



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

MAR 1990
 RICHMOND, VA

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		SKY COVER (TENTHS)					
	MAXIMUM	MINIMUM	AVERAGE	DEPARTURE FROM NORMAL	AVERAGE	DEN 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		FASTEST 1-MIN		MINUTES	PERCENT OF TOTAL POSSIBLE	SUNRISE TO SUNSET	MIDNIGHT TO MIDNIGHT			
																	SPEED	DIRECTION	SPEED	DIRECTION							
01	50	31	41	-1	18	24	0		0	0.00	0.0	30.240	06	2.8	9.0	18	N	14	02	642	94	1	2				
02	52	34	43	0	40	22	0	1	0	0.06	0.0	29.920	20	8.7	9.0	17	SW	14	21	0	0	10	9				
03	52	37	45	-2	46	20	0	2	0	0.29	0.0	29.645	01	3.2	5.9	22	N	14	36	44	6	10	9				
04	47	29	38	-5	19	27	0	1	0	0.00	0.0	29.980	02	7.9	11.1	32	N	22	01	689	100	0	1				
05	59	26	43	0	31	22	0	0	0	0.00	0.0	30.170	18	5.5	6.7	16	SE	12	15	619	88	4	3				
06	65	33	49	-5	39	16	0	1	8	0	T	30.210	03	6.0	9.0	26	NE	16	05	556	80	4	5				
07	42	27	35	-9	16	30	0	0	0	0.00	0.0	30.570	06	10.0	10.6	26	NE	18	05	671	96	2	5				
08	48	22*	35*	-9	23	30	0	0	0	0.00	0.0	30.430	16	2.4	4.8	14	E	9	10	502	72	10	10				
09	71	39	55	10	47	10	0	1	0	0.01	0.0	30.040	24	9.2	10.7	28	SW	16	25	481	69	7	6				
10	75	38	57	12	51	8	0	1	0	0.00	0.0	30.055	17	3.1	5.4	20	SE	13	15	620	88	2	2				
11	82	50	66	21	55	0	1	1	0	0.04	0.0	30.020	21	3.7	7.5	18	W	12	19	607	86	5	5				
12	89	54	72	26	57	0	7	1	8	0	0.00	29.980	24	7.2	8.1	17	N	12	23	600	85	9	7				
13	89*	63	76*	30	52	0	11	0	0	0.00	0.0	29.935	26	2.6	5.9	15	N	9	30	572	81	6	7				
14	87	59	73	27	53	0	8	0	0	0.00	0.0	29.890	20	8.6	9.1	24	S	15	19	633	89	8	7				
15	81	57	69	22	59	0	4	0	0	0.00	0.0	29.950	20	11.3	11.9	29	SW	18	20	641	90	8	7				
16	82	65	74	27	63	0	9	0	0	0.00	0.0	29.880	19	14.4	14.7	32	SW	24	21	489	68	10	10				
17	80	55	68	21	63	0	3	0	0	0.35	0.0	29.625	21	15.1	18.3	43	SW	26	21	186	26	10	9				
18	66	50	58	10	39	7	0	0	0	0.17	0.0	29.810	27	7.2	8.8	29	N	15	29	655	91	3	6				
19	70	47	59	11	40	6	0	0	0	0.00	0.0	29.940	15	7.2	11.8	40	N	24	35	638	88	9	9				
20	47	34	41	-8	26	24	0	34	0	0.22	T	29.915	33	15.3	16.8	35	N	26	01	379	52	9	8				
21	59	34	47	-2	23	18	0	0	0	0.00	0.0	30.070	30	6.8	9.3	21	NW	14	35	730	100	0	0				
22	70	35	53	4	34	12	0	0	0	0.00	0.0	30.070	20	10.5	10.9	30	SW	20	19	733	100	2	3				
23	75	49	62	12	39	3	0	0	0	0.00	0.0	29.960	28	7.5	12.9	26	N	18	30	684	93	2	4				
24	49	37	43	-7	33	22	0	1	0	0.13	0.0	30.160	05	9.0	9.5	22	N	16	01	104	14	10	8				
25	43	37	40	-10	38	25	0	1	0	0.32	0.0	30.150	03	3.1	4.6	12	N	10	01	0	0	10	10				
26	58	41	50	-1	35	15	0	1	8	0	0.00	30.100	32	3.8	6.0	21	W	12	27	620	84	8	9				
27	53	36	45	-6	24	20	0	0	0	0.00	0.0	30.200	01	7.4	9.2	18	N	14	34	744	100	1	2				
28	59	29	44	-7	31	21	0	1	0	0.00	0.0	30.250	13	3.0	4.9	16	SE	13	15	681	91	7	6				
29	46	43	45	-7	41	20	0	1	0	0.56	0.0	30.210	07	8.3	8.8	24	E	17	10	0	0	10	10				
30	48	43	46	-6	45	19	0	1	0	0.06	0.0	30.010	01	10.5	11.1	24	N	18	36	0	0	10	10				
31	54	45	50	-3	49	15	0	2	0	0.33	0.0	29.850	11	3.5	3.9	8	SE	7	12	21	3	10	10				
SUM	SUM	SUM	SUM	SUM	TOTAL	TOTAL	TOTAL	NUMBER OF DAYS	TOTAL	TOTAL	TOTAL	FOR THE MONTH:						TOTAL	%	SUM	SUM						
1948	1279				436	43			2.54	T	30.040	23	1.1	9.2	43	SW	26	01	14532	100	197	199					
AVG.	AVG.	AVG.	DEP.	AVG.	DEP.	DEP.		PRECIPITATION	DEP.						DATE: 17	DATE: 20+	POSSIBLE	MONTH	AVG.	AVG.							
62.8	41.3	52.1	4.9	39.6	-116	43		> 0.1 INCH	12	-1.03									22252	65	6.4	6.4					
NUMBER OF DAYS						SEASON TO DATE		SNOW, ICE PELLETS		GREATEST IN 24 HOURS AND DATES						GREATEST DEPTH ON GROUND OF											
						TOTAL	TOTAL	> 1.0 INCH								SNOW, ICE PELLETS OR ICE AND DATE											
MAXIMUM TEMP.		MINIMUM TEMP.		3208		44		THUNDERSTORMS		1		PRECIPITATION		SNOW, ICE PELLETS													
> 90°		< 32°		< 32°		< 0°		DEP.		DEP.		HEAVY FOG		2		0.62		29-30		20+							
0		0		6		0		-461		44		CLEAR		9		PARTLY CLOUDY		6		CLOUDY		16					

* EXTREME FOR THE MONTH - LAST OCCURRENCE IF MORE THAN ONE.
 † 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.

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 DATA CENTER

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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NATIONAL ENVIRONMENTAL SATELLITE, DATA AND INFORMATION SERVICE

NATIONAL CLIMATIC DATA CENTER ASHEVILLE NORTH CAROLINA

Kenneth D. Halpern
 DIRECTOR
 NATIONAL CLIMATIC DATA CENTER

OBSERVATIONS AT 3-HOUR INTERVALS

MAR 1990
RICHMOND, VA

13740

HOUR L.S.T.	SKY COVER (TENTHS)				TEMPERATURE				WIND				WEATHER	SKY COVER (TENTHS)	TEMPERATURE				WIND			
	CEILING IN HUNDREDS OF FEET	WHOLE MILES	16THS MILE	VISIBILITY	AIR OF	WET BULB OF	DEW POINT OF	REL HUMIDITY %	DIRECTION	SPEED (KNOTS)	CEILING IN HUNDREDS OF FEET	WHOLE MILES			16THS MILE	VISIBILITY	AIR OF	WET BULB OF	DEW POINT OF	REL HUMIDITY %	DIRECTION	SPEED (KNOTS)
MAR 1st																						
01	7	120	7		38	34	27	65	04	11	0	UNL	10									
04	10	120	7		36	31	21	55	03	6	10	55	10									
07	3	UNL	8		31	27	17	56	04	6	10	70	8									
10	0	UNL	10		39	31	14	36	01	10	10	60	7									
13	0	UNL	10		47	35	10	22	34	7	10	60	6									
16	0	UNL	10		49	36	10	21	26	7	10	70	5									
19	0	UNL	10		40	32	17	39	13	5	10	60	5									
22	0	UNL	10		35	31	23	62	16	8	10	50	4									
MAR 2nd																						
01	10	40	8		44	42	39	83	02	11	0	UNL	10									
04	0	UNL	10		37	32	24	59	01	16	0	UNL	8									
07	0	UNL	10		30	25	14	51	36	13	0	UNL	7									
10	0	UNL	10		35	28	12	39	02	16	2	UNL	7									
13	1	UNL	10		40	31	13	33	02	5	7	UNL	7									
16	0	UNL	10		44	34	16	32	29	4	7	UNL	7									
19	0	UNL	10		38	32	20	48	13	5	3	UNL	7									
22	0	UNL	10		32	29	24	72	12	6	2	UNL	7									
MAR 3rd																						
01	10	39	4		34	30	24	67	20	9	10	39	4									
04	10	6	0		38	33	24	57	19	11	10	6	0									
07	10	2	0		37	35	32	82	19	8	10	2	0									
10	10	4	2		44	41	38	80	20	8	10	4	2									
13	10	40	7		50	47	43	77	22	10	10	40	7									
16	10	95	7		52	50	48	86	22	7	10	95	7									
19	10	UNL	7		50	50	50	100	18	6	6	UNL	7									
22	7	UNL	0		49	49	49	100	19	7	7	UNL	0									

WEATHER CODES

- * TORNADO
- T THUNDERSTORM
- Q 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

MAR 1990
RICHMOND, VA

13740

HOUR	L. S. T.	VISI-BILITY			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)											
																						AIR OF	WET BULB OF	Dew POINT OF	REL HUMIDITY %	DIRECTION	SPEED (KNOTS)					
MAR 19th																																
01	10	250	10		52	44	33	49	05	7		10	25	6	TRN	42	41	40	93	36	14	0	UNL	10			36	30	18	48	30	12
04	10	250	10		50	42	32	50	05	5		10	15	7		39	37	35	86	01	18	0	UNL	10			35	29	17	48	31	11
07	8	250	10		48	42	34	59	10	8		10	17	7		38	36	33	82	33	13	0	UNL	10			35	29	18	50	31	8
10	7	UNL	10		59	49	38	46	12	11		10	13	7		36	35	33	89	34	16	0	UNL	10			46	37	21	37	33	8
13	10	UNL	10		69	56	44	41	19	13		8	65	10		43	37	29	58	33	19	0	UNL	10			54	42	24	31	32	11
16	10	250	10		68	55	42	39	18	15		10	45	10		43	34	19	38	31	14	0	UNL	10			58	44	25	28	29	10
19	10	55	10		62	54	46	56	19	7		8	65	10		39	31	14	36	32	16	0	UNL	10			51	41	27	40	13	3
22	8	95	10		60	54	49	67	15	7		5	UNL	10		37	30	16	42	30	13	0	UNL	10			40	36	30	68	15	4
MAR 20th																																
MAR 21st																																
MAR 22nd																																
MAR 23rd																																
MAR 24th																																
MAR 25th																																
MAR 26th																																
MAR 27th																																
MAR 28th																																
MAR 29th																																
MAR 30th																																
MAR 31st																																

SUMMARY BY HOURS

HOUR	L. S. T.	AVERAGES						RESULTANT WIND	
		SKY COVER (TENTHS)	STATION PRESSURE (INCHES)	TEMPERATURE			WIND SPEED (MPH)	DIRECTION	SPEED (MPH)
				AIR TEMP OF	WET BULB OF	Dew POINT OF			
01	6	30.050	47	44	40	79	8.1	17	0.9
04	6	30.030	45	42	38	79	8.1	01	0.5
07	6	30.070	44	42	38	81	8.3	33	1.1
10	6	30.090	54	47	40	62	10.9	30	2.5
13	7	30.045	60	50	40	52	11.7	26	4.2
16	7	30.000	61	51	40	51	10.8	25	4.2
19	7	30.010	54	48	40	63	8.4	15	2.5
22	7	30.040	50	46	41	73	8.1	16	2.5

HOURLY PRECIPITATION (WATER EQUIVALENT IN INCHES)

MAR 1990
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					T	0.01	T						T	T										02				
03	T	T	0.04	0.05	0.04	0.02	0.05	0.04	0.05	T	T	T	T	T	0.02	T	0.01	0.01	T		T	T	0.01	T	03			
04																									04			
05																									05			
06																							T	T	06			
07																									07			
08																									08			
09	T	T	T	T		0.01	T																		09			
10																									10			
11																			0.04						11			
12																									12			
13																									13			
14																									14			
15																									15			
16																									16			
17												T													17			
18	0.05	0.09	0.03												T	0.17	0.05	0.01	0.01	T	0.01	0.03	0.03	0.04	18			
19																									19			
20	0.13	0.02						T	0.04	0.03	T														20			
21																									21			
22																									22			
23																									23			
24																								T	24			
25	0.01	0.05	0.12	0.07	0.02	T	0.02	0.02	0.01	T	T	T	T	T	0.04	0.04	0.02	0.01	0.02	T				T	25			
26																									26			
27																									27			
28																									28			
29																									29			
30	0.04	T	T	T	T	T	0.01	0.01	T	T	T	T	0.06	0.04	0.06	0.14	0.09	0.01	0.04	0.01	T	T	0.02	0.01	0.01	0.02	0.03	30
31	T	T	0.03	T	0.02	0.08	0.06	0.04	0.03	0.06	0.01	T													T	T	31	

MAXIMUM SHORT DURATION PRECIPITATION

TIME PERIOD (MINUTES)	5	10	15	20	30	45	60	80	100	120	150	180
PRECIPITATION (INCHES)	0.13	0.14	0.14	0.14	0.14	0.15	0.17	0.19	0.20	0.23	0.23	0.29
ENDED: DATE	20	20	20	20	20	17	17	17	29	29	29	29
ENDED: TIME	0043	0049	0049	0049	0049	1559	1615	1631	1319	1359	1332	1359

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 GRISINGER

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