

JUN 1993
 RICHMOND, VA
 NOAA-NATIONAL WEATHER SERVICE
 RIC INTL APT/EXECUTIVE TERMINAL

ISSN 0198-537X



INQUIRIES/COMMENTS CALL
 (704) 271-4800

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

JUN 1993
 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 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	DIRECTION	FASTEST 1-MIN	DIRECTION	MINUTES	PERCENT OF TOTAL POSSIBLE	SUNRISE TO SUNSET	MIDNIGHT 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	75	56	66	-5	54	0	1	1	0	0.06	0.0	29.670	36	5.6	8.7	23	N	16	36	502	57	6	6	
02	75	55	65	-6	52	0	0	1	0	0.00	0.0	29.770	13	4.2	7.7	16	S	12	18	516	59	9	9	
03	76	60	68	-3	60	0	3	1 3	8	0.02	0.0	29.690	12	1.5	4.8	14	S	10	17	495	57	10	10	
04	81	60	71	0	64	0	6	1 3	8	0.43	0.0	29.645	06	2.2	6.5	33	SE	16	10	441	50	10	10	
05	87	60	74	2	63	0	9	1 3	8	0.59	0.0	29.660	24	3.2	11.5	35	NW	28	31	651	74	6	6	
06	75	54	65*	-7	49	0	0			0.00	0.0	29.890	32	5.8	7.1	25	NW	16	34	748	85	4	4	
07	85	53*	69	-3	59	0	4			0.00	0.0	29.880	20	6.8	8.3	24	SW	17	20	724	82	6	7	
08	91	69	80	8	71	0	15	1	8	0	0.0	29.790	19	5.7	7.6	20	N	15	35	520	59	8	8	
09	96	72	84	11	71	0	19	1	8	0	0.00	29.770	22	9.4	10.1	25	SW	18	23	745	85	2	3	
10	95	72	84	11	67	0	19	1	8	0	0.00	29.810	25	7.9	9.3	25	W	15	26	749	85	2	2	
11	88	70	79	6	68	0	14	1 3	8	0	0.60	29.850	31	0.8	4.7	30	SW	17	25	562	64	9	8	
12	77	63	70	-3	63	0	5	1	8	0	0.00	29.980	04	7.4	8.2	16	NE	12	03	343	39	9	8	
13	75	59	67	-7	61	0	2	1	8	0	0.00	30.020	06	6.7	7.2	17	E	14	07	567	64	9	7	
14	78	54	66	-8	60	0	1			0.00	0.0	29.970	07	5.2	6.8	18	E	14	10	688	78	4	3	
15	84	62	73	-1	64	0	8	1	8	0	0.00	29.880	20	6.6	7.7	18	SW	16	19	636	72	8	7	
16	87	68	78	4	64	0	13	8	8	0	0.00	29.965	04	3.4	6.2	14	E	12	01	578	65	5	4	
17	89	64	77	3	65	0	12	2	8	0	0.00	30.040	13	4.1	5.4	15	SE	9	14	649	73	5	3	
18	94	70	82	7	70	0	17	1	8	0	0.00	30.000	20	6.2	7.0	17	SW	13	23	683	77	3	3	
19	95	72	84	9	72	0	19	1	8	0	0.00	29.930	18	5.1	6.2	16	S	12	13	654	74	5	5	
20	95	74	85*	10	68	0	20	8	8	0	0.00	29.920	20	9.1	9.8	25	SW	17	21	640	72	7	8	
21	88	69	79	4	69	0	14	8	8	0	0.05	29.800	20	11.0	11.5	25	SW	16	23	480	54	10	9	
22	88	70	79	4	64	0	14	8	8	0	0.00	29.690	28	6.2	8.5	20	N	13	31	698	79	5	5	
23	85	59	72	-4	53	0	7			0.00	0.0	29.880	01	6.7	7.3	20	N	14	01	885	100	0	0	
24	88	54	71	-5	53	0	6			0.00	0.0	30.060	07	2.7	5.2	15	SE	9	09	885	100	0	0	
25	88	59	74	-2	59	0	9			0.00	0.0	30.050	16	6.7	7.9	17	SE	14	10	809	92	0	0	
26	92	63	78	2	67	0	13	1		0.00	0.0	29.880	16	5.8	7.5	21	S	12	14	621	70	5	4	
27	89	64	77	1	61	0	12			0	T	29.795	02	5.8	8.1	23	N	17	35	645	73	4	4	
28	96*	62	79	3	62	0	14		8	0	0.00	29.740	19	5.6	7.0	15	S	12	15	725	82	5	4	
29	94	69	82	6	65	0	17			0	T	29.730	04	1.7	6.1	16	N	13	33	498	56	9	8	
30	89	69	79	2	65	0	14	1	8	0	0.00	29.790	34	5.4	6.5	15	NW	10	31	727	82	8	8	
SUM	SUM					TOTAL	TOTAL			TOTAL	TOTAL									TOTAL	%	SUM	SUM	
2595	1905					0	307			1.75	0.0	29.850	19	1.2	7.6	35	NW	28	31	19064	100	173	163	
AVG.	AVG.	AVG.	DEP.	AVG.	DEP.	DEP.	DEP.			DEP.											POSSIBLE	MONTH	AVG.	AVG.
86.5	63.5	75.0	1.1	62.7		0	37			6	-1.87										26456	72	5.8	5.4
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.		3848		433		THUNDERSTORMS		4		PRECIPITATION		SNOW, ICE PELLETS										
≥ 90°		≤ 32°		≤ 32°		≤ 0°		HEAVY FOG		1		1.00		04-05		0.0								
9		0		0		-112		61		CLEAR 6		PARTLY CLOUDY 13		CLOUDY 11										

* 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.

ERRATA - FEB 1993 - CORRECT HEATING DEGREE DAYS DEPARTURES TO READ - MTH: 26 SEASON: -158

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. Walden
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OBSERVATIONS AT 3-HOUR INTERVALS

JUN 1993
RICHMOND, VA

13740

HOUR	L.S.T.	SKY COVER (ITEMS)	CEILING IN HUNDREDS OF FEET	WHOLE MILES	VISI-BILITY	WEATHER	TEMPERATURE				WIND		SKY COVER (ITEMS)	CEILING IN HUNDREDS OF FEET	WHOLE MILES	VISI-BILITY	WEATHER	TEMPERATURE				WIND												
							AIR OF	WET BULB OF	DEN POINT OF	REL HUMIDITY %	DIRECTION	SPEED (KNOTS)						AIR OF	WET BULB OF	DEN POINT OF	REL HUMIDITY %	DIRECTION	SPEED (KNOTS)											
JUN 1st																																		
01	10	10	8	7			69	68	68	97	21	8	0	UNL	6			55	54	53	93	00	0	10	60	8			65	58	52	63	17	9
04	10	10	10	6		F	66	64	64	93	35	9	10	50	6			56	54	52	87	01	7	10	85	6			61	59	58	90	00	0
07	10	10	60	6		F	59	56	53	81	36	14	10	60	7			60	54	48	65	04	7	10	130	7			65	61	58	78	17	4
10	7	50	7				64	56	50	61	01	10	10	48	7			67	56	47	49	11	10	10	140	6			69	64	60	73	20	6
13	8	250	10				72	61	52	50	36	9	8	60	10			73	61	52	48	18	8	9	140	6			73	65	60	64	06	5
16	5	UNL	10				71	59	49	46	01	6	7	UNL	10			74	62	53	48	17	4	9	140	6			75	66	61	62	02	3
19	3	UNL	10				69	62	51	53	06	3	10	55	10			69	62	58	68	16	5	10	90	6			71	65	62	73	04	5
22	0	UNL	10				58	56	54	87	11	5	10	55	10			63	58	54	73	14	4	10	80	6			67	65	63	87	08	6
JUN 2nd																																		
JUN 3rd																																		
JUN 4th																																		
JUN 5th																																		
JUN 6th																																		
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JUN 11th																																		
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JUN 13th																																		
JUN 14th																																		
JUN 15th																																		
JUN 16th																																		
JUN 17th																																		
JUN 18th																																		

MAXIMUM SHORT DURATION PRECIPITATION

TIME PERIOD (MINUTES)	5	10	15	20	30	45	60	80	100	120	150	180
PRECIPITATION (INCHES)	0.26	0.44	0.47	0.49	0.56	0.59	0.60	0.60	0.60	0.60	0.60	0.60
ENDED: DATE	05	05	05	05	11	11	11	11	11	11	11	11
ENDED: TIME	0439	0439	0444	0448	0153	0154	0209	0209	0209	0209	0209	0209

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.

OBSERVATIONS AT 3-HOUR INTERVALS

JUN 1993
RICHMOND, VA 13740

HOUR L.S.T.	SKY COVER (TENTHS)	VISI-BILITY		WEATHER	TEMPERATURE				WIND		SKY COVER (TENTHS)	CELLING IN HUNDREDS OF FEET	VISI-BILITY		WEATHER	TEMPERATURE				WIND										
		WHOLE MILES	16THS MILE		AIR of	WET BULB of	DEW POINT of	REL HUMIDITY %	DIRECTION	SPEED (KNOTS)			WHOLE MILES	16THS MILE		AIR of	WET BULB of	DEW POINT of	REL HUMIDITY %	DIRECTION	SPEED (KNOTS)	WHOLE MILES	16THS MILE	AIR of	WET BULB of	DEW POINT of	REL HUMIDITY %	DIRECTION	SPEED (KNOTS)	
																														CELLING IN HUNDREDS OF FEET
JUN 19th																														
01	3	UNL	5	H	76	73	71	85	19	6	6	UNL	3	H	80	74	71	74	22	7	4	UNL	5	H	72	69	67	84	18	6
04	7	250	5	H	74	72	71	90	20	5	9	250	3	H	75	72	71	87	17	7	5	UNL	5	H	71	68	66	84	19	8
07	6	UNL	3	H	77	73	71	82	22	7	8	180	5	H	78	71	68	72	22	7	10	250	7	H	75	70	68	79	19	8
10	2	UNL	3	H	89	77	71	55	00	0	2	UNL	6	H	89	74	67	48	21	9	10	200	7	H	80	73	70	72	18	11
13	5	UNL	3	H	95	77	69	43	13	6	9	UNL	6	H	95	75	66	39	22	12	10	200	7	H	87	76	71	59	20	13
16	4	UNL	3	H	94	77	70	46	18	8	7	UNL	6	H	93	75	66	41	21	15	10	31	7	H	84	75	71	65	20	14
19	7	UNL	3	H	86	78	75	70	18	5	10	UNL	6	H	86	74	68	55	19	7	10	140	7	H	77	71	67	71	23	9
22	2	UNL	3	H	80	76	74	82	14	3	8	UNL	6	H	78	73	70	77	19	8	10	85	7	H	76	71	68	76	22	10
JUN 20th																														
JUN 21st																														
JUN 22nd																														
JUN 23rd																														
JUN 24th																														
JUN 25th																														
JUN 26th																														
JUN 27th																														
JUN 28th																														
JUN 29th																														
JUN 30th																														

SUMMARY BY HOURS

HOUR L.S.T.	SKY COVER (TENTHS)	STATION PRESSURE (INCHES)	AVERAGES				RESULTANT WIND		
			TEMPERATURE			WIND SPEED (MPH)	DIRECTION	SPEED (MPH)	
			AIR TEMP of	WET BULB of	DEW POINT of				
01	4	29.840	68	65	63	85	6.0	21	2.2
04	6	29.840	66	64	63	89	5.8	29	0.4
07	6	29.875	70	66	63	81	7.6	29	1.6
10	6	29.885	79	68	62	58	8.7	29	0.9
13	6	29.860	84	70	61	48	9.4	19	1.0
16	5	29.825	85	70	62	48	9.9	21	2.5
19	6	29.830	79	69	64	60	7.3	15	2.6
22	4	29.860	71	67	64	79	6.3	16	3.0

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).

