

2004

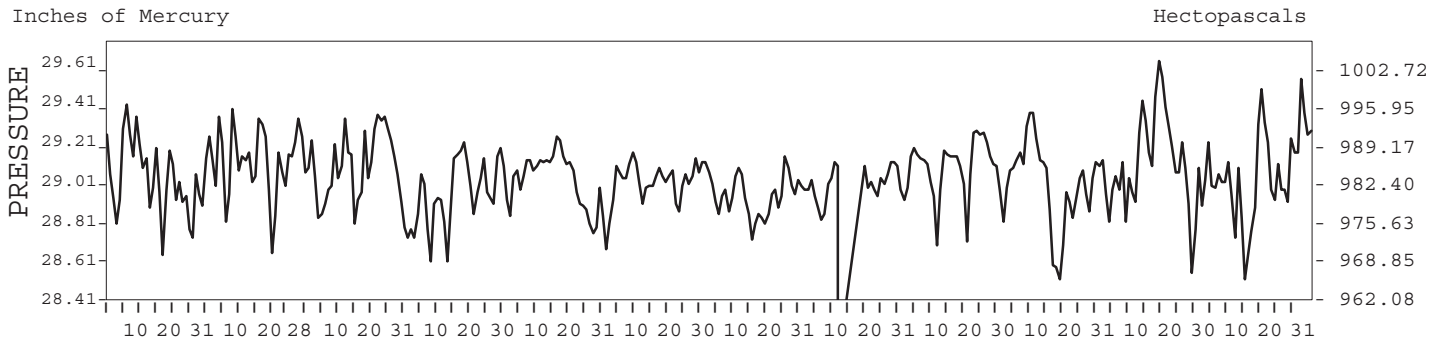
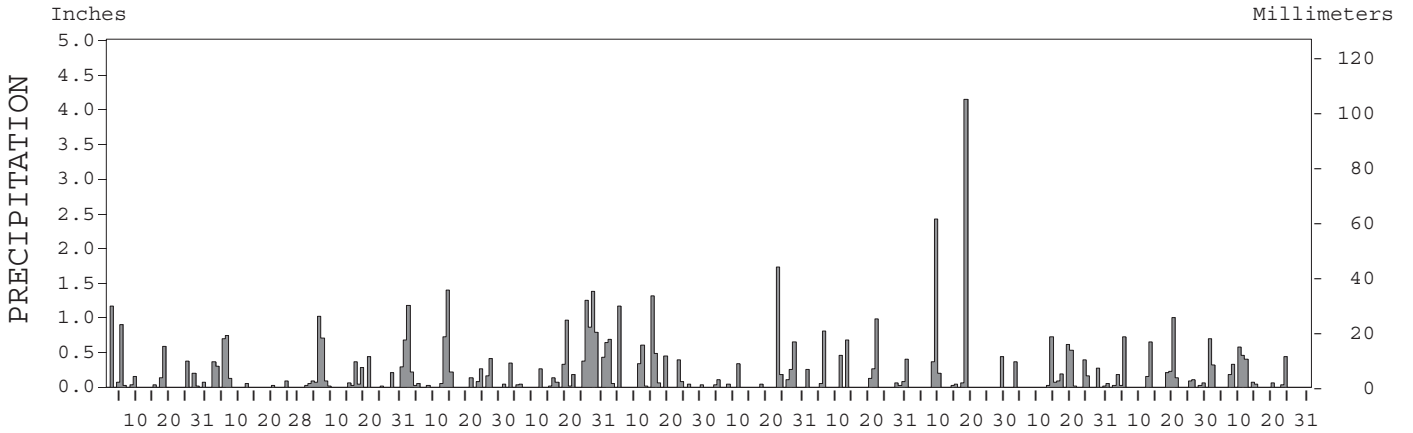
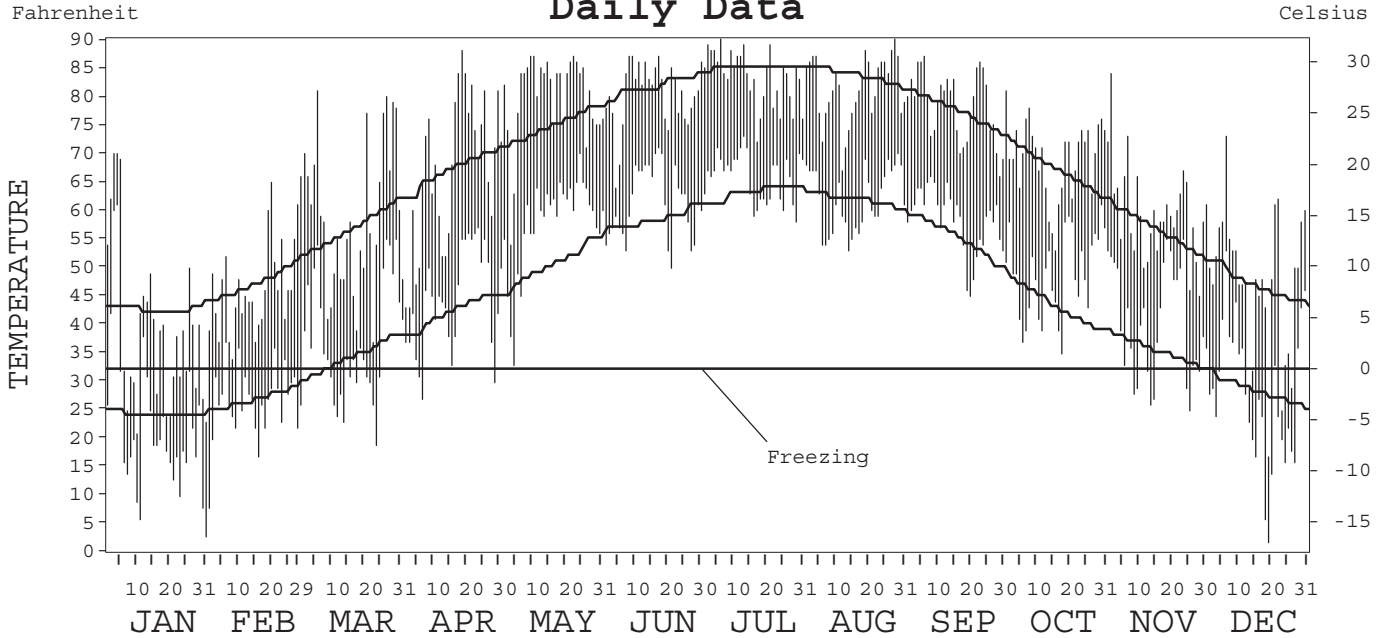
# LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-5604

## CHARLESTON, WEST VIRGINIA (CRW)

### Daily Data



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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
 NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE  
 NATIONAL CLIMATIC DATA CENTER  
 ASHEVILLE, NORTH CAROLINA  
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# METEOROLOGICAL DATA FOR 2004

## CHARLESTON, WV (CRW)

LATITUDE: 38° 22' 46" N      LONGITUDE: 81° 35' 29" W      ELEVATION (FT): GRND: 1023      BARO: 1026      TIME ZONE: EASTERN (UTC + 5)      WBAN: 13866

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	39.4	46.9	58.9	67.2	80.0	80.3	83.3	81.4	78.5	69.1	59.5	47.5	66.0	
	HIGHEST DAILY MAXIMUM	70	66	81	88	87	87	90	90	87	81	84	73	90	
	DATE OF OCCURRENCE	03+	29	05	18	22+	17+	06	28	06	01	02	07	AUG 28	
	MEAN DAILY MINIMUM	22.4	26.6	37.2	44.3	57.9	61.2	65.7	61.9	58.3	48.7	40.4	28.0	46.0	
	LOWEST DAILY MINIMUM	3	8	19	27	33	50	58	53	45	35	25	2	2	
	DATE OF OCCURRENCE	31	01	23	06	04	21	29	14	20	18	26	20	DEC 20	
	AVERAGE DRY BULB	30.9	36.8	48.1	55.8	69.0	70.8	74.5	71.7	68.4	58.9	50.0	37.8	56.1	
	MEAN WET BULB	27.4	31.5	42.8	49.6	63.7	66.2	69.3	62.9	53.8	45.0	34.1	34.1	34.1	
	MEAN DEW POINT	20.5	23.3	36.1	43.5	60.8	63.8	66.8	60.2	49.8	39.5	27.5	27.5	27.5	
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	0	0	1	1	0	0	0	0	0	2
MAXIMUM ≤ 32°	14	0	0	0	0	0	0	0	0	0	0	5	19	19	
MINIMUM ≤ 32°	27	25	12	3	0	0	0	0	0	0	8	19	94	94	
MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/C	HEATING DEGREE DAYS	1053	811	523	293	43	6	0	5	21	187	446	837	4225	
	COOLING DEGREE DAYS	1	0	8	22	173	188	303	219	131	7	3	0	1055	
RH	MEAN (PERCENT)	67	63	68	68	79	83	82	80	81	78	72	68	74	
	HOUR 01 LST	69	72	74	78	94	96	94	93	94	89	80	73	84	
	HOUR 07 LST	74	77	84	90	94	96	92	96	95	91	85	75	87	
	HOUR 13 LST	62	51	55	56	62	63	66	61	59	60	59	59	59	
	HOUR 19 LST	62	52	57	55	67	74	72	73	78	74	64	62	66	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	1	1	3	2	7	9	9	10	19	13	4	1	79	
	THUNDERSTORMS	0	0	4	3	15	9	10	6	0	4	0	1	52	
CLOUDINESS	SUNRISE-SUNSET: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)														
	SATELLITE (> 12,000 FT.)														
	MIDNIGHT-MIDNIGHT: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)														
SATELLITE (> 12,000 FT.)															
NUMBER OF DAYS WITH:															
CLEAR															
PARTLY CLOUDY															
CLOUDY															
PR	MEAN STATION PRESS. (IN.)	29.02	29.11	29.08	28.94	29.00	29.01	28.93		29.07	28.99	29.10	29.05		
	MEAN SEA-LEVEL PRESS. (IN.)	30.10	30.18	30.13	29.98	30.03	30.04	29.95		30.10	30.03	30.16	30.12		
WINDS	RESULTANT SPEED (MPH)	3.8	1.1	2.4	2.2	2.2	0.8	0.8		0.8	1.4	1.0	3.3		
	RES. DIR. (TENS OF DEGS.)	25	24	24	27	23	21	23		07	22	24	24		
	MEAN SPEED (MPH)	6.2	4.2	5.0	4.7	4.1	2.7	3.2	2.3	2.2	2.7	3.6	5.1	3.8	
	PREVAIL. DIR. (TENS OF DEGS.)	23	05	31	32	22	22	22	22	05	22	22	22	22	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	32	28	30	29	33	44	20	30	22	22	26	31	44	
	DIR. (TENS OF DEGS.)	30	28	31	27	30	30	25	19	33	27	28	20	30	
	DATE OF OCCURRENCE	22	20	07	27+	25	01	07	20	17	16+	25+	07	JUN 01	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	39	35	44	51	41	67	24	41	37	32	39	41	67	
DIR. (TENS OF DEGS.)	26	15	31	27	28	30	25	19	01	26	28	20	30		
DATE OF OCCURRENCE	22	05	07	27	26+	01	04	20	17	16	25	07	JUN 01		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	3.74	2.38	4.45	4.96	8.09	5.70	3.73	3.92	7.69	3.48	4.29	2.91	55.34	
	GREATEST 24-HOUR (IN.)	1.17	1.25	1.73	1.59	1.99	1.31	1.73	1.24	4.17	1.07	1.00	1.02	4.17	
	DATE OF OCCURRENCE	02	05-06	05-06	12-13	27-28	14	22	20-21	16-17	18-19	19	30-01	SEP 16-17	
	NUMBER OF DAYS WITH:														
PRECIPITATION ≥ 0.01	13	8	18	15	18	14	11	11	8	14	15	11	156		
PRECIPITATION ≥ 0.10	7	5	8	9	13	8	8	7	5	8	10	7	95		
PRECIPITATION ≥ 1.00	1	0	1	2	2	2	1	0	2	0	1	0	12		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)												4.8		
	GREATEST 24-HOUR (IN.)												1.7		
	DATE OF OCCURRENCE												13		
	MAXIMUM SNOW DEPTH (IN.)												3		
DATE OF OCCURRENCE												14			
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0													3		



PRECIPITATION (inches) 2004 CHARLESTON, WV (CRW)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	4.84	3.10	6.01	4.03	6.44	4.25	2.71	5.14	4.99	3.08	2.66	3.74	50.99
1976	2.89	2.11	4.21	0.50	3.66	4.24	6.93	2.23	5.37	5.44	1.02	2.18	40.78
1977	1.90	1.08	3.16	4.06	0.84	5.93	4.92	6.58	1.14	4.16	3.78	2.07	39.62
1978	5.59	1.31	2.67	3.31	3.99	2.96	9.83	8.21	1.45	2.68	2.26	8.02	52.28
1979	6.48	3.76	3.00	3.82	3.87	3.54	5.17	4.78	3.95	3.67	4.02	2.81	48.87
1980	2.85	2.25	5.32	4.49	2.67	2.17	8.47	10.32	2.37	2.03	3.02	1.85	47.81
1981	1.09	4.59	1.80	4.04	3.78	6.46	3.02	2.24	2.36	2.43	1.29	2.71	35.81
1982	3.74	3.23	4.96	1.14	6.19	7.00	2.68	2.65	2.58	1.65	4.65	2.71	43.18
1983	1.24	2.72	3.15	3.96	5.98	2.77	4.19	2.54	1.33	6.49	4.80	3.19	42.36
1984	1.67	2.56	2.72	4.00	3.71	2.56	4.37	4.57	2.95	3.28	4.73	3.78	40.90
1985	3.07	2.32	4.23	1.84	5.88	3.07	3.22	2.02	0.71	3.65	8.45	2.71	41.17
1986	2.12	4.35	1.87	1.39	4.86	2.36	7.61	4.71	3.51	2.20	6.88	3.89	45.75
1987	3.23	3.34	1.30	4.05	2.49	3.38	4.23	3.56	3.89	1.10	2.71	4.13	37.41
1988	1.62	2.50	2.71	2.17	2.59	0.94	3.00	2.86	3.46	1.87	5.02	2.66	31.40
1989	2.92	6.05	5.81	4.13	6.79	7.54	3.04	5.62	7.28	4.09	2.87	1.83	57.97
1990	2.86	3.74	1.94	2.89	4.87	3.01	5.35	2.54	4.26	3.51	2.07	7.01	44.05
1991	2.68	2.98	6.07	3.49	1.47	2.49	2.84	2.95	5.51	1.10	5.00	5.89	42.47
1992	1.94	2.72	4.79	2.93	4.66	3.21	6.41	4.41	1.38	0.94	3.15	3.50	40.04
1993	1.87	2.98	6.68	1.78	1.98	5.01	1.98	2.71	5.99	3.50	3.95	3.23	41.66
1994	6.42	5.56	7.73	3.78	3.98	4.43	3.71	6.20	1.95	1.13	1.95	2.52	49.36
1995	6.02	2.98	2.73	2.59	6.15	4.93	2.91	5.81	2.70	2.61	3.31	2.79	45.53
1996	5.18	2.82	4.32	3.77	7.40	3.59	8.50	2.82	7.37	2.49	4.36	2.04	54.66
1997	1.76	1.76	8.35	2.77	3.60	5.24	5.83	4.14	1.94	0.84	2.96	1.57	40.76
1998	3.43	4.23	3.41	4.77	5.27	10.56	3.65	3.70	2.50	1.67	1.89	3.18	48.26
1999	4.81	2.67	3.70	2.20	1.90	1.30	5.37	2.97	1.81	3.43	4.53	2.55	37.24
2000	1.41	4.25	2.26	4.67	4.75	3.38	6.06	4.35	2.87	0.87	1.27	2.10	38.24
2001	2.43	1.90	3.28	1.30	8.76	4.19	10.06	2.74	1.85	1.36	1.43	2.47	41.77
2002	3.15	0.89	5.92	4.49	4.86	3.61	3.67	1.72	3.24	6.11	4.12	2.94	44.72
2003	1.79	7.46	1.78	3.40	4.99	9.93	5.89	6.53	4.77	2.46	9.12	2.89	61.01
2004	3.74	2.38	4.45	4.96	8.09	5.70	3.73	3.92	7.69	3.48	4.29	2.91	55.34
POR= 103 YRS	3.61	3.30	4.08	3.57	3.98	3.97	4.96	4.13	3.14	2.74	3.27	3.20	43.95

WBAN : 13866

AVERAGE TEMPERATURE (°F) 2004 CHARLESTON, WV (CRW)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	35.7	38.0	39.8	50.2	66.1	71.7	74.2	76.7	63.9	57.6	50.2	38.6	55.2
1976	31.7	45.8	51.6	55.2	61.9	71.9	72.4	70.2	63.3	49.5	37.6	31.0	53.5
1977	18.6	33.2	49.8	58.4	67.0	68.6	76.9	73.6	70.2	53.4	49.1	35.1	54.5
1978	24.4	24.2	42.6	56.7	63.1	70.9	73.8	74.9	71.0	53.8	49.4	39.0	53.7
1979	28.1	27.9	50.5	55.1	63.0	68.8	72.9	73.4	67.0	54.6	47.5	38.3	53.9
1980	34.1	29.7	42.0	53.3	63.6	68.8	76.6	76.3	69.8	53.6	43.2	36.3	53.9
1981	28.0	37.2	41.4	59.1	60.4	73.2	75.7	72.8	66.5	54.2	45.3	34.6	54.0
1982	29.8	36.1	47.2	51.5	68.6	68.8	76.2	71.1	65.9	57.7	49.0	44.8	55.6
1983	34.0	37.7	47.0	52.1	61.1	71.6	77.0	78.0	68.4	58.1	47.4	32.0	55.4
1984	30.6	41.5	41.1	54.2	61.4	75.3	73.2	74.9	65.4	64.4	44.6	46.9	56.1
1985	27.2	34.0	49.4	60.8	66.3	71.0	75.8	74.0	69.6	62.3	55.5	33.8	56.6
1986	34.1	40.5	47.1	57.9	65.3	72.2	77.2	71.9	69.5	57.9	46.4	36.4	56.4
1987	33.0	37.2	47.0	52.7	68.4	73.5	77.1	77.0	67.1	50.3	49.0	39.8	56.0
1988	31.1	35.2	46.1	54.1	63.2	71.0	78.6	77.4	66.6	49.3	47.0	37.4	54.8
1989	41.1	34.9	47.8	52.8	59.4	71.7	75.7	73.2	67.0	56.7	46.4	26.0	54.4
1990	42.3	45.2	51.7	55.1	62.9	72.3	75.8	74.1	68.7	58.2	50.7	43.6	58.4
1991	36.5	40.3	47.4	60.3	71.7	73.9	77.9	75.2	68.4	59.1	45.8	41.3	58.2
1992	35.6	41.8	45.4	55.7	61.2	68.8	76.0	70.9	67.4	54.1	47.4	37.9	55.2
1993	40.2	34.0	41.8	55.0	64.9	71.4	79.0	76.4	66.6	55.1	47.1	36.6	55.7
1994	28.1	38.7	45.3	60.5	59.7	74.2	76.1	72.4	65.4	54.8	50.6	41.2	55.6
1995	34.7	34.0	46.9	55.2	61.9	71.4	76.4	77.6	64.6	56.9	40.8	32.5	54.4
1996	32.1	35.5	39.6	54.0	64.7	71.9	71.6	72.8	65.9	55.8	40.2	41.4	53.8
1997	35.6	43.8	47.1	50.8	58.7	70.1	74.5	70.8	65.0	55.1	42.2	36.5	54.2
1998	41.0	42.0	45.9	55.4	65.8	70.3	73.7	73.9	70.2	56.1	46.7	40.4	56.8
1999	38.3	39.4	40.1	58.5	64.0	72.9	79.1	72.3	65.8	54.8	48.9	38.2	56.0
2000	32.1	43.2	49.2	54.1	66.0	72.3	71.3	71.8	65.7	57.7	43.3	28.6	54.6
2001	33.2	40.6	40.3	59.1	64.0	70.6	72.4	74.8	64.6	55.1	50.4	42.3	55.6
2002	38.4	38.1	45.7	57.8	60.5	72.8	76.3	75.9	71.2	57.0	43.9	37.6	56.3
2003	28.2	33.9	48.6	57.4	62.2	67.6	73.2	74.4	65.1	54.8	49.7	36.3	54.3
2004	30.9	36.8	48.1	55.8	69.0	70.8	74.5	71.7	68.4	58.9	50.0	37.8	56.1
POR= 97 YRS	35.6	38.0	45.7	55.8	64.6	72.1	76.0	74.7	68.9	57.4	46.6	37.9	56.1

HEATING DEGREE DAYS (base 65°F) 2004 CHARLESTON, WV (CRW)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1975-76	0	0	106	227	441	813	1025	549	427	342	142	4	4076
1976-77	0	9	84	475	814	1047	1432	888	482	242	81	52	5606
1977-78	0	2	19	357	482	919	1249	1138	691	258	137	23	5275
1978-79	0	0	18	344	462	797	1137	1031	456	308	125	19	4697
1979-80	5	10	39	331	519	820	951	1017	707	349	106	27	4881
1980-81	0	0	33	356	650	882	1138	774	727	207	175	2	4944
1981-82	0	1	76	335	585	936	1086	801	545	405	36	2	4808
1982-83	1	2	69	268	480	626	955	757	554	388	153	16	4269
1983-84	4	0	66	227	521	1019	1059	674	734	346	171	5	4826
1984-85	1	0	98	74	613	563	1164	860	488	192	54	18	4125
1985-86	0	0	51	127	294	960	954	679	554	249	83	7	3958
1986-87	0	23	23	255	550	880	989	770	549	374	63	4	4480
1987-88	0	0	37	447	473	774	1043	859	577	326	112	38	4686
1988-89	2	0	37	484	534	849	735	837	536	367	221	2	4604
1989-90	0	7	72	270	553	1203	697	549	446	323	111	8	4239
1990-91	0	0	59	230	428	655	876	685	558	192	21	1	3705
1991-92	0	0	80	229	576	729	904	670	602	319	170	24	4303
1992-93	0	1	67	335	522	834	760	862	713	306	73	24	4497
1993-94	0	0	64	307	540	873	1136	732	607	191	197	3	4650
1994-95	0	4	34	308	424	729	932	861	555	306	138	7	4298
1995-96	0	0	72	262	721	999	1008	848	779	357	105	4	5155
1996-97	2	0	59	278	743	727	908	592	547	429	213	23	4521
1997-98	0	6	53	324	676	877	733	639	626	283	60	38	4315
1998-99	0	0	29	290	541	758	821	711	763	213	74	13	4213
1999-00	0	1	56	312	475	821	1014	627	490	320	51	14	4181
2000-01	0	0	94	250	644	1122	978	681	759	249	82	13	4872
2001-02	0	0	95	309	433	699	822	748	591	256	198	0	4151
2002-03	0	0	14	280	624	843	1135	865	503	244	106	34	4648
2003-04	0	0	61	312	451	883	1053	811	523	293	43	6	4436
2004-	0	5	21	187	446	837							

WBAN : 13866

COOLING DEGREE DAYS (base 65°F) 2004 CHARLESTON, WV (CRW)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	0	0	0	7	99	212	291	372	82	7	4	0	1074
1976	0	1	17	58	54	218	238	175	39	1	0	0	801
1977	0	0	18	50	148	165	373	277	180	4	12	0	1227
1978	0	0	0	16	88	207	279	314	205	4	1	0	1114
1979	0	0	13	18	69	138	257	277	105	17	0	0	894
1980	0	0	0	6	71	147	370	358	182	9	0	0	1143
1981	0	0	2	38	41	256	340	251	126	5	0	0	1059
1982	0	0	0	6	154	122	355	196	101	47	5	6	992
1983	0	0	2	6	39	222	385	407	177	18	0	0	1256
1984	0	0	0	27	64	318	261	312	116	65	7	8	1178
1985	0	0	9	72	105	204	339	285	194	52	14	0	1274
1986	0	0	4	41	100	227	384	244	167	43	0	0	1210
1987	0	0	0	13	177	268	381	379	108	0	2	0	1328
1988	0	0	3	9	64	225	430	392	91	4	3	0	1221
1989	0	0	11	6	55	211	339	273	140	23	2	0	1060
1990	0	0	41	33	54	232	342	286	174	28	7	0	1197
1991	0	0	17	60	236	273	408	324	190	53	5	0	1566
1992	0	0	2	47	57	143	347	192	145	4	0	0	937
1993	0	0	0	14	76	222	444	364	119	7	8	0	1254
1994	0	0	4	62	37	288	353	240	51	0	1	0	1036
1995	1	0	1	20	51	209	363	401	69	23	2	0	1140
1996	0	0	0	34	105	214	213	247	93	2	5	0	913
1997	1	5	0	11	23	182	302	195	61	23	0	0	803
1998	0	0	39	3	93	205	275	283	194	20	0	4	1116
1999	0	0	0	24	48	254	443	236	89	1	0	0	1095
2000	0	0	5	3	93	241	201	218	122	27	0	0	910
2001	0	0	0	80	56	185	235	310	93	12	0	0	971
2002	0	0	0	48	64	241	360	344	208	42	0	0	1307
2003	0	0	1	22	26	120	260	297	72	1	1	0	800
2004	1	0	8	22	173	188	303	219	131	7	3	0	1055

SNOWFALL (inches) 2004 CHARLESTON, WV (CRW)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1975-76	0.0	0.0	0.0	0.0	T	4.0	14.3	2.6	5.4	0.0	0.0	0.0	26.3
1976-77	0.0	0.0	0.0	T	4.7	7.4	22.2	11.1	1.0	1.5	0.0	0.0	47.9
1977-78	0.0	0.0	0.0	0.0	4.4	5.4	39.5	15.6	11.7	0.0	0.0	0.0	76.6
1978-79	0.0	0.0	0.0	0.0	T	1.5	27.5	20.1	5.5	T	0.0	0.0	54.6
1979-80	0.0	0.0	0.0	T	0.9	0.4	11.7	12.7	10.5	T	0.0	0.0	36.2
1980-81	0.0	0.0	0.0	T	0.5	2.6	9.1	6.8	7.5	T	0.0	0.0	26.5
1981-82	0.0	0.0	0.0	T	0.5	8.2	12.1	6.4	7.4	1.0	0.0	0.0	35.6
1982-83	0.0	0.0	0.0	0.0	T	2.9	5.8	15.0	5.2	0.1	0.0	0.0	29.0
1983-84	0.0	0.0	0.0	0.0	0.3	3.8	12.8	9.7	2.4	0.0	0.0	0.0	29.0
1984-85	0.0	0.0	0.0	0.0	T	3.7	17.6	20.1	0.9	1.7	0.0	0.0	44.0
1985-86	0.0	0.0	0.0	0.0	0.0	8.9	13.1	17.7	3.7	T	0.0	0.0	43.4
1986-87	0.0	0.0	0.0	0.0	0.2	0.1	16.3	9.7	3.9	20.7	0.0	0.0	50.9
1987-88	0.0	0.0	0.0	T	2.4	5.7	8.3	7.8	4.6	T	0.0	0.0	28.8
1988-89	0.0	0.0	0.0	T	T	6.9	1.7	4.6	T	1.4	0.6	0.0	15.2
1989-90	0.0	T	T	T	2.0	14.1	11.0	3.8	6.6	1.1	0.0	0.0	38.6
1990-91	T	0.0	0.0	0.0	0.0	1.2	3.5	6.5	5.3	T	0.0	0.0	16.5
1991-92	0.0	0.0	0.0	0.0	4.1	0.7	5.6	1.1	8.6	3.6	T	T	23.7
1992-93	0.0	0.0	0.0	T	2.5	3.7	0.4	12.0	20.4	T	0.0	T	39.0
1993-94	0.0	0.0	0.0	1.5	0.4	12.4	34.2	7.0	3.1	0.0	0.0	T	58.6
1994-95	0.0	0.0	T	0.0	T	T	9.1	7.9	8.7	0.0	0.0	0.0	25.7
1995-96	0.0	0.0	0.0	0.0	13.6	21.9	35.1	14.2	20.4	0.8	0.0	T	106.0
1996-97	0.0	0.0	0.0										
1997-98													
1998-99													
1999-00													
2000-01													
2001-02													
2002-03													
2003-04													
2004-						4.8							
POR= 49 YRS	T	T	T	0.1	2.4	5.2	11.1	8.7	5.4	0.9	T	T	33.8

WBAN : 13866

REFERENCE NOTES :

<p>PAGE 1: THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).</p> <p>PAGE 2 AND 3: H/C INDICATES HEATING AND COOLING DEGREE DAYS. RH INDICATES RELATIVE HUMIDITY W/O INDICATES WEATHER AND OBSTRUCTIONS S INDICATES SUNSHINE. PR INDICATES PRESSURE. CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).</p> <p>GENERAL: T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE. + INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES. BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA. NORMALS ARE 30-YEAR AVERAGES (1971 - 2000). ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM. PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH. POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING. WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED. 0.* OR * INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05. CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON-ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME-AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET AND ON SATELLITE DATA FOR CLOUDS ABOVE 12,000 FEET. THE NUMBER OF DAYS WITH CLEAR, PARTLY CLOUDY, AND CLOUDY CONDITIONS FOR ASOS STATIONS IS THE SUM OF THE CEILOMETER AND SATELLITE DATA FOR THE SUNRISE TO SUNSET PERIOD.</p>	<p>GENERAL CONTINUED: CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS. WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED. WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH. RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION. AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2. SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL. A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65° F. DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR. DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY. WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY.</p> <p>ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p>
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2004  
CHARLESTON,  
WEST VIRGINIA (CRW)

Charleston lies at the junction of the Kanawha and Elk Rivers in the western foothills of the Appalachian Mountains. The main urban and business areas have developed along the two river valleys, while some residential areas are in nearby valleys and on the surrounding hills. The hilltops are around 1,100 feet above sea level, about 500 feet higher than the valleys. The Kanawha Airport is just over 2 miles northeast of the center-city area, on an artificial plateau constructed from several hilltops.

Weather records are maintained at the Kanawha Airport by National Weather Service personnel. This site tends to be slightly cooler than the river valleys during the afternoons. Conversely, the valleys can become cooler than the hilltops during clear, calm nights. The weather at Charleston is highly changeable, especially from mid-autumn through the spring.

Winters can vary greatly from one season to the next. Snow does not favor any given winter month, heavy snowstorms are infrequent, and most snowfalls are in the 4-inch or less category. Snow and ice usually do not persist on valley roads, but can linger longer on nearby hills and outlying rural roads.

Afternoon temperatures in the 40s and morning readings in the 20s are common during the winter. Yet, every winter typically has two or three extended cold spells when temperatures stay below freezing for a few consecutive days. Northwesterly winds are associated with the cold weather. Air reaching Charleston from the northwest can cause cloudiness and flurries, even when there is no nearby organized storm system. Winter conditions are much more severe over the higher mountains less than 50 miles to the northeast through the southeast. Temperatures warm rapidly in the spring and are accompanied by low daytime humidities.

Summer and early autumn have more day-to-day consistency in the weather. Sunshine is more abundant than in winter. Summer precipitation falls mostly in brief, but sometimes heavy, showers. Flash flooding can occur along small streams, but flooding is rare on the dam-controlled Kanawha and Elk Rivers.

Afternoon summer temperatures are mostly in the 80s. Readings above 95 degrees are rare. However, during a hot spell, haze and humidity can add to the unpleasantness and indoor air conditioning is recommended. Cooler and less humid air often penetrates the area from the north to end a hot spell.

Early morning fog is common from late June into October. Industrial and vehicular pollutants can contribute to limited visibility any time of the year, especially when cooler air becomes trapped in the valleys. Autumn foliage is generally at its peak during the second and third weeks of October. By the end of October, the first 32 degree temperature has usually arrived.

Ample precipitation is well distributed throughout the year. July is quite often the wettest month of the year, while October averages the least rain. Droughts severe enough to limit water use are scarce. Any dry spells during the spring or autumn can cause conditions favorable for brush fires in outlying areas.

# STATION LOCATION

CHARLESTON, WEST VIRGINIA

LOCATION	Occupied From	Occupied To	Airline Distances and Directions from previous Location	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE										AUTOMATIC OBSERVING EQUIPMENT *	* TYPE  M = AMOS T = AUTOB S = ASOS W = AWOS  REMARKS	
						SEA LEVEL GROUND TEMPERATURE	GROUND											HYGROMETER
							WIND INSTRUMENT	EXTREME THERMOMETERS	PSYCHROMETER	SUNSHINE SWITCH	TIPPING BUCKET	WEIGHING RAIN GAGE	8 INCH RAIN GAGE					
*NOTE: <u>AIRPORT</u> NWS Building Kanawha Airport+	5/16/79	10/01/94	app. 0.7 mi. SSE	38°22'	81°36'	939	n32 q36	4	4		3	4	3	n4 p4 q4	n. Not moved 5/16/79. p. Type change 3/17/86. q. Move from field to NWS Bldg 8/3/89.			
Yeager Airport	10/01/94	Present	NA	38°23'	81°35'	r1023								S	ASOS Commissioned 10/01/94  r. Ground Elevation			

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\* NOTES: For earlier station history see previous editions.