

LOCAL CLIMATOLOGICAL DATA Monthly Summary

R.E. BYRD INTERNATIONAL AP.



LATITUDE 37° 30' N LONGITUDE 77° 20' W ELEVATION (GROUND) 164 FEET TIME ZONE EASTERN 13740

DATE	TEMPERATURE °F						DEGREE DAYS BASE 65°F		WEATHER TYPES 1 FOG 2 HEAVY FOG 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 0700 INCHES	PRECIPITATION		AVERAGE STATION PRESSURE IN INCHES ELEV. 177 FEET ABOVE M.S.L.	WIND (M.P.H.)				SUNSHINE MINUTES	SKY COVER (TENTHS)				
	MAXIMUM	MINIMUM	AVERAGE	DEPARTURE FROM NORMAL	AVERAGE DEW POINT	HEATING (SEASON BEGINS WITH JUL)	COOLING (SEASON BEGINS WITH JAN)	WATER EQUIVALENT (INCHES)			SNOW, ICE PELLETS (INCHES)	RESULTANT DIR.		RESULTANT SPEED	AVERAGE SPEED	PEAK GUST	FATEST 1-MIN		PERCENT OF TOTAL POSSIBLE	SUNRISE TO SUNSET	NOON TO MIDNIGHT		
1	2	3	4	5	6	7A	7B	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
01	53	38	46	-7	26	19	0		0	0.00	0.0	29.840	32	11.3	11.5	32	NW	18	32	508	67	6	3
02	61	30	46	-7	32	19	0		0	0.00	0.0	30.090	18	6.1	8.2	21	S	15	19	658	87	7	6
03	73	48	61	7	49	4	0		0	0.11	0.0	29.850	21	14.2	15.0	38	SW	28	22	506	66	9	8
04	81	60	71	17	58	0	6		0	0.0	0.0	29.745	21	17.1	18.3	41	SW	29	19	639	84	9	9
05	73	51	62	8	56	3	0	1	0	0.55	0.0	29.770	23	5.9	12.5	28	SW	17	28	282	37	10	9
06	55	44	50	-5	44	15	0	1	0	0.35	0.0	29.720	32	3.9	7.3	32	NW	23	33	494	64	9	8
07	45	33	39*	-16	37	26	0	1	0	1.05	T	29.630	36	4.7	9.5	29	NE	17	34	0	0	10	8
08	51	34	43	-13	39	22	0	1	0	0.05	0.0	29.620	21	9.7	10.8	30	SW	17	22	568	73	10	8
09	60	45	53	-3	35	12	0		0	0.00	0.0	29.790	28	11.6	12.5	29	NW	17	31	627	81	9	8
10	53	40	47	-9	28	18	0		0	0.00	0.0	30.000	35	6.8	9.7	23	N	17	06	477	61	10	10
11	53	36	45	-12	24	20	0		0	T	T	30.110	05	5.2	8.2	24	NE	15	04	715	92	3	3
12	59	29*	44	-13	30	21	0		8	0.00	0.0	30.130	16	5.0	6.7	23	SE	16	14	670	86	3	3
13	68	33	51	-6	39	14	0	1	8	0.00	0.0	30.010	34	2.2	7.2	29	NW	20	33	726	92	1	1
14	67	36	52	-6	40	13	0		0	T	0.0	30.010	12	5.4	8.2	20	SE	14	12	668	85	6	6
15	56	50	53	-5	53	12	0	1	0	1.54	0.0	29.740	03	7.2	10.1	22	E	17	08	0	0	10	10
16	67	44	56	-2	44	9	0	1	8	T	0.0	29.820	32	7.6	9.5	28	NW	15	32	712	90	4	4
17	79	42	61	2	49	4	0	2	0	0.00	0.0	29.910	21	9.6	10.6	33	SW	20	23	712	90	3	2
18	88*	55	72*	13	53	0	7		0	0.00	0.0	29.730	23	4.9	10.4	30	N	22	02	647	81	5	4
19	62	45	54	-5	50	11	0	1	8	T	0.0	29.790	03	8.4	8.9	25	NE	18	01	505	63	9	7
20	67	42	55	-4	35	10	0		0	0.00	0.0	29.930	05	6.3	8.4	23	NE	16	03	787	98	2	3
21	72	37	55	-5	37	10	0		0	0.00	0.0	29.820	10	1.3	3.8	14	N	9	08	746	93	1	2
22	71	46	59	-1	37	6	0		0	0.00	0.0	29.770	36	8.2	9.5	33	N	15	35	645	80	5	5
23	67	40	54	-6	34	11	0		0	0.00	0.0	29.815	04	3.9	6.7	17	NW	12	04	722	96	1	1
24	74	40	57	-4	41	8	0		0	0.00	0.0	29.800	35	2.5	5.4	16	NW	10	02	725	90	7	5
25	82	42	62	1	52	3	0	1	0	0.03	0.0	29.715	23	2.9	5.3	23	SW	12	29	613	76	8	7
26	80	62	71	10	60	0	6	1	0	0.03	0.0	29.640	34	5.5	8.6	18	NE	14	03	602	74	8	7
27	85	53	69	8	60	0	4	1 3	8	0.08	0.0	29.620	26	2.0	6.5	25	N	12	35	535	66	9	8
28	75	55	65	3	50	0	0	1	0	0.02	0.0	29.690	08	3.1	9.5	25	SE	20	16	703	86	8	7
29	71	52	62	0	58	3	0	1	8	0.15	0.0	29.750	16	3.4	5.9	14	NW	10	32	128	16	10	10
30	77	61	69	7	63	0	4	2	8	0.31	0.0	29.850	08	3.1	6.2	15	SE	10	15	571	69	9	9
SUM	SUM					TOTAL	TOTAL			TOTAL	TOTAL	FOR THE MONTH:				TOTAL	%	SUM	SUM				
2025	1323					293	27			4.27	T	29.820	28	1.0	9.0	41	SW	29	19	16941	FOR	201	181
AVG.	AVG.	AVG.	DEP.	AVG.	DEP.	DEP.				PRECIPITATION						DATE: 4	DATE: 4			POSSIBLE MONTH	AVG.	AVG.	
67.5	44.1	55.8	-2.1	43.7	6.7	14				1.37										23701	71	6.7	6.0
NUMBER OF DAYS						SEASON TO DATE	SNOW, ICE PELLETS	GREATEST IN 24 HOURS AND DATES				GREATEST DEPTH ON GROUND OF											
MAXIMUM TEMP.						TOTAL		≥ 1.0 INCH	PRECIPITATION				SNOW, ICE PELLETS										
≥ 90°	≤ 32°	≤ 32°	≤ 0°	DEP.	DEP.			THUNDERSTORMS	1	PRECIPITATION	SNOW, ICE PELLETS												
0	0	2	0	-44	41			HEAVY FOG	2	1.54	15	trace	11+										
								CLEAR	7	PARTLY CLOUDY	7	CLOUDY	16										

APR 1989
 RICHMOND, VA

* EXTREME FOR THE MONTH - LAST OCCURRENCE IF MORE THAN ONE.
 T TRACE AMOUNT.
 + ALSO ON EARLIER DATE(S).
 HEAVY FOG: VISIBILITY 1/4 MILE OR LESS.
 BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA.

DATA IN COLS 6 AND 12-15 ARE BASED ON 21 OR MORE OBSERVATIONS AT HOURLY INTERVALS. RESULTANT WIND IS THE VECTOR SUM OF WIND SPEEDS AND DIRECTIONS DIVIDED BY THE NUMBER OF OBSERVATIONS. COLS 16 & 17: PEAK GUST - HIGHEST INSTANTANEOUS WIND SPEED. ONE OF TWO WIND SPEEDS IS GIVEN UNDER COLS 18 & 19: FASTEST MILE - HIGHEST RECORDED SPEED FOR WHICH A MILE OF WIND PASSES STATION (DIRECTION IN COMPASS POINTS). FASTEST OBSERVED ONE MINUTE WIND - HIGHEST ONE MINUTE SPEED (DIRECTION IN TENS OF DEGREES). ERRORS WILL BE CORRECTED IN SUBSEQUENT PUBLICATIONS.

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NATIONAL ENVIRONMENTAL SATELLITE, DATA AND INFORMATION SERVICE

NATIONAL CLIMATIC DATA CENTER ASHEVILLE NORTH CAROLINA

Kenneth D. Walden
 DIRECTOR NATIONAL CLIMATIC DATA CENTER

OBSERVATIONS AT 3-HOUR INTERVALS

APR 1989
RICHMOND, VA 13740

HOUR L. S. T.	VISI- BILITY				TEMPERATURE				WIND				VISI- BILITY				TEMPERATURE				WIND																		
	SKY COVER (TENTHS)	CEILING IN HUNDREDS OF FEET		WHOLE MILES	16THS MILE	WEATHER	AIR OF	WET BULB OF	DEW POINT OF	REL HUMIDITY %	DIRECTION	SPEED (KNOTS)	SKY COVER (TENTHS)	CEILING IN HUNDREDS OF FEET		WHOLE MILES	16THS MILE	WEATHER	AIR OF	WET BULB OF	DEW POINT OF	REL HUMIDITY %	DIRECTION	SPEED (KNOTS)	SKY COVER (TENTHS)	CEILING IN HUNDREDS OF FEET		WHOLE MILES	16THS MILE	WEATHER	AIR OF	WET BULB OF	DEW POINT OF	REL HUMIDITY %	DIRECTION	SPEED (KNOTS)			
		01-04	05-09											10-14	15-19											20-24	25-29										30-34	35-39	40-44
APR 1st																																							
01	2	UNL	10				46	39	30	54	32	9	0	UNL	10					37	33	27	67	02	5	10	250	10						52	46	39	61	18	12
04	2	UNL	10				44	38	30	58	32	7	0	UNL	10					31	30	27	85	00	0	10	120	8						48	46	43	83	18	8
07	3	UNL	10				44	36	24	45	31	10	4	UNL	10					33	32	29	85	24	3	10	50	8						51	50	48	90	19	10
10	5	UNL	10				48	38	23	37	32	14	7	UNL	7					50	42	30	46	16	5	10	80	8						57	55	53	87	24	17
13	8	60	10				48	38	23	37	33	14	7	UNL	7					55	44	30	39	22	7	9	250	8						66	59	53	63	22	24
16	7	65	10				50	39	23	35	32	16	8	UNL	10					61	48	34	37	19	12	8	UNL	10						72	62	54	53	21	19
19	0	UNL	10				48	38	23	37	33	8	10	250	10					55	46	35	47	17	8	4	UNL	10						65	58	53	65	22	7
22	0	UNL	10				42	36	25	51	30	6	8	UNL	10					48	44	40	74	12	7	4	UNL	10						59	56	53	81	16	5
APR 2nd																																							
APR 3rd																																							
APR 4th																																							
APR 5th																																							
APR 6th																																							
APR 7th																																							
APR 8th																																							
APR 9th																																							
APR 10th																																							
APR 11th																																							
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APR 13th																																							
APR 14th																																							
APR 15th																																							
APR 16th																																							
APR 17th																																							
APR 18th																																							

WEATHER CODES

- * TORNADO
- T THUNDERSTORM
- O SQUALL
- R RAIN
- RW RAIN SHOWERS
- ZR FREEZING RAIN
- L DRIZZLE
- ZL FREEZING DRIZZLE
- S SNOW
- SW SNOW SHOWERS
- SG SNOW GRAINS
- SP SNOW PELLETS
- IC ICE CRYSTALS
- IP ICE PELLETS
- IPW ICE PELLET SHOWERS
- A 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

CEILING: UNL INDICATES UNLIMITED
 WIND DIRECTION: 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. AN ENTRY OF 00 INDICATES CALM
 SPEED: THE OBSERVED AVERAGE ONE-MINUTE VALUE, EXPRESSED IN KNOTS (MPH=KNOTS X 1.15).

OBSERVATIONS AT 3-HOUR INTERVALS

APR 1989 RICHMOND, VA 13740

HOUR L.S.T.	VISI-BILITY			WEATHER	TEMPERATURE				WIND		SKY COVER (TENTHS)	VISI-BILITY			WEATHER	TEMPERATURE				WIND										
	CEILING IN HUNDREDS OF FEET	WHOLE MILES	16THS MILE		AIR OF	WET BULB OF	DEW POINT OF	REL HUMIDITY %	DIRECTION	SPEED (KNOTS)		CEILING IN HUNDREDS OF FEET	WHOLE MILES	16THS MILE		AIR OF	WET BULB OF	DEW POINT OF	REL HUMIDITY %	DIRECTION	SPEED (KNOTS)									
APR 19th																														
01	4	UNL	8		59	58	57	93	06	6	8	UNL	8		44	43	42	93	36	6	0	UNL	7		43	40	36	76	00	0
04	10	100	3	F	58	57	57	97	05	7	8	UNL	8		45	41	35	68	01	7	0	UNL	7		39	38	36	89	00	0
07	10	100	5	H	60	59	58	93	02	9	4	UNL	8		47	42	35	63	01	9	0	UNL	7		45	42	38	77	01	4
10	8	80	8		60	56	52	75	03	14	3	UNL	8		60	47	32	35	03	14	0	UNL	10		63	49	34	34	25	3
13	10	41	8		62	55	49	63	01	11	1	UNL	8		64	49	32	30	05	11	2	UNL	10		69	53	37	31	16	5
16	7	70	8		61	54	47	60	03	8	0	UNL	8		65	50	33	30	06	5	1	UNL	10		72	53	34	25	08	8
19	0	UNL	10		58	52	46	65	11	4	1	UNL	8		59	48	35	41	12	5	2	UNL	10		63	50	35	35	13	7
22	0	UNL	10		50	48	46	86	05	3	0	UNL	8		49	43	35	59	13	5	6	95	10		54	47	39	57	15	3
APR 20th																														
APR 21st																														
APR 22nd																														
APR 23rd																														
APR 24th																														
APR 25th																														
APR 26th																														
APR 27th																														
APR 28th																														
APR 29th																														
APR 30th																														

SUMMARY BY HOURS

HOUR L.S.T.	SKY COVER (TENTHS)	AVERAGES						RESULTANT WIND	
		STATION PRESSURE (INCHES)	TEMPERATURE			WIND SPEED (MPH)	DIRECTION	SPEED (MPH)	
			AIR TEMP OF	WET BULB OF	DEW POINT OF				
01	5	29.830	50	47	43	79	7.5	34	1.0
04	5	29.820	47	45	42	84	5.9	32	1.0
07	6	29.860	50	47	43	80	7.2	33	1.2
10	7	29.870	59	51	43	58	10.1	32	0.8
13	7	29.820	64	54	44	52	12.2	27	3.4
16	7	29.770	65	55	45	51	11.3	27	3.0
19	7	29.790	59	51	44	61	10.2	07	1.1
22	6	29.830	53	49	44	74	8.0	34	0.3

HOURLY PRECIPITATION (WATER EQUIVALENT IN INCHES)

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RICHMOND, VA

13740

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	
01																								01	
02																									02
03		T	0.04	T		0.04	0.03	T	T																03
04		T	T																						04
05																									05
06	0.14	0.10	0.03	0.02	0.01	0.01	T																		06
07									0.02	0.10	0.16	0.05	0.03	0.10	0.12	0.01	0.08	0.06	0.07	0.12	0.05	0.02			07
08																									08
09																									09
10																									10
11		T	T																						11
12																									12
13																									13
14																									14
15	0.01	0.08	0.02	0.05	0.11	0.15	0.25	0.11	0.12	0.13	0.21	0.12	0.13	0.02	T	T									15
16	T																								16
17																									17
18																									18
19								T	T																19
20																									20
21																									21
22																									22
23																									23
24																									24
25																									25
26				T	0.01	0.02																			26
27																									27
28																									28
29	T	T																							29
30	0.25	0.06																							30

MAXIMUM SHORT DURATION PRECIPITATION

TIME PERIOD (MINUTES)	5	10	15	20	30	45	60	80	100	120	150	180
PRECIPITATION (INCHES)	0.06	0.11	0.16	0.20	0.21	0.22	0.27	0.32	0.37	0.41	0.47	0.54
ENDED: DATE	30	30	30	30	30	30	15	15	15	15	15	15
ENDED: TIME	0105	0110	0109	0110	0110	0110	0655	0705	0700	0720	0815	0820

THE PRECIPITATION AMOUNTS FOR THE INDICATED TIME INTERVALS MAY OCCUR AT ANY TIME DURING THE MONTH. THE TIME INDICATED IS THE ENDING TIME OF THE INTERVAL. DATE AND TIME ARE NOT ENTERED FOR TRACE AMOUNTS.

VALIDATED BY:
DON HOWELL

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