaze 7 Duststorm 8 Smoke, Haze 9 Blowing snow	Snow-ice pellets or ice on ground at 07AM in.	Precipitation		Avg. station pressure In. Elev. 177 feet m.s.l.	Wind			Sunshine		Sky cover Tenths		Date									
	Maximum	Minimum	Average	Departure from normal	Average dew point	Heating	Cooling			Water equivalent In.	Snow, ice pellets In.		Resultant direction	Resultant speed m.p.h.	Average speed m.p.h.	Fastest m.p.h.	Hours and tenths	Percent of possible	Sunrise to sunset		Midnight to midnight								
1	25	9	17	-22	-1	48	0	0	0	0	29.95	28	8.0	9.4	20	NW	10.3	100	1	2	1								
2	28	3*	16*	-23	1	49	0	0	0	0	30.36	29	3.1	5.3	12	NW	8.9	85	1	1	2								
3	28	18	23	-16	9	42	0	0	0	0	30.50	09	5.5	6.0	9	SE	1.0	9	10	10	3								
4	32	22	27	-12	26	38	0	1	4 6	0	30.19	01	7.7	7.9	9	N	0.0	0	10	10	4								
5	46	30	38	-1	34	27	0	1	2 6 8	0	29.71	21	5.0	6.9	19	SW	0.0	0	10	9	5								
6	47	30	39	0	33	26	0	2	8	0	29.83	17	4.9	5.6	10	SW	5.7	54	7	6	6								
7	44	28	36	-4	32	29	0	1	3	0	29.79	01	7.8	9.9	18	N	0.0	0	10	8	7								
8	36	34	35	-5	34	30	0	1		0	29.43	32	2.3	7.6	15	N	0.0	0	10	10	8								
9	36	23	30	-10	15	35	0	0		0	29.67	26	12.6	13.4	22	W	10.1	95	2	2	9								
10	32	15	24	-16	8	41	0	0		0	30.06	25	6.2	8.9	16	W	10.6	100	0	0	10								
11	49	20	35	-5	16	30	0	0		0	30.12	19	9.5	9.8	17	S	10.2	95	5	5	11								
12	57	29	43	3	29	22	0	0		0	29.93	18	9.8	10.8	20	SW	8.6	81	5	7	12								
13	59	31	45	5	46	20	0	1	3	0	29.20	17	9.3	12.8	40	SW	0.4	3	10	10	13								
14	39	26	33	-7	16	32	0	1		0	29.57	27	12.1	12.9	25	NW	10.8	100	0	3	14								
15	47	22	35	-5	18	30	0	0		0	29.82	12	1.3	4.9	8	NE	4.4	40	8	5	15								
16	46	24	35	-5	23	30	0	0	8	0	30.05	02	4.1	5.5	10	NE	10.9	100	3	1	16								
17	57	23	40	0	29	25	0	0	8	0	30.10	21	6.6	7.2	20	SW	8.5	78	4	1	17								
18	66	28	47	7	27	18	0	0		0	30.11	21	2.4	5.0	11	SW	10.9	100	2	1	18								
19	67	38	53	13	33	12	0	0	8	0	29.98	14	2.5	6.5	10	SE	4.3	39	9	8	19								
20	70	51	61	21	49	4	0	0	8	0	29.70	21	13.8	14.7	28	SW	2.9	26	9	7	20								
21	62	39	51	11	42	14	0	0		0	29.83	12	3.6	8.2	12	NW	6.8	61	7	6	21								
22	50	46	48	7	45	17	0	0	2	0	29.69	08	6.1	6.6	10	E	0.0	0	10	10	22								
23	57	38	48	7	36	17	0	0	2	0	29.40	24	10.0	10.8	27	SW	6.5	59	4	3	23								
24	51	30	41	0	26	24	0	0		0	29.76	28	7.1	9.4	14	N	7.3	65	4	3	24								
25	58	27	43	2	30	22	0	0	8	0	29.83	21	5.4	6.9	12	W	3.5	32	9	6	25								
26	66	32	49	7	38	16	0	0	1	8	0	29.83	16	5.4	6.2	19	SW	2.0	17	10	7	26							
27	73*	53	63*	21	53	2	0	0	1	8	0	29.62	23	11.5	11.7	17	SW	8.3	74	8	7	27							
28	66	46	56	14	25	9	0	0		0	29.81	25	9.6	10.4	21	SW	9.6	85	5	5	28								
Sum	1394	815				709	Total	Total			Total	Total	For the month:				Total	%	Sum	Sum									
Avg.	49.8	29.1	Avg.	39.5	Dep.	-0.4	28	6			4.37	2.0	29.85	23	3.4	8.6	40	SW	162.5	for	175	155							
										Precipitation										Date: 13		Possible month		Avg.					
										Snow, ice pellets										302.7		54		6.3		5.5			
										Season to date										3006		0							
										Thunderstorms										2									
										Heavy fog										X 4		1.68		7-8		1.5		3-4	
										Clear										7		Partly cloudy		8		Cloudy		13	

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																								1	
2																								2	
3																								3	
4	.02	.02	.03	.03	.01	.01	T	T	T	T	.07	.10	.03	.03	T	.01	T	T	.02	.03	.02	.03	.03	4	
5		.02	T	T	T	.01	.01	T																5	
6																								6	
7																								7	
8	T																							8	
9																								9	
10																								10	
11																								11	
12																								12	
13	T	T	.04	.13	.05	T	T	T	.02	.03	.10	.18	.01	T	.12	.06	.01	T	T	.01	.01	.01	.01	13	
14	T	T																						14	
15																								15	
16																								16	
17																								17	
18																								18	
19							.03	T																19	
20																								20	
21																								21	
22																								22	
23																								23	
24																								24	
25																								25	
26																								26	
27	.08																							27	
28																								28	

* 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 ¼ 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.

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I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina 28801.

William H. Haggard
 Director, National Climatic Center

SUMMARY BY HOURS

Hour, Local time	Sky cover Tenth	Station pressure In.	Temperature				Relative humidity %	Wind speed m.p.h.	Direction	Resultant wind Speed m.p.h.
			Air °F	Wet bulb °F	Dew Pt. °F	Wind speed m.p.h.				
01	5	29.85	36	33	28	75	7.0	24	1.9	
04	4	29.86	34	31	26	76	6.7	25	2.2	
07	6	29.88	32	30	26	80	6.4	22	2.6	
10	6	29.90	40	35	27	63	9.5	23	4.0	
13	7	29.85	47	39	28	53	10.6	23	5.2	
16	7	29.80	49	41	29	51	11.6	23	5.6	
19	5	29.82	42	37	29	61	8.7	20	3.2	
22	5	29.85	39	35	29	70	8.3	23	2.9	

OBSERVATIONS AT 3-HOUR INTERVALS

HOUR	SKY COVER			VISI- BILITY	WEATHER	TEMPERATURE				WIND				SKY COVER	VISI- BILITY	WEATHER	TEMPERATURE				WIND				SKY COVER	VISI- BILITY	WEATHER	TEMPERATURE				WIND																																																															
	Terms	Clouds	in %			AIR °F	WET BULB °F	DEW PT. °F	REL. HUM. %	DIR.	SPEED	Force	AIR °F				WET BULB °F	DEW PT. °F	REL. HUM. %	DIR.	SPEED	Force	AIR °F	WET BULB °F				DEW PT. °F	REL. HUM. %	DIR.	SPEED	Force	AIR °F	WET BULB °F	DEW PT. °F	REL. HUM. %	DIR.	SPEED	Force																																																								
DAY 01																																DAY 02																																DAY 03																															
01	0	UNL	12			19	18	13	77	32	6	0	UNL	15			07	06	-01	69	00	0	10	UNL	12			19	16	05	54	06	5																																																														
04	0	UNL	10			15	12	00	51	35	6	0	UNL	15			12	10	00	58	30	6	6	10	UNL	12			18	15	05	57	08	6																																																													
07	0	UNL	10			10	09	01	67	23	9	0	UNL	15			04	04	00	83	20	3	3	10	UNL	12			18	16	08	55	07	6																																																													
10	0	UNL	12			18	14	-02	41	25	13	0	UNL	12			20	16	-01	39	32	7	10	UNL	12			21	18	08	57	09	5																																																														
13	4	UNL	12			22	17	-01	36	28	10	0	UNL	12			24	19	-01	37	22	4	10	UNL	12			26	21	08	46	14	5																																																														
16	2	UNL	12			25	19	-04	28	27	13	3	UNL	12			28	21	00	30	28	10	10	UNL	12			27	22	07	43	11	7																																																														
19	0	UNL	12			21	16	-06	30	28	6	6	UNL	12			23	18	03	42	36	4	10	UNL	12			27	22	07	43	12	5																																																														
22	0	UNL	12			19	14	-06	32	31	7	7	UNL	12			19	17	09	65	09	3	10	UNL	12			22	22	20	92	08	3																																																														
DAY 04																																DAY 05																																DAY 06																															
01	10	18	3		SIP	24	22	20	92	36	7	10	2	0	8	30	30	29	96	35	4	10	1	0	4	35	35	35	100	31	7																																																																
04	10	5	3		IRIPF	22	24	22	92	01	6	10	2	0	8	33	33	30	96	19	3	10	0	0	4	33	33	33	100	27	3																																																																
07	10	5	3		ZLF	25	23	23	92	01	6	10	2	0	12	32	32	31	96	17	4	10	0	0	2	31	31	31	100	36	6																																																																
10	10	5	4		ZLF	27	27	25	92	01	7	10	1	0	2	32	32	32	100	14	5	10	3	0	6	32	32	32	100	00	0																																																																
13	10	4	1		ZRF	30	30	29	96	03	7	10	3	1	8	33	33	33	100	22	7	9	7	6	F	36	36	35	96	19	7																																																																
16	10	6	1		RF	32	31	30	92	01	8	10	7	5	8	43	43	42	96	22	8	4	UNL	5	F	47	42	35	63	14	7																																																																
19	10	4	1		RF	31	31	30	96	35	8	0	UNL	7	8	41	40	39	93	21	8	0	UNL	7	F	34	33	32	92	15	6																																																																
22	10	2	1		ZLF	31	31	30	96	34	6	10	2	1	8	37	37	36	96	24	9	0	UNL	10	F	34	31	27	76	08	3																																																																
DAY 07																																DAY 08																																DAY 09																															
01	0	UNL	12			31	29	25	78	10	2	10	5	1	8	35	35	34	96	33	10	9	20	10	3	35	34	32	89	24	15																																																																
04	0	UNL	12			29	28	26	89	03	3	10	10	3	8	35	34	33	92	35	5	0	UNL	10	3	31	27	18	59	25	15																																																																
07	0	UNL	12			30	29	27	89	35	5	10	14	3	8	34	33	32	92	22	3	0	UNL	10	3	27	23	14	58	26	12																																																																
10	10	50	7			37	34	29	73	05	7	10	8	3	8	36	35	33	89	34	5	0	UNL	12	3	30	25	12	47	27	13																																																																
13	10	20	7			44	40	36	74	08	10	10	6	2	8	36	35	34	92	07	10	0	UNL	12	3	35	28	14	42	28	14																																																																
16	10	6	2		RF	43	43	42	96	36	9	10	5	2	8	36	36	35	96	10	4	7	40	12	3	35	28	13	40	25	10																																																																
19	10	4	2		RF	37	37	37	100	36	18	10	4	1	8	36	36	35	96	27	6	3	UNL	12	3	30	24	11	45	25	6																																																																
22	10	4	4		RF	36	36	35	96	33	15	10	5	5	8	36	35	34	92	23	10	0	UNL	15	3	26	21	08	46	31	8																																																																
DAY 10																																DAY 11																																DAY 12																															
01	7	120	12			22	21	16	78	36	6	0	UNL	12			24	21	11	58	22	6	8	250	10	33	29	20	59	19	7																																																																
04	0	UNL	12			19	16	05	54	33	8	0	UNL	12			22	20	13	68	19	4	4	UNL	10	3	30	27	20	65	19	7																																																															
07	0	UNL	12			15	13	06	67	24	6	1	UNL	10			21	19	13	71	17	5	6	UNL	10	3	29	27	23	78	20	6																																																															
10	0	UNL	12			22	18	04	46	24	8	3	UNL	10			37	29	14	39	19	11	7	UNL	7	4	43	37	28	56	20	10																																																															
13	0	UNL	12			28	22	06	39	25	8	5	UNL	10			46	35	17	31	18	12	9	250	7	54	42	25	33	18	12																																																																
16	0	UNL	12			31	24	07	36	23	10	5	UNL	10			49	38	19	30	18	13	7	UNL	10	7	57	46	32	40	19	13																																																															
19	0	UNL	12			29	23	09	45	21	9	8	UNL	10			43	33	19	41	17	9	4	UNL	10	8	48	43	36	63	13	7																																																															
22	0	UNL	12			26	22	09	48	21	7	10	UNL	10			37	31	20	50	20	8	10	40	10	R	55	49	44	67	14	13																																																															
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01	10	30	12		RF	55	50	46	72	14	13	10	20	10	5	31	31	31	100	26	8	0	UNL	12	3	23	21	15	71	15	4																																																																
04	10	5	4		F	51	50	50	96	12	8	10	250	12	3	30	27	20	66	28	13	3	UNL	12	3	24	21	13	63	12	3																																																																
07	10	40	4		F	51	50	50	96	11	6	3	UNL	12	3	27	25	18	69	25	12	9	50	12	3	25	23	17	72	11	3																																																																
10	10	40	3		RF	53	53	53	100	12	8	0	UNL	12	3	31	24	14	49	27	14	4	UNL	10	3	29	25	15	85	17	6																																																																
13	10	10	7			58	57	56	93	15	13	0	UNL	15			36	29	14	40	29	13	12	UNL	12	3	39	32	18	43	23	7																																																															
16	10	20	2		RF	50	48	46	86	21	15	0	UNL	15			39	30	12	33	28	13	8	100	12	4	47	37	20	34	01	3																																																															
19	10	20	7			38	36	33	82	21	14	0	UNL	15			32	26	12	43	21	7	9	75	12	4	40	34	24	53	07	5																																																															
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01	0	UNL	10			31	28	23	72	06	4	0	UNL	5	H	27	26	23	85	00	0	0	UNL	7	3	37	35	33	85	36	3																																																																
04	0	UNL	10			26	25	22	85	36	4	0	UNL	5	H	26	26	24	92	00	0	0	UNL	7	3	30	29	28	92	12	3																																																																
07	0	UNL	8			25	24	21	85	35	5	0	UNL	4	KH	23	22	20	88	00	0	1	UNL	7	3	29	29	28	96	21	4																																																																
10	0	UNL	8			34	30	22	62	02	6	0	UNL	3	KH	37	34	29	73	20	11	2	UNL	10	3	53	43	30	41	24	5																																																																
13	6	250	7			42	35	24	49	35	3	5	UNL	5	KH	51	42	31	46	21	12	3	UNL	15	3	64	46	21	19	36	4																																																																
16	3	UNL	7			45	34	23	42	36	6	9	70	5	KH	55	45	33	43	21	10	3	UNL	15	3	65	46	21	19	22	7																																																																
19	0	UNL	10			37	33	25	62	06	5	0	UNL	7	KH	52	45	36	55	20	10	0	UNL	12	3	47	40	30	52	16	3																																																																
22	0	UNL	7			29	28	24	82	13	4	0	UNL	7		48	43	37	66	27	7	0	UNL	12	3	38	34	28	67	20	6																																																																
DAY 19																																DAY 20																																DAY 21																															
01	0	UNL	12			43	36	24	47	19	7	10	60	6	H	53	44	34	49	18	8	0	UNL	15	3	57	52	47	69	32	7																																																																
04	2	UNL	12			40	34	25	55	21	7	10	55	8		60	55	50	70	19	12	0	UNL	15	3	47	44	41	80	26	3																																																																
07	0	UNL	12			39	34	27	62	08	9	10	70	8	RW	57	55	53	87	19	11	3	UNL	15	3	41	40	38	89	16	5																																																																
10	10	200	8			54	44	33	45	34	4	9	35	10		60	57	54	81	20	11	4	UNL	15	3	56	48	40	55	05	7																																																																
13	8	UNL																																																																																													