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JANUARY 1979

VOLUME 30

NUMBER 1

CLIMATOLOGICAL DATA NATIONAL SUMMARY



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NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION

ENVIRONMENTAL DATA AND
INFORMATION SERVICE

NATIONAL CLIMATIC CENTER
ASHEVILLE, N.C.

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

JANUARY 1979

GENERAL SUMMARY OF WEATHER CONDITIONS

Lyle Denny, Climatologist
Environmental Data and Information Service, NOAA

HIGHLIGHTS: Most of the Nation showed above-normal precipitation in January. Many stations in the western Great Lakes area noted record amounts of snowfall. Exceptions to the above-normal precipitation included most of the Pacific Northwest, where only 40 to 60% of normal fell, and across the northern tier of States along the Canadian border west of the Lakes. New England received record precipitation in the eastern portions of the region, rain caused some flooding. Southwestern Texas saw drier than normal weather.

January stood as a quite cold month as many stations broke records for the coldest first month. From the northern Rockies to the central Plains, monthly averages dipped 13 to 16° colder than normal.

During the first week, very cold air plunged into the western United States. While low temperature records fell in the Plains, new record highs were set in the East. At the onset of the cold weather, vegetable harvest was delayed in California, but no damage was noted. As the cold air moved eastward, the southern Texas vegetable and citrus area was not so fortunate. A moderate freeze inflicted considerable damage on the 2d and 3d. Moving rapidly eastward, the cold air nipped parts of Florida, but only slight damage to tender foliage was reported. Rain or snow preceded the eastward moving cold air and became heaviest from eastern Texas to southern New England. Late in the week, heavy rain fell in southern California where the Los Angeles area measured more than 3 inches.

The drier-than-normal Pacific Northwest picked up 1 to 2 inches of precipitation during the second week. The rain (snow at higher elevations) extended southward well into California and southern Plateau. Elsewhere, a storm system formed in Missouri and moved northeastward spreading snow to its north and west and rain to the east. An additional 6 inches of snow fell on the hard-hit Chicago area. Cold weather continued to dominate most of the Nation, but warming

began in the West and southern Florida.

The Pacific storm affecting the Northwest moved southward along the California Coast and then into the Southwest during January's third week. Light to moderate rain or snow accompanied the storm. A minor disturbance added another couple of inches of snow to the southwestern Great Lakes area. A third system wound up in the lower Mississippi Valley and spread heavy rain in the South and freezing rain and then snow from the mid-Atlantic States northward. Colder-than-normal weather, but not as cold as the previous 2 weeks, persisted in the northern States and most of the Southeast. Warmer-than-normal temperatures spread from California into Alabama.

The last full week of January (the 22d-28th) brought a return of the very cold weather to nearly all the United States. Cold air plunged southward to the West and moved eastward. A low pressure system off the coast of Newfoundland, with its counter-clockwise circulation, brought warmer air into the Northeast making that area the only part of the Nation where the temperatures averaged above normal. Nearly all parts of the country received some precipitation, but most occurred in the South and the Northeast. Heavy rain in some New England areas caused local flooding. Thunderstorms rumbled over the South as the cold air encountered the warmer moist air. Nearly an inch of precipitation fell in Arizona, and another six or more inches of snow plagued the western Lakes area.

During the last three days of January, the cold air displaced the warmer air in the Lakes area and most of the Northeast. Only New England remained warmer than normal. Moisture from the Gulf spread northward into Texas and light snow fell from the central Plains to the Lakes.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

JANUARY 1979

STATE	Temperature							Precipitation				
	Monthly extremes							Monthly extremes				
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least		
		°F			°F			In.				In.
Alabama	2 Stations	76	1	Ashland 2 SSE	1	3	Reform 2 E	12.96	Fairhope 2 NE	.504		
Alaska	Port Heiden	52	30	Allakaket	-55	30	Little Port Walter	16.97	Lonely	T		
Arizona	Tumacacori Natl Mon	76	4	Hawley Lake	-36	30	Sunrise Mountain	11.52	Saint Johns	.72		
Arkansas	2 Stations	69	1	2 Stations	-7	14+	Arkansas City	12.39	Yellville	1.50		
California	El Centro 2 SSW	75	12	Big Bear Lake	-25	29	Strawberry Valley	15.32	Bishop WSO AP	.45		
Colorado	Trinidad FAA AP	63	12	Maybell	-60	1	Independence Pass 5 SW	8.66	Browns Park Refuge	.06		
Connecticut	Norwalk Gas Plant	65	2	Wigwam Reservoir	-9	20+	West Hartford	15.47	Bulls Bridge Dam	7.87		
Delaware	3 Stations	66	2+	Georgetown 5 SW	4	4	Newark University Farm	8.86	Georgetown 5 SW	6.78		
Florida	Fort Lauderdale	88	14	Smith Creek	14	3	High Springs	11.36	Miami WSMO AP	1.28		
Georgia	Waycross 4 NE	81	2	Blairsville Exp Station	2	9	Clayton 1 SSW	10.53	Midville Exp Station	2.98		
Hawaii	2 Stations	91	9+	Mauna Kea Obs 111.2	19	21+	Kukaiwa 222	60.44	Mauna 694	.08		
Idaho	Reynolds	51	12	Hamer 4 NW	-48	1	Tensed	5.46	Riggins	.41		
Illinois	Mt Carmel	49	1	3 Stations	-29	12+	Centralia	5.37	Jacksonville 2 E	D1.49		
Indiana	Madison Sewage Plant	61	1	Lowell	-24	15	Shoals Hiway 50 Bridge	6.01	Fort Wayne WSO AP	1.64		
Iowa	2 Stations	40	22	Anamosa 1 WNW	-29	2	Donnellson	4.15	Lake Park	.42		
Kansas	Syracuse 2 W	60	21	Ellsworth	-25	2	La Cygne	4.96	Richfield 10 WSW	.29		
Kentucky	Perryville 2	67	2	2 Stations	-9	15	Somerset 2 NE	8.64	Paducah FAA AP	3.25		
Louisiana	New Roads 5 ESE	79	1	Plain Dealing	8	3+	Saint Joseph Exp Station	17.50	Hackberry 8 SW	3.65		
Maine	Bar Harbor 3 NW	58	2	Van Buren 2	-40	12	Jonesboro	12.53	Fort Fairfield 5 NE	4.07		
Maryland	Millington	68	1	Mc Henry 2 NW	-8	4+	Conowingo Dam	10.41	Savage River Dam	4.45		
Massachusetts	Framingham	62	3+	Chester 2	-17	12	Sterling	14.34	Nantucket FAA AP	4.00		
Michigan	Adrian 2 NNE	40	1	Stambaugh 1 S	-37	16+	Whitefish Point	D 5.91	St Ignace-Mackinac Br	1.21		
Minnesota	2 Stations	29	26+	Wright 4 NW	-45	2	New London	2.82	Duluth Harbor Station	.25		
Mississippi	Gulfport Naval Center	76	18	5 Stations	5	10+	Port Gibson 1 NW	16.98	Biloxi City	5.86		
Missouri	Alton	53	17	Shelbina	-30	15	Wappapello	5.70	Macon	1.41		
Montana	Augusta	48	21	Wisdom	-49	7+	Summit	D 3.59	Turner	.03		
Nebraska	Benkelman	63	22	Box Butte Exp Station	-35	1	Nebraska City	2.90	Sidney 6 NNW	.08		
Nevada	3 Stations	64	13+	Mountain City R S	-30	31+	Mount Rose Bowl	6.76	Dyer 4 SE	.08		
New Hampshire	Greenland	61	2	2 Stations	-32	12	Mount Washington	12.62	Grafton	5.05		
New Jersey	2 Stations	64	2	High Point Park	-3	19	Morris Plains 1 W	13.24	Shiloh	6.31		
New Mexico	3 Stations	71	13+	Tierra Amarilla 4 NNW	-33	2	Tohatchi 1 ESE	8.63	Carlsbad FAA AP	.20		
New York	N Y Central Park WSO CI	63	19	Gouverneur 3 NW	-34	19	Green Port Power House	13.35	Massena FAA AP	2.52		
North Carolina	4 Stations	74	8+	Grandfather Mountain	-12	3	Rosman	D12.60	William O. Huske L & D	3.33		
North Dakota	Hebron	39	22	Belcourt Keya	-40	15+	Forman 5 SSE	D 1.11	2 Stations	T		
Ohio	3 Stations	62	1	2 Stations	-22	12+	Portsmouth US Grant Br	6.39	Toledo Express WSO AP	1.24		
Oklahoma	Waurika	64	18	Bixby 2 E	-14	31	Durant USDA	3.73	Boise City 2 E	.33		
Oregon	Ashland	64	11	Seneca	-40	1	Port Orford 5 E	12.48	Union City Exp Station	.47		
Pennsylvania	Derry 4 SW	65	1	2 Stations	-24	11	Bucksville	11.54	Union City Filt Plant	2.33		
Puerto Rico	Dos Bocas	92	31	Adjuntas Substation	45	31+	Pico Del Este	10.47	3 Stations	.00		
Rhode Island	Providence WSO AP	59	2	2 Stations	-1	20	North Foster 1 E	14.38	Block Island WSO AP	8.83		
South Carolina	2 Stations	77	2	Caesars Head	-3	3	Caesars Head	14.57	Charleston WSO AP	3.43		
South Dakota	Belle Fourche	52	21	Deerfield 4 NW	-34	1	Castlewood	2.45	Glad Valley 2 W	T		
Tennessee	Kingsport	69	1	2 Stations	-4	9+	Rockwood 2	10.00	Dyersburg FAA AP	2.98		
Texas	3 Stations	85	19+	2 Stations	-12	2	Marshall	14.32	3 Stations	.00		
Utah	2 Stations	57	12+	2 Stations	-43	2+	Silver Lake Brighton	5.50	Eskdale	.25		
Vermont	Dorset 1 S	56	2	Enosburg Falls	-32	19	Scarsburg Station	11.83	South Hero	4.38		
Virginia	Diamond Springs	72	1	Mt Lake Biological Sta	-10	3	Meadows of Dan 5 SW	8.54	Wytheville 1 S	3.45		
Virgin Islands	Cruz Bay	89	30+	Alex Hamilton Field FAA	61	27+	Granard	4.88	East End	.89		
Washington	Seattle Jackson Park	57	18	Newport	-30	1	Rainier Paradise R S	7.67	Ephraim FAA AP	.26		
West Virginia	2 Stations	69	2+	Snowshoe	-16	3	Snowshoe	10.24	Webster Springs 1 E	3.56		
Wisconsin	Hillsboro	35	28	Coudray 7 W	-49	2	Milwaukee Mt Mary College	4.12	Rice Lake	.62		
Wyoming	Chugwater	48	17	Darwin Ranch	-53	1	Snake River	3.84	2 Stations	.11		

CLIMATOLOGICAL DATA METRIC UNITS

METRIC UNITS

CLIMATOLOGICAL DATA
METRIC UNITS

JANUARY 1979

State and Station	Elevation (ground)	Pressure		Temperature		Precipitation		Wind		No. of days (sunrise to sunset)		
		m	mb	°C	°C	mm	mm	m/s	Frost-free miles (1.6 kilometers)	No. of days (sunrise to sunset)		
COLORADO	2297 ALAMOSA	6.3	-24.0	-1.4	-0.2	18.7	39.6	31	13	5	8	
	COLORADO SPRINGS	806.3	1019.8	-2.7	-1.4	-0.5	-25.0	0	31	5	8	
DELMER	173 1017.9	0.8	-1.4	-0.6	-0.6	12.2	-23.9	31	-11.6	62	77	
GRAND JUNCTION	1710 1023.2	-3.8	-1.3	-0.4	-0.6	4.4	-23.3	31	-11.7	77	77	
PUEBLO	1474 1025.7	-1.7	-1.5	-0.5	-0.6	10.6	-28.9	2	0	15	7	
CONNECTICUT	2 BRIDGEPORT	1012.9	1013.6	2.6	0.2	11.1	-15.0	19	216	116	17	
	HARFORD	52 1005.4	1013.1	0.7	-0.7	-2.0	13.9	2	284	210	19	
DELAWARE	23 WILMINGTON	1012.2	1015.4	6.2	-0.3	-0.3	17.8	1	-14.6	19	4	
DISTRICT OF COLUMBIA	88 WASHINGTON DULLES	1006.4	1016.5	3.7	-0.4	-0.5	17.8	1	-15.0	4	3	
WASHINGTON NATIONAL	3 WASHINGTON	1014.2	1016.5	5.5	-2.1	1.7	-0.3	17.2	3	0	22	
FLORIDA	6 APALACHICOLA U	1019.6	1020.2	16.3	3.3	8.8	-4.2	21.7	1	-6.7	3	
	DAYTONA BEACH	0 1017.6	1019.7	19.6	1.8	13.7	-0.9	20.1	14	-2.2	3	
FORKERSVILLE	5 1016.3	1016.7	22.4	1.4	16.9	-0.6	25.0	1	-1.2	3		
JACKSONVILLE	1 1016.0	1019.5	15.9	1.9	8.8	-0.7	25.0	1	-0.7	14		
KEY WEST	1 1017.7	1018.9	17.4	1.4	10.7	-0.8	26.7	14	-4.4	70		
MILANO	2 1018.3	1018.6	23.5	1.4	18.3	-1.2	12.2	3	0	0		
ORLANDO/M COY AFB	29 1015.6	1019.2	22.5	1.4	14.6	-0.2	27.2	14	-4.4	3		
PENSACOLA	34 1015.9	1020.2	12.6	1.6	-0.6	-0.2	28.6	1	-2.2	1		
TALLAHASSEE	17 1017.3	1019.9	16.6	1.1	7.8	-0.6	22.2	1	-6.7	9		
TAMPA	6 1019.0	1019.2	8.0	1.3	-0.4	-0.6	23.3	1	-7.2	10		
WEST PALM BEACH	5 1018.6	22.2	11.9	1.7	-1.6	27.9	14	-1.7	3	0	0	
GEORGIA	244 ATHENS	988.8	1019.4	9.4	-1.1	-0.8	-2.6	20.6	1	-11.1	3	
	ATLANTA	508 981.4	1019.3	8.7	-2.2	-0.7	-2.8	18.9	1	-12.2	3	
AUGUSTA	41 1013.2	1018.7	12.2	-1.7	-0.2	-1.4	23.9	1	-8.9	3		
COLUMBUS	136 1005.8	1020.1	11.0	-0.4	-0.5	-0.5	20.5	14	-9.6	3		
MACON	108 1006.1	1019.9	12.7	-0.6	-0.7	-0.7	22.6	1	-9.4	3		
ROME	194	7.3	-0.3	-0.1	-0.1	-0.1	22.3	0	-0.6	13		
SAVANNAH	14 1017.6	1019.5	13.7	1.1	-2.5	-2.5	23.3	1	-6.7	3		
HAWAII	244 HILD	988.8	1017.1	25.0	16.9	21.0	-0.8	32.8	9	16.4	14	
	ATLANTIC	2 1016.3	1016.7	26.7	17.3	21.1	-1.3	27.2	1	-10.7	14	
KAHULUI	15 1014.2	1017.4	25.7	17.6	21.7	-0.3	27.2	1	-10.7	14		
LITTLE	31 1012.2	1017.4	26.2	19.6	22.0	-0.1	29.4	18	1.1	21		
IDAHO	865 BOISE	919.4	1024.4	-3.7	-13.8	-0.8	-1.1	5.0	11	-14.4	15	
LEWISTON	431 1024.9	-5.3	-11.6	-0.6	-0.4	-0.9	-4.4	21.1	1	-21.1	14	
POCATELLO	135n 863.9	1024.9	-6.8	-16.8	-11.8	-0.9	6.1	11	-33.3	7	15	
ILLINOIS	CAIRO U	94	-0.8	-7.5	-4.1	-6.5	-0.5	7.2	19	-14.4	15+	
	CHICAGO O' HARE	201 993.6	1019.4	-6.0	-11.6	-0.6	-0.8	5.0	11	-16.4	72	
CHICAGO MIDWAY	185 994.3	1020.1	-1.3	-15.7	-6.6	-1.7	2.2	20	-27.2	15		
MOLINE	177 998.3	1021.4	-8.9	-19.7	-14.3	-8.6	2.0	28.8	1	-17.6	69	
PEORIA	199 995.9	1019.5	-7.6	-17.5	-12.6	-8.0	1.1	-1.1	2.0	1.8	51	
ROCKFORD	221 992.2	1021.0	-8.5	-18.5	-12.0	-8.0	-0.1	-0.1	2.0	1.8	51	
SPRINGFIELD	179 998.3	1022.0	-6.4	-15.4	-10.9	-1.7	-1.7	-2.0	-1.7	1.7	56	
INDIANA	116 1006.4	1021.1	-2.2	-10.2	-6.2	-0.5	0.1	1.7	-21.7	15	40	
	EVANSVILLE	0	30	-10.6	71	0	30	-10.6	71	5	37	53

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature				Precipitation				Wind				Cloudy, 8-10		No. of days (sunrise to sunset)												
		Sed. level	mb	Highest	°C	Lowest	°C	Depature from normal	No. of days	Snow/ice pellets	Fastest mile (1.6 kilometers)	Speed	Date	Direction	Partly cloudy, 4-7	Clear, 0-3	Cloudy, terms	Possible sunshine (%)												
	Station	mb	Depature from minimum	Depature from normal	Depature from normal	Depature from normal	Depature from normal	Average dew point	Min. 0 C or lower	Max 32.2 °C or above	With thunderstorms	25 mm or more	Total	Resultant speed	Resultant direction	Cloudy, terms	Cloudy, terms	Cloudy, terms												
INDIANA	FORT WAYNE	241	987.5	1019.0	-4.2	-12.1	-4.4	+2.2	17	+23.9	11	0.31	-12.8	70	42	-22	30	13	17	3	5	23	8.2	4.3						
INDIANA	INDIANAPOLIS	241	999.2	1020.0	-5.5	-11.9	-7.8	+3.9	23	+21.1	15	0.30	-10.6	85	82	10	36	19	0	465	254	26	12.5	7.6	35					
INDIANA	SOUTH BEND	236	988.8	1018.1	-4.2	-11.6	-7.8	+3.4	20	+25.6	15	0.31	-11.1	77	82	22	39	24	0	1146	533	25	13.0	3.2	14					
IDAHO	BURLINGTON	211	985.6	1022.5	-7.7	-16.5	-12.1	-7.1	19	+27.8	15	0.31	-17.2	68	64	22	30	10	0	577	24	31	12.5	7	6.7					
IDAHO	COEUR D'ALEINES	286	985.6	1022.5	-9.3	-19.8	-15.3	-7.3	19	+2.2	22	0.31	-15.6	68	64	22	30	10	0	356	24	31	13.4	10	4.1					
IDAHO	DUVALLE	322	979.7	1022.0	-10.8	-20.3	-15.3	-7.3	19	+0.2	23	0.31	-15.6	15	0.31	-15.6	68	38	10	0	744	635	25	13.0	13	10				
IDAHO	STUVA CITY	334	981.5	1022.7	-11.2	-20.3	-15.8	-7.1	19	+2.2	31	0.31	-15.6	15	0.31	-15.6	68	38	10	0	287	25	31	12.5	4	1.7				
IDAHO	ATELICO	765	984.5	1022.0	-11.2	-20.3	-15.8	-7.1	19	+1.2	23	0.31	-28.9	11	0.31	-28.9	11	0	10	12	9	0	12.5	13	13	9	4.1			
KANSAS	CONCORDIA	448	987.7	1022.7	-5.7	-15.8	-10.7	-7.6	19	+5.6	22	0.31	-24.4	31	0.31	-15.0	70	28	12	14	346	330	26	13.4	13	2				
KANSAS	OODGE CITY	787	986.5	1024.0	-5.0	-14.1	-9.6	-6.9	19	+5.6	22	0.31	-12.8	14	0.31	-12.8	13	26	17	13	21	346	24	36	12.5	6.8	0.6			
KANSAS	GOODLAND	1116	987.6	1020.5	-5.0	-14.8	-10.1	-6.6	19	+5.0	16	0.31	-26.1	14	0.31	-13.9	69	22	13	26	14	346	22	36	12.5	6.0	0.6			
KANSAS	TUPELA	267	999.8	1023.0	-5.7	-14.2	-9.9	-6.4	19	+5.7	22	0.31	-15.0	15	0.31	-15.0	70	24	11	0	305	134	25	13.4	13	1.4				
KANSAS	MICHTA	403	922.6	1023.0	-4.1	-12.9	-8.1	-5.4	19	+7.2	22	0.31	-23.9	8	0.31	-12.8	71	45	18	22	1	353	24	31	12.5	4	1.8			
KENTUCKY	COVINGTON	265	986.5	1019.5	-1.7	-10.2	-5.9	-5.4	19	+5.0	1	0.30	-21.1	15	0.30	-9.4	77	93	9	45	13	0	445	152	27	11.2	25+	3		
KENTUCKY	LEXINGTON	294	982.6	1019.3	-0.6	-8.8	-4.7	-4.7	19	+5.0	1	0.30	-19.4	15	0.30	-6.6	77	103	3	32	15	0	290	102	25	11.2	24	3		
KENTUCKY	Louisville	145	1001.7	1020.0	-0.1	-8.2	-4.1	-4.1	19	+17.8	1	0.30	-17.8	15	0.30	-8.3	75	34	16	0	216	76	28	11.0	24	2				
Louisiana	BATON ROUGE	20	1019.3	1021.6	10.8	1.1	5.9	-4.6	19	+22.8	19	0.16	-1.1	73	159	47	44	11	3	0	1.1	13.0	30	20	5	21	7.6			
Louisiana	LAKE CHARLES	1	1009.6	1020.4	11.7	2.0	6.9	-4.4	19	+22.0	19	0.11	-1.7	73	122	20	26	10	5	0	1.1	11.2	29	24	4	10	7.4			
Louisiana	NEW ORLEANS	77	1011.9	1021.5	7.3	3.1	7.6	-3.9	19	+23.3	11	0.10	-5.0	9	0.10	-6.1	69	124	20	12	1	1.1	13.0	30	20	4	1.7			
Louisiana	SHREVEPORT	77	1011.9	1021.5	7.3	3.1	7.6	-3.9	19	+20.6	17	0.10	-5.4	2	0.22	-11.1	81	234	81	12	4	7	13	32	20	4	1.7			
Maine	CARIBOU	190	997.1	1021.6	-4.7	-12.8	-9.2	-9.2	19	+2.6	7.2	0.24	-32.8	17	0.24	-7.2	79	114	62	32	19	815	991	31	14.6	7	7			
Maine	PORTLAND	14	1009.6	1012.1	-0.7	-6.6	-4.6	-4.6	19	+10.2	2	0.26	-22.2	20	0.26	-7.8	79	303	217	73	20	0	1585	813	2.3	14.6	7	7		
MARYLAND	HALTIMORE	45	1010.2	1016.0	4.7	-3.4	0.6	-0.2	17.8	24	+13.3	4	0	2.5	-6.1	64	199	125	46	14	1	145	51	2.9	19.7	18	6			
MASSACHUSETTS	BLUE MILL OBS R	192	1011.2	1012.0	2.0	-6.2	-2.1	-1.2	19	+13.9	2	0.21	-15.6	19	0.21	-5.0	71	295	190	69	18	1	229	127	3.0	27.7	3.6	3.6		
MASSACHUSETTS	WORCESTER	301	973.2	1012.0	3.9	-3.4	0.3	1.8	19	+1.8	2	0.29	-18.3	19	0.29	-5.0	72	293	193	74	15	0	406	229	3.0	14.6	18	5		
MICHIGAN	ALBION	210	989.2	1015.6	-5.8	-16.3	-10.1	-10.1	19	+0.2	24	0.31	-27.8	11	0.31	-12.8	78	45	3	23	13	0	592	635	2.1	28.4	3.7	3.7		
MICHIGAN	DETROIT METRO	189	981.5	1016.6	-4.0	-9.4	-6.7	-7.4	19	+3.1	24	0.31	-20.8	15	0.31	-10.5	73	39	-10	21	12	0	336	152	2.7	27	2.7	3.7		
MICHIGAN	FLINT	735	977.1	1016.4	-5.7	-12.2	-8.9	-8.9	19	+2.8	24	0.31	-22.8	11	0.31	-11.7	78	45	2	25	15	0	663	156	2.6	28.4	2.7	3.7		
MICHIGAN	GRAND RAPIDS	239	986.8	1017.3	-4.3	-11.8	-8.3	-8.3	19	+1.7	28	0.31	-29.4	77	53	-4	22	17	0	556	544	2.6	12.5	2.7	2.7					
MICHIGAN	HOUGHTON LAKE	150	981.9	1016.1	-7.1	-15.7	-11.4	-11.4	19	+3.6	28	0.31	-31.7	11	0.31	-12.8	83	38	1	19	13	0	554	610	1.7	28.4	2.7	2.7		
MICHIGAN	LAWRENCE	256	983.7	1016.9	-5.3	-12.3	-8.6	-8.6	19	+0.6	28	0.31	-22.3	19	0.31	-10.6	83	54	6	27	14	0	688	447	2.1	25	2.7	3.6		
MICHIGAN	MUSKOGEE	431	993.6	1017.6	-10.8	-18.6	-14.7	-14.7	19	+3.9	28	0.31	-31.7	16	0.31	-10.8	84	62	10	21	13	0	103	33	1.7	25	1.7	3.6		
MICHIGAN	SAULT STE MARIE	220	981.8	1013.8	-8.9	-16.8	-12.8	-12.8	19	+0.6	27	0.31	-17.2	15	0.31	-10.9	84	70	13	22	12	0	1069	818	2.4	13.4	2.3	3.6		
MINNESOTA	DULUTH	426	985.5	1020.0	-12.6	-17.4	-12.6	-12.6	19	+3.3	26	0.31	-35.6	11	0.31	-12.8	63	19	-10	5	13	0	302	457	2.3	31	9.8	3.1		
MINNESOTA	INTERNATIONAL FALLS	359	985.3	1020.1	-16.7	-22.0	-16.7	-16.7	19	+3.3	26	0.31	-42.2	16	0.31	-12.8	67	14	-8	3	11	0	274	610	1.4	29	8.9	3.1		
MINNESOTA	MINNEAPOLIS	256	989.5	1020.3	-11.4	-20.0	-16.0	-16.0	19	+3.3	26	0.31	-33.1	11	0.31	-13.9	61	28	9	12	0	361	533	1.9	31	9.8	3.1			
MINNESOTA	ROCHESTER	395	970.5	1021.9	-13.7	-20.5	-18.0	-18.0	19	+0.6	27	0.31	-33.3	11	0.31	-13.9	72	33	1	10	10	0	621	635	2.5	30	13.0	3.1		
MISSISSIPPI	ST CLIOU	313	982.4	1022.7	-13.3	-25.0	-19.2	-19.2	19	+5.0	21	0.31	-37.8	11	0.31	-13.9	72	33	13	11	10	0	452	58	2.5	30	13.0	3.1		
MISSISSIPPI	JACKSON	94	1009.5	1021.6	8.4	-1.5	3.5	-4.9	20.6	1	-10.6	9	0	23	0.23	0.20	79	158	243	143	14	2	7	0.9	34	11.4	2.1	22	20	4

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State and Station		Pressure		Temperature				Precipitation				Wind				No. of days (sunrise to sunset)		
		Silothon Q	Sea level	Date	Lowest	Highest	Average	Departure from normal	No. of days	With thunderstorms	Reported from normal	Resultant direction	Resultant speed	Speed	Direction	Cloudy, 0.3	Partly cloudy, 4.7	Sky cover, 0.1, inches (sunrise to sunset)
MISSISSIPPI	MERIDIAN	8.9	1009.6	1021.4	8.6	24.0	3.3	-4.9	20.0	17+	0	22	-1.1	7.6	221	112	91	23
MISSOURI	COLUMBIA REGIONAL	27.0	988.2	1022.1	-4.3	-13.6	-8.9	-7.4	5.0	22	-23.9	15+	0	30	-12.8	71	62	20
KANSAS CITY MUN. AP	309	983.7	1022.4	-6.2	-15.5	-10.8	-8.1	4.4	22	-23.9	15+	0	31	-15.7	71	28	13	
KANSAS CITY MUN. AP	226	981.5	1022.1	-3.8	-13.1	-8.4	-7.1	7.2	22	-21.1	3+	0	31	0	50.0	16	30	
ST. JOSEPH	267	981.5	1022.1	-6.7	-12.7	-8.9	-8.2	4.4	22	-27.8	3	0	31	0	50.0	15	30	
ST. LOUIS	162	1000.7	1022.3	-4.7	-12.5	-8.6	-8.0	4.9	17	-22.2	15	0	31	-10.0	98	53	25	
SPRINGFIELD	194	979.3	1021.8	-2.9	-13.1	-8.0	-8.5	6.7	17	-24.4	29+	0	30	-1.6	78	60	17	
MONTANA	BILLINGS	1087	992.0	1022.9	-9.3	-17.8	-13.5	-7.9	2.8	19	-27.2	14	0	31	-16.7	63	10	10
GLASGOW	696	937.0	1025.4	-15.1	-25.2	-20.2	-7.5	-3.9	24+	-36.1	15	0	31	-12.8	76	4	6	
GREAT FALLS	1116	887.9	1025.4	-9.3	-19.1	-14.2	-7.8	-7.8	20	-28.0	14	0	31	-16.7	63	12	11	
HAILEY	784	926.5	1024.5	-3.3	-25.2	-19.3	-7.8	-3.3	21+	-41.1	14	0	31	1.1	63	12	11	
HELENA	1107	1027.3	1027.3	-12.6	-22.8	-17.2	-9.4	0.6	21	-31.7	30	0	31	-13.3	63	20	12	
KALISPELL	904	910.4	1026.7	-12.2	-23.6	-17.9	-9.7	0.6	21	-38.3	1	0	31	-14.4	68	3	13	
MILES CITY	A01	925.2	1024.7	-12.9	-22.5	-17.7	-8.4	1.7	21	-33.3	14	0	31	-13.9	72	8	13	
MISSOURI	972	908.2	1027.2	-10.0	-19.4	-14.7	-8.6	6.1	21	-33.3	1	0	31	-17.8	76	2	10	
NEBRASKA	561	953.3	1023.8	-8.6	-18.3	-13.0	-8.2	1.1	22	-27.8	31	0	31	-17.2	72	21	11	
GRAND ISLAND	359	977.7	1023.2	-8.8	-18.6	-13.8	-8.3	2.8	22	-28.5	31	0	31	-17.2	74	10	10	
LINCOLN	471	960.1	1023.5	-10.1	-19.2	-14.0	-8.3	0.3	22	-27.2	31	0	31	-16.1	68	12	11	
NORFOLK	446	919.4	1023.7	-8.7	-20.3	-14.4	-9.7	3.9	22	-30.6	7	0	31	-16.7	69	22	13	
NORTH PLATTE	294	925.2	1024.7	-7.5	-16.2	-11.8	-6.6	4.9	22	-23.9	31	0	31	9	9	22	11	
OMAHA (EPPLEY)	390	978.6	1024.8	-9.2	-17.6	-13.4	-8.8	2.2	22	-25.6	14	0	31	13	12	22	12	
OMAHA (NORTH)	1204	978.0	1022.5	-4.9	-19.1	-12.0	-8.1	7.8	22	-31.1	1	0	31	-17.2	68	3	12	
SCOTTSBLUFF	780	925.2	1022.1	-8.9	-22.1	-15.5	-9.1	3.9	21	-33.3	14+	0	31	-15.5	71	21	11	
VALENTINE																		
NEVADA	ELKU	1530	943.9	1019.8	0.7	-11.1	-5.2	-0.2	7.2	11	-25.6	1	0	30	-17.8	81	9	19
ELY	1906	900.0	1019.0	0.2	-16.8	-3.3	-0.3	9.4	4	-30.6	29	0	31	-17.2	52	6	14	
LAS VEGAS	659	987.5	1019.2	9.7	0.4	-5.1	-1.7	-1.7	16.1	12	-8.3	2	0	31	-5.0	56	15	19
RENO	1342	985.2	1019.3	3.4	-6.0	-1.7	-1.7	11.1	-17.2	1	-6.1	72	0	30	-1.7	74	10	12
MINNEHAUCA	1311	868.6	1019.6	2.6	-10.0	-3.7	-1.6	14.4	11	-23.3	26	0	30	-8.9	66	22	-3	10
NEW HAMPSHIRE	CONCORD	104	995.7	1012.7	-0.3	-9.4	-4.8	1.5	13.3	2	-21.7	12	0	28	-9.4	69	16	16
MT. WASHINGTON Obs.	1909			-8.9	-18.3	-13.6	1.0	3.9	2+	-32.2	11	0	30	-9.4	69	27	0	17
NEW JERSEY	ATLANTIC CITY	20	1011.9	1014.3	4.7	-5.3	-0.3	-0.7	14.4	2	-16.1	19+	0	26	-3.9	76	1	1
ATLANTIC CITY U	2	1013.2	1014.2	4.2	-3.6	0.6	-0.6	11.7	2	-11.7	19	0	24	-1.7	76	1	1	
NEWARK	17	1014.3	1014.3	3.8	-3.7	0.1	0.0	1.7	2	-14.4	19	0	23	-4.4	72	1	1	
TRENTON U										-13.9	19	0	23	228	15A	60	15	17
NEW MEXICO	ALBUQUERQUE	1610	936.4	1017.3	6.2	-5.3	0.5	-1.3	13.3	12	-13.3	30	0	26	-7.2	60	18	16
CLAYTON	1515	985.6	1017.5	1.5	-11.2	-4.8	-5.4	15.0	12	-23.3	1	0	25	-5.0	68	10	17	
ROSMELL	1112	889.6	1017.5	7.5	-4.3	1.6	-1.8	14.9	12	-22.8	2	0	25	-5.0	68	10	17	
NEW YORK	ALBANY	86	1002.4	1014.4	0.9	-10.1	-5.5	0.3	12.8	2+	-23.9	19	0	26	-8.9	78	16	17
BINGHAMTON	485	952.6	1013.7	-2.4	-9.7	-6.0	-0.4	11.1	2+	-21.7	12	0	30	-10.1	74	162	103	27
BUFFALO	215	987.8	1014.7	-3.4	-6.4	-1.8	-0.3	12.8	1	-21.1	1	0	29	-7.8	89	13A	64	23
NEW YORK U	40	1010.5	1013.9	4.0	-2.8	0.9	0.8	11.2	2	-13.3	19	0	20	-6.0	64	76	143	20
NEW YORK KENNECY	4	1012.2	1013.2	4.1	-2.1	0.7	1.0	11.2	2	-13.4	19	0	20	-5.0	67	143	83	21
NEW YORK LA GUARDIA	14	1014.5	1014.5	3.3	-3.8	-0.2	-0.3	13.9	2	-14.4	19	0	20	-5.0	69	22D	147	24
ROCHESTER	167	992.9	1015.0	-2.1	-9.6	-5.8	-1.4	11.1	1	-24.4	11	0	27	-8.3	80	104	49	25
															25	925	3.0	14

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State and Station	Elevation (ground)	Sea level	Pressure	Temperature						Precipitation						Wind						Sunshine										
				Average maximum			Average minimum			Average relative humidity			Total			With thunderstorms			Dust			Cloudy, cloudy, 47°										
				No. of days	Date	Lowest	No. of days	Date	Highest	No. of days	Date	Avg. dew point	No. of days	Date	Total	Depature from normal	No. of days	Date	Maximum depth on ground	Resultant speed	No. of days (sunrise to sunset)	%										
RHODE ISLAND PROVIDENCE	1010.5	1012.9	3.2	=5.4	=1.1	0.9	12.0	2	-16.7	1.9	0	27	-5.0	76	296	207	69	15	0	152	102	31	13*	8	6	17	6.8	51				
SOUTH CAROLINA CHARLESTON	1016.9	1014.9	14.2	0.6	7.4	-1.8	24.6	1	-6.7	1.0	0	15	0.6	64	87	13	25	13	0	0	0	2.1	27	15.6	19.21	7	9	15	6.6	67		
CHARLESTON U	1010.2	1014.4	13.7	-2.3	3.0	-3.0	-4.6	3	0.1	-6.3	1.0	0	10	-2.2	67	38	31	13	0	0	0	1.3	27	17.9	27.24	7	8	16	6.4	69		
COLUMBIA	965	1010.5	13.7	-1.1	2.3	-1.1	-4.1	10.0	-10.0	3	0	19	-3.3	56	132	47	15	0	23	T	0.9	28	14.8	5.21	8	10	13	6.2	56			
GHANVILLE SPRINGS	292	982.4	1017.8	-2.5	2.9	-2.8	-16.9	1	-10.0	3	0	24	-3.3	56	183	79	71	15	0	23	T	0.9	28	14.8	5.21	8	10	13	6.2	56		
SOUTH DAKOTA ABERDEEN	995	973.6	1023.6	-12.1	-23.2	-17.6	-31.7	1.8	-32.2	2.4	0	31	-13.3	66	24	12	8	10	0	394	356	10	6	15	5.9	51	10	6	15	5.9	51	
WYOMING RADIO CITY	970.5	902.4	-9.2	-21.9	-17.7	-8.1	-6.1	2.1	-30.6	1.4	0	31	-1.2	62	23	12	6	9	0	605	457	2.0	3.2	12.5	14	6	11	13	5.6	83		
SIOUX FALLS	932	969.0	-11.7	-21.9	-16.8	-6.9	-6.4	19*	-30.6	1.4	0	31	-13.3	63	29	14	9	10	0	483	457	1.9	3.1	12.5	14	6	11	13	5.6	83		
BRISTOL	459	962.8	1010.8	4.1	-13.3	-23.6	-19.4	-2.9	-1.7	1.8	0	25	-5.6	72	134	42	41	20	0	234	76	1.5	2.5	22.4	6	21	8.0	5.6	51			
CHATTANOOGA	203	995.6	1020.2	5.4	-2.5	-9.0	-3.6	1.3	-11.0	9*	0	25	-6.4	71	134	2.7	56	13	0	13	0	155	12.6	3.2	3.2	12.5	14	6	11	13	5.6	83
KNOXVILLE	299	983.1	1019.1	1.2	-4.1	-4.2	-4.2	-4.2	-12.8	3	0	25	-3.9	74	157	38	51	16	0	119	76	1.4	2.9	11.6	2.8	3	2.8	12.5	7.8	43		
MEMPHIS	1011.5	1022.1	3.0	-4.2	-1.5	1.3	1.3	1.9	-11.3	1.9	0	25	-6.7	74	157	54	51	16	1	12	3.2	3.2	1.6	3.2	3.2	7.7	43					
NASHVILLE	189	998.0	1020.5	2.8	-5.4	-1.2	-4.3	-1.2	-15.6	1.5	0	25	-5.6	75	181	60	51	12	0	203	76	1.4	2.8	10.3	2.4	5	4	12.5	7.9	37		
DAK RIGOLE	274	974.0	4.2	-5.2	-0.5	-3.9	-16.7	1	-15.0	9	0	25	-1.5	71	193	67	51	16	0	107	25	1.5	1.6	11.5	4	11	16	7.1	37			
TEXAS ABELLINE	544	956.0	1021.0	7.2	-2.0	-3.2	-4.5	-2.0	-15.0	9*	0	25	-5.6	72	134	42	41	20	0	234	76	1.5	2.5	22.4	6	21	8.0	5.6	51			
AMARILLO	499.0	997.0	1011.9	2.1	-3.9	-6.2	-6.2	-6.2	-16.7	1.2	0	25	-6.4	71	134	2.7	56	13	0	13	0	155	12.6	3.2	3.2	12.5	14	6	11	13	5.6	83
BROWNSVILLE	182	998.0	1020.5	9.5	0.4	4.7	5.2	2.0	-6.1	1.9	0	25	-2.2	2.2	28	0	18	76	54	6	23	14	1	1	1	0	0	5.6	31			
CORPUS CHRISTI	1019.0	1011.5	12	1.3	-2.2	13.5	-2.2	-2.2	-26.1	1.7	0	25	-3.9	3+	56	2	56	13	0	155	11	1	0	0	0	0	0	5.6	30			
DALLAS - FORT WORTH	168	1000.3	1022.4	5.6	10.9	10.9	10.9	10.9	10.9	1.0	0	25	-10.6	2	23	0	23	76	105	60	46	39	33	12	2	4.5	32.7	43				
DEL RIO	313	997.0	1020.2	1.8	1.7	2.1	5.8	2.1	-17.4	1.6	0	25	-10.6	2	23	0	23	76	105	60	46	39	33	12	2	4.5	32.7	43				
EL PASO	1194	881.8	1016.1	10.9	5.0	5.0	-1.4	16.1	1.2	-9.4	2	0	25	-2.8	61	20	10	8	6	0	1	0	0	0	0	0	0	1.6	62			
GALVESTON	2	121.6	4.6	3.8	3.8	2.6	-5.0	-2.6	-1.6	-1.6	0	25	-5.6	62	126	1.2	19	61	20	10	8	6	0	0	0	0	0	1.6	62			
HOUSTON INTERCOST	229	1017.3	1021.2	11.6	1.9	-4.4	-4.4	-4.4	-4.4	-4.4	0	25	-2.2	75	160	69	57	15	4	21	1.7	2	1.7	2.7	1.7	2.7	1.7	2.7	35			
LUBBOCK	92	905.0	1010.1	5.6	-0.2	-2.4	-2.4	-2.4	-2.4	-2.4	0	25	-6.1	63	137	2.6	6	6	0	20	51	0.5	2.6	1.6	3.2	1.6	3.2	1.6	3.2	34		
MIDLAND	469	915.0	1010.3	8.4	-0.8	-2.4	-4.4	-4.4	-17.8	1.7	0	25	-6.1	63	137	2.6	6	6	0	20	51	0.5	2.6	1.6	3.2	1.6	3.2	1.6	3.2	34		
PORT ARTHUR	51	1020.1	12	2.6	7.7	-3.4	-2.4	-2.4	-17.4	1.9	0	25	-2.2	72	137	2.6	36	12	4	0	20	51	0.5	2.6	1.6	3.2	1.6	3.2	1.6	3.2	34	
SAN ANGELO	580	983.0	1020.5	8.6	-0.5	-2.4	-2.4	-2.4	-17.4	1.9	0	25	-3.9	72	137	2.6	36	12	4	0	20	51	0.5	2.6	1.6	3.2	1.6	3.2	1.6	3.2	34	
SAN ANTONIO	329	991.9	1021.1	11.7	1.7	-4.2	-4.2	-4.2	-17.4	1.9	0	25	-3.9	72	137	2.6	36	12	4	0	20	51	0.5	2.6	1.6	3.2	1.6	3.2	1.6	3.2	34	
VICTORIA	32	1016.9	1021.1	12.7	7.7	-4.2	-21.6	1.9	-6.3	1.2	0	25	-6.1	71	137	2.6	36	12	4	0	20	51	0.5	2.6	1.6	3.2	1.6	3.2	1.6	3.2	34	
WICHITA FALLS	303	1003.4	1022.5	4.0	-1.4	-0.7	-5.9	-5.9	-17.0	1.9	0	25	-0.6	81	51	3	28	11	2	0	2.9	2.7	1.4	3.6	13.4	32.23	4	5	22	7.9	34	
UTAH MILFORD	1533	945.2	1021.2	-1.2	-12.9	-7.1	-6.3	-6.3	-31.1	3.0	0	30	-1.4	77	33	18	6	13	0	483	254	0.7	2.1	13.0	5.14	2	8	5	21	8.1		
SALT LAKE CITY	1286	872.3	1021.6	-1.2	-4.9	-5.5	-5.5	-5.5	-22.2	3.1	0	29	-8.9	77	33	18	6	13	0	351	102	0.7	2.1	12.5	5.14	2	8	5	21	8.1		
VERMONT BURLINGTON	1001	1016.0	-4.2	-11.3	-7.8	0.7	10.6	2	-26.7	1.2	0	28	-11.7	70	114	70	23	22	0	963	330	0.3	2.6	13.0	3.4	1	7	23	8.0	27		
VIRGINIA LYNCHBURG	279	982.1	4.8	-0.1	-2.6	-1.7	-1.7	-1.7	-15.0	3	0	29	-2.2	65	169	99	49	16	0	102	51	2.1	2.9	14.8	14.8	10	14	16	5.2	33		
NORFOLK	7	1015.7	8.8	-0.7	4.1	-0.7	-2.8	-2.8	-21.1	1.1	0	29	-1.7	66	164	79	45	11	1	125	T	2.1	3.0	14.8	14.8	10	14	16	5.2	33		
RICHMOND	50	1001.5	7.7	-0.7	2.8	-0.7	-0.7	-0.7	-15.7	4	0	29	-2.2	66	158	84	42	14	1	125	T	2.1	3.0	14.8	14.8	10	14	16	5.2	33		
RIKEVILLE	350	973.9	1017.0	6.5	-5.2	-1.9	-1.9	-1.9	-15.6	1.1	0	29	-6.7	66	159	84	43	13	0	172	94	4.3	1.3	25.5	25.5	5	9	17	7.1	33		
WALLOPS ISLAND	3	1017.0	6.4	-1.9	-2.4	-0.4	-0.4	-0.4	-10.1	2.1	0	24	-6.7	66	159	84	43	13	0	172	94	4.3	1.3	25.5	25.5	5	9	17	7.1	33		
WASHINGTON OLYMPIA	59	1012.2	4.3	-5.6	-0.6	-3.5	-10.6	-10.6	-12.2	1	0	25	-1.3	81	68	42	14	0	20	6.0	2.1	2.1	2.1	2.1	2.1	0	0	0	0	33		
QUILLIGUE	55	1010.8	4.0	-2.6	-1.8	-1.0	-1.0	-1.0	-12.2	1	0	24	-1.3	80	67	42	14	0	20	6.0	2.1	2.1	2.1	2.1	2.1	0	0	0	0	33		
SEATTLE U	6	1010.6	5.6	-0.9	-2.3	-1.9	-1.9	-1.9	-11.1	2.0	0	29	-8.9	77	33	18	6	13	0	351	102	0.7	2.1	12.5	5.14	2	8	5	21	8.1		

CLIMATOLOGICAL DATA
METRIC UNITS

JANUARY 1979

State and Station	Elevation (ground)	Sea level	Station Q	Pressure			Temperature			Precipitation			Wind			Snow, ice pellets			Possible Sunshine		
				mm	mb	mb	°C	°C	°C	mm	mm	mm	m/s	km/s	mm	mm	mm	%			
WASHINGTON	SEATTLE-YACIMA	1002.7	1019.6	6.3	0.1	-0.2	11.7	20	76.7	1	0	15	1.9	0.8	1.9	9.4	4.4	18	7.2	4.5	
	SEATTLE-YACIMA	935.7	1024.3	7.0	-1.6	-0.3	-11.5	-8.3	-30.0	1	0	31	-13.3	8.6	2.6	8.9	N 4	2.5	7.9	4.1	
	SPokane PASS R	878.6	1026.2	5.6	-1.1	0	-8.6	-3.6	-22.8	1	0	31	-20.0	-2.0	2.0	7.6	6.5	2.0	7.6	7.6	
	WALLA WALLA U	208	289	4.8	-1.0	-0.3	-7.5	-4.3	-12.0	1	0	31	-15.0	-1.5	2.0	9.6	2.1	2.9	9.6	1.1	
	YAKIMA	321	985.4	1026.2	4.6	-1.4	-0.6	-7.1	-5.6	-23.3	7.	0	31	-13.3	7.1	2.3	8.9	3.2	2.1	8.1	
SAN JUAN P.R.	4	1013.9	1016.3	28.9	22.7	25.8	1.7	32.2	28	20.6	21	1	0	20.6	7.6	3.3	-6.2	10	16	0	
WEST VIRGINIA	BERKLEY	925.5	1017.9	2.1	-8.4	-3.6	-3.2	-1.2	-20.0	1	0	29	-5.6	8.5	4.7	4.0	18	1	22.9	14	
	CHARLESTON	983.4	1016.7	2.1	-6.1	-2.2	-1.6	-20.6	1	-16.1	3	0	27	-5.7	7.2	3.3	23	0	26	15.6	
	ELKINS	943.8	1018.7	1.4	-8.5	-3.5	-1.4	-17.8	1	-21.7	9	0	30	1.4	6.6	6.6	22	2.2	25	14	
	HUNTINGTON	594	987.5	1.7	-7.1	-2.2	-0.4	-15.0	1	-16.1	3	0	28	-7.2	7.2	3.4	19	0	27	14	
	PARKERSBURG U	252	187	0.8	-0.1	-7.5	-0.5	-15.0	1	-16.1	3	0	30	1.4	1.4	1.4	10.3	2.7	27	14	
WISCONSIN	GREEN BAY	204	991.5	1018.3	9.9	-19.2	-16.5	-1.1	26.4	-31.7	16*	0	31	-17.8	7.2	4.5	18	1.3	2.5	11.2	
	LA CROSSE	198	995.9	1022.1	-9.1	-19.6	-16.4	-2.2	28.4	-31.1	16	0	31	-16.1	6.5	6.1	37	1.1	31	1.8	
	MADISON	262	986.5	1019.9	-8.9	-18.9	-13.9	-2.5	28.4	-33.3	16*	0	31	-16.7	7.4	4.3	11	1.4	30	13.0	
	MILWAUKEE	205	992.6	1019.4	-7.8	-16.9	-11.3	-0.3	20	-26.7	15*	0	31	-15.7	7.1	7.6	35	1.4	28	13.4	
WYOMING	Casper	1627	834.7	1021.6	-6.7	-19.1	-16.9	-1.1	18	-33.9	1	0	31	-17.2	6.7	2.1	7	0	4.6	19.7	
	CHAYENNE	1867	805.6	1018.4	-1.4	-16.2	-14.4	-0.2	24	-27.2	1	0	31	-17.2	5.0	2.1	7	0	2.0	10.6	
	LARSEN	1496	926.6	1023.2	-23.4	-17.1	-10.7	-10.2	16	-25.0	31*	0	31	-14.4	7.8	1.9	7	0	5.5	11.2	
	SHERIDAN	1204	878.8	1024.6	-22.6	-15.9	-9.2	-5.0	21	-34.4	5	0	31	-15.6	6.9	1.2	7	0	2.0	15.0	

HEATING DEGREE DAYS

(Base 65°F.)

JANUARY 1979

State and Station	Current season			State and Station	Current season			State and Station	Current season			State and Station	Current season		
	This month	Period July through this month	Normals		This month	Period July through this month	Normals		This month	Period July through this month	Normals		This month	Period July through this month	Normals
ALABAMA BIRMINGHAM U	855	1797	1802	INDIANA POISF	1503	4101	3437	NEBRASKA GRAND ISLAND	1777	4548	3781	TEXAS ARISTI	1065	2530	2598
BIRMINGHAM	839	1797	1802	LEONSTON	1485	4041	3209	LINCOLN	1787	4409	3685	AMARILLO	942	2040	2181
HUNTSVILLE	974	1930	2059	POCATELLU	1678	4838	4083	MURKIN	1826	4775	4997	KNOXVILLE	945	2186	2144
MOBILE	613	1041	1086	ILLINOIS CAIRO U	1247	2628	2307	NORTH PLATTE	1824	4986	3733	MEMPHIS	1049	2038	2023
MONTGOMERY	681	1493	1467	CHICAGO U MARE	1622	4078	3729	OMAHA	1676	4074	3580	NASHVILLE	1048	2362	2279
ALASKA ANCHORAGE	1321	5356	6423	CHICAGO MIDWAY	1628	3963	3512	OMAHA (NORTH)	1767	4402	3878	OAK RIDGE	1043	2497	2407
ANNETTE	1055	4043	3965	PEDRIA	1820	4371	3747	SCOTTSDALE	1690	4578	3893	TEXAS AUSTIN	916	1942	1652
RARRON	2091	1070	11078	SPRINGFIELD	1722	4043	3582	VALLETTA	1888	5223	4194	WACO	1230	3032	2508
RARTER ISLAND	2009	10220	10922	INDIANA EVANSVILLE	1771	4466	3967	NEVADA FLY	1306	4247	4310	WICHITA FALLS	1056	2255	1835
RETHFL	1367	4291	7462	FORT WAYNE	1466	3694	3564	LAS VEGAS	1479	4859	4555	UTAH MILFORD	974	1940	1652
RTTLES	2173	8449	9591	WINNEMICCA	1453	3381	3274	RENO	1113	3839	3456	SALT LAKE CITY	1409	4220	3747
RIG DELTA	1991	7563	8434	INDIANAPOLIS	1453	3669	3674	TRENTON U	1271	4087	3810	WILMINGTON	1327	3649	3512
COLD BAY	921	4080	5383	SOUTH RENO	1491	3795	3284	NEW HAMPSHIRE CONCORD	1284	4387	4160	WILMINGTON	1452	4529	4410
FAIRBAKS	7200	7930	8981	NEW JERSEY DESKIN	1692	4082	3618	MT WASHINGTON OBS	1782	7857	7722	WILMINGTON	1048	3618	3140
GULKA	2140	8427	9427	NEW YORK U	1779	4281	3927	ATLANTIC CITY	1032	2862	2795	WILMINGTON	913	3531	3276
HOMER	1056	5087	5989	DUQUOUE	1877	4770	4234	ATLANTIC CITY U	979	2632	2907	WILMINGTON	866	2963	2680
JUNEAU	1370	9140	5264	SIOUX CITY	1895	4894	4104	NEWARK	1001	2623	2829	WILMINGTON	1018	2548	2530
KING SALMON	1076	5212	6716	WATERLOO	1903	4778	4347	TRENTON U	1013	2744	2805	WILMINGTON	787	1834	1633
KODIAK	829	4175	4921	NEW YORK ALBANY	1615	3795	3329	NEW MEXICO ALBUQUERQUE	98	2641	2457	WILMINGTON	876	2160	2363
KOTZEBUE	1639	7654	8093	NEW YORK BINGHAMTON	1549	3541	2994	CLAYTON	1286	3431	2994	WILMINGTON	1037	2646	2559
MC GRATH	2038	7554	8434	NEW YORK RUFFALO	1470	4031	3531	RUSHFELL	979	2482	2386	WILMINGTON	859	2233	2363
OME	1387	6337	7961	NEW YORK NEW YORK	1643	3729	3151	NEW YORK NEW YORK KENNEDY	1324	4048	3911	WILMINGTON	1452	4529	4410
ST. PAUL ISLAND	966	5129	5915	NEW YORK ROCHESTER	1491	3333	2847	NEW YORK ROCHESTER	1351	4000	4054	WILMINGTON	1048	3618	3140
TALKETNA	1536	6359	7014	NEW YORK SYRACUSE	1643	3729	3151	NEW YORK SYRACUSE	1351	4000	3788	WILMINGTON	913	3531	3276
UNALAKLEET				LOUISIANA BATON ROUGE	687	1250	1094	NEW YORK WALLOPS ISLAND	1371	3813	3235	WILMINGTON	866	2963	2680
VALOZ	1229	5511	6215	LOUISIANA LAKE CHARLES	636	1137	964	NEW YORK WALLA WALLA U	1031	2724	2716	WILMINGTON	876	2160	2363
YAKUTAT	1294	5186	5427	LOUISIANA NEW ORLEANS	586	965	949	NEW YORK YAKIMA	1342	3700	3688	WILMINGTON	1452	4529	4410
ARIZONA FLAGSTAFF	1307	4266	4033	LOUISIANA SHREVEPORT	849	1615	1390	NEW YORK YONKERS	1351	3777	3577	WILMINGTON	1048	3618	3140
PHOENIX	455	1049	1014	MAINE CARIBOU	1534	5441	5397	NEW YORK YONKERS	1371	3777	3577	WILMINGTON	913	3531	3276
TUCSON	511	1249	1095	MAINE PORTLAND	1272	4139	4134	NEW YORK YONKERS	1430	3777	3577	WILMINGTON	866	2963	2680
WINSLW	1102	3068	2894	MISSOURI LEXINGTON	1225	3919	3801	OHIO AKRON	1397	3587	3523	WILMINGTON	876	2160	2363
YUMA	399	809	692	MISSOURI LOUISVILLE	984	2543	2745	OHIO CINCINNATI ABBE 08	1397	3587	3523	WILMINGTON	1452	4529	4410
ARKANSAS PORT SMITH	1215	2478	2108	MISSOURI BATON ROUGE	687	1250	1094	OHIO CLEVELAND	1328	3327	3434	WILMINGTON	1048	3618	3140
CITTE ROCK	1083	2149	2108	MISSOURI LAKE CHARLES	636	1137	964	OHIO COLUMBUS	1346	3348	3323	WILMINGTON	913	3531	3276
NO. LITTLE ROCK	1188	2307	1956	MISSOURI NEW ORLEANS	586	965	949	OHIO DAYTON	1372	3366	3274	WILMINGTON	866	2963	2680
CALIFORNIA BAKERSFIELD	410	1233	1404	MISSOURI SHREVEPORT	849	1615	1390	OHIO MANSFIELD	1433	3693	3318	WILMINGTON	876	2160	2363
RISHOP	931	2749	2558	MISSOURI ALBANY	1534	5441	5397	OHIO TOLEDO	1461	3831	3656	WILMINGTON	1452	4529	4410
BLUE CANYON	994	3134	2939	MISSOURI DETROIT METRO	1390	3590	3472	OHIO YOUNGSTOWN	1363	3618	3614	WILMINGTON	1048	3618	3140
EUREKA U	562	2769	2554	MISSOURI DETROIT	1432	3814	3624	OHIO YONKERS	1328	3327	3434	WILMINGTON	913	3531	3276
REF5NO	549	1649	1461	MISSOURI FLINT	1518	3991	3939	OHIO YONKERS	1346	3348	3323	WILMINGTON	866	2963	2680
LONG BEACH	344	925	946	MISSOURI GRAND RAPIDS	1477	4181	3809	OHIO YONKERS	1372	3366	3274	WILMINGTON	876	2160	2363
LOS ANGELES	316	827	902	MISSOURI HOUGHTON LAKE	1655	4838	4684	OHIO YONKERS	1433	3693	3318	WILMINGTON	1452	4529	4410
LOS ANGELES U	354	931	639	MISSOURI LANSING	1509	4090	3878	OKLAHOMA SALEM	1461	3831	3656	WILMINGTON	1048	3618	3140
MT SHARTA R	1051	3767	3255	MISSOURI MUSKEGON	1481	4174	4174	OKLAHOMA TULSA	1221	2615	2893	WILMINGTON	913	3531	3276
OAKLAND	491	1620	1415	MISSOURI SAULT ST MARIE	1733	5310	5028	OKLAHOMA TULSA	1293	2654	2828	WILMINGTON	866	2963	2680
RED BLUFF	541	1527	1612	MISSOURI ST CLOUD	2093	9755	9134	OKLAHOMA TULSA	1221	2615	2893	WILMINGTON	876	2160	2363
SACRAMENTO	606	1832	1678	MISSOURI ST. LOUIS	1481	4174	3787	OKLAHOMA TULSA	1293	2654	2828	WILMINGTON	1452	4529	4410
SAN OIFGO	244	643	776	MISSOURI SPRINGFIELD	1483	4174	3787	OKLAHOMA TULSA	1221	2615	2893	WILMINGTON	1048	3618	3140
SAN FRANCISCO	536	1839	1663	MISSOURI TOMAHAWK	1515	3317	3027	OKLAHOMA TULSA	1293	2654	2828	WILMINGTON	913	3531	3276
SAN FRANCISCO U	431	1684	1481	MISSOURI WISCONSIN	1680	3788	3264	OKLAHOMA TULSA	1221	2615	2893	WILMINGTON	866	2963	2680
SANTA MARIA	505	1778	1596	MISSOURI WISCONSIN	1496	3263	3264	OKLAHOMA TULSA	1293	2654	2828	WILMINGTON	876	2160	2363
STOCKTN	605	1752	1684	MISSOURI WISCONSIN	1480	3878	3787	OKLAHOMA TULSA	1221	2615	2893	WILMINGTON	1452	4529	4410
COLORADO				MINNESOTA DULUTH	1999	5904	5518	OREGON ASTORIA	910	3207	2992	WILMINGTON	1048	3618	3140
ALAMOSA	1827	5624	5049	MISSISSIPPI JACKSON	2287	6782	6113	OREGON BURNS U	1517	4722	4133	WILMINGTON	913	3531	3276
COLORADO SPRINGS	1484	4227	3460	MISSISSIPPI MERIDIAN	1914	4985	4730	OREGON EUGENE	1029	3342	2882	WILMINGTON	866	2963	2680
DENVER	1450	3988	3488	MISSISSIPPI ROCHESTER	2064	5547	4742	OREGON MEDFORD	905	3089	2857	WILMINGTON	876	2160	2363
GRAND JUNCTION	1493	4154	3431	MISSISSIPPI ST. CLOUD	2093	9755	9134	OREGON RENEWETON	1533	4100	3139	WILMINGTON	1452	4529	4410
PUBBL	1509	5903	3190	MISSISSIPPI SPRINGFIELD	1483	4218	3747	OREGON RUTLAND	1058	3246	2744	WILMINGTON	1048	3618	3140
CONNECTICUT				MISSISSIPPI TOMAHAWK	1771	5265	4132	OREGON SALEM	1038	3223	2735	WILMINGTON	913	3531	3276
BRIDGEPORT	1062	2841	2919	MISSISSIPPI WHALE	2145	6122	5180	OREGON SEXTON SUMMIT R	978	3698	3372	WILMINGTON	866	2963	2680
HARTFORD	1184	3798	3400	MISSISSIPPI WHALE	1480	3788	3264	OREGON SEXTON SUMMIT R	1075	3326	3278	WILMINGTON	876	2160	2363
DELAWARE				MISSISSIPPI WHALE	1979	5352	4330	OREGON PROVIDENCE	1075	3326	3278	WILMINGTON	1452	4529	4410
WILMINGTON	1037	2836	2827	MISSISSIPPI WHALE	2098	5890	5020	OREGON RHODE ISLAND	985	2839	2936	WILMINGTON	1048	3618	3140
OIST OF COLUMBIA				MISSISSIPPI WHALE	1808	5352	4330	OREGON PROVIDENCE	1075	3326	3278	WILMINGTON	913	3531	3276
WASHINGTON DULLES	1040	2810	2924	MISSISSIPPI WHALE	1509	5347	4751	OREGON RHODE ISLAND	1141	1353	1353	WILMINGTON	866	2963	2680
WASHINGTON NATIONAL	918	2148	2481	MISSISSIPPI WHALE	1841	5586	4659	OREGON CHARLESTON U	627	1028	1177	WILMINGTON	876	2160	2363
FLORIDA				MISSISSIPPI WHALE	1515	3317	3027	OREGON COLUMBIA	664	1407	1650	WILMINGTON	1452	4529	4410
ARALACHICOLA U	525	876	866	MISSISSIPPI WHALE	1624	3592	3210	OREGON GRANVILLE-SRTRNRG	851	1943	1963	WILMINGTON	1048	3618	3140
DAYTONA BEACH	279	334	550	MISSISSIPPI WHALE	1680	3788	3264	OREGON ABERDEEN	2051	5668	5020	WILMINGTON	913	3531	3276
FORT MYERS	127	140	284	MISSISSIPPI WHALE	1496	3263	2844	OREGON HURON	2068	5346	4690	WILMINGTON	866	2963	2680
JACKSONVILLE	525	368	445	MISSISSIPPI WHALE	1483	4218	3747	OREGON ARIO CITY	1781	4940	4113	WILMINGTON	876	2160	2363
KEY WEST	17	17	34	MISSISSIPPI WHALE	2023	5972	4984	OREGON SIOUX FALLS	1960	5176	4585	WILMINGTON	1452	4529	4410
MIAMI	84	85	122	MISSISSIPPI WHALE	1771	5265	4132	OREGON SIOUX FALLS	1141	1353	1353	WILMINGTON	1048	3618	3140
ORLANDO	230	286	442	MISSISSIPPI WHALE	2145	6122	5180	OREGON SIOUX FALLS	627	1					

COOLING DEGREE DAYS

(Base 65°F.)

JANUARY 1979

State and station	Current season			Current season			Current season			Current season			Current season		
	This month		Period January through this month	This month		Period January through this month	This month		Period January through this month	This month		Period January through this month	This month		Period January through this month
			Normals January through this month			Normals January through this month			Normals January through this month			Normals January through this month			Normals January through this month
ALABAMA BIRMINGHAM U	0	0	c	HAWAII HILD HONOLULU	155	155	192	NEBRASKA GRAND ISLAND	0	0	0	0	SOUTH CAROLINA CHARLESTON	0	0
HUNTSVILLE	0	0	c	XAHULUI	159	159	726	LINCOLN	0	0	0	0	CHARLESTON U	0	0
MORILE	0	0	c	LIMUE	197	197	208	NURFOLK	0	0	0	0	COLUMBIA	0	0
MONTGOMERY	0	0	c	POCATELLU	243	243	194	NORTH PLATTE	0	0	0	0	GRNLVLE=SPRNBRC	0	0
ALASKA ANCHORAGE	0	0	c	IDAHO HOISE	0	0	0	OMAHA (EPPLEY)	0	0	0	0	SOUTH DAKOTA ABERDEEN	0	0
ANNETTE	0	0	c	LEWISTON	0	0	0	OMAHA (NORTH)	0	0	0	0	HURON	0	0
BARRON	0	0	c	POCATELLU	0	0	0	SCOTTSBLUFF	0	0	0	0	RAPID CITY	0	0
BARTRER ISLAND	0	0	c	ILLINOIS CAIRO U	0	0	0	VALENTINE	0	0	0	0	SIOUX FALLS	0	0
RETHEL	0	0	c	CHICAGO N MAKE	0	0	0	NEVADA	0	0	0	0	TENNESSEE	0	0
RETTLES	0	0	c	CHICAGN MIWAY	0	0	0	ELKO	0	0	0	0	BRISTOL	0	0
RIG DELTA	0	0	c	MOLINE	0	0	0	FLY	0	0	0	0	CHATTANOOGA	0	0
ROLO BAY	0	0	c	PEDRIA	0	0	0	LAS VEGAS	0	0	0	0	KNOXVILLE	0	0
FAIRRAKKS	0	0	c	PLACFORD	0	0	0	RENO	0	0	0	0	MEMPHIS	0	0
GULKANA	0	0	c	SPRINGFIELD	0	0	0	WINNEMUCCHA	0	0	0	0	NASHVILLE	0	0
HOMER	0	0	c	INDIANA EVANSVILLE	0	0	0	NEW HAMPSHIRE	0	0	0	0	OAK RIDGE	0	0
JUNEAU	0	0	c	FORT WAYNE	0	0	0	CUNCORD	0	0	0	0	TEXAS	0	0
KING SALMON	0	0	c	INDIANAPOLIS	0	0	0	MT WASHINGTON DAS	0	0	0	0	ABILENE	0	0
KODIAK	0	0	c	SOUTH BEND	0	0	0	NEW JERSEY	0	0	0	0	AMARILLO	0	0
KOTZEBUE	0	0	c	IOWA BURLINGTON	0	0	0	ATLANTIC CITY	0	0	0	0	AUSTIN	0	0
MC GRATH	0	0	c	DES MOINES	0	0	0	ATLANTIC CITY U	0	0	0	0	BROWNSVILLE	45	63
NAME	0	0	c	DUBUQUE	0	0	0	NEWARK	0	0	0	0	CORPUS CHRISTI	26	34
ST. PAUL ISLAND	0	0	c	SIOUX CITY	0	0	0	THENTON U	0	0	0	0	DALLAS FT WORTH	0	0
TALKEETNA	0	0	c	KATEPLDO	0	0	0	NEW MEXICO	0	0	0	0	DEL RIO	0	0
INALAKLEET	0	0	c	KANSAS CONCORDIA	0	0	0	ALBUQUERQUE	0	0	0	0	EL PASO	0	0
VALDEZ	0	0	c	DODGE CITY	0	0	0	CLAYTUN	0	0	0	0	GALVESTON	0	0
YAKUTAT	0	0	c	GOODLAND	0	0	0	ROSWELL	0	0	0	0	HOUSTON INTERCON	0	0
ARIZONA FLAGSTAFF	0	0	c	TOPEKA	0	0	0	NEW YORK	0	0	0	0	LUBBOCK	0	0
PHENIX	0	0	c	WICHITA	0	0	0	ALBANY	0	0	0	0	MIDLAND	0	0
TUCSON	0	0	c	KENTUCKY COVINGTON	0	0	0	BINGHAMTON	0	0	0	0	PORT ARTHUR	0	0
WINSLW	0	0	c	LEXINGTON	0	0	0	BUFFALO	0	0	0	0	SAN ANGELO	0	0
YUMA	0	0	c	LOUISVILLE	0	0	0	NEW YORK U	0	0	0	0	SAN ANTONIO	0	0
ARKANSAS FORT SMITH	0	0	c	LOUISIANA BATON ROUGE	0	0	0	NEW YORK KENNEDY	0	0	0	0	VICTORIA	0	0
LITTLE ROCK	0	0	c	LAKE CHARLES	0	0	0	NEW YORK LA GUARDIA	0	0	0	0	WACO	0	0
ND. LITTLE ROCK	0	0	c	SHREVEPORT	0	0	0	ROCHESTER	0	0	0	0	WICHITA FALLS	0	0
CALIFORNIA BAKERSFIELD	0	0	c	MAINE CARIBOU	0	0	0	SYRACUSE	0	0	0	0	UTAH	0	0
PISHOP	0	0	c	PORTLAHO	0	0	0	NORTH CAROLINA	0	0	0	0	HILFORD	0	0
BLUE CANYON	0	0	c	MARYLAND BALTIMORE	0	0	0	ASHEVILLE	0	0	0	0	SALT LAKE CITY	0	0
EUREKA U	0	0	c	MASSACHUSETTS BLUE HILL UBS R	0	0	0	CAPE HATTERAS R	0	0	0	0	VERMONT	0	0
FRESNO	0	0	c	ROSTON	0	0	0	CHARLOTTE	0	0	0	0	BURLINGTON	0	0
LONG BEACH	0	0	c	WORCESTER	0	0	0	GREENSHROD	0	0	0	0	VIRGINIA	0	0
LOS ANGELES	0	0	c	MICHIGAN ALPENA	0	0	0	RALEIGH	0	0	0	0	LYNCHBURG	0	0
LOS ANGELES U	0	0	c	DETROIT	0	0	0	WILMINGTON	0	0	0	0	NORFOLK	0	0
MT SHASTA R	0	0	c	DETROIT METRO	0	0	0	NORTH OAKOTA	0	0	0	0	RICHMOND	0	0
OKLAHOMA	0	0	c	FLINT	0	0	0	BISMARCK	0	0	0	0	ROANOKE	0	0
RED BLUFF	0	0	c	GRAND RAPIDS	0	0	0	FARGO	0	0	0	0	WALLOPS ISLAND	0	0
RACKAMENTO	0	0	c	HOUGHTON LAKE	0	0	0	WILLISTUN	0	0	0	0	WASHINGTON	0	0
SAN DIEGO	0	0	c	LANSING	0	0	0	OHIO	0	0	0	0	OLYMPIA	0	0
SAN FRANCISCU	0	0	c	MUSKEGON	0	0	0	AKRON	0	0	0	0	GUILLAYUTE	0	0
SAN FRANCISCO U	0	0	c	SAULT STE MARIE	0	0	0	CINCINNATI ABBE DB	0	0	0	0	SEATTLE	0	0
SANTA MARIA	0	0	c	MINNESOTA OULUTH	0	0	0	CLEVELAND	0	0	0	0	SEATTLE-TACOMA	0	0
STOCKTON	0	0	c	INTERNATIONAL FALLS	0	0	0	COLUMBUS	0	0	0	0	SPokane	0	0
COLORADO ALAMOSA	0	0	c	MINNEAPOLIS	0	0	0	DAYTON	0	0	0	0	STAMPEDE PASS R	0	0
COLORADO SPRINGS	0	0	c	ROCHESTER	0	0	0	MANSFIELD	0	0	0	0	WALLA WALLA U	0	0
DENVER	0	0	c	ST CLOUDO	0	0	0	YOUNGSTOWN	0	0	0	0	YAKIMA	0	0
GRAND JUNCTION	0	0	c	MISSISSIPPI JACKSON	0	0	0	OKLAHOMA	0	0	0	0	WEST INDIIES	0	0
PUEBLO	0	0	c	MERIDIAN	0	0	0	OKLAHOMA CITY	0	0	0	0	SAN JUAN P.R.	426	426
CONNECTICUT ARIODEPORT	0	0	c	MISSOURI	0	0	0	TULSA	0	0	0	0	WEST VIRGINIA	0	0
WARTFORO	0	0	c	COLUMBIA REGIONAL	0	0	0	OREGON	0	0	0	0	BECKLEY	0	0
DELAWARE WILMINGTON	0	0	c	KANSAS CITY	0	0	0	ASTORIA	0	0	0	0	CHARLESTON	0	0
OST. OF COLUMBIA WASHINGTON DULLES	0	0	c	ST JOSEPH	0	0	0	RURRS U	0	0	0	0	ELKINS	0	0
WASHINGTON NATIONAL	0	0	c	ST LOUIS	0	0	0	EUGENE	0	0	0	0	HUNTINGTON	0	0
FLORIDA APPALACHICOLA U	1	1	18	SPRINGFIELD	0	0	0	MOND	0	0	0	0	PARKERSBURG U	0	0
DAYTONA REACH	26	26	37	MONTANA BILLINGS	0	0	0	PORTLAND	0	0	0	0	WISCONSIN	0	0
FORT MYERS	52	52	81	GLASGOW	0	0	0	SALEM	0	0	0	0	GREEN BAY	0	0
JACKSONVILLE	1	1	25	GREAT FALLS	0	0	0	SEXON SUMMIT R	0	0	0	0	LA CROSSE	0	0
KEY WEST	154	154	193	HAVER	0	0	0	YAP R	391	391	381	0	MAISON	0	0
MIAMI	90	90	121	HELENA	0	0	0	JUHNSTON	318	338	366	0	WILWAKEE	0	0
ORLANOM	26	26	52	KALISPELL	0	0	0	KUROR R	516	516	502	0	WYOMING	0	0
PENSACLA	0	0	27	MILES CITY	0	0	0	KHAYALEIN	502	502	507	0	CASPER	0	0
TALLAMASSEE	0	0	23	MISSOULA	0	0	0	MAJURU	507	507	490	0	CHEYENNE	0	0
TAMPA	28	28	60	PROVIFUNCE	0	0	0	PAGO PAGO	502	502	474	0	LANDER	0	0
WEST PALM BEACH	59	59	94	ALLEGNTOWN	0	0	0	PUNAPE R	524	524	484	0	HUNTINGTON	0	0
GEORGIA ATMENS	0	0	c	FRIE	0	0	0	TKUN MODEN ISLAND	533	533	495	0	SHERIDAN	0	0
ATLANTA	0	0	c	HARRISBURG	0	0	0	WAKE	392	392	372	0	WILLIAMSPORT	0	0
AUGUSTA	0	0	c	PHILADELPHIA	0	0	0	YAP R	490	490	477	0	ALLENTOWN	0	0
COLUMBUS	0	0	c	PITTSBURGH	0	0	0	PHILAELPHIA	0	0	0	0	FRIE	0	0
MACON	0	0	c	SCRANTON	0	0	0	PROVIFUNCE	0	0	0	0	HARRISBURG	0	0
ROME	0	0	c	ILLIAMSPT	0	0	0	PROVIFUNCE	0	0	0	0	PHILAELPHIA	0	0
SAVANNAH	0	0	c	RHOUE ISLAND	0	0	0	PROVIFUNCE	0	0	0	0	PHILAELPHIA	0	0

STORM SUMMARY

JANUARY 1979

STATE	TORNADOES				HAILSTORMS				WINDSTORMS				LIGHTNING				@HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				φ ALL OTHER					
	NUMBER	DEATHS	INJURIES	† DAMAGE	DEATHS	INJURIES	† PROPERTY	CROPS	DEATHS	INJURIES	† PROPERTY	CROPS	DEATHS	INJURIES	† PROPERTY	CROPS	DEATHS	INJURIES	† PROPERTY	CROPS	DEATHS	INJURIES	† PROPERTY	CROPS	DEATHS	INJURIES	† PROPERTY	CROPS		
Alabama *	3	2			6				3	?	?						9	?	7	7	1	?	7	6	?	?	?	?		
Alaska *																														
Arizona																														
Arkansas																														
California																														
Colorado																														
Connecticut																														
Delaware																														
Florida																														
Georgia																														
Hawaii																														
Idaho																														
Illinois																														
Indiana																														
Iowa																														
Kansas																														
Kentucky																														
Louisiana																														
Maine																														
Maryland & DC																														
Massachusetts																														
Michigan																														
Minnesota																														
Mississippi																														
Missouri																														
Montana *																														
Nebraska																														
Nevada																														
New Hampshire																														
New Jersey *																														
New Mexico *																														
New York																														
North Carolina																														
North Dakota																														
Ohio																														
Oklahoma *																														
Oregon																														
Pacific																														
Pennsylvania																														
Puerto Rico																														
Rhode Island																														
South Carolina																														
South Dakota *																														
Tennessee																														
Texas	1	1			4				?	?			5				4	?	?	?	?	?	?	?	?	?	?	?	?	?
Utah																														
Vermont																														
Virginia																														
Virgin Islands *																														
Washington																														
West Virginia *																														
Wisconsin																														
Wyoming																														

RAWINSONDE DATA

Average monthly values

JANUARY 1979

ALBANY, NY 1004 MB												ALBUQUERQUE, NM 836 MB												AMARILLO, TX 891 MB												ANCHORAGE, AK 1007 MB												ANNETTE, AK 1013 MB											
Standard pressure surface in mb.	No. of observations	Dynamic height meters			Temperature °C +			Resultant Wind Speed m.p.s.			No. of observations			Dynamic height meters			Temperature °C			Resultant Wind Speed m.p.s.			No. of observations			Dynamic height meters			Temperature °C			Resultant Wind Speed m.p.s.			No. of observations			Dynamic height meters			Temperature °C			Resultant Wind Speed m.p.s.															
		Dynamic height meters	Temperature °C	Dew Point °C +	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C +	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C +	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C +	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C +	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C +	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C +	Direction tens of deg.	Speed m.p.s.																							
5FC	31	86	-6.7	-9.5	29	2.6	31	1,619	-2.9	36	2.2	31	1,095	-7.1	-9.8	30	1,446	-3.9	-10.0	29	3.8	31	1,379	-6.0	-12.9	14	4.5	4.6	-9.9	0.2	1.7	31	37	-1.2	-3.8	0.9	2.0																						
1000	18	202	-10.0	-13.9	26	2.1	30	1,127	-2.6	36	2.1	31	1,67	-4.9	-6.6	03	2.5	20	157	-1.4	-3.6	08	1.6	1.7	-7.4	1.6	2.4	0.8	2.4	1.6	1.4	0.8	2.4																										
950	31	518	-9.4	-9.4	26	4.6	31	939	-2.6	36	2.1	30	1,952	-8.4	-11.6	28	5.2	2.0	2.5	-8.4	06	1.2	31	550	-1.6	-3.6	1.4	3.8	1.6	1.4	1.6	3.8																											
850	31	939	-8.0	-10.2	27	7.2	31	1,383	-8.4	26	2.7	30	1,964	-2.7	-9.8	30	2.4	1.9	6.5	31	1,190	-8.6	-15.2	15	3.1	3.1	-9.0	1.6	4.2	1.6	4.2	1.6	4.2																										
800	31	1,854	-8.7	-14.2	26	13.2	30	1,964	-2.7	36	2.1	31	1,195	-3.4	-11.6	29	6.5	31	1,182	-8.6	-15.2	15	3.1	3.1	-9.0	1.6	4.2	1.6	4.2	1.6	4.2																												
750	31	2,354	-10.0	-16.4	26	16.5	30	2,747	-4.8	26	4.3	31	2,456	-4.3	-14.0	28	8.6	31	2,350	-11.4	-17.0	16	6.3	31	2,405	-9.6	-18.0	25	4.0	4.0	-9.0	1.6	3.8	1.6	3.8																								
700	31	2,884	-11.5	-20.2	26	20.0	30	3,014	-6.9	26	1.1	31	2,999	-5.6	-16.1	28	10.9	31	2,870	-14.1	-22.1	19	6.0	31	2,935	-12.1	-21.8	26	5.2	5.2	-9.0	1.6	3.8	1.6	3.8																								
650	31	3,450	-11.8	-22.9	25	24.1	30	3,590	-9.9	26	1.1	31	3,577	-8.7	-19.5	28	12.7	31	3,435	-17.3	-25.6	21	5.9	31	3,498	-15.6	-25.0	26	6.3	6.3	-9.0	1.6	3.8	1.6	3.8																								
600	29	4,055	-16.7	-25.6	26	24.3	30	4,204	-13.1	26	1.4	31	4,193	-12.3	-24.0	28	15.3	31	4,031	-21.3	-30.0	21	5.9	31	4,097	-19.7	-28.8	27	6.9	6.9	-9.0	1.6	3.8	1.6	3.8																								
550	29	4,704	-20.0	-30.8	26	25.2	30	4,862	-17.3	26	2.2	31	4,853	-16.4	-27.5	27	17.7	31	4,667	-25.9	-33.6	22	6.3	31	4,738	-24.0	-32.5	27	9.0	9.0	-9.0	1.6	3.8	1.6	3.8																								
500	28	5,405	-25.1	-34.6	26	30	5,577	-21.9	26	3.1	31	5,523	-21.3	-32.4	27	20.9	31	5,350	-30.8	-38.4	24	7.2	31	5,427	-28.7	-36.7	28	10.3	10.3	-9.0	1.6	3.8	1.6	3.8																									
450	28	6,163	-30.0	-40.2	26	28.9	30	6,337	-27.2	26	3.7	31	6,332	-26.9	-35.9	27	22.4	31	6,096	-36.1	-42.3	22	8.2	31	6,173	-33.8	-41.9	28	12.8	12.8	-9.0	1.6	3.8	1.6	3.8																								
400	28	6,992	-36.0	-45.1	27	33.2	30	7,766	-32.7	26	4.1	31	7,717	-32.0	-42.0	27	24.4	31	6,898	-41.8	-47.0	23	9.6	31	6,990	-39.3	-46.2	29	14.5	14.5	-9.0	1.6	3.8	1.6	3.8																								
350	28	7,910	-42.0	-54.0	27	32.5	30	8,102	-39.3	26	4.4	31	8,044	-38.9	-44.9	27	27.8	31	7,707	-46.7	-51.1	23	10.0	31	7,894	-42.2	-49.1	29	16.0	16.0	-9.0	1.6	3.8	1.6	3.8																								
300	28	8,912	-48.8	-63.3	27	33.9	30	9,145	-37.3	26	4.7	31	9,140	-36.9	-44.9	27	30.4	31	8,801	-52.1	-58.7	23	10.3	31	8,077	-51.5	-58.7	30	18.4	18.4	-9.0	1.6	3.8	1.6	3.8																								
250	28	10,123	-53.1	-68.6	26	36.8	30	10,341	-51.9	26	5.0	31	10,342	-51.3	-58.6	27	35.6	31	9,974	-52.5	-59.1	23	10.3	31	10,277	-51.6	-58.1	30	18.9	18.9	-9.0	1.6	3.8	1.6	3.8																								
200	28	11,550	-56.1	-66.4	26	35.7	28	11,771	-56.1	26	5.3	31	11,757	-55.7	-59.7	27	37.4	31	11,407	-55.2	-59.2	24	10.1	31	11,499	-54.2	-59.4	30	13.5	13.5	-9.0	1.6	3.8	1.6	3.8																								
175	28	12,398	-56.7	-67.7	27	34.4	28	12,617	-57.4	26	5.6	31	12,606	-56.3	-59.6	27	36.7	31	12,277	-56.0	-59.7	23	10.1	31	12,358	-55.1	-59.3	30	12.0	12.0	-9.0	1.6	3.8	1.6	3.8																								
150	25	13,173	-56.2	-67.2	26	33.8	28	13,590	-58.2	26	5.9	31	13,584	-56.6	-59.6	27	34.4	31	13,279	-50.3	-59.3	24	10.6	31	13,355	-52.3	-59.3	30	11.5	11.5	-9.0	1.6	3.8	1.6	3.8																								
125	25	14,536	-57.1	-67.1	26	34.6	28	14,733	-58.9	26	6.2	31	14,736	-58.5	-59.5	27	30.1	31	14,669	-50.4	-59.5	25	9.9	31	14,533	-53.0	-59.3	31	10.9	10.9	-9.0	1.6	3.8	1.6	3.8																								
100	22	15,945	-60.0	-60.0	27	16,120	26	16,127	-61.7	27	2.4	28	16,128	-62.1	-62.1	27	24.5	31	15,921	-51.5	-51.5	25	10.3	31	15,969	-53.9	-51.5	31	11.3	11.3	-9.0	1.6	3.8	1.6	3.8																								
80	19	17,332	-60.1	-60.1	27	17,499	26	17,623	-62.3	27	18.3	29	17,500	-62.8	-62.8	27	19.6	31	17,368	-51.8	-51.8	26	10.4	31	17,402	-54.1	-51.8	31	9.9	9.9	-9.0	1.6	3.8	1.6	3.8																								
70	18	18,163	-60.4	-60.4	27	18,326	26	18,322	-61.3	27	18.3	29	18,328	-62.7	-62.7	27	18.1	31	18,235	-51.8	-51.8	27	11.3	31	18,259	-54.0	-51.8	31	11.1	11.1	-9.0	1.6	3.8	1.6	3.8																								
60	17	19,119	-68.6	-68.6	26	19,282	26	19,281	-61.6	28	9.0	29	19,281	-61.6	-61.6	26	12.0	31	19,238	-52.0	-52.0	27	11.5	30	19,245	-54.6	-52.0	31	11.4	11.4	-9.0	1.6	3.8	1.6	3.8																								
50	15	20,247	-67.0	-67.0	26	20,417	26	20,417	-60.8	28	8.2	29	20,414	-60.3	-60.3	26	11.0	30	20,413	-52.7	-52.7	28	13.1	30	20,411	-54.8	-52.7	31	12.3	12.3	-9.0	1.6	3.8	1.6	3.8																								
40	15	21,640	-60.8	-60.8	26	21,809	26	21,809	-58.0	28	8.3	29	21,808	-58.0	-58.0	26	9.4	30	21,807	-51.4	-51.4	28	15.6	30	21,805	-55.0	-51.4	31	13.6	13.6	-9.0	1.6	3.8	1.6	3.8																								
30	15	23,486	-59.4	-59.4	26	24,022	26	24,022	-58.0	28	8.4	29	24,021	-57.5	-57.5	26	10.2	30	24,019	-51.4	-51.4	28	16.5	30	24,017	-55.0	-51.4	31	13.6	13.6	-9.0	1.6	3.8	1.6	3.8																								
20	15	24,590	-59.8	-59.8	26	24,796	26	24,796	-56.4	28	8.5	29	24,795	-56.4	-56.4	26	10.4	30	24,794	-50.4	-50.4	28	17.2	30	24,792	-55.0	-50.4	31	15.8	15.8	-9.0	1.6	3.8	1.6	3.8																								
10	15	26,019	-57.6	-57.6	26	26,235	26	26,235	-51.7	28	8.6	29	26,234	-51.7	-51.7	26	10.5	30	26,233	-45.7	-45.7	28	15.9	30	26,232	-52.7	-45.7	31	17.7	17.7	-9.0	1.6	3.8	1.6	3.8																								
10	15	27,085	-53.6	-53.6	26	27,087	26	27,087	-49.2	28	8.7	29	27,086	-49.2	-49.2	26	10.6	30	27,085	-43.2	-43.2	28	18.2	30	27,084	-49.2	-43.2	31	16.2	16.2	-9.0	1.6	3.8	1.6	3.8																								
7	7	30,190	-46.3	-46.3	26	30,190	26	30,190	-44.7	28	8.8	31	30,189	-44.7	-44.7	26	10.7	30	30,188	-39.2	-39.2	28	19.7	31	30,187	-43.2	-39.2	31	21.7	21.7	-9.0	1.6	3.8	1.6	3.8																								
BOISE, ID 920 MB	30	871	-10.1	-13.9	11	* 4	31	1	7.2	3.7	01	3.4	30	7	11.0	8.3	34	1	0	31	218	-6.7	-8.1	26	2.7	31	4	6.5	2.5	-26	31	2.3	2.3																										
BOOTH																																																											

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CARIB. M. 956 MB										CENTREVILLE, AL 1004 MB										CHARLESTON, SC 1017 MB										CHATHAM, MA 1011 MB										CHIHUAHUA, MEXICO 857 MB									
Standard pressure surface mb	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.																			
5°F 31	194	-10.5	-14.9	33	1.2	31	1,400	-6	-2.7	33	1.5	31	13	4.8	-1.9	27	1.5	31	16	-2.2	-3	6	26	1.4	31	1,428	3.3	-2.7	22	2.2																			
1000 7	224	-18.9	-23.1	26	2.0	208	-6	-6.0	34	2.0	29	163	5.6	-1.5	30	1.7	22	6.1	26	5.6	-5	6	27	2.4	31	1,959	5.4	-5.8	23	5.5																			
950 31	485	-10.0	-12.6	30	3.0	581	1.3	-3.8	28	2.0	31	570	5.0	-1.3	25	4.6	31	507	-1.9	-5.0	-5	6	27	2.4	31	2,515	3.8	-9.9	25	8.5																			
900 31	902	-10.7	-14.6	29	2.9	311	1,017	1.0	-5.2	28	4.9	31	1,014	6.0	-2.6	25	7.5	31	9.3	-3.4	-8.7	-7	3	27	2.4	31	3,073	1.9	-15.3	26	12.8																		
850 31	1,342	-11.1	-14.2	26	3.2	311	1,477	1.1	-7.7	27	8.3	31	1,491	4.8	-5.6	25	9.9	31	1,388	-4.4	-11.3	27	9.8	29	1,498	5.6	-4.4	22	2.5																				
800 31	1,800	-11.5	-16.6	27	5.2	311	1,965	.9	-9.1	27	10.8	31	1,974	3.2	-14.6	27	16.9	31	1,865	-5.5	-12.3	26	12.6	26	1,989	5.4	-5.8	23	5.5																				
750 31	2,303	-12.2	-17.5	26	7.3	311	2,482	-7	-12.8	27	13.0	31	2,496	1.2	-11.8	26	15.2	31	2,377	-7.1	-14.7	26	14.4	31	2,515	3.8	-9.9	25	8.5																				
650 31	3,388	-16.6	-23.0	26	10.7	311	3,616	-5.7	-19.5	27	16.2	31	3,638	3.6	-17.3	26	19.7	30	3,485	-11.7	-18.6	26	16.9	31	3,616	3.8	-17.4	26	13.8																				
600 31	3,987	-19.3	-25.2	26	12.6	311	4,239	-9.0	-22.1	26	21.8	31	4,287	-7	-20.5	26	22.4	31	4,001	-1.8	-21.5	26	20.6	31	4,301	2.2	-21.5	26	15.7																				
550 31	4,636	-22.9	-28.2	25	14.1	311	4,488	-12.8	-25.6	26	24.8	31	4,941	1.4	-18.2	26	24.4	31	4,797	-9.1	-20.7	26	22.4	31	4,970	2.2	-24.4	27	17.4																				
500 31	5,376	-27.0	-34.6	25	15.7	311	5,422	-15.7	-30.0	26	27.4	31	5,664	-1.5	-21.2	26	26.5	31	5,445	-1.5	-20.5	26	24.1	31	5,708	-14.4	-28.4	26	21.1																				
450 31	6,076	-31.4	-34.6	25	18.9	311	6,410	-22.5	-34.6	26	31.6	31	6,452	-6.0	-32.8	26	32.7	29	6,214	-28.6	-37.7	26	25.5	31	6,498	-19.5	-31.7	26	24.3																				
400 31	6,798	-33.6	-38.2	25	20.6	311	7,265	-28.5	-38.8	26	36.4	31	7,312	-2.1	-37.2	26	37.1	29	7,047	-34.6	-41.4	26	32.1	31	7,363	-25.5	-35.8	26	25.6																				
350 31	7,810	-43.7	-41.3	24	23.5	311	8,212	-34.9	-45.6	26	39.9	31	8,266	-34.2	-42.7	26	40.6	29	7,971	-41.0	-44.5	26	30.4	31	8,322	-32.4	-41.0	26	28.0																				
300 31	8,829	-50.0	-52.0	24	24.6	311	9,268	-42.6	-49.0	26	41.9	31	9,322	-42.3	-48.4	26	44.6	29	9,002	-47.4	-50.0	26	33.8	31	9,388	-40.5	-44.1	26	31.9																				
250 31	9,810	-54.0	-50.0	24	28.2	311	10,477	-50.7	-50.7	26	46.3	29	10,539	-50.7	-50.7	26	48.6	29	10,192	-52.8	-52.8	27	37.9	31	10,605	-49.5	-50.0	26	33.3																				
200 31	11,432	-56.4	-56.4	24	30.1	311	11,908	-57.6	-57.6	26	46.5	29	11,952	-58.6	-58.6	26	50.0	29	11,623	-55.9	-55.9	27	38.1	31	12,039	-57.6	-57.6	27	38.2																				
175 31	12,280	-56.2	-56.2	24	29.1	311	12,747	-58.9	-58.9	26	44.8	29	12,798	-59.9	-59.9	26	49.3	29	12,470	-56.7	-56.7	27	35.5	31	12,875	-61.3	-57.6	27	37.6																				
150 30	13,259	-55.9	-55.9	24	26.9	311	13,707	-60.4	-60.4	26	42.4	29	13,758	-61.3	-61.3	26	44.1	29	13,444	-56.5	-56.5	26	32.6	31	13,826	-63.2	-57.6	27	37.0																				
125 30	14,417	-56.3	-56.3	24	24.4	301	14,681	-62.5	-62.5	26	37.2	29	14,882	-64.2	-64.2	26	38.6	27	14,596	-57.4	-57.4	26	31.1	30	14,941	-66.0	-57.4	27	32.4																				
100 25	15,829	-57.4	-57.4	24	23.0	281	16,205	-65.7	-65.7	26	31.9	27	16,236	-66.7	-66.7	26	31.2	25	16,003	-59.5	-59.5	26	27.2	29	16,286	-68.7	-57.4	27	24.6																				
80 25	17,231	-53.9	-53.9	24	21.6	271	17,558	-66.2	-66.2	26	24.0	25	17,590	-66.9	-66.9	26	24.7	27	17,400	-60.3	-60.3	26	22.7	26	17,621	-69.3	-69.3	27	18.7																				
70 25	18,059	-58.9	-58.9	24	18.6	271	18,369	-65.2	-65.2	26	20.4	25	18,400	-65.3	-65.3	27	19.9	23	18,235	-60.3	-60.3	26	21.8	26	18,416	-65.9	-65.9	27	14.5																				
60 25	19,025	-55.4	-55.4	24	18.2	251	19,915	-63.5	-63.5	26	17.0	24	19,338	-63.1	-63.1	26	15.2	24	19,033	-58.0	-58.0	26	20.0	25	19,359	-64.4	-58.0	26	11.4																				
50 25	20,194	-60.3	-60.3	24	14.6	251	20,404	-60.3	-60.3	26	15.4	24	20,774	-60.6	-60.6	27	12.2	24	20,332	-59.5	-59.5	26	16.5	26	20,480	-61.6	-59.0	26	10.0																				
40 25	25,157	-59.7	-59.7	24	15.6	231	25,834	-60.6	-60.6	26	11.1	21	26,871	-59.0	-59.0	27	8.0	21	27,724	-59.4	-59.4	26	18.1	23	27,871	-55.0	-59.0	26	8.2																				
30 10	23,333	-60.8	-60.8	24	21.8	241	24,904	-60.8	-60.8	25	11.0	22	23,714	-53.3	-53.3	26	6.3	23	25,331	-58.0	-58.0	27	19.2	23	23,692	-55.3	-57.6	25	5.7																				
25 9	24,483	-61.1	-61.1	24	21	241	24,920	-53.3	-53.3	25	8.4	21	24,904	-50.2	-50.2	25	7.5	20	24,683	-53.2	-53.2	27	22.4	24	24,856	-53.4	-53.4	25	4.3																				
20 6	25,799	-63.0	-63.0	24	21	261	26,269	-50.2	-50.2	25	9.1	21	26,372	-47.4	-47.4	25	9.2	20	26,099	-56.0	-56.0	27	24.4	15	26,277	-51.7	-51.7	26	3.9																				
15 10	31,312	-42.4	-42.4	24	21	261	16,406	-47.8	-47.8	25	12.7	20	18,280	-44.8	-44.8	24	13.8	18	27,943	-53.5	-53.5	27	34.5	6	28,253	-47.2	-47.2	26	2.9																				
10 14	31,312	-42.4	-42.4	24	5.0	311	30,840	-46.4	-46.4	25	5.0	30,846	-46.0	-46.0	24	5.0	30,571	-49.6	-49.6	26	34.5	6	28,253	-47.2	-47.2	26	2.9																						

DODGE CITY, KS 926 MB										EL PASO, TX 882 MB										ELY, NV 806 MB										EMPALME, MEXICO 1014 MB										FAIRBANKS, AK 997 MB									
Standard pressure surface mb	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.																			
5°F 31	1,042	-8.3	-13.3	33	3.9	31	1,193	1.9	-6.9	31	1.3	31	1,906	-12.0	-20.5	20	2.7	30	12	11.3	7.7	34	1,007	1.3	-7.8	04	2.3																						
1000 7	2.4	-18.9	-23.1	30	3.0	311	1,980	2.0	-7.2	27	4.5	31	1,930	3.9	-3.9	23	2.6	31	1,483	1.9	-10.1	04	2.3																										
950 31	411	-1.1	-3.8	15	6.3	31	596	-6.4	-7.8	27	7.1	31	1,030	3.9	-5.7	23	5.3	31	1,927	-1.0	-1.0	27	1.7																										
900 31	844	-2.1	-5.9	16	6.6	31	966	-7.8	-10.8	27	7.1	31	1,030	3.9	-3.9	23	2.6	31	1,927	-1.0	-1.0	27	1.7																										
850 31	1,296	-4.5																																															

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GREENSBORO, NC 984 MB			GUADALUPE IS. - MEXICO 1014 MB						GUAM, MARIANA 15. 1000 MB						Hilo, HI 1016 MB						HUNTINGTON, WV 988 MB									
SFC	31	275	-1.4	-6.5	29	1.1	30	23	14.1	9.8	34	3.4	31	111	24.4	21.7	0.7	4.1	31	10	18.7	16.4	30	1.1	31	246	-3.7	-7.5	26	1.5
1000							30	143	13.3	9.1	33	3.8	14	124	24.9	21.9	0.7	4.5	31	148	15.5	15.4	36	1.6	7	268	-11.5	-15.8	27	
950	31	556	-1.	-6.6	28	4.1	30	572	10.5	4.6	30	3	31	557	22.0	19.5	0.7	9.9	31	588	16.7	13.8	0.5	3.5	31	553	-4.5	-7.1	24	4.9
900	31	990	+2.	-6.9	27	8.0	30	1,024	8.9	-1.2	29	3	31	1,026	19.5	15.5	0.7	10.2	31	1,047	13.6	10.9	0.6	4.4	31	947	-5.0	-8.4	25	8.6
850	31	1,286	-1.	-8.6	27	11.4	30	1,282	6.7	2.6	29	3	31	1,517	17.4	11.0	0.7	9.4	31	1,527	11.1	8.5	1.1	3.5	31	1,126	-1.6	-1.1	26	9.1
800	31	1,730	-1.	-10.1	27	14.1	30	1,722	6.4	-1.0	29	3	31	1,565	15.6	10.6	0.7	9.2	31	1,523	10.6	8.0	1.1	3.5	31	1,040	-1.6	-1.1	26	9.1
750	31	2,448	-2.5	-13.6	27	15.3	30	2,519	3.8	-1.4	28	7	31	2,581	14.0	-0.1	0.8	8.1	31	2,565	7.0	-4.7	0.5	1.7	31	2,410	-6.5	-12.4	27	15.9
700	30	2,993	-4.8	-17.2	27	17.1	30	3,076	1.0	-1.6	27	8	31	3,160	11.4	-0.8	0.8	8.0	31	3,130	5.1	-10.8	0.3	1.4	31	2,984	-8.4	-15.2	27	19.1
650	30	3,572	-7.9	-21.3	27	19.5	30	3,668	-2.2	-19.	27	10.7	31	3,775	8.2	-10.6	0.6	7.0	31	3,732	2.3	-14.7	31	2.0	31	3,520	-11.1	-19.1	27	19.1
600	30	4,190	-11.6	-24.2	27	22.0	30	4,299	6.2	-2.3	26	12.0	31	4,432	4.4	-13.5	0.9	5.5	31	4,374	-1.6	-18.5	29	4.1	31	4,132	-14.1	-22.3	27	23.5
550	30	4,855	-15.5	-27.7	27	25.8	30	4,979	-10.7	-1.6	26	14.0	31	5,134	-1.	-16.8	0.9	5.2	31	5,061	-6.0	-23.2	28	7.1	31	4,767	-17.9	-27.3	27	23.5
500	30	5,565	-20.4	-32.9	27	29.8	30	5,700	-16.0	-30.9	26	16.3	31	5,891	-4.9	-21.3	10	5.8	31	5,800	-11.0	-27.5	28	9.1	31	5,494	-22.4	-32.4	27	25.4
450	30	6,335	-25.4	-37.7	27	33.6	30	6,480	-21.4	-35.6	26	19.4	31	6,712	-9.7	-26.9	11	5.0	31	6,602	-16.0	-31.3	28	12.5	31	6,260	-27.5	-36.7	27	28.8
400	30	7,184	-30.9	-42.6	27	35.8	30	7,344	-27.3	-39.6	25	23.6	31	7,612	-15.3	-31.8	10	3.2	31	7,480	-21.6	-37.5	28	15.5	31	7,096	-33.0	-42.0	26	32.2
350	30	8,170	-36.4	-47.0	27	39.2	30	8,356	-31.3	-45.6	26	27.5	31	8,721	-13.3	-38.1	9	1.7	31	8,580	-27.4	-42.6	28	20.9	31	8,028	-45.6	-54.2	26	37.4
300	30	9,170	-41.9	-51.0	27	41.0	29	9,358	-36.1	-46.9	25	31.7	31	9,721	-9.0	-45.6	5.6	-4.8	31	9,546	-37.4	-47.6	28	26.0	31	8,828	-45.6	-54.6	26	37.4
250	30	10,372	-51.1	-61.1	26	46.1	30	10,575	-49.1	-51.1	26	33.0	31	10,988	-40.9	-52.2	22	1.9	31	10,802	-41.5	-52.9	28	31.4	30	10,263	-51.6	-61.6	26	41.8
200	30	11,805	-56.7	-67.7	26	45.9	30	12,016	-56.2	-56.2	26	32.3	31	12,466	-52.9	-52.9	20	4.7	31	12,285	-51.2	-56.2	28	26.3	30	11,699	-54.6	-64.6	26	42.6
175	30	12,650	-57.3	-67.3	26	44.2	30	12,857	-59.9	-59.9	27	31.5	31	13,316	-59.7	-59.7	19	5.9	31	13,141	-57.4	-57.4	29	23.2	30	12,551	-55.8	-60.6	26	40.6
150	30	13,623	-58.5	-68.5	26	43.0	30	13,814	-61.9	-61.9	26	29.7	31	14,262	-67.6	-67.6	17	7.9	31	14,100	-63.9	-63.9	29	28.8	30	13,532	-56.1	-61.7	26	37.7
125	29	14,767	-58.5	-68.5	26	42.0	30	14,936	-64.8	-64.8	27	23.4	31	15,339	-75.4	-75.4	16	9.1	31	15,199	-70.9	-70.9	29	25.0	27	14,691	-57.3	-61.7	26	35.1
100	28	16,148	-62.8	-62.8	28	16,294	-67.4	27	18.0	31	16,605	-8.9	14	7.1	31	16,500	-77.2	-77.2	29	18.6	28	16,090	-59.9	-59.9	26	28.4				
80	27	17,519	-63.6	-63.6	21	17,631	-68.5	27	14.7	25	17,852	-82.1	10	5.6	28	17,776	-78.5	-78.5	29	9.1	27	17,471	-61.0	-73.7	27	23.8				
70	27	18,340	-62.9	-62.9	18	18,441	-67.1	26	10.6	24	18,607	-78.2	08	4.5	27	18,542	-56.2	-72.0	30	5.5	21	18,299	-61.2	-72.7	27	21.5				
60	27	19,220	-62.2	-62.2	16	19,347	-66.6	23	19,497	-72.8	2.8	2.1	26	19,434	-71.1	-71.1	32	2.0	27	19,256	-60.6	-70.6	27	19.3						
50	26	20,543	-63.0	-63.0	15	20,503	-66.6	26	6.3	10.6	20,567	-84.0	21	1.9	26	20,530	-65.0	-70.3	08	1.4	18	20,347	-69.0	-70.7	27	19.3				
40	26	21,322	-58.2	-58.2	27	13,885	-50.9	2.2	27	6.6	23	12,561	-2.1	11	2.9	26	21,917	-0.3	-0.3	08	2.7	21	21,790	-59.3	-59.3	27	16.1			
30	25	23,696	-55.4	-55.4	28	8.7	11	23,709	-56.8	-56.8	27	7.2	22	23,757	-56.1	-56.1	09	6.7	23	23,731	-55.8	-56.8	08	4.4	25	23,605	-56.4	-56.4	26	17.2
25	24	24,805	-54.0	-54.0	28	9.2	11	24,872	-53.9	-53.9	26	5.1	22	24,924	-53.7	-53.7	09	9.7	23	24,905	-53.4	-53.4	10	4.0	14	24,761	-54.2	-54.2	27	17.4
20	22	26,233	-51.1	-51.1	27	13.6	10	26,338	-51.7	-51.7	21	26,361	-52.1	08	12.1	26,345	-52.2	-52.2	11	3.5	11	26,196	-51.9	-51.9	27	23.4				
15	21	28,109	-48.8	-48.8	28	11.6	10	28,239	-8.4	-8.4	08	15.4	22	28,224	-49.4	-49.4	12	2.2	10	28,059	-49.5	-49.5	26	33.4						
10	14	30,760	-46.3	-46.3	28	18.6	10	30,946	-2.3	-2.3	17	10,910	-45.3	20	4.4	30	7,340	-42.7	-42.7	7	33,321	-40.9	-40.9	27	42.7					

RAWINSONDE DATA

Average monthly values

JANUARY 1979

Standard pressure surface mb.	KEY WEST, FL 1017 MB										KING SALMON, AK 1002 MB										KOPOR, CAROLINE 15. 1008 MB										KOTZEBUE, AK 1006 MB										LAKE CHARLES, LA 1020 MB									
	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction	tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction	tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction	tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction	tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction	tens of deg.	Resultant Wind Speed m.p.s.															
500	31	3	19.4	15.9	06	2.1	31	40.1	15.4	-1.1	-5.4	11	3.7	31	30	27.2	23.6	05	3.0	10	5	-14.9	-16.6	11	3.8	31	30	17.3	4.3	02	1.6																			
1000	31	15.0	19.1	15.2	07	3.0	19	4.0	1.9	-3.3	-3.3	11	5.4	31	97	26.3	23.6	05	3.9	6	139	16.6	-12.0	11	3.1	31	58.7	5.4	-5	1.9	1.7																			
1500	31	5.91	16.6	12.5	13	2.8	31	3.1	4.3	-3.3	-3.3	11	5.4	31	59	22.7	20.9	05	7.0	10	440	12.0	-13.1	20	3.1	31	1,030	6.0	-3	27	3.9																			
2000	31	1,050	14.9	8.4	20	2.6	31	1.9	-1.9	-4.2	-4.2	11	5.7	15	7.2	31	0.20	19.8	17.4	06	8.3	10	853	-13.3	-16.6	20	3.1	31	1,498	5.2	-4	27	7.1																	
2500	31	1,534	13.1	5.5	23	3.8	31	1,324	-4.4	-9.2	-9.2	17	8.2	31	1,512	17.0	12.4	06	7.9	10	1,287	-14.9	-17.9	15	2.0	31	1,1992	3.6	-6	27	10.3																			
3000	31	2,042	11.3	-0.5	25	5.7	31	1,800	-6.8	-13.0	-13.0	17	8.1	31	2,028	15.7	6.7	07	7.1	10	1,743	-17.7	-22.7	17	2.4	31	2,514	1.6	-9	27	13.2																			
3500	31	2,579	9.2	-4.2	25	8.0	31	2,301	-9.8	-16.6	-16.6	18	8.1	31	2,575	13.4	2.3	07	6.9	10	2,223	-20.8	-26.5	20	2.1	31	3,068	-5.0	-12.5	27	16.4																			
4000	31	3,149	6.6	-10.5	25	9.0	31	2,831	-13.0	-20.2	-20.2	18	9.0	31	3,154	10.5	-2.2	07	5.9	10	2,730	-23.7	-31.3	20	3.3	31	4,289	-6.1	-20.4	26	21.2																			
4500	31	3,754	3.2	-12.3	25	10.5	31	3,392	-16.6	-24.0	-24.0	19	9.7	31	3,768	7.2	-7.0	08	5.9	10	3,266	-26.3	-36.1	21	5.6	31	3,658	-3.0	-16.5	26	19.1																			
5000	31	4,398	-1.7	-21.0	20	12.1	31	3,989	-20.8	-27.4	-27.4	19	9.6	31	4,242	3.4	-10.4	08	5.9	10	3,845	-29.1	-38.4	23	7.0	31	4,289	-6.1	-20.4	26	21.2																			
5500	31	5,088	-4.6	-21.0	20	14.3	31	4,626	-25.5	-32.5	-32.5	19	9.6	31	5,122	-5.5	-15.9	08	6.2	10	4,490	-33.4	-43.2	23	8.5	31	4,965	-1.2	-24.6	26	21.2																			
6000	31	5,834	-9.4	-25.2	20	16.1	31	5,101	-30.2	-38.1	-38.1	19	8.9	31	5,779	1.4	-19.4	08	6.2	10	5,125	-47.8	-54.9	24	11.0	31	5,483	-19.0	-32.4	26	28.1																			
6500	31	6,640	-4.6	-31.1	20	18.1	31	6,056	-35.0	-42.0	-42.0	19	9.2	31	6,760	-1.9	-9.2	08	6.4	10	5,945	-48.2	-57.0	24	11.0	31	7,347	-25.0	-37.0	26	32.1																			
7000	31	7,446	-21.4	-36.4	20	20.1	31	7,864	-41.0	-48.0	-48.0	19	9.6	31	7,311	-1.9	-31.3	09	7.0	10	6,633	-47.1	-57.1	24	13.4	31	7,347	-25.0	-37.0	26	32.1																			
7500	31	8,495	-21.6	-41.9	20	22.5	31	7,764	-46.2	-53.0	-53.0	20	13.0	30	8,602	-21.7	-37.5	08	7.4	10	7,511	-51.1	-61.1	23	12.2	31	8,303	-32.0	-43.6	26	34.8																			
8000	31	9,577	-37.1	-49.1	20	24.7	31	9,775	-51.0	-58.0	-58.0	21	13.5	30	9,715	-30.2	-44.5	08	5.4	10	8,507	-53.2	-63.2	23	12.3	31	9,366	-41.0	-52.0	26	40.2																			
8500	31	10,810	-47.5	-57.0	20	26.7	31	9,951	-54.3	-61.3	-61.3	22	13.7	30	9,485	-40.4	-52.8	09	4.9	10	10,583	-49.9	-59.3	23	12.2	31	10,810	-49.9	-59.3	26	43.1																			
9000	31	13,091	-60.6	-60.6	20	28.7	31	12,257	-50.0	-57.0	-57.0	22	11.0	30	12,457	-52.8	-62.8	12	7.6	10	11,141	-49.8	-59.8	23	12.2	31	12,016	-56.6	-66.6	26	45.7																			
9500	31	14,042	-64.3	-64.3	20	29.8	31	13,267	-49.6	-56.6	-56.6	22	10.6	30	14,261	-67.5	-72.8	12	12.8	10	13,032	-48.1	-58.1	23	14.9	31	13,812	-60.6	-64.0	26	40.0																			
10000	31	15,147	-6.6	-6.6	20	27.5	31	14,964	-49.4	-56.4	-56.4	22	10.5	30	15,339	-75.1	-81.1	12	15.1	10	14,234	-48.1	-58.1	23	14.5	31	14,938	-63.8	-76.0	26	35.8																			
10500	31	16,461	-7.4	-7.4	20	20.3	31	15,921	-50.4	-57.4	-57.4	23	9.9	31	16,610	-81.5	-88.5	11	10.8	10	15,710	-47.1	-57.1	23	16.1	31	16,293	-67.7	-77.7	26	28.7																			
11000	31	17,752	-7.5	-7.5	20	13.8	31	17,375	-50.4	-57.4	-57.4	24	9.6	31	17,851	-80.5	-87.5	09	4.6	10	17,189	-46.9	-56.9	23	17.5	31	17,629	-68.0	-78.0	26	21.0																			
11500	31	18,529	-7.3	-7.3	20	9.0	31	18,247	-50.5	-57.5	-57.5	25	10.3	30	18,627	-73.6	-80.6	31	9.0	10	18,076	-45.9	-55.9	26	16.6	31	18,364	-66.6	-76.6	26	21.0																			
12000	31	19,441	-6.9	-6.9	20	4.4	31	19,252	-50.5	-57.5	-57.5	26	10.6	30	19,541	-68.6	-75.6	28	5.4	10	19,160	-45.0	-55.0	23	19.7	31	19,370	-60.7	-70.7	26	13.8																			
12500	31	20,543	-6.4	-6.4	20	2.5	30	20,441	-50.5	-57.5	-57.5	27	9.7	30	20,645	-64.0	-71.0	28	8.0	7	20,307	-46.9	-56.9	23	12.3	31	20,204	-62.0	-72.0	26	21.3																			
13000	31	23,747	-5.4	-5.4	05	1.8	30	23,753	-52.9	-59.9	-59.9	29	1.3	31	23,753	-65.6	-72.6	27	1.4	2	23,753	-53.4	-63.4	09	1.8	31	23,856	-53.4	-63.4	26	2.0																			
13500	31	24,925	-5.0	-5.0	20	21.8	31	24,774	-52.6	-59.6	-59.6	29	1.1	31	24,774	-61.4	-68.4	27	1.5	2	24,774	-58.4	-68.4	09	1.7	31	24,297	-51.1	-61.1	26	6.2																			
14000	31	26,388	-4.7	-4.7	20	5.5	24	26,426	-52.3	-59.3	-59.3	30	1.6	28	26,320	-48.1	-55.1	09	2.0	8	26,320	-48.1	-55.1	27	2.4	31	28,188	-49.3	-55.3	26	5.2																			
14500	31	28,303	-4.3	-4.3	13	9.1	20	28,417	-49.0	-56.0	-56.0	31	1.8	28	28,320	-48.1	-55.1	09	2.2	8	28,320	-48.1	-55.1	27	2.4	31	30,888	-44.1	-54.1	26	5.2																			
15000	31	30,937	-4.2	-4.2	14	1.0	31	31,410	-42.6	-49.6	-49.6	32	1.0	22	31,410	-33.0	-44.6	06	6	2	31,410	-33.0	-44.6	06	6	31	30,888	-44.1	-54.1	26	5.2																			
15500	31	30,889	-4.8	-4.8	14	4.4	24	31,410	-44.6	-51.6	-51.6	32	1.0	22	31,410	-33.0	-44.6	06	6	2	31,410	-33.0	-44.6	06	6	31	30,888	-44.1	-54.1	26	5.2																			
16000	31	31,417	-3.8	-3.8	14	5.8	30	31,408	-46.6	-53.6	-53.6	32	1.0	22	31,408	-33.0	-44.6	06	6	2	31,408	-33.0	-44.6	06	6	31	30,888	-44.1	-54.1	26	5.2																			
16500	31	31,509	-5.1	-5.1	15	6.8	30	13,671	-57.6	-64.6	-64.6	29	1.5	30	29,297	-57.9	-64.9	31	1.5	2	29,297	-57.9	-64.9	31	1.5	31	30,593	-50.9	-57.9	27	35.9																			
17000	31	31,336	-5.8	-5.8	15	6.8	29	12,523	-56.8	-63.8	-63.8	29	1.5	30	13,134	-61.3	-68.3	31	1.5	2	29,297	-56.8	-63.8	31	1.5	31	30,593	-50.9	-57.9	27	35.9																			
17500	31	31,336	-5.8	-5.8	14	6.8	29	12,523	-56.8	-63.8	-63.8	29	1.5	30	13,134	-61.3	-68.3	31	1.5	2	29,297	-56.8	-63.8	31	1.5	31	30,593	-50.9	-57.9	27	35.9																			
18000	31	31,316	-6.6	-6.6	12	5.8	29	13,503	-56.0	-63.0	-63.0	29	1.6	30	14,024	-64.7	-71.7	29	1.6	2	29,297	-59.8	-66.8	31	1.6	31	30,593	-54.1	-61.1	27	35.9																			
18500	31	31,540	-7.4	-7.4	08	7.3	28	14,663	-56.4	-63.4	-63.4	29	1.3	30	15,184	-69.4	-76.4	31	1.3	2	29,297	-59.8	-66.8	31	1.3	31	30,593	-54.1	-61.1	27	35.9																			
19000	31	31,668	-8.3	-8.3	09	10.9	26	16,076	-57.8	-64.8	-64.8	30	1.1	30	16,495	-75.3	-82.3	31	1.1	2	29,297	-64.9	-71.9	31	1.1	31	30,593	-54.1	-61.1	27	35.9																			
19500	31	31,780	-8.0	-8.0	09	5.7	28	17,481	-58.0	-65.0	-65.0	3																																						

RAWINSONDE DATA

Average monthly values

JANUARY 1979

MONETT, MO 968 MB				NASHVILLE, TN 999 MB				NOME, AK 1006 MB				NORTH PLATTE, NE 919 MB				OAKLAND, CA 1017 MB								
Standard pressure surface m.b.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.
5 FC	31	418	-8.8	-11.4	18	+3	29	180	-2.7	-6.0	27	1.3	29	5	-6.6	-10.4	10	8.5	31	847	-16.4	-20.1	31	1.8
1000	1	584	-6.9	-9.8	27	2.0	29	250	-5.6	-9.0	30	1.0	21	120	-5.2	-10.7	10	5.8	31	31	-1.4	-8.2	31	1.2
950	30	1	-1.9	-5.4	27	12.4	28	81	-3.4	-7.5	24	2.7	29	452	-5.1	-9.5	12	7.3	31	31	-7.3	-1.4	31	1.4
900	31	1,003	-5.4	-10.4	28	6.1	29	999	-3.1	-9.1	26	7.3	29	876	-6.2	-10.9	13	6.6	31	1,007	-13.7	-16.9	32	3.1
850	31	1,451	-5.4	-12.4	28	8.1	29	1,452	-2.9	-9.4	26	9.2	29	1,322	-7.8	-13.6	13	6.1	31	1,495	-10.7	-15.6	32	7.0
800	31	1,927	-5.6	-12.7	28	10.3	29	1,932	-3.8	-10.8	27	11.4	29	1,792	-9.7	-16.5	14	6.7	31	1,913	-9.7	-16.7	31	9.3
750	31	2,433	-6.3	-14.5	28	12.6	29	2,441	-4.9	-12.5	27	13.9	29	2,288	-12.5	-19.5	15	6.8	31	2,411	-10.5	-17.6	32	11.0
700	31	2,971	-8.2	-18.6	27	14.9	29	2,982	-6.7	-17.7	27	16.8	29	2,812	-15.6	-23.6	16	6.7	31	2,900	-12.0	-19.0	31	11.3
650	31	3,549	-11.1	-24.5	27	16.6	29	3,558	-9.4	-19.6	27	19.3	29	3,367	-19.2	-26.3	16	6.8	31	3,504	-15.1	-21.8	30	12.4
600	31	4,156	-14.9	-23.7	27	17.9	29	4,173	-12.7	-22.3	27	21.0	29	3,958	-23.1	-29.9	16	6.4	31	4,106	-18.2	-26.0	30	14.3
550	31	4,807	-19.1	-29.4	27	20.9	29	4,832	-16.5	-27.4	26	24.0	29	4,590	-27.5	-34.4	17	6.6	31	4,750	-22.2	-30.1	29	16.6
500	31	5,517	-23.2	-33.8	27	24.3	29	5,543	-20.9	-30.9	26	27.4	29	5,269	-32.5	-37.8	18	7.0	31	5,445	-26.6	-34.8	28	16.0
450	31	6,275	-28.2	-37.8	27	26.4	29	6,266	-26.2	-35.7	26	30.5	28	6,008	-36.9	-40.2	19	8.3	31	6,198	-31.9	-38.6	26	20.9
400	31	7,040	-34.0	-44.0	27	30.0	28	7,152	-32.0	-40.6	26	33.0	28	6,816	-45.5	-44.3	19	9.4	31	7,120	-37.7	-42.6	28	22.4
350	31	8,035	-40.4	-54.5	27	34.6	27	33.1	-48.7	-43.7	26	36.0	28	7,077	-46.3	-49.8	19	9.8	31	7,932	-47.9	-51.7	27	24.7
300	31	9,070	-46.5	-54.5	26	35.6	26	35.8	-48.9	-45.9	26	40.3	28	7,099	-52.8	-54.9	19	10.9	31	8,957	-49.9	-52.7	27	27.4
250	31	10,266	-51.6	-57.7	27	38.9	25	10,316	-51.8	-56.9	26	43.9	28	8,078	-55.3	-59.3	19	10.0	31	10,135	-54.4	-57.4	27	31.7
200	31	11,700	-55.0	-60.9	26	39.6	23	11,755	-56.3	-59.3	26	44.6	27	11,303	-53.1	-59.3	20	10.8	31	11,560	-54.8	-58.8	27	24.5
175	31	12,652	-55.8	-60.5	26	38.4	23	12,600	-57.6	-60.5	26	42.9	27	12,167	-51.5	-59.3	20	10.6	31	12,415	-54.4	-58.4	27	24.5
150	31	13,512	-56.2	-62.2	27	35.0	23	13,579	-57.9	-62.2	26	39.5	27	13,168	-51.3	-59.3	21	11.9	31	13,402	-54.7	-59.7	27	21.9
125	31	14,687	-57.7	-67.7	26	31.2	23	14,720	-59.5	-67.7	26	35.2	27	14,354	-51.3	-61.3	21	12.8	31	14,568	-55.4	-65.4	27	19.8
100	31	16,087	-60.3	-70.3	27	25.2	22	16,102	-62.0	-70.3	26	28.6	27	15,802	-51.6	-62.0	22	13.4	31	15,988	-57.0	-67.0	28	17.7
80	30	17,972	-61.2	-71.2	27	21.1	19	17,475	-63.0	-72.0	26	23.4	27	17,248	-52.1	-62.0	23	16.3	30	17,398	-57.5	-68.0	28	15.7
70	29	18,300	-60.9	-70.9	27	17.4	19	18,299	-62.5	-72.5	26	20.5	27	18,113	-52.4	-62.5	24	17.5	30	18,240	-58.3	-68.3	28	13.6
60	28	19,262	-60.5	-70.5	27	15.5	18	19,250	-61.9	-72.5	27	15.2	26	19,107	-52.5	-62.5	24	18.6	30	19,210	-58.6	-68.6	29	13.0
50	28	20,398	-60.1	-70.1	27	14.4	18	20,381	-60.9	-72.5	26	14.4	26	20,284	-53.4	-62.5	25	20.8	30	20,355	-58.8	-68.8	29	10.7
40	26	21,797	-58.7	-72.7	28	12.1	17	21,772	-58.6	-72.7	27	11.2	25	21,728	-53.8	-62.6	25	22.6	30	21,759	-58.0	-68.0	29	9.3
30	26	23,622	-56.1	-72.7	27	11.4	15	23,582	-56.0	-72.7	27	13.6	22	23,594	-53.5	-62.6	26	26.6	30	23,574	-57.1	-65.6	29	9.5
25	24	24,784	-55.1	-72.7	27	12.5	15	24,747	-54.7	-72.7	27	13.4	19	24,783	-54.0	-62.7	27	26.7	29	24,723	-56.7	-65.7	29	11.0
20	22	26,222	-52.9	-72.7	28	13.6	13	26,177	-52.7	-72.7	28	9.1	16	26,251	-53.4	-62.7	26	26.4	29	26,143	-54.9	-63.2	29	8.4
15	18	28,069	-50.3	-72.7	27	19.8	10	28,028	-51.2	-72.7	27	5	28,349	-50.4	-62.7	28	27,991	15	30,660	-52.7	-64.8	28	15.0	
10						6	30,555	-52.7						15	30,660	-48.7			10	30,877	-45.8			10.1

PORTLAND, ME 1010 MB				QUILLAYUTE, WA 1012 MB				RAPID CITY, SD 906 MB				ST CLOUD, MN 983 MB				ST PAUL ISLAND, AK 993 MB														
SFC	31	20	-6.6	-9.4	31	1.8	31	58	.3	-2.2	07	1.4	31	966	-14.9	-19.6	35	3.5	31	316	-21.6	-24.1	31	1.4	31	10	1.5	-1.7	14	3.1
1000	22	161	-9.7	-12.7	27	2.4	30	154	1.6	-2.1	09	1.7	31	966	-14.9	-19.6	35	3.5	31	316	-21.6	-24.1	31	1.4	31	13	6.0	2.2	1.4	5.0
950	31	497	-6.1	-9.9	31	3.4	31	564	1.6	-4.6	14	1.8	31	964	-18.1	-20.1	33	4.3	31	564	-18.1	-20.1	33	4.3	31	365	-7.7	-2.6	1.5	5.6
900	31	920	-7.0	-11.0	30	3.8	31	999	-2	-7.3	19	2.3	23	1,040	-15.3	-20.2	34	3.6	31	969	-16.2	-19.2	32	6.0	31	795	-3.5	-5.4	1.6	5.6
850	31	1,364	-7.5	-12.8	28	5.3	31	1,455	-1.9	-11.2	23	2.6	31	1,448	-11.1	-16.4	32	7.2	31	1,401	-15.6	-20.1	31	6.6	31	1,244	-6.1	-11.2	16	7.4
800	31	833	-1.8	-14.9	27	7.6	31	1,935	-4.3	-14.4	25	2.6	31	1,913	-12.1	-18.2	32	10.2	31	1,858	-16.0	-22.0	31	8.0	31	1,717	-8.6	-15.4	16	7.2
750	31	2,282	-1.9	-14.9	27	9.2	31	2,444	-7.7	-19.0	28	3.2	31	2,400	-13.3	-20.1	32	11.7	31	2,344	-16.2	-23.6	31	9.0	31	2,215	-11.6	-19.8	16	8.4
700	31	2,489	-1.7	-14.9	26	13.2	31	2,191	-1.9	-14.9	26	4.8	31	2,169	-12.1	-18.2	32	12.6	31	2,084	-16.0	-22.0	30	10.4	31	2,004	-12.4	-23.4	17	8.2
650	31	3,135	-1.4	-12.7	21	2.6	31	3,555	-12.9	-25.5	29	5.7	31	3,467	-18.0	-23.8	30	14.1	31	3,194	-20.2	-25.8	30	12.1	31	2,986	-21.5	-26.1	17	7.7
600	31	4,034	-17.5	-25.6	26	15.4	31	4,151	-16.7	-27.7	30	7.4	31	4,082	-20.8	-27.7	30	13.4	31	3,404	-20.0	-27.1	29	12.3	31	3,890	-22.6	-29.6	17	10.4
550	31	6,685	-21.3	-29.6	26	17.1	31	4,791	-20.9	-29.5	30	9.1	31	7,211	-24.8	-31.6	29	19.8	31	4,638	-26.1	-35.1	29	15.0	31	4,523	-26.9	-34.9	18	11.3
500	31	5,382	-25.7	-34.1	26	18.6	31	5,497	-25.8	-33.9	30	10.5	31	5,407	-29.5	-36.6	29	19.3	31	5,322	-30.3	-30.5	28	16.5	31	5,204	-31.7	-39.5	18	12.6
450	30	6,129	-31.1	-39.5	26	20.2	31	5,252	-31.1	-38.2	30	11.8	31	6,152	-34.6	-41.9	29	17.7	31	6,056	-35.2	-41.4	28	18.2	31	5,911	-36.7	-41.6	19	13.2
400	30	6,955	-37.1	-43.1	26	22.2	31	7,076	-37.5	-44.5	29	13.4	31	6,965	-40.2	-45.7	29	20.1	31	6,875	-40.8	-43.6	28	20.7	31	6,747	-42.2	-46.9	18	13.2
350	30	7,868	-43.1	-45.2	26	22.6	31	7,988	-44.0	-47.0	29	14.8	31	7,867	-45.9	-49.7	28	22.3	31	7,775	-46.7	-47.7	28	22.4	31	7,642	-47.5	-47.5	19	15.4
300	30	8,891	-48.7	-51.0	25	23.6	30	9,008	-51.0	-50.1	29	17.4	31	8,877	-51.4	-54.9	28	24.9	31	8,782	-52.1	-52.1	27	23.6	31	8,648	-51.7	-16.4	17	16.4
250	30	10,077	-52.7	-57.0	25	26.8	30	10,177	-57.0	-57.0	29	19.9	31	10,051	-54.8	-54.8	29	26.6	31	9,953	-55.0	-55.0	27	24.0	31	9,826	-52.4	-52.4	19	16.3
200	30	11,185	-55.5	-55.5	26	29.1	30	11,584	-57.2	-57.2	29	19.1	31	11,479	-53.8	-53.8	29	24.5	31	11,384	-53.5	-53.5	28	24.0	31	11,280	-48.8	-19.4	17	16.4
175	30	12,359	-55.5	-57.7	27	26.6	29	12,336	-56.2	-56.2	29	16.8	31	12,338	-53.1	-53.1	29	21.6	31	12,249	-52.8	-52.8	27	23.4	31	12,159	-48.6	-19.1	20	14.7
150	30	13,420	-56.0	-57.7	26	25.5	28	13,345	-55.2	-55.2	29	14.1	31	13,424	-53.4	-53.4	28	20.6	31	13,289	-52.8	-52.8	27	22.0	31	13,179	-48.1	-19.9	20	14.7
125	29	14,496	-57.0	-57.0	23	24.3	29	15,569	-52.1	-52.1	30	13.6	31	14,502	-54.4	-54.4	29	20.0	31	14,412	-54.0	-54.0	29	19.5	31	14,381	-54.0	-54.0	21	13.8
100	29	15,206	-58.3	-58.3	26	20.6	28	16,012	-55.5	-55.5	30	11.0	31	15,927	-55.0	-55.0	29	18.6	31	15,816	-55.0	-55.0	28	20.4	30	15,856	-47.9	-11.5	20	13.8
80	28	17,301	-58.7	-58.7	26	17.2	28	17,431	-56.4	-56.4	31	9.9	31	17,334	-56.5	-56.5	29	16.3	30	17,251	-56.7	-56.7	28	20.4	30	17,326	-47.8	-22.2	12.6	
70	27	18,137	-59.1	-59.1	26	15.3	28	18,280	-56.3	-56.3	32	8.7	31	18,191	-56.9	-56.9	29	15.1	30	18,097	-57.2	-57.2	28	19.1	30	18,208	-47.8	-22.2	12.5	
50	27	19,105	-58.9	-58.9	26	14.9	28	19,260	-56.0	-56.0	33	8.0	30	19,168	-57.6	-57.6	29	13.2	30	19,070	-58.0	-58.0	28	18.2	30	19,226	-47.8	-23.2	12.2	
50	26	20,245	-59.6	-59.6	27	13.4	28	20,418	-56.3	-56.3	34	8.1	30	20,319	-57.6	-57.6	30	12.2	30	20,219	-58.1	-58.1	29	17.6	29	20,432	-48.2	-23.0	13.0	
40	26	21,648	-58.8	-58.8	27	11.6	23	21,859	-55.3	-55.3	35	7.8	30	21,727	-57.9	-57.9	30	11.1	30	21,623	-58.6	-58.6	29	16.4	29	21,901	-48.6	-24.8	24	13.4
30	25	23,462	-57.8	-57.8	27	17.6	19	23,704	-55.6	-55.6	36	10.1	27	23,538	-58.4	-58.4	30	12.6	27	23,450	-58.6	-58.6	30	16.6	28	23,806	-49.3	-25.4	15.7	
25	23	24,626	-57.8	-57.8	27	23.5	17	24,833	-56.8	-56.8	35	10.8	25	24,670	-58.5	-58.5	29	15.5	26	24,590	-58.6	-58.6	30	16.1	28	25,000	-50.2	-25	15.7	
20	22	26,045	-55.4	-55.4	26	26.4	15	26,247	-56.5	-56.5	36	13.1	23	26,068	-57.2	-57.2	29	17.5	20	26,082	-56.1	-56.1	32	14.7	26	26,462	-52.4	-52.4	16	
15	18	27,893	-52.4	-52.4	26	32.6	7	28,278	-48.5	-48.5	31	27	29,914	-55.8	-55.8	29	19.5	17	27,918	-53.1	-53.1	30	18.2	23	28,278	-53.3	-27	16.8		
10								13	30,645	-48.9	-48.9	31	14.1	10	30,766	-47.9	-47.9	28	13.1	30,090	-49.4	-49.4	28							

RAWINSONDE DATA

Average monthly values

JANUARY 1979

Standard pressure surface mb	SALEM, IL 999 MB					SALEM, OR 1013 MB					SALT LAKE CITY, UT 873 MB					SAN DIEGO, CA 1002 MB					SAN JUAN, P.R. 1016 MB					
	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Wind direction deg.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Wind direction deg.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Wind direction deg.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Wind direction deg.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Wind direction deg.	Speed m.p.s.
SFC	31	17	-9.7	-12.6	31	14.9	31	6.1	-1.6	31	8	31	124	9.3	5.6	10	1.0	31	6	20.6	18.4	07	2.6	2.6		
1000	31	23	-11.8	-17.4	31	5.6	29	16.9	-1.6	31	7	31	161	10.3	2.1	18	2.0	31	582	19.2	8.7	5.3	2.6	3.6		
950	31	56	-8.6	-11.9	31	5.6	29	16.9	-1.6	31	7	31	1,015	7.8	-2.2	21	2.6	31	1,046	16.4	12.5	0.7	5.4	5.4		
900	31	98	-7.7	-12.2	29	7.5	31	1,006	-1.1	31	13	31	1,484	5.3	-4.6	25	3.3	31	1,531	13.7	8.0	0.7	5.1	5.1		
850	31	1,427	-6.1	-13.5	29	9.2	31	1,465	-0.6	31	7	31	1,949	-6.8	-10.3	19	1.8	31	2,498	-5.5	-11.7	2.7	6.4	6.4		
800	31	1,902	-6.0	-13.4	28	10.8	31	1,948	-2.7	31	26	32	1,965	-7.5	-12.7	21	2.9	31	1,978	3.0	-7.9	2.9	4.6	4.6		
750	31	2,407	-7.2	-15.8	27	12.8	31	2,457	-5.2	31	28	40	2,466	-9.4	-14.9	25	3.2	31	2,498	-5.5	-11.7	27	6.4	6.4		
700	31	2,594	-9.5	-17.9	27	14.6	31	2,599	-8.2	31	29	51	2,997	-12.1	-17.1	28	5.5	31	3,049	-2.2	-18.2	27	6.4	6.4		
650	31	3,512	-12.6	-21.3	27	16.4	31	3,569	-11.4	31	22	7.9	5.9	31	3,564	-12.0	-18.6	28	8.1	3,674	-5.4	-19.8	27	10.7	10.7	
600	31	4,120	-15.6	-24.5	27	19.1	31	4,178	-15.2	31	25	17	4.1	31	4,184	-17.1	-24.5	29	10.4	3,760	-1.6	-19.9	24	3.9	3.9	
550	31	4,747	-19.6	-28.6	27	20.3	31	4,680	-19.5	31	30	21	1.1	31	4,680	-21.1	-27.7	29	1.7	31	4,741	-10.9	-17.1	21	9.6	9.6
500	31	5,773	-24.9	-34.3	26	23.4	31	5,572	-24.5	31	34	5	9.5	31	5,506	-26.0	-30.7	29	14.7	31	5,644	-18.7	-31.6	27	6.6	6.6
450	31	6,234	-26.9	-36.2	26	23.3	31	6,293	-29.5	31	30	10	6.1	31	6,261	-30.7	-37.4	29	17.2	31	6,421	-24.2	-36.2	27	19.2	19.2
400	31	7,057	-34.5	-42.1	26	20.0	31	6,123	-35.5	31	32	12	21	31	7,087	-36.7	-41.9	28	20.3	31	7,265	-30.7	-40.9	27	21.6	21.6
350	31	7,991	-40.7	-54.5	26	23.4	31	8,042	-42.3	31	30	13	9.1	31	8,001	-42.8	-42.5	28	23.0	31	8,207	-37.5	-48.8	27	25.9	25.9
300	31	9,023	-47.1	-56.8	26	26	31	9,064	-49.8	31	30	18	2.2	31	9,023	-49.4	-50.0	29	28.5	31	9,251	-44.5	-66.7	27	32.2	32.2
250	30	10,214	-52.5	-55.5	26	26	31	10,239	-56.0	30	18.5	30	10,207	-55.0	-55.0	29	28.5	31	10,454	-50.9	-56.0	26	35.2	35.2		
200	30	11,645	-55.2	-55.2	26	26	31	11,648	-57.7	30	17.4	29	11,630	-56.1	-56.1	28	26.9	31	11,889	-55.8	-59.0	27	39.5	39.5		
175	30	12,497	-55.5	-55.5	26	37.0	31	12,499	-55.9	30	15.4	29	12,480	-55.8	-55.8	28	23.1	31	12,735	-57.7	-57.7	27	38.1	38.1		
150	30	13,180	-55.5	-55.5	26	37.3	31	13,177	-55.1	31	14.2	28	13,161	-55.7	-55.7	28	20.8	31	13,703	-59.5	-59.5	27	33.7	33.7		
125	30	14,637	-57.2	-57.2	26	31.3	31	14,641	-55.3	31	12.8	27	14,616	-56.5	-56.5	28	19.2	31	14,840	-61.5	-61.5	27	28.8	28.8		
100	30	16,043	-59.2	-59.2	26	25.6	31	16,062	-56.4	31	11.1	26	16,023	-57.9	-57.9	28	15.7	31	16,219	-63.4	-63.4	27	22.2	22.2		
80	30	17,438	-60.4	-60.4	26	19.5	31	17,477	-56.7	31	8.4	26	17,427	-58.7	-58.7	29	12.5	31	17,582	-64.1	-64.1	27	15.4	15.4		
70	30	18,270	-60.4	-60.4	27	17.7	31	18,324	-57.1	32	8.3	26	18,266	-58.6	-58.6	29	11.1	29	18,399	-63.4	-63.4	27	13.1	13.1		
60	30	19,232	-60.2	-60.2	27	15.5	31	19,232	-56.8	33	8.0	26	19,233	-56.8	-56.8	30	10.4	27	19,252	-52.4	-52.4	27	8.0	8.0		
50	20	20,370	-59.6	-59.6	27	14.9	31	20,430	-56.3	35	6.6	25	20,426	-59.6	-59.6	31	7.3	25	20,476	-60.4	-60.4	27	5.9	5.9		
40	20	21,776	-57.8	-57.8	27	12.4	31	20,800	-56.6	35	7.4	24	20,751	-58.9	-58.9	32	6.4	24	21,699	-53.2	-53.2	27	4.2	4.2		
30	20	23,777	-57.7	-57.7	27	11.5	31	23,777	-53.9	35	7.4	24	23,729	-51.9	-51.9	33	5.4	21	24,746	-57.7	-57.7	27	25.0	25.0		
25	22	24,791	-53.1	-53.1	27	13.4	27	24,888	-55.4	02	9.5	21	24,746	-57.7	-57.7	33	5.4	21	24,886	-54.6	-54.6	27	1.2	1.2		
20	22	26,232	-52.0	-52.0	27	17.2	27	26,215	-51.5	03	11.5	21	26,161	-55.8	-55.8	31	5.9	16	26,305	-52.1	-52.1	27	11	11		
15	20	28,107	-48.9	-48.9	27	18.4	20	28,202	-53.5	03	11.3	20	28,021	-52.8	-52.8	30	7.1	15	28,186	-48.6	-48.6	27	12	12		
10	14	30,777	-46.8	-46.8	27	14.3	14	30,894	-50.2	05	14.2	10	30,709	-48.6	-48.6	27	6.0	30,880	-46.0	-46.0	27	11	11			
7						5	33,188	-46.1					33,331	-40.8				6	33,347	-38.7				9	33,475	-38.7

SAULT STE MARIE, MI 988 MB					SPOKANE, WA 936 MB					TAMPA BAY, FL 1018 MB					TOPEKA, KS 990 MB					TRUX, CAROLINE 15+ 1010 MB					
SFC	31	221	-13.7	-17.7	34	.6	31	720	-12.4	-14.3	07	.8	31	13	10.6	8.3	05	1.1	31	268	-13.1	-16.6	33	1.7	31
1000	31	517	-12.9	-14.5	32	2.2	31	573	-9.2	-10.1	1.0	1.8	31	591	12.5	4.8	0.8	2.1	31	581	-10.4	-14.4	33	3.9	31
900	31	929	-13.5	-14.7	32	3.0	31	1,024	-8.7	-10.8	10	1.8	31	1,084	11.0	1.9	2.4	4.7	31	999	-8.6	-13.6	32	5.3	31
850	31	1,363	-14.7	-15.9	30	4.5	31	1,468	-8.7	-13.0	19	1.1	31	1,520	9.7	-1.2	26	7.8	31	1,449	-7.9	-15.4	30	6.7	31
800	31	1,821	-15.7	-18.4	29	5.7	31	1,931	-9.2	-14.5	26	2.5	31	2,023	9.0	-4.1	26	10.0	31	1,916	-7.3	-15.6	29	8.8	31
750	31	2,307	-16.7	-20.3	28	7.3	31	2,435	-10.5	-21.9	29	4.9	31	2,556	-7.2	-6.8	26	12.2	31	2,417	-8.5	-16.4	28	18.3	31
700	31	2,825	-16.0	-24.1	28	9.5	31	2,964	-12.6	-21.1	30	6.9	31	3,121	4.3	-9.8	26	14.0	31	3,151	-13.1	-20.8	28	14.3	31
650	31	3,966	-20.4	-22.6	27	10.1	31	4,179	-23.6	-22.6	31	9.0	31	4,566	-6.6	-21.0	26	19.6	31	4,774	-20.8	-28.9	28	31.9	31
600	31	5,282	-40.4	-43.7	26	19.8	31	5,051	-49.6	-51.6	31	22.0	31	9,500	-38.4	-49.4	26	31.7	29	9,008	-6.4	-22.4	28	31.6	31
550	31	6,874	-52.7	-52.7	26	22.1	31	6,894	-51.6	31	22.0	29	9,500	-38.4	-49.4	26	31.7	29	9,783	-42.3	-42.3	28	33.4	31	
500	31	9,927	-54.5	-54.5	25	24.8	31	10,132	-56.8	30	23.6	29	10,724	-68.4	-68.4	26	32.2	29	10,199	-53.5	-53.5	28	36.8	31	
450	31	11,357	-53.9	-53.9	25	24.1	31	11,595	-56.4	30	22.0	29	12,160	-57.6	-57.6	26	37.8	29	11,626	-55.1	-55.1	27	37.4	31	
400	31	12,215	-53.8	-53.8	25	22.5	31	12,400	-55.6	30	19.6	29	12,997	-61.0	-61.0	26	39.3	27	12,481	-54.5	-54.5	27	35.6	31	
350	31	13,206	-53.6	-53.6	25	21.5	31	13,649	-56.2	31	10.3	27	14,025	-62.5	-62.5	26	37.5	27	14,295	-62.7	-62.7	27	32.6	31	
300	31	14,247	-54.7	-54.7	25	11.2	31	14,724	-58.1	31	8.5	26	15,000	-64.5											

RAWINSONDE DATA

Average monthly values

JANUARY 1979

WASHINGTON DULLES INT'L AP 1006 Mb																WAYCROSS, GA 1014 Mb																WEST PALM BEACH, FL 1017 Mb																WINNEMUCCA, NV 869 Mb																INNSWELL, AZ 850 Mb															
Standard pressure surface mb.	No. of observations															No. of observations															No. of observations															Resultant Wind																																	
	Dynamic height meters			Temperature °C			Dew Point °C			Resultant Wind			Dynamic height meters			Temperature °C			Dew Point °C			Resultant Wind			Dynamic height meters			Temperature °C			Dew Point °C			Resultant Wind			Dynamic height meters			Temperature °C			Dew Point °C			Resultant Wind																																	
5FC 31 85 -2.6 -7.2 31 2.5 31 14 5.2 1.4 9.3 31 1.0 31 1.0 31 154 16.9 10.6 0.6 1.2 30 1,481 -4.1 -8.9 09 .9 17 1,527 -4.2 -9.8 21 .5 .5	1000 1.0 20.9 -10.9 30 2.2 2.9 16.4 5.8 1.2 9.3 31 2.5 31 1.0 31 590 14.9 7.5 1.7 1.4 30 1,026 -4.5 10.9 22 1.1 30 1,972 -1.9 -9.1 24 2.9 .5	950 31 3.8 -8.4 29 6.2 31 57.4 7.3 1.2 9.3 31 2.5 31 1.0 31 590 14.9 7.5 1.7 1.4 30 2,466 -6.4 13.3 26 3.5 30 2,484 -3.6 -11.6 26 .5	900 31 9.6 -9.0 27 9.3 31 1,019 6.9 1.2 9.3 25 5.0 31 1.0 31 1,047 12.9 4.6 2.2 2.7 30 3,002 -6.6 17.3 28 5.6 30 3,019 -6.0 -15.4 27 .5	850 31 1,412 -3.4 -10.4 28 12.3 31 1,488 5.7 1.2 9.3 26 9.2 31 1.0 31 1,526 10.7 3.5 24 5.4 30 4,157 -5.1 18.5 29 7.0 30 5,064 -3.0 -21.9 28 1.6 -1.2 1.6 .5	800 31 1,693 -4.1 -10.8 28 13.3 31 1,984 4.7 1.2 9.3 26 11.1 31 1.0 31 2,031 10.0 1.6 25 7.8 30 1,960 -4.5 10.9 22 1.1 30 1,972 -1.9 -9.1 24 2.9 .5	750 31 2,399 -5.7 -12.6 27 14.6 31 2,500 3.2 1.1 9.3 26 14.7 31 2,566 8.2 -6.2 25 10.3 30 2,466 -6.4 13.3 26 3.5 30 2,484 -3.6 -11.6 26 .5	700 31 2,936 -7.4 -15.5 27 16.3 31 3,036 5.1 1.1 9.3 26 17.3 31 3,133 5.4 -10.5 26 12.5 30 3,002 -6.6 17.3 28 5.6 30 3,019 -6.0 -15.4 27 .5	650 31 3,519 -10.1 -18.6 26 18.0 31 3,652 4.0 1.1 9.3 26 20.7 31 3,713 2.2 -13.6 26 10.7 30 3,022 -6.6 17.3 28 5.6 30 3,019 -6.0 -15.4 27 .5	600 31 4,125 -13.6 -21.5 26 19.7 31 4,290 5.5 1.1 9.3 26 23.5 31 4,377 7.1 -17.6 26 16.1 30 4,188 -1.6 22.4 30 9.1 30 5,064 -3.0 -21.9 28 1.6 -1.2 1.6 .5	550 31 4,762 -17.7 -25.7 22 22.0 31 4,967 -9.4 -2.4 26 23.6 25 29.1 5.0 5,065 -5.5 -23.2 26 16.1 29 4,814 -8.9 -24.5 30 10.4 30 4,978 -16.5 -27.3 28 1.6 -1.2 1.6 .5	500 31 5,489 -22.3 -27.1 22 24.4 31 5,696 -1.6 2.5 27 27.2 26 29.5 11.1 5,085 -10.6 -26.0 26 20.1 29 5,544 -23.8 -31.0 30 11.2 30 5,598 -21.9 -27.3 28 1.6 -1.2 1.6 .5	450 31 6,255 -27.3 -35.9 26 27.5 31 6,487 -19.6 -31.5 26 31.1 31 6,607 -16.0 -30.1 26 22.5 29 6,306 -29.4 -36.3 30 13.0 30 6,359 -26.3 -37.2 28 2.0 20.2 .5	400 31 7,094 -33.1 -40.4 26 29.9 31 7,352 -25.5 -36.4 26 34.5 31 7,484 -22.0 -35.3 26 24.7 29 7,136 -35.6 -41.2 29 15.4 30 7,200 -32.5 -41.5 28 2.0 20.2 .5	350 31 8,023 -39.1 -48.4 26 32.5 31 8,310 -32.3 -42.5 26 36.7 30 8,453 -29.5 -41.2 26 26.8 29 8,056 -41.9 -41.9 29 18.2 30 8,131 -39.3 -44.5 28 2.0 20.2 .5	300 31 9,061 -46.0 30 36.4 30 9,370 -40.7 -47.0 26 39.1 30 9,532 -37.7 48.8 26 28.1 29 9,082 -48.8 29 18.9 30 9,168 -46.2 28 20.0 30 9,246 -41.5 28 2.0 20.2 .5	250 31 10,257 -51.7 26 40.5 30 10,586 -50.2 26 43.2 30 10,763 -47.7 26 31.9 29 10,261 -55.2 29 20.8 30 10,362 -52.6 28 22.3 30 11,782 -56.6 29 2.0 20.2 .5	200 31 11,687 -56.4 26 43.6 29 12,015 -58.5 26 45.4 30 12,204 -57.0 26 34.2 29 11,674 -57.6 29 21.1 30 12,635 -57.1 29 2.0 20.2 .5	175 31 12,535 -56.6 26 41.5 29 12,849 -60.9 26 45.7 30 13,043 -60.3 26 34.8 29 12,519 -56.7 29 21.1 30 12,635 -57.1 29 2.0 20.2 .5	150 31 13,512 -56.4 26 36.3 29 13,805 -60.2 26 44.7 30 13,995 -64.2 25 35.6 29 13,498 -56.3 28 18.5 29 13,609 -57.5 28 2.0 20.2 .5	125 29 14,663 -58.2 26 34.2 29 14,926 -64.9 26 36.5 29 15,102 -68.8 25 32.4 28 14,654 -57.1 29 16.8 29 14,757 -59.2 27 2.0 20.2 .5	100 28 16,056 -60.5 26 28.6 29 16,426 -68.1 26 31.2 29 16,425 -72.4 26 26.3 28 16,056 -58.1 29 13.8 29 16,151 -61.2 27 2.0 20.2 .5	80 28 17,449 -63.0 26 22.6 29 16,407 -66.9 26 19.5 28 16,517 -71.6 26 12.4 28 16,300 -58.6 30 10.8 28 16,436 -61.6 28 2.0 20.2 .5	70 25 18,269 -61.0 26 22.6 29 16,407 -66.9 26 19.5 28 16,517 -71.6 26 12.4 28 16,300 -58.6 30 10.8 28 16,436 -61.6 28 2.0 20.2 .5	60 23 19,220 -60.9 28 17.5 27 19,342 -65.5 26 14.9 28 19,436 -67.9 25 7.9 26 19,269 -58.8 30 7.4 27 19,302 -60.7 29 2.0 20.2 .5	50 22 20,354 -59.8 26 16.9 26 20,455 -63.2 26 12.6 28 20,543 -63.8 26 4.5 25 20,420 -58.3 33 5.5 26 20,433 -59.8 29 2.0 20.2 .5	40 22 21,751 -58.9 26 16.4 24 21,830 -60.4 26 7.9 28 21,926 -59.2 26 1.7 23 21,824 -57.7 34 5.4 26 21,836 -58.5 29 2.0 20.2 .5	30 22 23,569 -56.1 27 14.0 23 23,616 -56.2 29 5.5 27 23,747 -54.2 33 1.0 23 23,661 -56.3 02 4.5 25 23,659 -55.9 26 2.0 20.2 .5	25 20 24,735 -54.5 26 18.9 22 24,796 -53.9 30 4.1 26 24,920 -51.6 26 -.7 16 24,839 -55.6 02 5.0 23 24,816 -54.9 29 2.0 20.2 .5	20 19 26,192 -51.9 26 19.8 21 26,251 -50.6 28 3.4 26 26,374 -47.4 19 1.9 15 26,299 -53.5 04 7.5 19 26,263 -52.1 29 2.0 20.2 .5	15 19 28,064 -49.9 27 23.7 21 28,138 -48.0 26 6.2 21 28,297 -43.7 19 5.2 12 28,258 -50.7 05 17.6 15 28,142 -50.2 32 2.0 20.2 .5	10 10 30,613 -49.9 13 30,872 -45.2 26 7.5 31 6,709 -9.0 -27.4 09 6.6 01 3.0 31,093 -41.6 11 30,979 -45.7 05 17.6 15 28,142 -50.2 32 2.0 20.2 .5	7 5 33,473 -41.4 12 31,093 -41.6 10 19.4																																															

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

JANUARY 1979

Date	Sun's zenith distance								Date	Sun's zenith distance										
	A.M.				•	P.M.				A.M.				•	P.M.					
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°		60.0°	70.7°	75.7°	78.7°		60.0°	70.7°	75.7°	78.7°		
MAUNA LOA OBSERVATORY, HI																				
Air mass										Air mass										
	3.34	2.67	2.01	1.34	•	1.34	2.01	2.67	3.34											
17----	1.30	1.37	1.47	1.59	----	----	----	----	----											
18----	1.35	1.41	1.49	1.58	1.66	1.53	1.40	1.26	1.16											
19----	1.32	1.38	1.45	1.56	1.63	1.53	1.41	1.31	1.21											
20----	1.28	1.34	1.41	1.55	1.65	----	----	----	----											
25----	1.27	1.36	1.43	1.54	1.63	1.50	1.40	1.30	1.22											
26----	1.32	1.40	1.49	1.59	1.69	1.59	1.47	1.38	1.29											
27----	1.18	1.31	1.42	1.55	1.67	----	----	----	----											
31----	1.26	1.33	1.43	1.53	----	----	----	----	----											
Aver-ages	1.29	1.36	1.45	1.56	1.66	1.54	1.42	1.31	1.22											

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

Date,	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys,	-74	-70	-61	-67	-73	-79	-79	-36	-9	-6	-57	-45	-49	-51	-63	-45	-48	-44	-58	-54	-57	-50	-47	-47	-33	-64	-25	-73	-64	-62	-59	-53

REFERENCE NOTES

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES: Dates in the table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

- + And also on an earlier date or dates.
- D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch of water equivalent to every 10 inches of snow-fall.

CLIMATOLOCICAL DATA - METRIC UNITS: Data from airport unless otherwise specified.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

- B Number of days maximum 21.1°C. or above for Alaskan Stations.
- Y Peak Gust.
- + And also on an earlier date or dates.
- U Indicates Urban site.
- R Indicates Rural site.
- Ø Station pressures apply to elevations shown in the "Elevations" table of the annual issue of this publication.

Conversion formulae to English Units are as follows:

$$\begin{aligned} 1 \text{ foot} &= 0.3048 \text{ meters} \\ ^\circ\text{F.} &= \frac{9}{5} \times ^\circ\text{C} + 32 \\ 1 \text{ inch} &= 25.4 \text{ millimeters} \\ 1 \text{ mile per hour} &= 0.447 \text{ meters per second} \end{aligned}$$

HEATING DEGREE DAYS: Data from airport unless otherwise specified.

- U Indicates Urban site.
- R Indicates Rural site.

COOLING DEGREE DAYS: Data from airport unless otherwise specified.

- U Indicates Urban site.
- R Indicates Rural site.

STORM SUMMARY:

- o Includes crop damage.
- C Crop damage.
- * No occurrence of storms or unusual weather phenomena reported.
- @ Includes heavy sleet storm.
- # Freezing drizzle and freezing rain, commonly known as glaze.
- Ø For breakdown of "All Others," and for detailed listing of other storms, see the Environmental Data and Information Service, NOAA, monthly publication STORM DATA.
- + No Storm Data Report received for this State.
- <> Report Incomplete.
- + Storm damages are placed in categories varying from 1 to 9 as follows:

1	Less than \$50
2	\$50 to \$500
3	\$500 to \$5,000
4	\$5,000 to \$50,000
5	\$50,000 to \$500,000
6	\$500,000 to \$5 Million
7	\$5 Million to \$50 Million
8	\$50 Million to \$500 Million
9	\$500 Million to \$5 Billion

RAWINSONDE DATA (Average Monthly Values):

All observations scheduled at 1200, C.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 60° above the horizon, or any obstruction above the horizon. The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygrometers. These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

- * Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.
- + Observations for these stations are scheduled at 0000 C.C.T.
- + Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES: Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

()	Clouds Present	DM	Moderate Dust	HM	Moderate Haze	KS	Slight Smoke
*	Values corresponding to true solar noon	DS	Light Dust	HS	Slight Haze	M	Moderate Haze-indeterminable
BD	Blowing Dust	F	Fog	I	Intense Haze-indeterminable		
BN	Blowing Sand	CF	Cround Fog	K	Smoke	N	Sand
D	Dust	H	Haze	KI	Intenae Smoke	S	Slight Haze-indeterminable
DI	Intenae Duat	HI	Intenae Haze	KM	Moderate Smoke		

NET RADIATION: The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

DESCRIPTION OF CHARTS

CHART I. A. NORMAL DAILY AVERAGE TEMPERATURE ($^{\circ}$ F. 1941-70) FOR MONTH. B. TEMPERATURE DEPARTURE FROM 30-YEAR MEAN ($^{\circ}$ F. 1941-70) FOR MONTH. Chart I-A is reproduced from monthly normals maps prepared at the National Climatic Center. Chart I-B is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin," a publication of Environmental Data Service.

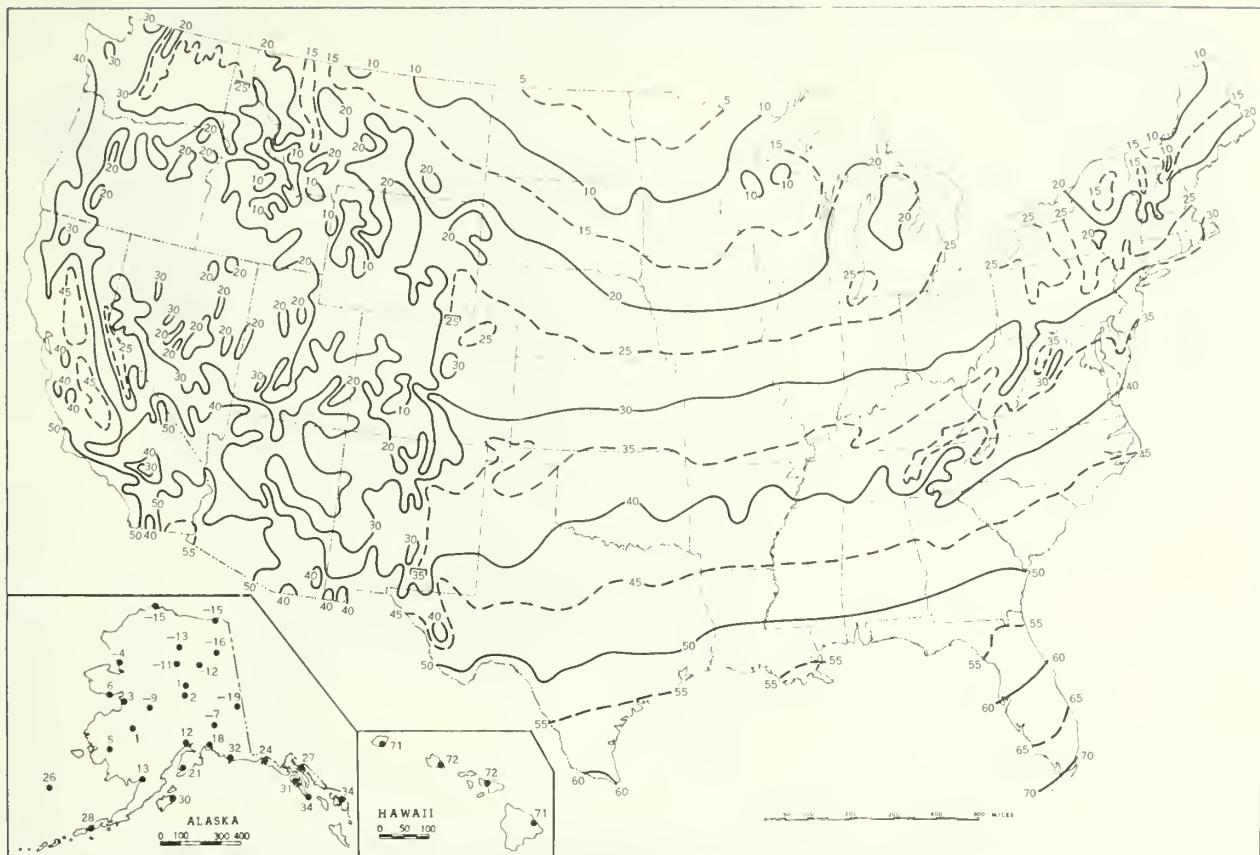
CHART II. A. TOTAL PRECIPITATION. Chart II. A. is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin."

CHART II. B. PERCENTAGE OF NORMAL PRECIPITATION. Chart II. B. is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin."

CHART III. TRACKS OF CENTERS OF ANTICYCLONES AT SEA LEVEL.

CHART IV. TRACKS OF CENTERS OF CYCLONES AT SEA LEVEL. Centers which can be identified for 24 hours or more are tracked in these charts. Semi-permanent features such as the Great Basin and Pacific Highs and Colorado and Mexico Lows are not shown. The 7:00 a.m., e.s.t., positions are shown by open circles, with the intermediate positions at 6-hour intervals shown by X's. The date is given above the circle and the central pressure to whole millibars below. A dashed track indicates a regeneration rather than actual movement to the next position. Squares indicate position of stationary center for period shown beside it.

Chart 1. A. Normal Daily Average Temperature ($^{\circ}\text{F}$. 1941-70), January



B. Temperature Departure from 30 - Year Mean ($^{\circ}\text{F}$ 1941-70), January 1979

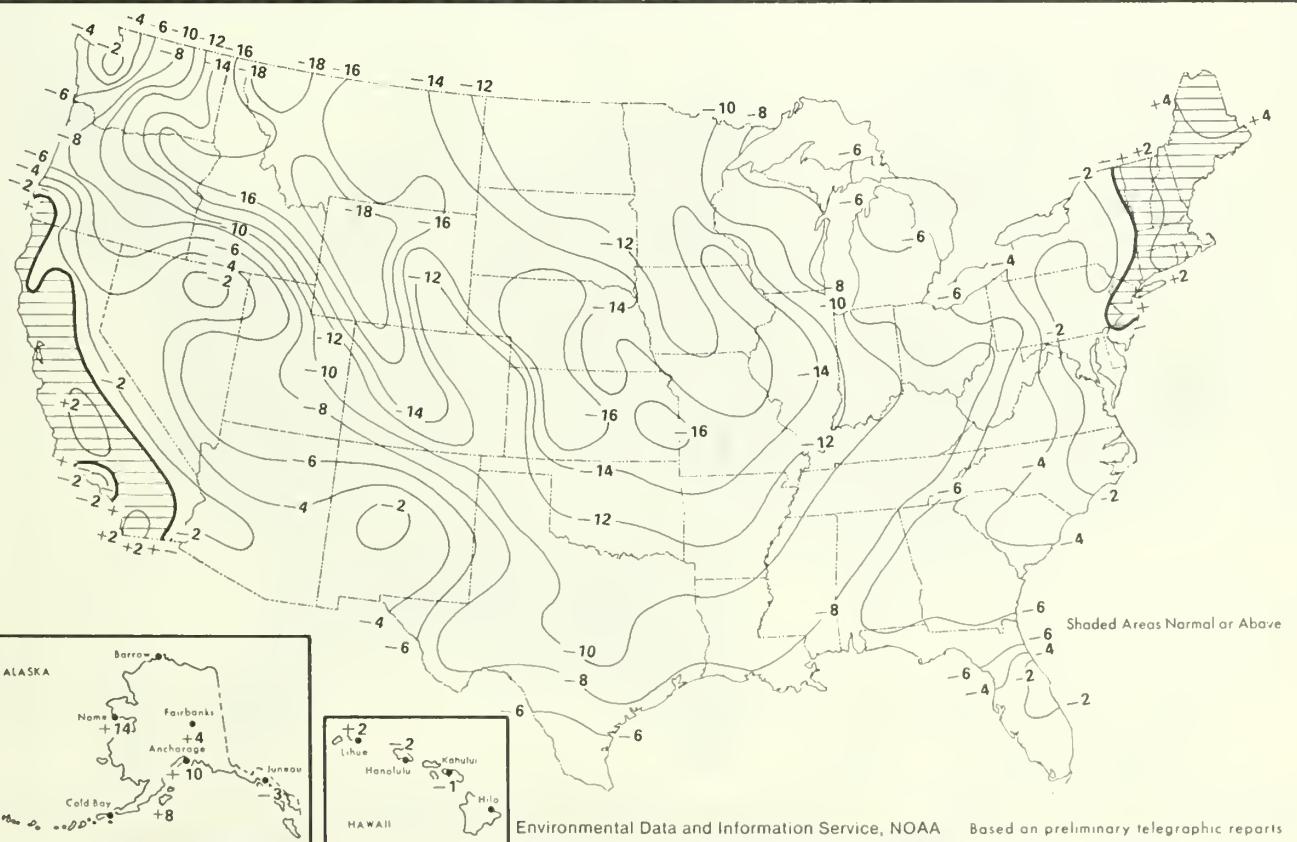
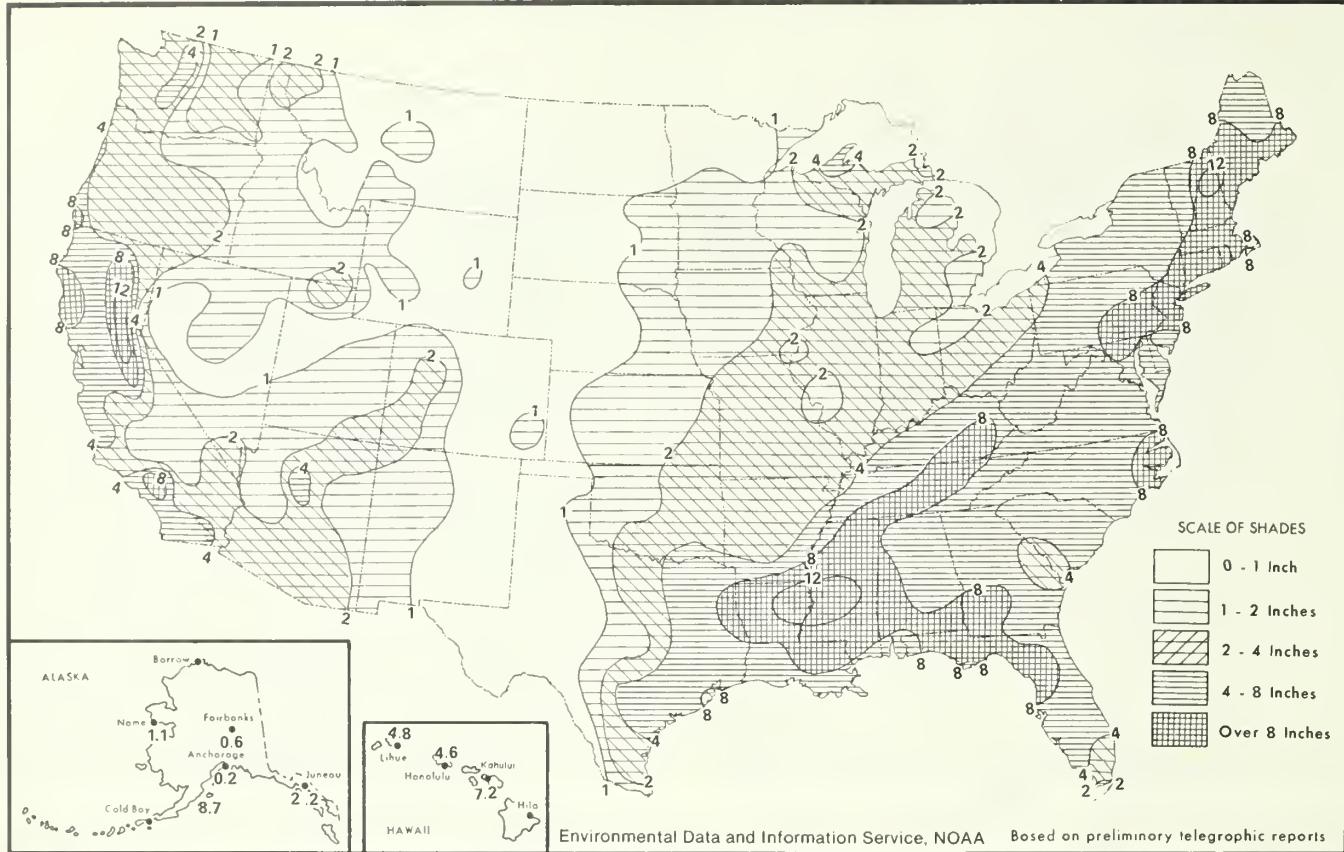


Chart II. A. Total Precipitation (Inches), January 1979



B. Percentage of Normal Precipitation, January 1979

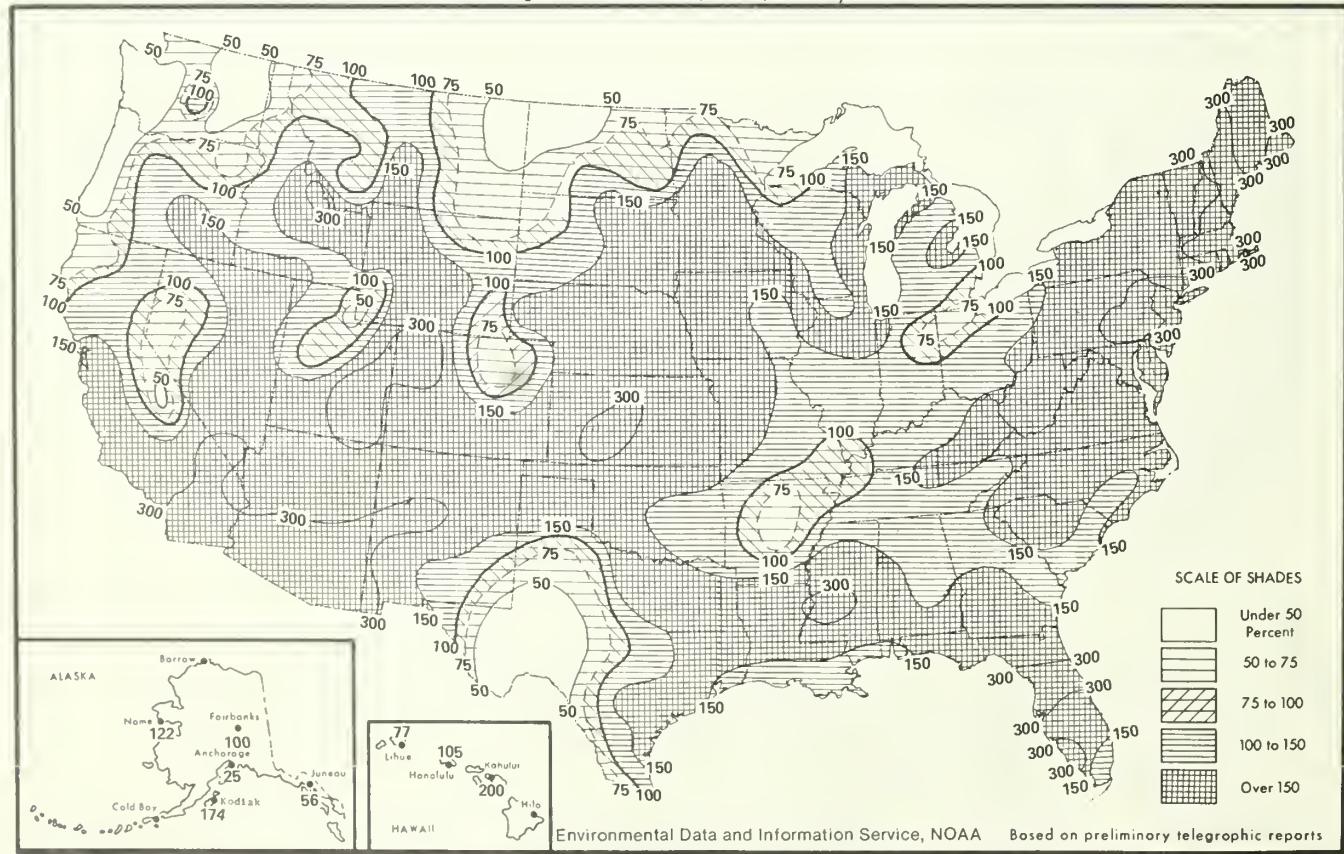
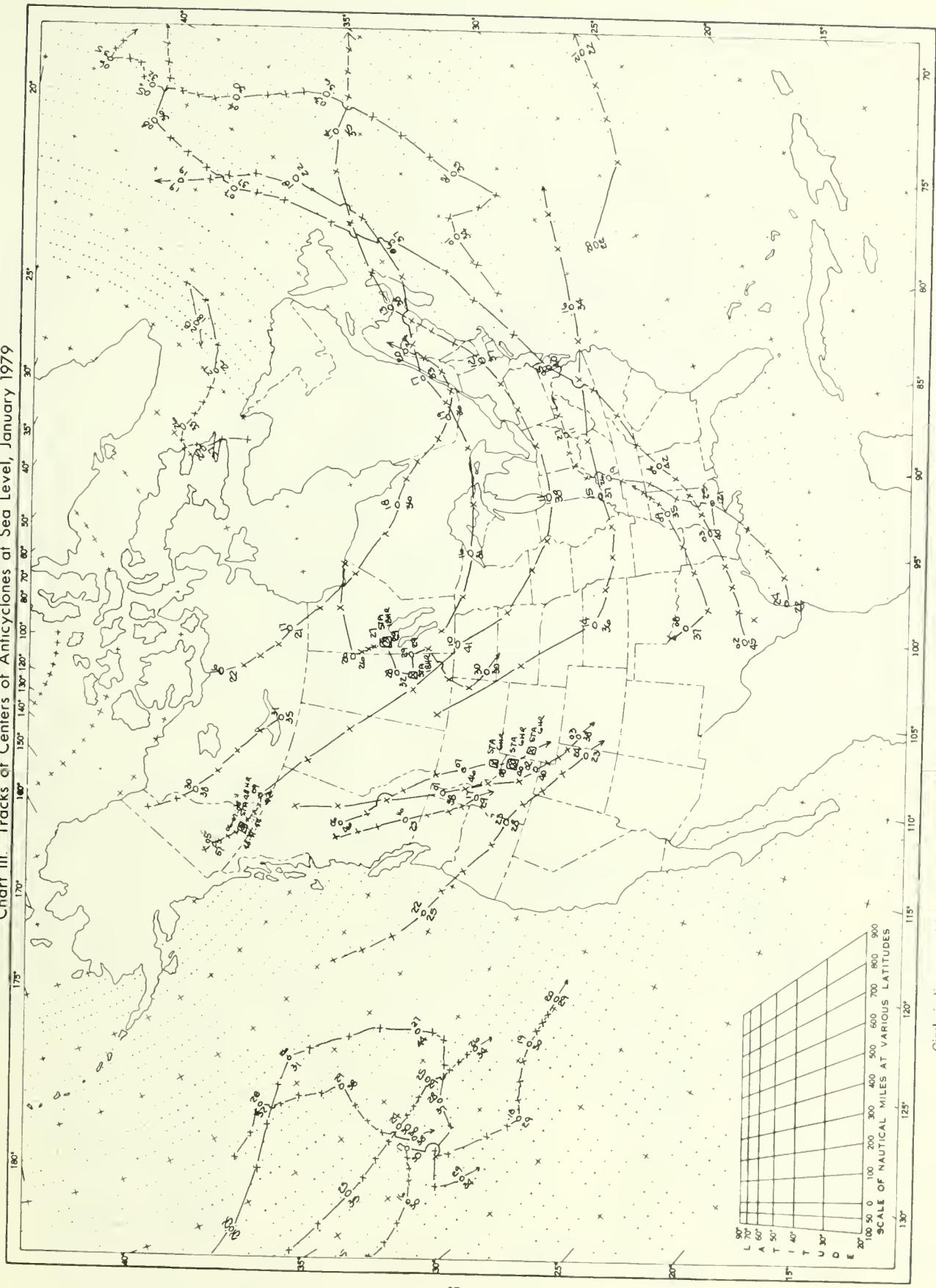
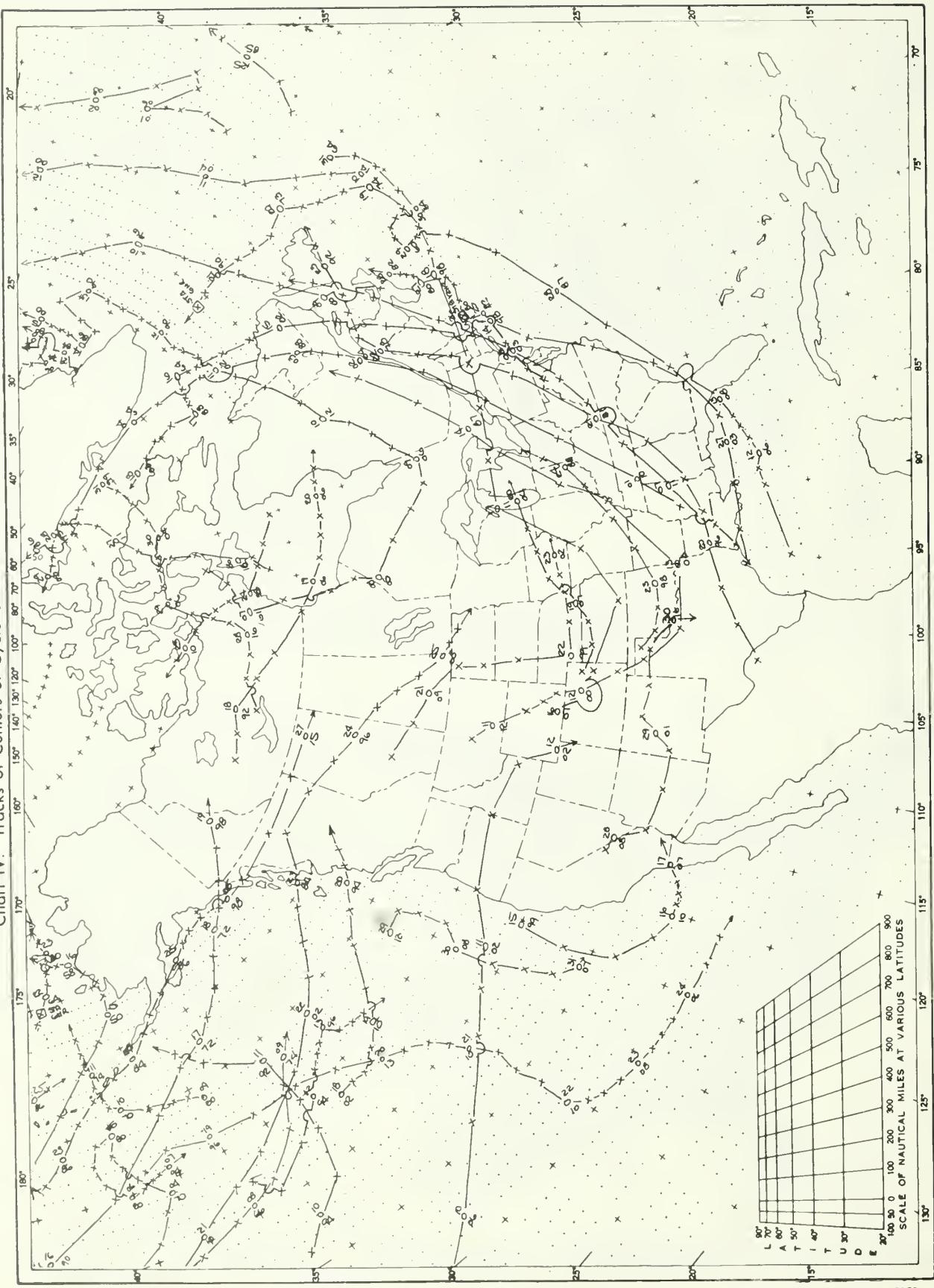


Chart III. Tracks of Centers of Anticyclones at Sea Level, January 1979



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date figure below, pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IV. Tracks of Centers of Cyclones at Sea Level, January 1979



Circle indicates position of center at 07:00 a.m. E.S.T. Figure above circle indicates date figure below, pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

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FEBRUARY 1979

VOLUME 30

NUMBER 2

CLIMATOLOGICAL DATA

NATIONAL SUMMARY



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NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION

ENVIRONMENTAL DATA AND
INFORMATION SERVICE

NATIONAL CLIMATIC CENTER
ASHEVILLE, N.C.

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

FEBRUARY 1979

GENERAL SUMMARY OF WEATHER CONDITIONS

Lyle Denny, Climatologist
Environmental Data and Information Service, NOAA

HIGHLIGHTS: Much of California and the Pacific Northwest recorded above-normal precipitation during the month. Percentages ranged up to 150% above totals expected this time of year. The northern Plains also exceeded normal precipitation; amounts well above an inch brought parts of this area past 300% of normal. Precipitation was generally heavier than the average from New Mexico eastward to the Atlantic and from eastern Texas northeastward to Pennsylvania. Flooding occurred in the Deep South and in the mid-Atlantic area. Temperatures averaged colder than normal over most of the Nation. The northern and central Plains were 12 to 15° colder than normal. Only the West Coast and Plateau averaged near normal temperatures.

As the month began, a blast of cold air moved from western Canada to envelop the Rockies and Plains. Sub-zero temperatures were felt in the Plains as far south as Oklahoma. Spotty snowcover over most of the winter wheat area afforded some protection. A storm system moved into southern California and spread heavy rain along the coast with lesser amounts, in the form of snow, hitting the Plateau and central Rockies. A low pressure system formed in the Gulf of Mexico and spread precipitation northward and eastward to cover most of the area east of the Mississippi River.

Early in the week of the 5th-11th, another surge of cold air pushed southward into the Plains. The average temperature for the week was 21° colder than normal in parts of the central Plains. The coldest minimum temperature in this area plummeted to -20° in northern Missouri and southern Iowa. Freezing temperatures reached into northern Florida. Another storm system formed in the Gulf of Mexico, but this time stayed to the south and caused heavy rain from southern Louisiana to central Georgia and moderate rain or freezing rain into the mid-Atlantic States.

Some heavy rain, snow in the mountains, fell in the Pacific Northwest.

The mid-month week of the 12th-18th brought precipitation to nearly all of the Nation. Heavy rain or snow fell in the West with moderate amounts in the South and mid-Atlantic areas. Temperatures were warmer than normal in the West but colder east of the Rockies. Departures from normal plunged as much as 27° in New York State. At week's end, heavy snow began to fall in Georgia and moved northward.

Early in the week of the 19th-25th, a low pressure system moved northward along the East Coast and left a heavy snowcover from Georgia to southern New England. Amounts ranged from 3 to 5 inches in Georgia to 20 to 25 inches in parts of the mid-Atlantic area. Subsequent warm rain depleted most of the snowcover. Again, precipitation fell in most of the Nation during the week. Heaviest amounts dampened Washington State, northern California, and the Southeast. Temperatures averaged near or slightly above normal in much of the Nation, but the northern Plains showed 12 to 15 degrees colder than normal.

During the last days of the month, a strong low pressure system caused rain from the Carolinas to New England stretching as far west as the Ohio Valley. Local flooding occurred in some mid-Atlantic areas. In the West, some heavy rain fell from central California northward. Snow fell in the Plateau and northern Rockies. Thunderstorms broke out in the South, and hail was recorded at several places along the lower Mississippi River. Cold air moved all the way to northern Florida but was rapidly replaced by another warming trend. Moderately cold air dominated the northern tier of States.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

FEBRUARY 1979

STATE	Temperature							Precipitation						
	Monthly extremes							Monthly extremes						
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least				
		°F			°F			In.						In.
Alabama	2 Stations	80	16+	Calera 2 SW	-4	10	2 Stations	11.23	Muscle Shoals FAA AP	3.57				
Alaska	Cape Sarichef	50	21+	Northway FAA AP	-71	9	Beaver Falls	11.00	18 Stations	.00				
Arizona	Tumacacori Natl Monument	86	13	Hawley Lake	-20	7	Bright Angel R S	4.17	Dateland Whitewng Rch	.00				
Arkansas	2 Stations	79	16	3 Stations	-8	10+	Shirley	8.20	Gravette	1.98				
California	Kern River Power House 1	83	12	Bodie	-24	3	Bucks Creek Power House	19.15	Gold Rock Ranch	.00				
Colorado	Trinidad FAA AP	82	13	Taylor Park	-42	5	Independence Pass 5 SW	5.40	8 Stations	.00				
Connecticut	3 Stations	53	28	Falls Village	-21	12	Groton	5.17	Falls Village	2.71				
Delaware	Bridgeville 1 NW	56	28	Middletown 1 WSW	-15	14	Milford 2 WSW	7.44	Georgetown 5 SW	5.41				
Florida	Clewiston U.S. Engineers	89	25	2 Stations	15	10	Niceville	12.78	2 Stations	.16				
Georgia	Waycross 4 NE	83	24	Blairsville Exp Station	2	10	Warrenton	11.56	Glenville	2.89				
Hawaii	2 Stations	85	23+	Mauna Kea Obs 111.2	19	28-	Mount Waialeale 1047	80.97	Puukohola Heiau 98.1	2.64				
Idaho	Three Creek	62	11	Island Park Oam	-37	1	Mullan	7.50	Chilly Barton Flat	.07				
Illinois	Kaskaskia R Nav Lock	66	24	Mount Carroll	-28	5	Anna 1 E	7.19	Piper City 3 SE	.55				
Indiana	Paoli	65	23	Frankfort Disposal Plant	-22	5	Evansville	5.73	Auburn 2 SSE	.35				
Iowa	Keokuk Lock and Dam 19	47	23	Grinnell 3 SW	-34	9	Lansing	1.40	Marble Rock	.08				
Kansas	Hugoton	81	14	Lincoln 1 ESE	-24	1	Genesee	1.92	2 Stations	.00				
Kentucky	Pikeville	73	24	2 Stations	-13	11+	Hickman 1 E	8.43	Meta 4 SE	2.34				
Louisiana	2 Stations	80	15+	Tallulah	13	10	Thibodaux	14.25	Hosston	3.88				
Maine	Saco	54	28	Rangely	-38	14+	Woodland	4.02	Gardiner	.86				
Maryland	2 Stations	59	28+	Unionville	-20	13	Mechanicsville 1 SE	0 8.55	Hancock Fruit Lab	03.90				
Massachusetts	2 Stations	53	28-	Chester 2	-30	18-	Chatham WSMO	5.71	Birch Hill Oam	2.08				
Michigan	2 Stations	53	28	2 Stations	-44	17	Munising	4.71	T					
Minnesota	Moose Lake 1 SSE	48	28	Waskish Ranger Station	-40	16	Tower 3 S	2.81	Theilmann	.27				
Mississippi	Columbia	79	15	2 Stations	5	10+	Pascagoula 2 ENE	14.72	Lafayette Springs	2.80				
Missouri	3 Stations	71	24+	Plattsburg Waterworks	-30	10+	Puxico	8.07	Sedalia Water Plant	.18				
Montana	Yellowtail Oam	61	13	Malta 7 E	-38	15	Heron 2 NW	5.98	2 Stations	T				
Nebraska	Benkelman	66	14	Mullen 21 NW	-30	2	Bruning	.84	2 Stations	.00				
Nevada	Pahrump U of N Lab	73	13	Spring Valley State Park	-28	3	Mount Rose Bowl	6.68	Las Vegas WSO AP	.07				
New Hampshire	Nashua 2 NNW	53	28	2 Stations	-40	12	Mount Washington	4.34	Colebrook 2 E	1.03				
New Jersey	Moorestown	65	28	Sussex 1 SE	-18	18	Millville FAA AP	7.57	Mahwah	2.86				
New Mexico	Bitter Lakes Wildlife Ref	86	15	El Vado Oam	-31	4	Sandia Crest	2.45	10 Stations	.00				
New York	New York Laurel Hill	58	28	Old Forge	-52	18	Holbrook	6.11	Chazy	.54				
North Carolina	2 Stations	75	26+	Celo 2 S	-6	10	Lake Toxaway 2 SW	9.36	Cedar Island	2.81				
North Dakota	Medora	46	19	3 Stations	-39	17+	Fullerton 1 ESE	2.28	Hannah 2 N	.12				
Ohio	4 Stations	65	24+	Oorset	-28	17	London Waterworks	5.27	Wauseon Water Plant	.46				
Oklahoma	3 Stations	84	15+	Pawhuska	-14	1	Hee Mountain Tower	6.02	Goodwell Research Station	T				
Oregon	Riddle	64	18	Seneca	-39	2	Valsetz	25.40	Malheur Refuge Hdq	.23				
Pennsylvania	Philadelphia WSFO	58	28	2 Stations	-34	18+	Chadds Ford	6.90	West Hickory	1.38				
Puerto Rico	Guayama	94	20	Adjuntas Substation	47	6-	Rio Grande El Verde	13.42	4 Stations	.00				
Rhode Island	Kingston	53	28	Kingston	-14	12	Newport	5.33	Woonsocket	3.71				
South Carolina	Holly Hill	79	16	Simms Water Plant	4	19	Santuck	9.22	Charleston WSO AP	3.04				
South Dakota	Belle Fourche	57	10	Linerton	-33	4	Harding 3 SE	2.30	2 Stations	.01				
Tennessee	Chattanooga WSO AP	73	15	Livingston Radio WLIV	-13	10	Samburg Wildlife Refuge	7.87	Newport 1 NW	3.05				
Texas	Archer City	95	15	Perryton 5 NNE	-3	1	San Augustine	8.85	6 Stations	.00				
Utah	Zion National Park	68	13	3 Stations	-33	3	Snowbird	7.43	Wah Wah Ranch	.00				
Vermont	Oorset 1 S	50	28	Enosburg Falls	-38	12	Searsburg Station	3.13	3 Stations	.60				
Virginia	Grundy	72	24	Sterling (RCS)	-17	18	Lawrenceville 5 W	7.59	Grundy	3.13				
Virgin Islands	Truman Field FAA AP	90	25+	Alex Hamilton Field FAA	61	5	Beth Upper New Works	3.80	Water Isle	1.07				
Washington	4 Stations	62	27-	2 Stations	-20	2-	Spruce	30.16	Prosper 4 NE	.23				
West Virginia	Logan	72	24	Brandonville	-20	11	Snowshoe	7.20	Beckley WSO AP	2.54				
Wisconsin	Solon Springs	48	28	Brule Island	-48	17	Medford	2.29	Baraboo	.41				
Wyoming	2 Stations	66	13	3 Stations	-37	1	Snake River	3.89	3 Stations	.00				

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature						Precipitation						Wind						No. of days (sunrise to sunset)						
		Station		Average maximum			Average minimum			Departure from normal			Greatest in 24 hours			Departure from normal			Resultant speed		Cloudy, 8-10							
		mb	mb	°C	°C	°C	°C	°C	°C	°C	°C	mm	mm	mm	mm	mm	mm	m/s	m/s	m/s	Partly cloudy, 4-7	Sky clear, 0-3	%					
ALASKA BIRKINSHAM	7,777 199	998.3 1021.3	11.3 11.9	1.4 0.4	6.4 4.6	-2.8 -1.6	23.3 24.4	15 15	-10.0 -10.0	10 10	0 0	1.6 1.3	1.19 1.19	-2.1 -1.5	56 54	1.1 1.4	T T	0.4 0.4	35 34	22 25+	3 4	20 17	8.1 7.4	35				
BIRKINSHAM	190	997.6 1021.0	1021.3 1022.0	9.4 15.6	-0.4 -1.8	-2.6 -1.8	17.7 23.9	15 10	-11.1 -7.8	10 10	0 0	0.5 0.5	1.39 0.76	-2.2 -1.1	1.9 1.0	T T	0.5 0.5	25 25	31 31	25+ 25	3 4	17 10	14 14	36				
HUNTSVILLE	54	1012.9 1013.9	1021.0 1021.2	10.6 13.9	5.2 3.9	-0.8 -1.4	12.7 25.6	15 15	-7.8 -5.0	10 10	0 0	0.5 0.2	1.32 1.96	-2.2 -1.9	1.11 0.87	T T	0 0	0.5 0.6	36 36	31 30	25+ 25	4 4	17 14	7.4 7.4	36			
MOBILE	59	1013.9	1021.2																									
MONTGOMERY																												
ANCHORAGE	35	1006.6	1011.4	-6.4	-17.4	-11.9	-23.9	11	-21.1	7	0	28	-21.7	44	1.8	17	0	1.5	559	3.4	3	23	2	79				
ANCHORAGE	34	1029.8	1030.4	-2.4	-2.6	-2.6	-28.6	14	-14.1	6*	0	28	-32.8	69	1.82	-53	4.4	2.2	772	355	13.4	11.2	2	23	8.4	79		
BARTON ISLAND	12	1028.6	1030.8	-24.0	-23.2	-23.2	-29.2	17	-13.3	17	0	28	-22.8	69	1.82	-5	0	0	0	174*	1.8	15	11.2	2	23	3.4	79	
BETHEL	38	1013.9	1011.8	-17.3	-17.3	-17.3	-20.6	14	-11.7	26	0	28	-21.8	10*	1.8	-8	2	3	0	229	3.1	25	15.8	2	23	10	4.8	
BETLES	196	1013.7	1013.1	-6.5	-16.5	-16.5	-21.6	15	-11.7	27	0	28	-20.0	6	1.8	-16	2	3	0	25	1.2	21.9	4	23	1	4.8		
BIG OCEAN	186	1008.7	1011.9	-34.7	-34.7	-34.7	-32.7	14	-12.8	7	0	28	-6.7	7	1.8	-20	2	5	0	610	1.5	36	1.5	2	23	1.6		
COLD BAY	29	1008.1	1011.9	0.0	-4.6	-2.0	-0.1	1	-12.8	5	0	21	-2.9	85	2.0	-45	2	5	0	58	559	1.2	21.9	2	23	8.0		
FAIRBAKS	133	1007.6	1026.8	-4.9	-38.7	-31.8	-27.7	12	-6.1	7	0	28	1.7	63	1.82	-13	4	1	0	113	0.8	2	24	2	23	0		
GULKAH	479	1007.6	1026.8	-19.2	-36.2	-27.7	-27.7	12	-8.3	26*	0	28	1.7	63	1.82	-36	3	1	0	266	914	1.2	24	2	23	0		
HOMER	19	1011.2	1011.9	-4.7	-13.7	-9.1	-11.7	9	-3.9	14*	0	28	-18.9	13	1.82	-64	7	1	0	544	483	2.4	11.6	5	15	3.2		
JUNEAU	14	1011.2	1011.9	-7.6	-15.8	-11.7	-9.4	13	-2.8	3*	0	28	-16.7	55	1.82	-19	7	1	0	30	3.0	36	10.2	2	23	6.0		
KING SALMON	15	1010.8	1011.8	-8.9	-19.8	-14.3	-14.3	13	-4.4	4*	0	28	-14.4	60	1.82	-27	8	1	0	25	1.5	36	10.2	2	23	2.9		
KODIAK	4	1004.4	1008.8	0.8	-6.3	-6.3	-2.4	8.9	-1.1	23	0	28	-29.9	57	0	-8	0	0	0	381	3.8	9	12.5	2	23	4.3		
KOTZEBIE	3	1027.9	1028.1	-19.3	-26.9	-23.1	-23.1	9	-8.9	27	0	28	-29.4	57	0	-9	0	0	0	107	1.3	24	2	23	2.3			
MC GRAH	105	1009.5	1022.6	-10.3	-38.4	-28.8	-30.8	10	-8.3	25	0	28	-10.6	57	0	-23	0	0	0	533	3.0	23	10.7	2	23	0.6		
NAMEKON	4	1024.0	1024.6	-13.6	-23.0	-18.3	-3.4	14	-2.2	22	0	28	-30.0	14	1.82	-21	0	0	0	107	1.3	24	2	23	0.5			
ST. PAUL ISLAND	7	1012.2	1013.1	-0.9	-7.1	-1.1	-3.9	3.2	-1.1	10	0	21	-8.3	10	1.82	-33	3	1	0	50	5.0	8	19.7	3	20	8.3		
TAKKEENNA	105	1015.5	1015.7	-5.7	-21.3	-14.5	-14.5	12	-0.6	24	0	28	-28.9	12	1.82	-45	7	1	0	1041	1.0	3	19.7	3	20	7.8		
UNALAKleet	11	1006.1	1007.2	-6.5	11.8	-9.2	-3.8	0	0.6	13	0	28	-17.2	13	1.82	25	-109	14	0	307	1.194	24	25.0	3	27	0.5		
VADEL	9	1006.1	1007.2	-6.2	-14.5	-8.6	-6.4	2	-0.6	12	0	27	-15.1	10	1.82	-194	18	6	0	173	1.168	24	7	15	4	10	4.5	
YAKUTAT																												
ARIZONA	2135	786.0	1019.7	4.0	-11.4	-3.4	-2.6	12.8	12	-22.2	4	0	26	-8.9	70	4.4	7	20	2	460	1016	1.2	22	1.2	2	23	6.8	
FLAGSTAFF	338	778.0	1017.2	20.0	5.8	13.2	0.3	26.1	13	2.2	6	0	2.8	55	2.0	-13	1	3	0	1	1	1	13.4	2	23	4.6	81	
PHOENIX	788	792.7	1019.4	4.8	19.4	4.8	12.1	0.7	-2.2	13	0	27	-0.6	56	1.5	-48	15	1	0	1	1	1	15.6	2	25	11	11	
TUSON	1492	852.4	1020.2	11.5	5.1	3.2	-1.1	23.3	13	-9.4	1	0	-4.4	67	1.5	-7	10	3	0	0	10	25	1.9	22	11	11	8.8	
YINSON	59	1010.2	1011.6	22.4	6.9	-1.6	-1.6	27.2	13	-9.4	1	0	-1.1	45	1.5	-6	1	0	0	10	1.5	39	11.6	2	23	9.1		
ARKANSAS	136	1004.7	1021.9	5.7	-3.7	1.0	-2.3	22.8	22	-20.6	1	0	20	-2.8	78	1.16	34	7	8	2	112	102	1.6	4	12.5	4	18	7.3
FORT SMITH	78	1011.9	1021.9	7.2	-2.3	2.4	-4.6	22.2	15	-12.2	9	0	17	-1.1	71	1.14	32	12	3	249	0.9	36	10.3	2	24	4.3		
LITTLE ROCK																				396	229	0.9						
NO. LITTLE ROCK	165																											
CALIFORNIA	145	1002.7	1029.4	16.6	5.7	11.2	-0.2	26.1	12	-1.7	9	0	6.1	75	1.0	11	10	0	0	0	0	0	0	0	0	0		
BAKERSFIELD	125	814.4	1017.5	15.0	-1.7	3.7	-1.6	17.2	7	-3.3	3	0	28	1.6	-11	8	33	14	175	76	0	0	0	0	0			
BLUE CANYON	1405	837.5	1017.5	11.9	5.8	8.9	0.2	12.5	12	-7.8	2	0	16.1	65	1.14	159	21	0	0	0	0	0	0	0	0			
EUREKA U	13	1008.5	1020.4	14.5	4.1	9.3	0.8	10.8	0.8	-2.2	2	0	3	6.1	76	1.14	47	37	10	0	0	0	0	0	0	0		
FRISCOU	100	1008.0	1019.4	16.4	5.1	10.8	0.8	21.1	2.5	-0.2	4	0	6.1	76	1.14	47	37	10	0	0	0	0	0	0	0			
LONG BEACH	8	1018.0	1019.2	18.3	7.4	12.9	-0.2	22.2	13	-2.2	4	0	7.2	75	1.14	47	37	10	0	0	0	0	0	0	0			
LOS ANGELES	30	1015.6	1019.1	16.4	5.7	10.5	0.2	10.8	0.8	-3.2	3	0	3.3	78	1.14	47	37	10	0	0	0	0	0	0	0			
LOS ANGELES U	1077	892.0	1018.2	13.7	7.0	10.5	-1.6	12.8	6	-12.8	6	0	25	1.14	47	37	10	0	0	0	0	0	0	0	0			
MT SHASTA R	178	1011.9	1021.9	8.2	-0.8	3.7	-2.3	23.9	15	-12.2	9	0	17	1.14	47	37	10	0	0	0	0	0	0	0	0			
NO. LITTLE ROCK	165			7.2	-2.3	2.4	-4.6	22.2	15	-12.2	9	0	22	1.14	47	37	10	0	0	0	0	0	0	0	0			
PEAK BLUFF	104	1005.4	1018.4	14.5	4.1	9.3	0.8	21.1	6*	-2.8	1	0	4.4	74	1.14	47	37	10	0	0	0	0	0	0	0			
SACRAMENTO	13	1018.5	1019.5	14.5	4.1	9.3	0.8	21.1	6*	-1.7	8	0	4.4	74	1.14	47	37	10	0	0	0	0	0	0	0			
SAN BERNARD	137	1018.0	1019.6	17.4	9.0	4.0	-1.7	17.8	9	-1.7	12	0	5.0	73	1.14	47	37	10	0	0	0	0	0	0	0			
SAN DIEGO	4	1018.3	1019.4	17.9	9.8	13.8	0.4	6.1	5*	-0.1	12	0	7.8	74	1.14	47	37	10	0	0	0	0	0	0	0			
SAN FRANCISCO U	2	1018.0	1018.8	14.3	8.9	11.6	-0.2	17.2	9	-0.5	12	0	6.1	5*	1.14	47	37	10	0	0	0	0	0	0	0			
SANTA MARIA	16	1018.0	1018.8	14.3	8.9	11.6	-0.2	18.3	9	-0.3	12	0	6.1	5*	1.14	47	37	10	0	0	0	0	0	0	0			
SANTA MARIA V	72			2.8	-1.7	0	-2.2	4	-1.7	10	0	21.1	10	0	0	0	0	0	0	0	0	0	0	0	0			

Possibly sunniest day of month

Possibly sunniest day of year

Possibly sunniest day of decade

Possibly sunniest day of century

Possibly sunniest day of millennium

Possibly sunniest day of century

Possibly sunniest day of millennium

Possibly sunniest day of century

Possibly sunniest day of millennium

Possibly sunniest day of century

CLIMATOLOGICAL DATA
METRIC UNITS

FEBRUARY 1973

State and Station	Elevation (ground)	Pressure		Temperature						Precipitation						Wind						No. of days (sunrise to sunset)		Possible sunshine (sunrise to sunset) %	
		mb	mb	°C	°C	°C	°C	°C	°C	mm	mm	mm	mm	mm	mm	mm	m/s	Frost/mile (1.6 kilometers)	No. of days (sunrise to sunset)						
CALIFORNIA	STICKTON	7	1013.3	16.3	4.9	10.6	1.1	21.1	5	-1.1	3	0	3	0	0	0	0	10.7	17	13	4	9	15	7.3	
COLORADO	ALBUQUERQUE	2297	807.7	1016.7	-0.7	-23.1	-11.9	-6.8	6.1	14	-34.4	4	0	28	-11.7	46	2	152	0.8	24	13	9	6	4.8	
COLORADO	SPRINGS	1873	832.7	1014.3	7.5	-6.5	0.3	0.7	21.1	13	-15.6	5	0	25	-9.4	53	1	25	0.9	17	11	6	4.8	0.7	
CONNECTICUT	BRIDGEPORT	2	1019.6	1020.3	-0.9	-12.2	-7.4	-4.1	11.7	28	-17.3	18+	0	22	-13.9	51	0	147	5.1	17	14	5	7	7.0	
DELAWARE	MILMINSTER	23	1018.6	1021.6	-1.3	-9.8	-5.5	-6.4	12.8	28	-21.1	18	0	25	-10.6	68	0	218	1.2	17.0	30	5	9	13	
DIST. OF COLUMBIA	WASHINGTON DULLES	88	1010.2	1022.4	0.2	-9.9	-4.8	-5.8	12.8	28	-25.6	18	0	25	-10.0	69	0	234	1.52	15.2	NW	6	9	10	
FLORIDA	APALACHICOLA	6	1021.0	1021.5	15.6	5.2	10.4	-2.8	23.9	16	-2.8	10	0	5	6.7	8.2	0	28	7	2	0	0	0	0	0
HAWAII	DAYTON BEACH	9	1019.3	1020.9	19.3	8.6	13.9	-1.4	28.1	24	3.9	10.9	0	0	3.3	7.1	49	-25	18	7	2	0	0	0	0
KANSAS	FORT MYERS	5	1020.0	1020.3	23.8	11.7	17.8	-0.4	29.4	24+	5.0	2	0	0	3.6	6.7	49	-2	18	7	1	0	0	0	0
KENTUCKY	JACKSBURG	8	1020.3	1021.2	17.0	-2.4	11.7	20.7	26.7	7	-5.0	2	0	0	5.9	7.3	95	-4	49	10	3	0	0	0	0
LAWRENCE	KY WEST	1	1019.7	1019.7	23.6	1.7	-1.3	27.8	25	11.7	10+	0	0	15.6	7.4	24	-35	10	7	1	0	0	0	0	0
MARYLAND	MARYLAND	2	1020.0	1020.2	22.7	13.8	18.3	-1.6	28.3	7	5.0	2	0	0	12.2	7.1	14	-35	10	7	1	0	0	0	0
MISSOURI	ORLANDO/MC CORY	29	1017.3	1020.9	21.3	7.9	14.7	-2.2	28.9	7	0.6	1	0	0	8.9	74	37	-38	22	8	1	0	0	0	0
PENNSYLVANIA	PENSACOLA	34	1016.6	1020.1	15.6	5.4	10.5	-4.2	25.6	16	-5.0	10	0	0	5.6	77	157	-38	71	11	2	0	0	0	0
TEXAS	TALLAHASSEE	17	1018.7	1022.0	16.5	3.2	9.9	-1.8	23.9	16*	-7.2	10	0	10	5.0	78	104	-17	59	9	1	0	0	0	0
WEST PALM BEACH	6	1019.6	1022.4	23.0	12.2	17.6	-1.3	28.9	7	2.8	2	0	0	11.1	69	20	-46	11	5	1	0	0	0	0	0
GEORGIA	ATLANTA	344	990.5	1020.1	10.3	0.4	5.6	-1.9	22.8	15	-7.2	18*	0	15	-0.6	70	158	42	41	11	1	119	76	1.3	33
ILLINOIS	CHICAGO O'HARE	303	993.1	1020.4	10.7	0.1	5.4	-1.8	21.7	15	-6.4	10	0	16	-0.6	70	145	33	39	12	2	102	102	1.2	32
INDIANA	DETROIT	41	1015.2	1020.7	12.9	0.4	9.7	-2.4	23.9	15	-8.9	2	0	14	0.1	70	186	91	55	11	1	66	76	0.8	21
KANSAS	COLUMBUS	136	1006.8	1020.3	13.2	2.4	7.8	-2.4	24.4	23	-6.7	10+	0	12	0.2	73	199	87	51	12	3	51	50	0.5	29
KENTUCKY	FRANKFORT	10	1007.5	1020.8	13.4	1.6	7.5	-2.7	23.9	15	-7.8	2	0	12	2.8	77	215	104	65	12	2	66	76	0.8	30
LOUISIANA	RUMFORD	194	1019.0	1021.4	15.2	3.7	9.4	-1.7	20.5	23	-10.0	10	0	19	-0.5	76	153	107	51	13	0	107	76	0.8	29
MISSISSIPPI	SAVANNAH	14	915.3	1017.7	5.4	-1.1	2.2	-0.7	10.6	25*	1.3	-4.4	68	0	19	-0.6	76	105	33	10	2	0	0	0	0
MISSOURI	HONOLULU	8	1015.2	1016.5	24.7	18.0	21.3	-0.3	28.9	6	12.9	1	0	17.8	84	157	829	24	1	0	0	0	0	0	0
NEVADA	POCATELLO	135	892.2	1019.0	1.7	-6.2	-2.3	-0.8	8.3	12	-30.6	3	0	25	-6.7	73	30	9	11	12	0	246	203	3.6	20
NEW YORK	CAIRO	96	996.0	1023.6	3.3	-5.1	-0.9	-5.2	16.7	23*	-16.1	9	0	21	-12.2	74	123	27	49	12	7	140	76	1.2	19
NEW YORK	CHICAGO O'HARE	201	1000.0	1025.1	-4.8	-12.8	-6.8	-5.5	5.6	28	-25.6	5	0	28	-12.2	74	17	76	10	1	173	483	0.4	31	
NEW YORK	CHICAGO MIDWAY	185	1001.0	1025.0	-4.5	-12.5	-6.5	-5.9	5.6	28	-27.2	5	0	28	-12.6	74	12	76	8	1	224	660	0.5	30	
NEW YORK	HOLLYWOOD	117	1001.0	1025.0	-5.3	-10.4	-5.9	-4.4	4.2	23	-31.7	9	0	28	-14.4	69	13	77	8	1	143	432	0.6	32	
NEW YORK	PEORIA	199	998.6	1025.2	-4.9	-14.3	-9.6	-7.2	5.6	23	-27.8	9	0	28	-13.3	73	3.5	-3	13	8	2	91	432	0.6	3
NEW YORK	ROCKFORD	221	995.9	1024.7	-5.8	-15.5	-10.6	-6.2	-	-	-29.4	5	0	28	-13.9	73	30	-3	9	11	0	310	635	0.7	5

CLIMATOLOGICAL DATA
METRIC UNITS

FEBRUARY 1979

State and Station	Elevation (ground)	Pressure		Temperature						Precipitation						Wind						Frost													
		Sea level		Average maximum			Average minimum			Depature from normal			Depreciation in 24 hours			With thunderstorms			No. of days			Snow, ice pellets			Frost miles (1.6 kilometers)			No. of days							
		mb	mb	°C	°C	°C	°C	°C	°C	Depature	Depure	Depure	Depure	Depure	Depure	Total	Maximum depth	Resultant speed	Direction	Cloudy, 8-10	Partly cloudy, 4-7	Sky cover, tenthis	Possible sunshin	No. of days	(sunrise to sunset)	No. of days	(sunrise to sunset)	No. of days							
ILLINOIS	SPRINGFIELD	179	1000.7	1024.2	-3.5	-12.1	-8.3	-7.4	8.3	23	-28.9	9	0	28	-11.1	74	78	-17	14	7	0	117	254	0.5	3	15.0	N 25	7	2	19	7.3	4.6			
INDIANA	EVANSVILLE	116	1008.1	1022.7	1.3	-9.6	-4.1	-6.3	16.1	23	-22.8	9	0	24	-7.8	72	122	39	48	13	4	216	178	1.4	1	12.5	N 25	6	3	19	7.4	32			
	FORT WAYNE	241	992.2	1044.2	-4.7	-14.0	-9.6	-7.1	9.4	23	-25.6	5	0	25	-10.6	81	207	-26	10	8	0	287	330	0.3	1	14.3	NE 25	7	3	18	7.1	60			
	INDIANAPOLIS	241	992.6	1023.6	-2.3	-12.3	-7.3	-6.0	10.6	23	-26.7	5	0	25	-10.0	81	13	21	13	1	457	305	1.1	5	15.6	NE 25	7	3	18	7.1	36				
	SOUTH BEND	236	993.9	1023.2	-4.2	-13.2	-8.7	-5.6	7.2	23	-23.9	9	0	28	-12.8	72	38	-11	12	9	1	404	584	0.6	15	10.3	29	4	5	5	18	7.5			
IDAHO	BURLINGTON	211	987.1	1024.0	-4.1	-14.2	-9.1	-6.5	5.6	23	-28.9	9	0	28	-14.4	72	76	-6	12	7	1	145	533	0.8	1	10.7	2 25+	6	8	14	6.5	71			
	LES MINES	285	983.1	1024.0	-5.3	-11.9	-10.1	-5.8	4.4	27+	-28.3	9	0	28	-14.4	72	13	-13	7	0	208	32	0.5	2	13.4	NW 21	5	7	16	6.8	52				
	OUDBURG	122	981.7	1024.2	-7.2	-16.4	-12.7	-6.2	2.2	23	-32.6	5	0	28	-16.7	73	28	-4	12	9	1	221	533	1.3	1	15.6	NW 15	6	6	16	7.0	59			
	SIUX CITY	134	981.7	1024.4	-7.1	-18.2	-12.7	-7.9	2.8	27+	-31.1	1	0	28	-16.7	73	9	-15	4	8	0	84	406	0.8	6	17.4	NW 15	6	10	12	6.6	54			
	WATERLOO	265	990.9	1024.9	-7.0	-17.8	-12.4	-6.2	2.8	23+	-31.1	5	0	28	-16.1	69	8	-15	2	9	0	74	406	0.3	5	13.9	33	15	6	12	6.6	52			
KANSAS	CONCORDIA	448	966.8	1022.4	-4.1	-13.1	-7.4	-3.7	7.1	27	-26.1	1	0	28	-11.1	75	3	-21	3	1	0	56	203	0.5	6	15.2	5 19+	6	10	12	6.2	71			
	ODGE CITY	787	925.5	1019.6	4.6	-8.4	-0.9	-3.7	19.4	22	-19.4	5	0	28	-7.8	71	2	-14	2	1	0	23	76	0.3	1	17.9	N 15	8	11	19	5.7	75			
	GOODLAND	414	886.5	1011.3	7.1	-7.8	-0.3	-0.1	19.4	14	-21.7	2	0	26	-6.1	75	2	-9	12	2	0	33	178	1.3	1	14.8	15	11	11	6.3	54				
	WICHITA	403	987.8	1024.4	-1.3	-12.9	-7.1	-3.0	19.4	27	-30.6	7	0	25	-10.6	76	1.6	-9	5	2	0	279	279	0.8	1	14.8	N 15	6	7	15	6.6	52			
KENTUCKY	CODINGTON	265	989.8	1023.0	-0.6	-11.2	-5.9	-2.8	4.7	23	-22.8	5	0	26	-10.6	69	96	-19	13	1	0	297	229	0.9	2	15.6	5 25+	5	2	21	7.8	71			
	LEXINGTON	294	984.8	1021.8	2.1	-7.8	-2.2	-4.3	17.8	23	-17.8	23	-16.1	8+	0	24	-5.6	82	74	-13	20	13	1	255	152	0.2	12	13.4	N 25	3	6	19	7.9	44	
	LOUISVILLE	145	1003.7	1022.3	3.0	-7.5	-2.2	-4.3	17.8	23	-17.8	23	-16.1	8+	0	24	-7.2	70	114	26	38	12	2	277	127	0.8	35	17.0	N 22	5	5	18	7.5	44	
LOUISIANA	BAION ROUGE	20	1019.0	1021.5	15.0	5.1	10.1	-2.1	23.9	23	-6.1	10	0	5	5.6	78	275	154	120	12	3	0	0	0.5	0	13.4	35	23	5	18	7.4	18	7.3		
	LAKE CHARLES	3	1019.6	1020.8	14.4	5.9	6.7	11.6	-1.5	21.8	21	-4.2	9+	0	4	6.7	82	164	51	125	12	2	0	0	1.0	9	9.4	30	25	7	17	7.4	42		
	NEW ORLEANS	1	1019.6	1020.7	16.4	6.7	12.6	1.5	26.1	10	-4.4	10	0	3	6.7	72	317	195	133	12	2	0	0	0.7	9	10.3	31	25	5	17	7.4	42			
	SHREVEPORT	77	1011.2	1020.5	12.9	3.3	-2.1	8.1	-2.2	26.7	15	-7.8	9	0	9	5.0	82	126	32	43	13	2	38	25	0.2	9	11.6	31	24	4	20	7.9	35		
MAINE	CARIBOU	190	988.8	1016.9	-8.4	-15.6	-12.0	-9.1	-1.4	28	-25.6	18+	0	28	-16.1	58	89	-1	50	6	0	114	508	3.5	32	13.9	NW 5	5	12	3	13	6.2			
	PONTIANO	13	1014.6	1016.9	-4.3	-16.0	-9.1	-4.1	8.3	28	-25.0	18+	0	24	-11.7	57	182	110	47	13	0	861	610	2.5	33	18.8	N 1	6	7	15	6.7	52			
MARYLAND	BALTIMORE	45	1016.3	1022.0	0.7	-7.9	-3.6	-5.1	13.9	28	-19.4	10	0	24	-11.7	57	182	110	47	13	0	861	610	2.5	33	18.8	N 1	6	7	15	6.7	52			
MASSACHUSETTS	BLUE HILL OBS R	192	1016.6	1017.5	-3.3	-11.7	-7.5	-4.9	-4.1	11.7	28+	-22.2	14+	0	25	-14.4	51	107	6	60	9	0	156	102	5.2	31	15.2	NW 5	6*	14	29	5	10		
	WORCESTER	301	978.0	-4.7	-12.6	-8.6	-4.6	8.3	28	-23.9	14	0	28	-17.2	54	67	-14	32	9	0	155	127	1.2	1	14.8	NW 5	6*	14	29	5	10				
MICHIGAN	ALPENA	210	997.0	1023.9	-6.7	-19.3	-13.0	-5.4	8.3	23	-38.3	17	0	28	-16.1	74	27	-7	9	10	0	33	686	0.5	30	9.8	4	5	10	13	6.9				
	DETROIT METRO	189	998.0	1023.6	-4.6	-15.1	-9.4	-5.6	-8.0	23	-21.7	17	0	27	-12.8	74	14	-30	4	9	0	99	178	0.7	1	13.4	NE 25	5	7	16	7.3	45			
	FLINT	235	993.9	1023.4	-6.4	-15.1	-10.7	-6.1	-5.3	6.1	-6.7	28	-28.3	17	0	28	-13.9	68	15	-23	7	8	0	76	229	0.9	25	12.5	25	21	5	3	20	7.6	42
	GRAND RAPIDS	239	992.9	1023.7	-4.3	-15.1	-10.7	-6.1	-5.3	6.1	-6.7	28	-26.1	17	0	28	-13.9	68	15	-23	7	8	0	76	122	0.9	25	12.5	25	21	5	3	20	7.6	42
	HOUGHTON LAKE	256	990.2	1023.5	-5.4	-18.7	-12.0	-4.6	-3.3	9.3	-2.8	23	-36.7	17	0	28	-13.9	73	16	-14	5	8	0	211	533	0.4	32	15.6	27	21	8	6	14	6.3	42
	LANSING	350	991.0	1023.6	-5.3	-18.9	-12.0	-4.6	-3.3	9.3	-2.8	23	-36.7	17	0	28	-13.9	73	16	-14	5	8	0	211	533	0.4	32	15.6	27	21	8	6	14	6.3	42
	MARQUETTE	431	999.3	1023.8	-7.9	-13.9	-9.7	-5.6	-3.9	6.7	-2.7	23	-36.7	17	0	28	-13.9	73	16	-27	5	8	0	211	533	0.2	26	15.6	NW 4	3	19	7.3	48		
	Sault Ste Marie	270	995.9	1024.4	-9.1	-20.7	-14.9	-5.6	-6.1	27	-25.0	17	0	28	-16.7	67	4.9	-12	11	1	1	51	787	0.7	6	10.7	8	13.0	10	1	17	6.3	57		
MINNESOTA	DUULTH INTERNATIONAL FALLS	435	969.2	1024.2	-10.2	-19.8	-15.0	-3.9	1.7	27	-30.6	16	0	28	-15.6	64	4.8	26	19	15	1	592	737	1.2	8	14.3	NE 22	6	6	16	7.0	46			
	INTERNATIONAL FALLS	349	978.3	1025.0	-12.2	-23.9	-18.1	-4.2	2.8	26	-35.0	17	0	28	-12.8	63	2.6	8	19	13	0	465	737	0.7	5	9.4	32	23	7	3	18	6.9	46		

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Slope	Slope	Pressure				Temperature				Precipitation				Wind				No. of days (sunrise to sunset)													
				Average maximum		Average minimum		Date		Departure from normal		No. of days		Snow, ice pellets		Resultant speed		Farthest mile (1.6 kilometers)		Cloudy, 8-10		Partly cloudy, 4-7		Sky cover, tenth									
				mb	mb	°C	°C	°C	°C	°C	°C	mm	mm	mm	mm	m/s	m/s	m/s	m/s	%	%	%	%	%	%								
MINNESOTA	254	991.9	1024.3	-7.1	-17.4	-12.2	-20.1	-14.6	-14.9	-6.2	-14.9	3.3	23+	-32.8	5	0.28	-17.8	60	14	1.4	10.7	Sk 23+	5	9	14	6.8	65						
RUCHESTER	395	974.2	1024.2	-9.2	-12.1	-12.1	-21.3	-14.9	-14.9	-4.6	-14.9	1.7	22	-33.9	5	0.28	-17.8	72	18	1.2	14.8	Nw 19	6	7	15	6.8	6.8						
ST CLOUD	313	984.8	1024.5	-8.7	-12.1	-12.1	-21.3	-14.9	-14.9	-4.6	-14.9	2.8	28	-35.0	5	0.28	-17.8	9	23	1.8	15	660	233	1.2	21	14.8	16						
MISSISSIPPI	94	1009.5	1021.5	13.0	2.5	7.8	-2.1	2.6	1.5	-10.0	10	0	10	2.3	80	212	95	83	13	3	1	0	0.2	3.5	11.2	1.3	24+	2					
JACKSON	88	1010.2	1021.6	13.3	1.9	7.6	-2.3	2.4	1.5	-9.4	10	0	10	2.8	76	189	66	69	12	3	T	0	0.5	3.4	8.9	3.4	9	2					
MERIDIAN																																	
MISSOURI	270	989.2	1025.0	0.3	-10.3	-4.9	-5.8	-11.7	-12.8	-6.3	-12.8	1.7	27	-26.1	5	0	-9.4	71	36	-8	13	7	1	1.78	330	0.8	4	13.4	N 25+				
COLUMBIA REGIONA-	309	984.1	1022.9	-1.3	-11.1	-6.2	-12.1	-13.8	-13.8	-6.3	-12.1	1.2	27	-24.4	5+	0	-10.6	71	26	-14	14	6	0	0.2	3.8	279	0.9	4	13.0	Nw 15			
KANSAS CITY MUN AP	226	908.5	1016.5	0.9	-9.6	-4.2	-5.5	-12.3	-15.0	-6.1	-15.0	1.2	27	-23.3	1	0	-10.6	71	19	-14	14	5	0	0.2	3.5	221	1.3	4	18.3	S 20			
ST JOSEPH	247	886.9	1022.5	-2.8	-16.4	-8.6	-8.3	-12.2	-15.9	-6.1	-15.9	1.2	27	-30.6	1	0	-10.6	63	19	-14	12	8	5	0	0.2	3.5	220	1.3	4	24.9+	S 20		
ST LOUIS	163	1002.4	1023.7	-0.7	-9.8	-6.1	-6.4	-12.4	-16.4	-6.1	-16.4	1.2	27	-12.2	2	0	-7.2	85	14	-12	11	1	1	0	0.2	3.5	224	1.3	4	24.9	S 20		
SPRINGFIELD	386	974.6	1021.8	3.4	-8.9	-2.7	-5.5	-16.9	-22	-6.1	-27.2	0	25	-7.2	0	0	-7.2	75	42	-14	15	1	1	0	0.2	3.5	205	0.5	16	11.6	S 21		
MONTANA	1087	888.6	1017.3	-1.7	-12.8	-7.3	-4.7	-9.4	-16.9	-7.3	-16.9	1.3	27	-26.1	16	0	-12.2	66	14	-2	5	10	0	0	0.2	3.5	221	1.7	4	21.0	N 7		
BILLINGS	696	934.3	1021.6	-12.1	-21.8	-6.2	-7.3	-13.8	-13.8	-6.3	-13.8	1.7	25	-35.0	15	0	-16.1	79	19	1.1	5	15	0	0	0.2	3.5	220	1.7	4	20.0	N 7		
GLASGOW	1116	885.5	1016.5	-0.9	-13.8	-6.2	-7.3	-13.8	-13.8	-6.3	-13.8	1.2	25	-25.6	15	0	-26	13.3	64	1.4	5	15	0	0	0.2	3.5	220	1.7	4	20.0	N 7		
GREAT FALLS	788	922.5	1016.5	-9.6	-12.2	-6.1	-7.3	-15.3	-15.3	-6.1	-15.3	1.2	25	-35.0	15	0	-26	13.3	64	1.4	5	15	0	0	0.2	3.5	220	1.7	4	20.0	N 7		
HAVER	1167	877.8	1018.1	-0.6	-13.8	-6.1	-6.6	-12.9	-11.7	-6.1	-11.7	1.3	27	-11.7	2	0	-27	67	18	1.6	1.6	1.6	0	0	0.2	3.5	220	1.7	4	20.0	N 7		
HELENA	904	908.6	1020.4	-0.6	-13.8	-6.1	-6.6	-12.9	-11.7	-6.1	-11.7	1.3	27	-29.4	12	0	-25	67	20	1.6	1.6	1.6	0	0	0.2	3.5	220	1.7	4	20.0	N 7		
KALISPELL	904	921.8	1020.0	-0.7	-19.0	-7.6	-7.3	-13.8	-13.8	-7.6	-13.8	1.2	27	-30.6	16	0	-17.1	76	26	8	0	0	0	0.2	3.5	220	1.7	4	20.0	N 7			
MILES CITY	801	901.5	1016.6	0.3	-7.0	-3.6	-3.6	-0.9	-0.9	-3.6	-0.9	7.8	12	27	-22.2	2	0	-6.7	79	26	8	0	0	0	0.2	3.5	220	1.7	4	20.0	N 7		
MISSOULA	972	901.5	1016.6	-0.3	-7.5	-3.6	-3.6	-0.9	-0.9	-3.6	-0.9	7.8	12	27	-22.2	2	0	-6.7	79	26	8	0	0	0	0.2	3.5	220	1.7	4	20.0	N 7		
NEBRASKA	561	952.6	1022.6	-4.4	-15.8	-10.1	-7.7	-10.1	-10.1	-7.7	-10.1	5.0	19	-28.3	1	0	-13.3	78	11	-1.7	5	6	0	0	0.2	3.5	220	1.7	4	20.0	N 7		
GRAND ISLAND	159	952.0	1023.1	-4.8	-16.3	-10.6	-8.3	-11.6	-11.6	-8.3	-11.6	5.6	14	-31.9	1	0	-14.4	74	12	-1.7	5	5	0	0	0.2	3.5	220	1.7	4	20.0	N 7		
LINCOLN	471	964.1	1023.2	-5.6	-17.6	-11.6	-11.6	-13.8	-13.8	-11.6	-13.8	5.6	14	-28.9	1	0	-15.0	74	12	-1.7	5	5	0	0	0.2	3.5	220	1.7	4	20.0	N 7		
NORFOLK	846	918.4	1021.0	-1.7	-14.8	-8.2	-8.2	-13.8	-13.8	-8.2	-13.8	8.9	26	-28.3	1	0	-28	76	12	-1.7	5	5	0	0	0.2	3.5	220	1.7	4	20.0	N 7		
NORTH PLATTE	298	865.2	1017.2	-2.8	-13.8	-8.2	-8.2	-13.8	-13.8	-8.2	-13.8	8.9	26	-25.0	16	0	-28	76	12	-1.7	4	4	0	0	0.2	3.5	220	1.7	4	20.0	N 7		
OMAHA (EPPLEY)	199	865.2	1017.2	-0.1	-15.4	-10.2	-10.2	-15.4	-15.4	-10.2	-15.4	6.1	27	-27.0	16	0	-28	60	10	-15	4	7	0	0	0.2	3.5	220	1.7	4	20.0	N 7		
OMAHA (NORTH)	1206	877.4	1017.3	-5.4	-19.8	-10.2	-10.2	-19.8	-19.8	-10.2	-19.8	6.1	27	-23.3	16	0	-8.3	65	10	-6	1	3	0	0	0.2	3.5	220	1.7	4	20.0	N 7		
SCOTTSDUFF	789	924.5	1017.3	-2.6	-18.2	-10.2	-10.2	-18.2	-18.2	-10.2	-18.2	8.9	27	-29.4	16	0	-8.3	55	7	-6	3	5	0	0	0.2	3.5	220	1.7	4	20.0	N 7		
VALLENE																																	
NEVADA	1539	843.6	1017.0	6.3	-14.2	-0.6	-0.6	-11.3	-11.3	-0.6	-11.3	2.0	27	-22.2	3	0	-11.2	83	30	1.5	5.8	-4	30	8	0	0.2	3.5	220	1.7	4	20.0	N 6	
ELY	1906	807.0	1018.3	5.3	-11.3	-3.0	-0.7	-11.3	-11.3	-3.0	-11.3	2.0	27	-26.1	9	0	-11.2	84	30	1.5	5.8	-4	30	8	0	0.2	3.5	220	1.7	4	20.0	N 6	
LAS VEGAS	659	941.1	1018.6	16.0	2.2	9.1	-0.4	21.7	13	-0.4	21.7	1.3	27	-15.3	4	0	-5.6	84	30	1.5	5.8	-4	30	8	0	0.2	3.5	220	1.7	4	20.0	N 6	
RENO	1342	865.2	1017.1	10.2	-6.8	-2.7	-0.1	17.8	10	-6.8	17.8	1.0	27	-15.0	3	0	-5.6	60	21	-6	1	3	0	0	0.2	3.5	220	1.7	4	20.0	N 6		
MINNEWUCCA	1311	867.6	1017.1	8.1	-3.7	2.2	-0.1	16.1	11	-3.7	16.1	1.1	27	-23.9	3	0	-5.6	61	31	-6	1	3	0	0	0.2	3.5	220	1.7	4	20.0	N 6		
NEW HAMPSHIRE	104	1005.1	1018.5	-13.3	-23.3	-3.3	-3.3	-18.3	-18.3	-3.3	-18.3	2.2	26	-26.7	13	0	-17.2	55	11	-11.7	63	0	0	0	0	0.2	3.5	220	1.7	4	20.0	N 6	
MT WASHINGTON OBS	1909	104	1018.5	-23.3	-23.3	-3.3	-3.3	-18.3	-18.3	-3.3	-18.3	2.2	26	-38.9	14	0	-28	55	11	-11.7	63	0	0	0	0	0.2	3.5	220	1.7	4	20.0	N 6	
NEW JERSEY	20	1017.6	1020.1	-0.5	-11.0	-5.7	-6.4	-11.0	-11.0	-5.7	-11.0	1.2	27	-23.9	12	0	-10.6	71	11	-14.6	61	0	0	0	0	0.2	3.5	220	1.7	4	20.0	N 6	
ATLANTIC CITY U	3	1020.0	1021.0	-1.0	-1.4	-4.7	-5.1	-1.0	-1.0	-4.7	-1.0	1.2	27	-15.6	18	0	-10.6	71	11	-16.0	78	51	0	0	0	0	0.2	3.5	220	1.7	4	20.0	N 6
NEWARK	2	1017.1	1017.1	-1.0	-1.4	-4.7	-5.1	-1.0	-1.0	-4.7	-1.0	1.2	27	-18.3	18	0	-11.7	63	11	-11.7	63	0	0	0	0	0.2	3.5	220	1.7	4	20.0	N 6	
TRENTON U	17	1017.1	1017.1	-1.0	-1.4	-4.7	-5.1	-1.0	-1.0	-4.7	-1.0	1.2	27	-18.3	18	0	-11.7	63	11	-11.7	63	0	0	0	0	0.2	3.5	220	1.7	4	20.0	N 6	
NEW MEXICO	1619	838.1	1017.5	12.9	-2.0	5.1	0.6	12.9	12.9	-2.0	12.9	1.3	27	-22.8	14	0	-5.6	53	16	-6	8	5	0	0	0	0.2	3.5	220	1.7	4	20.0	N 6	
ALBUQUERQUE	1515	890.3	1016.7	9.9	-5.5	2.2	-0.1	15.1	15.1	-5.5	15.1	1.3	27	-25.6	14	0	-5.6	53	11	-6	8	5	0	0	0	0.2	3.5	220	1.7	4	20.0	N 6	
CLAYTON	1112	890.																															

CLIMATOLOGICAL DATA
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FEBRUARY 1979

State and Station	Elevation (Ground)	Pressure		Temperature				Precipitation				Wind				No. of days (sunrise to sunset)					
		Sea Level		Station		Average maximum		Average minimum		Departure from normal		Total		With thunderstorms		Resultant speed		Post one mile (1.6 kilometers)			
		mb	mb	mb	mb	°C	°C	°C	°C	°C	°C	mm	mm	mm	mm	m/s	m/s	m/s	m/s		
NEW YORK	BINGHAMTON	959.0	1021.1	-5.6	-13.9	-10.2	-5.1	5.0	22+	-26.1	18+	0	27	-15.6	66	42	-15	13.9	7.4	4.8	
BUFFALO	955.6	1022.8	-5.9	-13.2	-9.5	-7.2	-2.3	7.2	23	-27.8	18	0	28	-12.8	78	52	-13	28.1	5.2	7.9	
NEW YORK U	215	1016.6	-0.3	-6.9	-3.6	-4.4	-0.3	1.3	2.8	-17.9	18	0	21	-11.8	54	16	-11	1.0	15.6	4.1	
NEW YORK KENNEDY	40	1018.6	1020.4	-0.7	-7.1	-3.9	-4.0	13.9	28	-16.7	18	0	21	-12.2	56	11	0	4.4	33	17.0	
NEW YORK LA GUARDIA	4	1012.0	1011.1	-2.1	-8.0	-5.0	-5.0	10.6	24	-17.8	18	0	24	-12.2	59	10	0	4.5	31	13.0	
ROCHESTER	167	1010.7	1023.3	-5.6	-11.8	-10.2	-6.2	8.3	21	-28.3	18	0	27	-12.8	79	61	-1	1.0	17.0	5.6	
SYRACUSE	125	1007.1	1022.9	-5.5	-15.8	-10.0	-6.5	6.9	28	-32.1	18	0	27	-16.1	63	65	-6	2.9	16.1	4.6	
NORTH CAROLINA	ASHVILLE	941.8	1020.0	7.9	-3.7	2.1	-2.0	19.4	22	-12.2	20+	0	21	-2.2	77	131	39	38	10	1.9	34
CAPE HATTERAS R	652	1020.0	9.6	0.4	2.1	2.2	3.0	-3.4	21.1	24	-6.1	10	0	17	0.6	75	119	13	38	13	18
CHARLOTTE	224	992.9	1021.1	8.7	-2.2	3.2	-2.2	2.1	16	-11.1	18+	0	19	-3.9	64	50	8	21	1.8	13.4	
GREENSBORO	273	988.5	1021.2	5.8	-6.9	0.5	-4.3	17.8	16	-15.0	10	0	21	-5.6	68	42	4.5	9	0.8	11.6	
RALEIGH	132	1010.4	1021.2	8.2	-2.2	3.2	-2.2	22.2	15	-13.3	15	0	19	-3.3	71	128	4.7	3.6	2.3	19	
WILMINGTON	9	1019.6	1021.1	11.7	0.7	6.2	-2.7	22.8	24+	-8.9	10	0	16	0.0	69	107	21	38	10	5	
NORTH DAKOTA	BLISMARK	960.0	1024.4	-12.6	-24.1	-18.2	-7.9	1.1	5	-34.4	1	0	28	-12.2	61	31	20	11	1.1	17.0	
FARGO	502	989.5	1025.0	-13.6	-22.6	-18.6	-6.8	-1.7	27	-34.4	17	0	28	-22.8	67	44	33	11	1.4	16.0	
WILLISTON	273	949.5	1022.9	-10.7	-23.1	-16.8	-6.9	2.8	26	-34.4	16+	0	28	-15.0	71	21	7	0	0.8	14.3	
OHIO	AKRON	976.0	1023.0	-3.6	-12.3	-8.4	-6.1	10.0	23	-25.0	17	0	27	-12.2	71	54	-1	27	13	6.0	
CINCINNATI A&P	232	923.0	1023.0	-0.0	-5.4	-4.7	-6.1	17.2	23	-20.6	15	0	26	-11.7	72	82	7	32	13	2.5	
CLEVELAND	247	991.9	1023.1	-2.4	-11.7	-7.2	-6.1	12.2	23	-22.6	11	0	25	-11.7	70	70	14	51	1.0	12.5	
COLUMBUS	247	991.9	1023.1	-1.2	-11.7	-7.1	-6.1	11.7	23	-21.7	11	0	26	-11.1	71	73	14	30	1.0	13.0	
DAYTON	103	984.8	1022.9	-2.0	-12.3	-7.2	-6.3	15.6	23	-23.9	17	0	25	-10.0	79	72	15	3.0	1.0	12.0	
MANSFIELD	195	979.3	1023.8	-4.3	-13.0	-8.7	-6.0	10.0	23	-23.9	17	0	26	-12.8	70	44	-6	19	10	2.5	
TOLEDO	204	978.0	1022.9	-5.1	-13.7	-9.4	-6.7	8.3	23	-23.9	17	0	27	-12.8	73	18	-27	5	1.0	12.8	
YOUNGSTOWN	259	978.0	1022.9	-4.0	-12.5	-8.2	-5.3	8.3	23	-25.6	17	0	24	-9.2	66	-13.3	52	-10	26	1.0	
OKLAHOMA	OKLAHOMA CITY	973.2	1021.4	5.2	-5.8	-0.3	-5.4	19.4	22	-19.4	9	0	24	-4.4	77	16	-18	15	3	1.0	
TULSA	192	996.6	1022.0	4.6	-6.7	-1.0	-6.1	21.7	22	-21.7	1	0	24	-6.1	72	21	-23	9	7	0.5	
OREGON	ASTORIA	2	1013.2	1013.8	8.7	2.0	5.4	-1.0	14.4	12	-7.2	2	0	6	3.9	88	299	100	47	25	9.1
BURNS U	1265	1012.9	1013.2	26.3	22.2	24.3	-0.2	6.9	25	-26.1	2	0	26	4.4	44	14	9	2.6	1.0	2.5	
EUGENE	109	1002.0	1015.8	9.3	2.8	6.1	-0.1	13.9	25	-11.1	2	0	25	2.8	82	62	1.7	1.0	0.5	9.2	
MEDFORD	196	968.8	1017.4	9.9	1.0	5.5	-0.3	15.0	23	-10.0	2	0	25	1.1	78	58	1.1	0.7	0.3	9.3	
PEORIA	452	961.1	1015.6	-3.1	3.2	1.1	-0.1	13.9	13	-23.0	2	0	13	-1.7	75	39	-15	12	0.7	2.7	
PORTLAND	16	1013.9	1015.1	9.3	2.8	6.1	-0.1	13.9	13	-8.9	2	0	15	3.3	80	63	2.6	2.8	1.5	9.5	
SALEM	160	1007.5	1015.1	9.4	2.4	5.9	-0.1	14.4	15	-12.2	2	0	17	3.3	85	61	1.0	1.5	1.4	9.5	
SEATTLE SUMMIT R	1169	981.1	1016.1	2.0	-1.6	6.7	-1.0	6.7	15	-6.7	2	0	18	-0.1	86	121	39	24	1.1	7.5	
PACIFIC AREA	GUAM TAGUAC R	110	1012.9	1013.2	28.9	21.1	25.0	-0.2	30.0	28+	17.2	23	0	0	20.6	80	47	-61	21	1.0	6.7
JOINTON	29	1006.1	1009.9	31.0	23.8	27.4	-0.3	32.2	25+	20.0	5	0	0	23.3	82	41	-8	23	10	6.5	
KIRKJALEIN	2	1009.1	1009.4	29.7	25.9	25.0	-0.1	30.6	27+	22.8	15+	0	0	23.3	82	164	-24	50	14	6.2	
MAURITIUS	3	1009.1	1010.8	30.1	29.7	27.7	-0.2	30.6	28+	23.3	19+	0	0	23.9	82	171	-10	39	15	6.3	
FALAGO	4	1009.1	1010.8	30.1	29.7	27.4	-0.5	31.0	24+	22.2	14+	0	0	23.9	82	167	-12	39	15	6.3	
PONAPE R	37	1003.7	1008.7	30.1	29.2	27.5	-0.4	32.2	23	21.1	10+	0	0	22.8	79	169	-122	37	18	6.7	
TRUK MOEN ISLANU	2	1009.1	1009.5	30.4	25.3	27.5	-0.2	31.7	4	11.7	7	0	0	20.6	76	37	-51	61	10	6.0	
WAKE	3	1014.9	1015.1	27.6	22.7	25.2	-0.2	28.9	28+	19.4	7	0	0	20.6	80	80	-37	15	1	6.1	
YAP R	13	1008.5	1010.2	30.6	22.9	26.8	-0.2	31.1	27+	21.1	25	0	0	22.8	80	80	-57	33	1	6.2	
PENNSYLVANIA	ALLENTOWN	118	1007.1	1022.0	-2.6	-10.3	-6.6	-9.9	11.1	28	-21.1	18+	0	24	-11.7	69	116	43	34	13	6.1
ERIE	23	995.6	1023.8	-6.2	-13.8	-9.0	-6.2	6.1	28+	-27.2	11	0	27	-12.2	83	55	1	39	15	6.0	

CLIMATOLOGICAL DATA
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State and Station		Pressure		Temperature		Precipitation		Wind		No. of days (sunrise to sunset)		
		Sea level	Station	Highest	Lowest	No. of days	Snow, ice pellets	Farthest mile (1.6 kilometers)	Speed m/s	Cloudy, 8-10	Possible sunshine (sunrise to sunset)	
PENNSYLVANIA	HARRISBURG	1009.5	1022.7	-1.3	-9.2	-5.4	12.2	28	-20.6	18	4 15 6.4 5.8	
PHILADELPHIA	1020.7	1021.6	-1.2	-8.9	-5.2	-6.1	12.2	28	-18.9	11	5 5 17 6	
PITTSBURGH	976.6	1022.9	-3.3	-12.2	-7.8	-6.3	7.8	28	-26.4	11	30 1 18 7.8 4.3	
SCRANTON	985.8	1022.1	-5.1	-8.9	-6.3	-5.1	7.8	28	-12.8	73	32 1 18 7.8 2.4	
WILLIAMSPORT	1002.4	1022.6	-2.8	-10.9	-6.8	-4.9	8.1	28	-24.4	18	5 6 4 18 6.3	
RHODE ISLAND	BLOCK ISLAND PROVINCETOWN	34	1016.3	1018.6	-2.6	-8.4	-5.5	-5.1	7.2	28+	-17.8 18+	
SOUTH CAROLINA	CHARLESTON U	12	1019.3	1021.4	14.4	1.9	8.2	-2.1	24.4	16	0 24	
COLUMBIA	1012.5	1020.7	12.3	3.1	7.7	-3.1	21.7	15	-6.7	10	0 14	
GRINNELL-SPRINGFIELD	955.1	1020.5	9.1	-0.1	6.1	-2.6	24.4	16	-6.1	19	0 17	
SOUTH DAKOTA	ABERDEEN HURON RAPID CITY SIOUX FALLS	10	395	973.2	1023.0	-8.6	-20.2	-16.4	-7.0	-0.6	6	
MISSOURI	964	903.8	1020.0	-2.4	-14.6	-8.4	-5.0	11.1	1.1	27+	12	
NASHVILLE	999.5	968.8	1023.9	-8.1	-19.2	-13.6	-6.6	1.7	27+	12		
TENNESSEE	BRISTOL CHATTANOOGA KNOXVILLE MEMPHIS NASHVILLE OAK RIDGE R	459	965.5	1021.5	5.0	-5.1	-0.1	-3.8	18.9	23	-17.2 10	
MISSOURI	996.3	984.8	1020.9	7.3	-0.1	2.6	-3.4	22.8	15	-0.2	10	
MEMPHIS	1011.5	1022.2	8.1	-0.9	3.6	-2.9	20.6	22	-12.8	9	0 21	
NASHVILLE	1009.5	1021.7	6.1	-6.6	0.8	-4.2	19.4	16	-19.4	10	0 21	
OAK RIDGE R	276	6.9	-3.3	1.8	-2.8	17.2	15	-15.6	10	0 22		
TEXAS	ABILENE AMARILLO AUSTIN BROWNSVILLE CORPUS CHRISTI DALLAS = FOOT MURTH OEL RIO EL PASO GALVESTON INTERCON LUBBOCK MILTON PORT ARTHUR SAN ANGELO SAN ANTONIO VICTORIA WACO WICHITA FALLS	564	955.0	1019.2	13.9	0.3	7.2	-1.7	31.1	14	-9.4	
AMARILLO	989.6	1016.4	12.0	-2.7	4.4	0.2	20.0	14	-11.1	16	0 24	
AUSTIN	182	997.5	1021.7	14.4	9.2	-2.7	26.7	14	-5.0	9	0 14	
BROWNSVILLE	6	1016.3	1018.7	10.9	15.3	-2.7	28.3	24	-1.7	17	0 14	
CORPUS CHRISTI	12	1018.0	1019.0	8.2	8.2	-1.4	28.8	24	0.6	14	0 14	
DALLAS = FOOT MURTH	168	999.0	1020.9	10.4	0.8	5.7	-3.6	25.6	14	-8.9	9	0 14
OEL RIO	313	1018.7	117.9	4.6	11.2	-1.9	30.0	15	-2.2	17	0 14	
EL PASO	1194	982.5	1016.1	16.1	0.6	8.4	-0.7	25.6	14	-5.0	7	0 14
GALVESTON	29	1016.6	1020.3	14.1	8.1	1.1	-2.4	22.8	28	-1.3	17	0 14
INTERCON	32	1015.9	1020.1	16.6	5.6	10.9	-2.0	25.6	28	-1.2	17	0 14
LUBBOCK	992	904.5	1017.8	13.8	-2.8	5.5	-0.4	30.6	14	-14.4	18	0 14
MILTON	869	917.4	1017.1	15.8	-0.1	7.4	-1.4	26.1	24	-9.4	16	0 14
PORT ARTHUR	5	1020.0	1016.1	6.1	6.6	1.4	-0.4	26.1	24	-2.2	9	0 14
SAN ANGELO	580	950.9	1018.9	16.0	0.3	8.2	-2.1	30.6	14	-8.3	17	0 14
SAN ANTONIO	240	990.4	1019.4	17.6	5.7	11.5	-2.1	27.2	14	-1.7	17	0 14
VICTORIA	32	1015.9	1020.1	16.6	6.4	2.3	-2.6	27.7	28	-3.3	17	0 14
WACO	153	1002.0	1020.5	12.0	1.8	6.9	-3.0	27.2	15	-7.2	17	0 14
WICHITA FALLS	303	983.1	1020.9	9.8	-3.1	3.4	-4.3	33.3	14	-10.6	16+	
UTAH	MILFORD SALT LAKE CITY	1533	965.9	1020.0	4.9	-7.9	-1.5	-1.2	11.7	26	-25.0 4+	
MILFORD	1286	872.0	1019.1	5.0	-4.4	0.3	-0.5	11.1	13	-1.2	17	
SALT LAKE CITY	101	1008.5	1021.8	-8.8	-18.4	-13.6	-6.2	6.1	24	-34.4	12	
VERMONT	BURLINGTON	279	986.1	1021.4	2.5	-7.1	-2.3	-5.7	16.1	22	-16.7 11	
VIRGINIA	NORFOLK	77	1020.3	1021.4	5.3	-3.8	0.7	-4.5	17.2	25	-10.0 15+	

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature						Precipitation						Wind						No. of days (sunrise to sunset)		Passable Sunshine (sunrise to sunset)							
		mb	mb	°C	°C	°C	°C	°C	°C	mm	mm	mm	mm	mm	mm	m/s	m/s	m/s	m/s	7	5	16	7	58							
VIRGINIA																															
RICHMOND	50	1015.2	1021.6	3.5	-7.3	-1.9	-0.0	15.0	28	+22.2	10	0	23	-6.1	75	75	68	11	1	495	356	1.5	35	11.6	7.1						
ROANOKE	350	977.7	1021.1	3.5	-6.4	-1.4	-0.8	15.0	22	+1.4	18+	0	24	-7.8	65	136	58	44	12	0	490	254	1.6	32	19+	7.4					
MALLOPS ISLAND	3																														
WASHINGTON																															
OLYMPIA	59	1006.1	1013.3	8.7	0.5	4.6	-0.4	15.6	25	-10.6	2+	0	12	2.2	86	83	61	26	0	38	25	2.7	20	13.0	9.4						
QUILLIAHUTE	55	1003.7	1011.3	8.7	7.7	0.8	4.3	5.7	-0.7	15.0	25	-1.0	2.0	91	486	182	97	24	0	13	1.5	15	13.4	SE 17	9.3	15					
SEATTLE-TACOMA	122	998.3	1013.0	8.8	2.7	5.7	0.0	14.4	25	-3.9	2+	0	10	0.5	75	135	61	29	33	21	0	10	T	2.9	16	17.0	SSN 13				
SPokane PASS R	718	928.5	1014.3	1.4	-4.9	-1.8	-0.9	8.9	26	-27.2	1	0	21	-3.3	87	56	13	12	18	0	269	406	2.8	19	20.1	SW 6	8.9	28			
WALLA WALLA U	1206	813.4	1012.0	-1.2	-5.2	-1.2	-0.2	2.8	9	-16.1	1	0	28	352	90	99	26	2578	2794	12	15	76	254	10.7	SE 25	0	27	9.6			
YAKIMA	289	975.6	1012.0	8.3	0.6	4.4	-0.1	16.1	11+	-20.0	2	0	9	4.7	12	15	6	6	6	11	0	48	127	1.2	26	9.3	16				
SAN JUAN P.R.	321	975.3	1012.0	-4.6	0.3	-1.7	13.9	26	-23.3	2	0	23	-2.8	82	0	23	-6	6	11	0	48	127	1.2	29	5	2					
WEST INDIES																															
SAN JUAN P.R.	4	1015.6	1017.9	29.4	22.5	25.9	1.9	33.3	13+	20.6	4	2	0	20.0	74	46	-18	27	9	2	0	3.2	7	12.1	E 23	6	18	4	4.9	71	
WEST VIRGINIA																															
CHARLESTON	763	928.9	1021.5	1.9	-8.0	-3.0	-3.3	13.9	22	-20.6	10	0	22	-6.7	78	65	-20	19	14	0	749	305	0.8	25	13.0	12.5	1	21	6.6		
ELKINS	286	988.8	1022.3	2.9	-7.5	-0.3	-0.8	18.9	23	-17.2	11	0	23	-6.1	76	96	17	35	16	0	511	178	0.9	30	11.2	23	21	3	20	8.3	
HUNTINGTON	594	947.9	1022.0	1.2	-11.5	-0.3	-0.3	13.9	23	-27.8	11	0	24	-2.8	11	92	18	26	19	0	475	305	1.4	35	1.4	23	1	4	8.6		
PARKERBURG U	752	996.9	1022.0	3.1	-6.9	-0.9	-0.2	20.0	23	-17.2	10	0	23	-7.8	67	109	35	33	15	0	460	229	0.7	35	8.0	5.25+	1	6	21	8.6	
WISCONSIN																															
GREEN BAY	208	997.0	1024.3	-7.3	-18.3	-12.8	-5.0	5.0	23	-29.4	5	0	28	-17.2	68	30	4	9	11	1	300	635	1.2	32	10.7	NW 21	10	6	12	5.9	64
LACROSSE	198	997.0	1025.1	-4.8	-16.8	-10.8	-4.0	4.4	27	-32.2	17	0	28	-16.1	64	17	-6	1	18.5	0.3	30	0.3	23	9	6	13	6.2	58			
MAISUN	262	997.0	1024.1	-5.4	-17.2	-11.3	-6.8	4.4	28	-29.4	73	0	28	-14.4	73	23	-1	10	9	0	221	711	0.3	1	11.6	N 25	6	7	15	6.2	54
MILWAUKEE	205	997.3	1024.1	-5.9	-12.5	-9.4	-0.1	2.6	23	-23.9	5	0	28	-13.3	71	25	-4	9	12	0	231	737	1.2	30	14.8	N 25	6	7	15	6.2	54
WYOMING																															
CASPER	1627	834.1	1014.9	0.7	-10.1	-0.7	-1.8	8.3	13	-30.0	2	0	26	-10.0	65	10	-3	4	8	0	185	152	5.9	23	17.4	21	4	9	15	7.3	
CHEYENNE	1867	807.3	1014.7	5.7	-6.2	-0.2	1.4	18.9	13	-17.8	15+	0	23	-12.2	43	14	-8	2	3	0	156	76	4.4	27	25.0	NW 7	7	13	6.3	66	
LANDER	1696	822.6	1018.3	0.4	-13.5	-6.5	-2.9	11.7	13	-30.6	2	0	28	-11.7	70	1	-15	1	2	0	28	457	0.5	21	14.3	1	11	6.6	57		
SHERIDAN	1208	876.1	1018.9	-1.6	-16.5	-9.0	-5.6	9.4	9	-28.9	16+	0	28	-12.2	75	10	-10	4	8	0	175	457	1.7	31	17.0	N 7	1	9	18	7.8	

HEATING DEGREE DAYS

(Base 65°F.)

FEBRUARY 1979

State and Station	Current season			State and Station	Current season			State and Station	Current season			State and Station	Current season		
	This month	Period July through this month	Normals		This month	Period July through this month	Normals		This month	Period July through this month	Normals		This month	Period July through this month	Normals
	July through this month				July through this month				July through this month				July through this month		
ALABAMA BIRMINGHAM U	597	2381	2319	IDAHO ROISF	855	4956	4263	NEBRASKA GRAND ISLAND	1431	5029	4825	TENNESSEE BRISTOL	920	3450	3334
BIRMINGHAM	594	2681	2664	LEWISTON	808	4849	4027	LINCOLN	1454	5863	4277	CHATTANOOGA	725	2815	2806
HUNTSVILLE	691	1442	1423	POCATELLO	1034	5872	5080	NORFOLK	1506	6211	5243	KNOXVILLE	786	2972	2774
MOBILE	401	1756	1784	ILLINOIS CAIRN I)	965	3593	3070	NORTH PLATTE	1335	6321	4966	MEMPHIS	734	2772	2617
MONTGOMERY	445	1756	1784	CHICAGO D HARE	1360	5388	4814	OMAHA (EPPLEY)	1333	5407	4625	NASHVILLE	877	3239	2951
ALASKA ANCHORAGE	1515	6871	7445	CHICAGO MIDWAY	1345	5308	4566	SCOTTSBLUFF	1435	5837	4984	OAK RIDGE	826	3323	3096
ANNETTE	930	4973	4757	MOLINE	1445	5816	4447	VALENTINE	1446	6669	5330	TEXAS ABILENE	567	2509	2141
BARROW	2390	13090	13410	PEDRIA	1403	5446	4626	NEVADA ELKO	889	5136	5312	AHARILLO	697	3729	3216
BARTER ISLAND	2402	12622	13284	ROCKFORD	1458	5904	5115	ELY	1072	5931	5394	AUSTIN	460	1840	1470
BETHEL	1962	8253	9152	SPRINGFIELD	1336	4974	4257	LAS VEGAS	458	2198	2141	BROWNSVILLE	203	695	561
BETTLES	2374	11033	11039	INDIANAPOLIS	1288	4669	4236	RENO	781	4620	4237	CORPUS CHRISTI	256	2998	1810
BIG DELTA	2375	9938	10159	SOUTH RENO	1356	5025	4754	WINNEHICCA	809	4896	4675	DALLAS FT WORTH	635	2998	1959
COLD BAY	1020	5700	6413	INDIANA EVANSVILLE	1125	4156	3013	NEW HAMPSHIRE CONCORD	1392	5779	5349	DEA RIO	363	1584	1344
FAIRBANKS	2543	10463	10811	FORT WAYNE	1401	5095	4614	MT WASHINGTON OBS	1849	9707	9402	EL PASO	494	2248	2261
GULKANA	2324	9950	10338	INDIANAPOLIS	1288	4669	4236	NEW JERSEY	1208	4070	3666	GALVESTON	361	1241	1017
HOMER	1375	6462	7172	SOUTH RENO	1356	5025	4754	ATLANTIC CITY	1045	3677	3331	HOUSTON INTERCON	376	1548	1222
JUNEAU	1505	6645	6287	INDIANAPOLIS	1288	4669	4236	ATLANTIC CITY U	1155	3778	3736	LUBBOCK	640	3097	2818
KING SALMON	1648	6860	8071	WATERLNU	1547	6325	5580	TRENTON U	1155	3899	3690	HIDLAND	546	2676	2174
KODIAK	1055	5230	5862	KANSAS RURLINGTON	1377	5459	4674	NEW MEXICO ALBUQUERQUE	665	3306	3357	PORT ARTHUR	360	1326	1283
KOTZEBUE	2093	9547	9547	DES MOINES	1433	5714	5069	CLAYTON	806	4237	3803	SAN ANGELO	510	2409	1879
MC GRATH	2383	9937	10660	DUROUF	1511	6281	5439	ROSWELL	591	3073	3005	SAN ANTONIO	350	1590	1345
NDHE	1847	8384	9635	SINUX CITY	1360	6454	5271	NEW YORK U	1106	3772	3583	VICTORIA	352	1416	1053
ST. PAUL ISLAND	976	6105	7091	WATERLNU	1547	6325	5580	NEW YORK KENNEDY	1115	3666	3737	WACO	570	2302	1722
TALKEETNA	1649	8008	8406	WICHITA	1143	4476	3644	NEW YORK LA GUARDIA	1173	3897	3609	WICHITA FALLS	750	3005	2370
VALDEZ	1379	6890	7408	KANSAS CONCRTRIA	1294	5089	4267	NEW YORK R	1414	5462	5073	VERMONT	1610	6139	5709
YAKUTAT	1350	6536	6458	DOODGE CITY	1013	4554	3828	ALBANY	1437	5497	5236	BURLINGTON	1437	5497	5709
ARIZONA FLAGSTAFF	1089	5355	4999	GONDOLAO	936	4967	4469	BINGHAMTON	1400	5213	4925	VIRGINIA LYNCHBURG	1033	3581	3283
PHOENIX	254	1263	1307	TOPEKA	1277	5006	4938	RUFFALD	1400	5213	4925	NORFOLK	879	2713	2677
TUCSON	311	1520	1428	LEXINGTON	1061	4032	3640	ROCHESTER	1432	5132	4829	ROANOKE	992	3638	3312
WINSLOW	757	3825	3621	LOUISVILLE	1030	3780	3588	SYRACUSE	1457	5234	4819	WALLOPS ISLAND	1004	3237	3139
YUMA	174	1083	884	LOUISIANA RATON ROUGE	418	1668	1429	NORTH CAROLINA ASHEVILLE	810	3187	3252	WASHINGTON OLYMPIA	683	4301	3812
ARKANSAS FORT SMITH	869	3347	2716	LAKE CHARLES	406	1543	1272	CAPE HATTERAS R	663	1993	2038	QUILLAYUTE	703	4234	3937
LITTLE ROCK	732	2921	2724	NEW ORLEANS	347	1312	1248	CHARLOTTE	750	2660	2578	SEATTLE	630	3593	3282
NO. LITTLE ROCK	794	3101	2524	SHREVEPORT	517	2132	1806	GREENSBORO	896	3152	3019	SEATTLE-TACOMA	630	3609	3568
CALIFORNIA BAKERSFIELD	352	1585	1757	HARLYN	1100	3643	3591	RALEIGH	792	2695	2784	SPokane	1011	6150	4944
BISHOP	731	3480	3213	MASSACHUSETTS BLUE HILL OBS R	1527	6968	6855	WILMINGTTON	606	1993	1975	STAMPEDE PASS R	1080	6833	6277
BLUE CANYON	833	3967	3612	ALBUE HILL OBS R	1296	4864	4525	NORTH DAKOTA BISHARCK	1837	7718	6686	WALLA WALLA U	693	4426	3640
EUREKA U	667	3236	3020	DETROIT	1340	4930	4539	FARGO	1863	7864	6894	YAKIHA	901	5293	4492
FRESNO	372	2021	2064	DETROIT METRO	1355	5169	4699	WILLISTON	1774	7779	6754	WEST VIRGINIA BECKLEY	1070	4154	4175
LONG BEACH	268	1193	1117	FLINT	1458	5449	5093	OHIO AKRON	1348	4935	4572	CHARLESTON	1031	3789	3538
LOS ANGELES	295	1122	1172	GRAND RAPIDS	1393	5574	4943	CINCINNATI ABBE 08	1157	4209	3720	ELKINS	1187	4606	4405
LOS ANGELES U	274	1205	846	HOUGHTON LAKE	1530	6368	5958	CLEVELAND	1281	4608	4473	HUNTINGTON	1014	3876	3556
MT SHASTA R	642	4609	4017	LANSING	1452	5542	5026	COLUMBUS	1270	4618	4295	PARKERSBURG U	1128	4160	3684
OAKLAND	387	2007	1982	MUSKEGON	1408	5582	4918	DAYTON	1281	4647	4243	WISCONSIN GKEEN BAY	1564	6543	5905
REO BLUFF	418	1945	2032	SAULT STE MARIE	1673	6983	6242	MANSFIELD	1353	5046	4309	LA CROSSE	1466	6064	5581
SACRAMENTO	446	2278	2104	HINNESOTA DULUTH	1679	7583	6999	TOLEDO	1390	5221	4717	MADISON	1489	6291	5691
SANDERG R	717	D		INTERNATIONAL FALLS	1837	8619	7737	YOUNGSTOWN	1332	4950	4686	HILWAUKEE	1391	5689	5355
SAN DIEGO	219	862	1013	MINNEAPOLIS	1537	6522	6088	OKLAHOMA CITY	932	3547	2947	WYOMING CASPER	1153	6441	5297
SAN FRANCISCO	606	2245	2049	ROCHESTER	1658	7165	6089	TULSA	972	3626	2948	CHEYENNE	933	5523	5001
SAN FRANCISCO U	332	2016	2006	ST CLOUD	1677	7432	6584	PALEONTON	757	4917	3870	LANOER	1248	7098	5632
SANTA MARIA	442	2220	1960	MISSOURI COLUMBIA REGIONAL	1169	4480	3906	PORTLAND	615	3861	3370	SMERIDAN	1376	7022	5469
STOCKTON	384	2136	2129	KANSAS CITY	1230	4822	4126	SALEM	619	3842	3354				
COLORADO ALAMOSA	1518	7142	6230	ST LOUIS	1354	5142	4204	SEXTON SUHHIT R	849	4537	4148				
COLORADO SPRINGS	906	5133	4584	SPRINGFIELD	1053	4271	3531	PENOLETON	639	3728	3516				
DENVER	854	4842	4290	ST LOUIS	1167	4430	3883	PORTLAND	757	4917	3870				
GRAND JUNCTION	1154	5308	4310	ST LOUIS	1250	6932	5860	TOLEDO	615	3861	3370				
PUEBLO	849	4812	4038	ST LOUIS	1168	7140	6108	YOUNGSTOWN	619	3842	3354				
CONNECTICUT BRIDGEPORT	1126	3987	3874	MISSOURI COLUMBIA	1169	4480	3906	WILLIAMSPORT	1264	4540	4454				
MARTFORD	1310	5108	4670	ST LOUIS	1250	6932	5860	WILMINGTON	1424	5222	4834				
DELAWARE WILMINGTON	1197	4033	3706	ST LOUIS	1167	4430	3883	RHODE ISLAND	1182	4094	3982				
DIST. OF COLUMBIA WASHINGTON DULLES	1163	3973	3798	ST LOUIS	1250	6932	5860	PROVIDENCE	1170	3829	3660				
WASHINGTON NATIONAL	1019	3187	3257	ST LOUIS	1167	4430	3883	PITTSBURGH	1311	4878	4418				
FLORIDA APPALACHICOLA U	394	1270	1156	ST LOUIS	1250	6932	5860	PITTSBURGH U	1214	4399	3962				
DAYTONA BEACH	244	598	760	ST LOUIS	1167	4430	3883	SCRANTON	1370	5087	4636				
FORT MYERS	100	246	409	ST LOUIS	1250	6932	5860	WILLIAMSPORT	1264	4540	4454				
JACKSONVILLE	371	1334	1127	ST LOUIS	1167	4430	3883	WILMINGTON	1424	5222	4834				
KEY WEST	72	39	59	ST LOUIS	1250	6932	5860	RHODE ISLAND	1182	4094	3982				
MIAMI	82	167	189	ST LOUIS	1167	4430	3883	PROVIDENCE	1196	4035	3880				
ORLANDO	214	500	626	ST LOUIS	1250	6932	5860	PITTSBURGH	1261	4587	4275				
PENSACOLA	390	1344	1530	ST LOUIS	1167	4430	3883	PROVIDENCE	1261	4587	4275				
TALLAHASSEE	424	1486	1342	ST LOUIS	1250	6932	5860	PITTSBURGH	1261	4587	4275				
TAMPA	190	512	619	ST LOUIS	1167	4430	3883	PROVIDENCE	1261	4587	4275				
WEST PALM BEACH	118	244	274	ST LOUIS	1168	7140	6108	PITTSBURGH	1261	4587	4275				
GEORGIA ATHENS	635	2371	2401	ST LOUIS	1169	7140	6108	PITTSBURGH	1261	4587	4275				
ATLANTA	646	2385	2481	ST LOUIS	1169	7140	6108	PITTSBURGH	1261	4587	4275				
AUGUSTA	582	2123	2101	ST LOUIS	1169	7140	6108	PITTSBURGH	1261	4587	4275				
COLUMBUS	577	1849	1960	ST LOUIS	1169	7140	6108	PITTSBURGH	1261	4587	4275				
MACON	561	1883	1870	ST LOUIS	1169	7140	6108	PITTSBURGH	1261	4587	4275				
ROME	676	2624	2492	ST LOUIS	1169	714									

COOLING DEGREE DAYS

(Base 65°F.)

FEBRUARY 1979

State and station	Current season		Normals January through this month	State and station	Current season		Normals January through this month	State and station	Current season		Normals January through this month	State and station	Current season		Normals January through this month
	This month	Period January through this month			This month	Period January through this month			This month	Period January through this month			This month	Period January through this month	
ALABAMA BIRMINGHAM U	0	0	26	HAWAII HILO	160	315	362	NEBRASKA GRANO ISLAND	0	0	0	SOUTH CAROLINA CHARLESTON	2	2	25
BIRMINGHAM	1	1	19	MONDULU	209	368	430	LINCOLN	0	0	0	CHARLESTON U	31	31	5
MUNISVILLE	0	0	6	KAHULUI	197	394	395	NORFOLK	0	0	0	COLUMBIA	0	0	0
MOBILE	6	6	52	LIMUE	224	487	372	NURTH PLATTE	0	0	0	GRNVILLE-SPRTNB RG	0	0	0
MONTGOMERY	2	2	30	IDAMO	0	0	0	OMAHA (EPPLEY)	0	0	0	SOUTH DAKOTA			
ALASKA ANCMORAGE	0	0	0	BOISE	0	0	0	OMAHA (NORTH)	0	0	0	ABERDEEN	0	0	0
ANNETTE	0	0	0	LEWISTON	0	0	0	SCOTTSBLUFF	0	0	0	HURON	0	0	0
BARROW	0	0	0	POCATELLO	0	0	0	VALENTINE	0	0	0	RAPID CITY	0	0	0
BARTER ISLAND	0	0	0	ILLINOIS	0	0	0	NEVADA	0	0	0	SIOUX FALLS			
BETTEL	0	0	0	CAIRO U	0	0	0	ELKO	0	0	0	TENNESSEE			
BETLES	0	0	0	CHICAGO O HARE	0	0	0	ELY	0	0	0	BRISTOL	0	0	0
BIG DELTA	0	0	0	CHICAGO MIDWAY	0	0	0	LAS VEGAS	0	0	0	CHATTANOOGA	0	0	0
COLD BAY	0	0	0	MOLINE	0	0	0	RENO	0	0	0	KNOXVILLE	0	0	0
FAIRBANKS	0	0	0	PEORIA	0	0	0	WINNEMUCCA	0	0	0	MEMPHIS	0	0	0
GULKANA	0	0	0	ROCKFORD	0	0	0	NEW HAMPSHIRE	0	0	0	NASHVILLE	0	0	0
HOMER	0	0	0	SPRINGFIELD	0	0	0	CONCORDO	0	0	0	OAK RIDGE	0	0	0
JUNEAU	0	0	0	INDIANA	0	0	0	MT WASHINGTON DBS	0	0	0	TEXAS			
KING SALMON	0	0	0	EVANSVILLE	0	0	0	NEW JERSEY	0	0	0	ABILENE	9	9	0
KODIAK	0	0	0	FORT WAYNE	0	0	0	ATLANTIC CITY	0	0	0	AMARILLO	0	0	0
KOTZEBUE	0	0	0	INDIANAPOLIS	0	0	0	ATLANTIC CITY U	0	0	0	AUSTIN	7	9	24
MC GRATH	0	0	0	SOUTH BEND	0	0	0	NEWARK	0	0	0	BROWNSVILLE	56	101	185
NAME	0	0	0	IOWA	0	0	0	TRENTON U	0	0	0	CORPUS CHRISTI	39	65	82
ST. PAUL ISLAND	0	0	0	BURLINGTON	0	0	0	NEW MEXICO	0	0	0	OEL RIO	9	9	30
TALKEETNA	0	0	0	DES MOINES	0	0	0	ALBUQUERQUE	0	0	0	EL PASO	0	0	0
UNALAKleet	0	0	0	DOUBUQUE	0	0	0	CLAYTON	0	0	0	GALVESTON	0	0	47
VALDEZ	0	0	0	SIOUX CITY	0	0	0	ROSWELL	0	0	0	HOUSTON INTERCON	13	20	38
YAKUTAT	0	0	0	WATERLOO	0	0	0	NEW YORK	0	0	0	LUBBOCK	0	0	0
ARIZONA FLAGSTAFF	0	0	0	KANSAS	0	0	0	ALBANY	0	0	0	MIAMI	0	0	0
PHOENIX	0	0	14	KONCOROIA	0	0	0	BINGHAMTON	0	0	0	PORT ARTHUR	17	21	42
TUCSON	0	0	11	OODGE CITY	0	0	0	BUFFALO	0	0	0	SAN ANGELO	2	2	0
WINSLOW	0	0	0	GOODLAND	0	0	0	NEW YORK U	0	0	0	SAN ANTONIO	13	16	24
YUMA	0	0	46	TOPEKA	0	0	0	NEW YORK KENNEDY	0	0	0	VICTORIA	18	25	44
ARKANSAS FORT SMITH	0	0	0	WICHITA	0	0	0	NEW YORK LA GUARDIA	0	0	0	WACO	1	1	6
LITTLE ROCK	0	0	0	KENTUCKY	0	0	0	ROCHESTER	0	0	0	WICHITA FALLS	2	2	0
NO. LITTLE ROCK	0	0	0	COVINGTON	0	0	0	SYRACUSE	0	0	0	UTAH			
CALIFORNIA BAKERSFIELD	0	0	0	LEXINGTON	0	0	0	NORTH CAROLINA	0	0	0	MILFORD			
BISMAR	0	0	0	LOUISVILLE	0	0	0	ASHEVILLE	0	0	0	SALT LAKE CITY	0	0	0
BLUE CANYON	0	0	0	LOUISIANA	0	0	0	CAPE HATTERAS R	0	0	0	VERMONT			
EUREKA U	0	0	0	BATON ROUGE	6	7	41	CHARLOTTE	0	0	0	BURLINGTON	0	0	0
FRESNO	0	0	0	LAKE CHARLES	2	4	50	GREENSBORO	0	0	0	VIRGINIA			
LONG BEACH	0	0	0	NEW ORLEANS	14	14	63	RALEIGH	0	0	0	LYNCHBURG	0	0	0
LOS ANGELES	0	0	12	SHREVEPORT	8	8	1n	WILMINGTON	0	0	0	NORFOLK			
LOS ANGELES U	0	0	24	MAINE	0	0	0	NORTH DAKOTA	0	0	0	RICHMOND			
MT SHASTA R	0	0	0	CARIBUU	0	0	0	BISMARCK	0	0	0	ROANOK			
OAKLAND	0	0	0	PORTLAND	0	0	0	FARGO	0	0	0	WALLOPS ISLAND	0	0	0
RED BLUFF	0	0	0	MARYLAND	0	0	0	WILLISTON	0	0	0	WASHINGTON			
SACRAMENTO	0	0	0	BALTIMORE	0	0	0	OHIO	0	0	0	OLYMPIA			
SAN JOAQUIN R	0	0	0	MASSACHUSETTS	0	0	0	CINCINNATI ABBE CB	0	0	0	QUILLAYUTE			
SAN DIEGO	0	0	10	BLUE HILL DBS R	0	0	0	CLEVELAND	0	0	0	SEATTLE			
SAN FRANCISCO	0	0	0	BOSTON	0	0	0	COLUMBUS	0	0	0	SEATTLE-TACOMA			
SAN FRANCISCO U	0	0	0	WORCESTER	0	0	0	DAYTON	0	0	0	SKANE			
SANTA MARIA	0	0	0	SAULT STE MARIE	0	0	0	MANSFIELD	0	0	0	STAMPEDE PASS R			
STOCKTON	0	0	0	MICHIGAN	0	0	0	TOLEDO	0	0	0	WALLA WALLA U			10
COLORADO COLORADO SPRINGS	0	0	0	ALPENA	0	0	0	YUNGSTOWN	0	0	0	YAKIMA	0	0	0
DENVER	0	0	0	DDETROIT	0	0	0	WEST INDIIES	0	0	0	WEST INDIIES SAN JUAN P.R.	393	819	610
GRANJ JUNCTION	0	0	0	DETROIT METRO	0	0	0	OKLAHOMA	0	0	0	WEST VIRGINIA			
PUEBL	0	0	0	GRAND RAPIDS	0	0	0	OKLAHOMA CITY	0	0	0	BECKLEY	0	0	0
CONNECTICUT BRIDGEPORT	0	0	0	MOUGHTON LAKE	0	0	0	TULSA	0	0	0	CHARLESTON	0	0	0
HARTFORD	0	0	0	LANSING	0	0	0	OREGON	0	0	0	ELKINS	0	0	0
DELAWARE WILMINGTON	0	0	0	MUSKEGON	0	0	0	ASTORIA	0	0	0	HUNTINGTON	0	0	0
OIST. OF COLUMBIA	0	0	0	SAULT STE MARIE	0	0	0	BURNS U	0	0	0	PARKERSBURG U	0	0	0
WASHINGTON QULLES	0	0	0	MINNESOTA	0	0	0	EUGENE	0	0	0	WISCONSIN			
WASHINGTON NATIONAL	0	0	0	INTERNATIONAL FALLS	0	0	0	MEFORD	0	0	0	GREEN BAY	0	0	0
FLORIDA APPALACHICOLA U	0	0	50	MINNEAPOLIS	0	0	0	PENDLETON	0	0	0	LA CROSSE	0	0	0
DAYTONA BEACH	28	34	96	ROCHESTER	0	0	0	PORTLAND	0	0	0	MADISON	0	0	0
FORT MYERS	80	134	197	ST. JOSEPH	0	0	0	SALEM	0	0	0	MILWAUKEE	0	0	0
JACKSONVILLE	13	14	63	KANSAS CITY	0	0	0	SEXTON SUMMIT R	0	0	0	WYOMING			
KEY WEST	147	301	403	COLUMBIA REGIONAL	0	0	0	GUAM TAGUAC R	344	735	725	CASPER	0	0	0
MIAMI	81	171	266	KALISPELL	0	0	0	JUNSTON	304	642	688	CHEYENNE	0	0	0
ORLANDO	31	57	138	ST. LOUIS	0	0	0	KOROK R	463	979	942	LA NOER	0	0	0
PENSACOLA	2	2	64	SPRINGFIELD	0	0	0	KAJALIEIN	467	969	961	SHERIDAN	0	0	0
TALLAHASSEE	2	2	61	MISSOURI	0	0	0	MAJUP R	454	961	944				
TAMPA	36	64	147	ALLENTOWN	0	0	0	PAGG PAGO	465	967	908				
WEST PALM BEACH	87	146	220	BILLINGS	0	0	0	PONAPE R	455	989	924				
GEORGIA ATHENS	0	0	0	GLASGOW	0	0	0	TRUK MOEN ISLAND	489	1022	947				
ATLANTA	0	0	0	GREAT FALLS	0	0	0	WAKE	354	746	708				
AUGUSTA	0	0	0	HAVRE	0	0	0	YAP R	434	924	911				
COLUMBUS	2	2	14	HELENA	0	0	0	PENNSYLVANIA	0	0	0				
MACON	1	1	24	KALISPELL	0	0	0	ALLENTOWN	0	0	0				
ROME	0	0	0	MILES CITY	0	0	0	EKIE	0	0	0				
SAVANNAH	5	5	33	MISSOURI	0	0	0	MARRISBURG	0	0	0				
					0	0	0	PHILADELPHIA	0	0	0				
					0	0	0	PITTSBURGH	0	0	0				
					0	0	0	SCRANTON	0	0	0				
					0	0	0	WILLIAMSPT	0	0	0				
					0	0	0	RHOE ISLAND	0	0	0				
					0	0	0	BLOCK ISLAND	0	0	0				
					0	0	0	PROVIDENCE	0	0	0				

STORM SUMMARY

FEBRUARY 1979

STATE	TORNADOES				HAILSTORMS			WINDSTORMS			LIGHTNING			@HEAVY SNOWSTORMS AND BLIZZARDS			# ICE STORMS			φ ALL OTHER					
	NUMBER	DEATHS	INJURIES	† DAMAGE	DEATHS	INJURIES	† DAMAGE	DEATHS	INJURIES	† DAMAGE	DEATHS	INJURIES	† DAMAGE	DEATHS	INJURIES	† DAMAGE	DEATHS	INJURIES	† DAMAGE	DEATHS	INJURIES	† DAMAGE			
Alabama	*																								
Alaska	*																								
Arizona	*																								
Arkansas	*																								
California	*																								
Colorado	*																								
Connecticut	*																								
Delaware	*																								
Florida	*																								
Georgia	*																								
Hawaii	*																								
Idaho	*																								
Illinois	*																								
Indiana	*																								
Iowa	*																								
Kansas	*																								
Kentucky	*																								
Louisiana	*																								
Maine	*																								
Maryland & DC	*	1	1																						
Massachusetts	*																								
Michigan	*																								
Minnesota	*																								
Mississippi	*																								
Missouri	*																								
Montana	*																								
Nebraska	*																								
Nevada	*																								
New Hampshire	*																								
New Jersey	*																								
New Mexico	*																								
New York	*	1	1																						
North Carolina	*																								
North Dakota	*																								
Ohio	*																								
Oklahoma	*																								
Oregon	*																								
Pacific	*																								
Pennsylvania	*																								
Puerto Rico	*																								
Rhode Island	*																								
South Carolina	*																								
South Dakota	*																								
Tennessee	*																								
Texas	2	2	1	5																					
Utah	*																								
Vermont	*																								
Virginia	*																								
Virgin Islands	*																								
Washington	*																								
West Virginia	*																								
Wisconsin	*																								
Wyoming	*																								

RAWINSONDE DATA

Average monthly values

FEBRUARY 1979

Standard pressure surface mb.	ALBANY, NY 1012 MB										ALBUQUERQUE, NM 838 MB										AMARILLO, TX 891 MB										ANCHORAGE, AK 1007 MB										ANNESTE, AK 1002 MB									
	Resultant Wind					Resultant Wind					Resultant Wind					Resultant Wind					Resultant Wind					Resultant Wind					Resultant Wind					Resultant Wind					Resultant Wind									
	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.					
SFC	26	86	-12.2	-16.8	31	2.9	27	1.619	-5.5	36	1.6	28	1.095	-1.3	6.2	2.1	28	4.5	-12.5	-23.2	0.1	4.0	2.8	37	-9	-3.2	10	2.0	2.0	86	83	-1.2	4.3	0.8	2.1	83	80	-5.3	5.1	1.1	2.1	83	81	-5.3	5.1	1.1	2.1			
1000	23	191	-12.4	-17.4	32	3.6	27	1.619	-5.5	36	1.6	28	1.095	-1.3	6.2	2.1	28	114	-12.3	-22.2	0.1	5.2	19	88	-1.2	-4.3	0.8	2.1	88	85	-3.0	5.1	1.1	2.1	85	83	-3.0	5.1	1.1	2.1										
950	25	567	-13.4	-17.5	33	5.6	27	1.619	-5.5	36	1.6	28	1.095	-1.3	6.2	2.1	28	492	-12.3	-22.4	0.1	8.3	28	463	-5.6	-7.3	1.6	5.7	88	85	-5.6	-7.3	1.6	5.7	85	83	-5.6	-7.3	1.6	5.7										
850	25	1,416	-12.5	-20.2	31	8.8	27	1.619	-5.5	36	1.6	28	1.095	-1.3	6.2	2.1	28	906	-11.1	-22.6	0.3	8.8	28	889	-5.6	-7.3	1.6	5.7	889	85	-5.6	-7.3	1.6	5.7																
800	25	1,879	-12.1	-21.0	30	10.9	27	1.988	-6	30	2.3	28	1.473	3.7	-8.3	27	2.8	1,345	-11.8	-24.1	0.2	7.9	28	1,335	-7.9	-10.4	1.6	6.6	1,805	1,792	-10.4	-13.6	20	7.3																
750	25	2,373	-12.7	-23.0	33	13.5	27	2,504	-2.0	28	5.3	28	2,487	1.0	-11.8	27	8.3	2,297	-15.6	-28.7	0.3	5.4	28	2,300	-12.7	-17.9	2	7.5	2,823	1,644	-16.4	-21.2	22	7.7																
700	25	2,898	-13.8	-24.3	31	16.1	27	3,050	-4.8	28	8.4	28	3,038	-2.6	-16.0	27	9.9	2,814	-18.3	-31.4	0.2	5.2	28	3,023	-16.4	-21.2	22	7.5	3,376	2,524	-20.4	-25.2	22	7.9																
650	25	3,459	-16.4	-27.0	29	19.4	27	3,630	-7.8	28	10.5	28	3,623	-5.9	-20.0	27	11.1	3,364	-21.3	-34.7	0.2	6.7	28	3,364	-20.4	-25.2	22	7.9	3,766	2,944	-24.4	-29.2	23	8.4																
600	24	4,036	-18.7	-31.4	26	20.9	27	4,249	-11.4	28	12.9	28	4,245	-9.9	-21.6	27	15.1	4,580	-28.5	-37.6	0.1	7.0	28	4,580	-28.5	-37.6	0.1	7.0	3,964	3,244	-24.4	-29.2	23	8.4																
550	25	4,692	-23.4	-34.0	29	23.6	27	4,911	-15.7	28	14.8	28	4,900	-13.6	-24.6	27	15.0	4,527	-27.1	-34.9	0.1	8.0	28	5,048	-23.9	-33.9	0.1	8.0	4,592	4,044	-24.4	-29.2	23	8.4																
500	25	5,185	-23.4	-34.0	29	23.6	27	5,202	-15.7	28	14.8	28	5,191	-13.6	-24.6	27	15.0	4,527	-27.1	-34.9	0.1	8.0	28	5,048	-23.9	-33.9	0.1	8.0	4,592	4,044	-24.4	-29.2	23	8.4																
450	22	6,137	-32.7	-42.1	28	29.5	27	6,392	-26.3	37.2	26	19.0	28	3,399	-21.9	-37.2	26	20.8	5,990	-37.7	-47.1	0.1	9.1	28	5,998	-38.8	-48.7	0.1	9.1	4,303	3,525	-32.7	-42.1	28	4.3															
400	19	6,994	-33.7	-44.2	27	30.5	26	8,165	-38.4	-45.3	26	22.5	28	3,391	-31.3	-42.4	26	23.3	7,973	-47.3	-50.1	0.1	10.0	28	6,797	-44.0	-43.0	0.1	10.0	4,303	3,525	-32.7	-42.1	28	4.3															
350	19	7,906	-43.8	-54.3	27	29.8	26	8,165	-38.4	-45.3	26	22.5	28	3,391	-31.3	-42.4	26	23.3	7,973	-47.3	-50.1	0.1	10.0	28	6,797	-44.0	-43.0	0.1	10.0	4,303	3,525	-32.7	-42.1	28	4.3															
300	15	8,926	-49.4	-53.3	26	31.7	26	9,207	-5.5	-6.4	26	29.5	28	9,221	-45.8	-56.2	27	25.6	8,692	-51.9	-59.1	0.1	12.4	28	8,691	-52.2	-59.1	0.1	12.4	8,691	8,692	-52.2	-59.1	0.1	12.4															
250	18	10,087	-52.8	-62.8	26	31.7	26	10,401	-5.3	-6.2	26	32.5	28	10,414	-5.3	-6.2	27	29.4	8,973	-51.9	-59.1	0.1	11.8	28	9,868	-52.2	-59.1	0.1	11.8	8,973	8,968	-52.2	-59.1	0.1	11.8															
200	11	11,524	-53.2	-62.8	26	31.7	26	11,820	-5.7	-6.6	26	32.3	28	11,830	-5.8	-6.7	27	28.6	11,331	-48.7	-53.8	0.1	9.8	28	11,323	-49.5	-53.8	0.1	9.8	11,323	11,323	-49.5	-53.8	0.1	9.8															
175	12	12,788	-57.1	-62.8	26	31.7	26	12,664	-5.7	-6.6	26	30.7	28	12,670	-5.8	-6.7	27	27.7	12,211	-47.8	-52.6	0.1	9.7	28	12,209	-48.9	-52.6	0.1	9.7	12,209	12,209	-48.9	-52.6	0.1	9.7															
150	16	13,366	-53.7	-62.8	26	31.7	26	13,637	-5.8	-6.7	27	27.5	28	13,640	-5.8	-6.7	27	25.5	13,229	-47.7	-52.6	0.1	9.3	28	13,213	-49.0	-52.6	0.1	9.3	13,213	13,213	-49.0	-52.6	0.1	9.3															
125	16	14,533	-55.6	-62.8	26	31.7	26	14,777	-6.0	-6.9	27	25.7	28	14,782	-6.0	-6.9	27	22.7	14,433	-47.4	-52.6	0.1	9.5	28	14,410	-49.3	-52.6	0.1	9.5	14,410	14,410	-49.3	-52.6	0.1	9.5															
100	16	15,951	-56.3	-62.8	26	31.7	26	16,158	-6.3	-7.2	27	21.7	28	16,165	-6.2	-7.1	27	19.8	15,910	-47.2	-52.6	0.1	9.7	28	15,872	-49.7	-52.6	0.1	9.7	15,872	15,872	-49.7	-52.6	0.1	9.7															
80	13	17,375	-56.7	-62.8	26	31.7	26	17,578	-6.3	-7.2	27	15.3	27	17,532	-6.3	-7.2	27	16.7	17,386	-47.5	-52.6	0.1	9.7	28	17,330	-49.9	-52.6	0.1	9.7	17,330	17,330	-49.9	-52.6	0.1	9.7															
70	12	18,228	-57.1	-62.8	26	31.7	26	18,349	-6.3	-7.2	27	12.1	27	18,353	-6.3	-7.2	27	12.8	18,269	-47.2	-52.6	0.1	9.6	28	18,225	-49.7	-52.6	0.1	9.6	18,225	18,225	-49.7	-52.6	0.1	9.6															
60	11	19,203	-54.8	-62.8	26	31.7	26	19,290	-6.3	-7.2	27	7.7	26	19,302	-6.2	-7.1	27	10.2	19,289	-47.1	-52.6	0.1	9.5	28	19,234	-49.9	-52.6	0.1	9.5	19,234	19,234	-49.9	-52.6	0.1	9.5															
50	10	20,361	-53.9	-62.8	26	31.7	26	20,426	-6.0	-6.9	27	6.3	26	20,430	-6.0	-6.9	27	6.2	20,398	-46.9	-52.6	0.1	9.4	28	20,360	-49.6	-52.6	0.1	9.4	20,360	20,360	-49.6	-52.6	0.1	9.4															
40	9	21,792	-53.4	-62.8	26	31.7	26	21,822	-6.0	-6.9	27	5.0	26	21,828	-5.9	-6.8	27	4.9	21,798	-46.8	-52.6	0.1	9.3	28	21,759	-49.6	-52.6	0.1	9.3	21,759	21,759	-49.6	-52.6	0.1	9.3															
30	8	23,649	-52.1	-62.8	26	31.7	26	23,662	-5.8	-6.7	27	2.1	25	23,668	-5.8	-6.7	27	2.0	23,638	-45.6	-52.6	0.1	9.2	28	23,576	-49.6	-52.6	0.1	9.2	23,576	23,576	-49.6	-52.6	0.1	9.2															
25	6	24,882	-50.5	-62.8	26	31.7	26	24,901	-5.5	-6.4	27	1.1	25	24,878	-5.5	-6.4	27	1.0	24,878	-45.5	-52.6	0.1	9.1	28	24,813	-49.6	-52.6	0.1	9.1	24,813	24,813	-49.6	-52.6	0.1	9.1															
20	5	26,325	-48.4	-62.8	26	31.7	26	26,348	-5.5	-6.4	27	1.1	25	26,345	-5.5	-6.4	27	1.0	26,345	-45.5	-52.6	0.1	9.0	28	26,284	-49.6	-52.6	0.1	9.0	26,284	26,284	-49.6	-52.6	0.1	9.0															
15	4	28,235	-48.4	-62.8	26	31.7	26	28,257	-5.5	-6.4	27	1.1	25	28,254	-5.5	-6.4	27	1.0	28,254	-45.5	-52.6	0.1	8.9	28	28,193	-49.6	-52.6	0.1	8.9	28,193	28,193	-49.6	-52.6	0.1	8.9															
10	3	28,168	-50.7	-62.8	26	31.7	26	28,194	-5.5	-6.4	27	1.1	25	28,191	-5.5	-6.4	27	1.0	28,191	-45.5	-52.6	0.1	8.8	28	28,131	-49.6	-52.6	0.1	8.8	28,131	28,131	-49.6	-52.6	0.1	8.8															
5	2	28,168	-50.7	-62.8	26	31.7	26</																																											

RAWINSONDE DATA

Average monthly values

FEBRUARY 1979

COLD BAY, AK 10CB MB				DAYTON, OH 984 MB				DEL RIO, TX 982 MB				DENVER, CO 834 MB				DESERT ROCK, NV 902 MB			
SFC	26	30	-1.9 -4.0 0.0 0.8 +.9	28	299	-9.4 -12.2 0.6 +.6	28	314	6.9 +4.3 0.8 1.05	28	1,611	-3.8 -10.2 2.2 1.3	27	1,007	2.1 -2.7 1.3 +.6				
1000	21	121	-2.6 -6.0 0.0 0.2 1.4	28	500	-7.7 -10.0 0.8 1.6	28	581	7.7 +2.7 1.4 1.09	27	1,057	3.8 -4.2 0.6 1.2							
950	26	500	-4.7 -7.0 0.0 0.8	28	1,003	-11.9 -2.7 3.4 2.0	26	584	7.9 +2.7 1.4 1.09	27	1,493	4.6 -6.3 1.8 2.3							
900	26	923	-7.3 -10.5 0.4 1.4	28	1,452	-4.9 -13.4 2.6 2.8	26	1,031	8.3 +2.2 1.4 1.04	27	1,207	1.9 -12.7 2.0 5.2							
850	26	1,368	-8.3 -16.9 0.2 1.7	28	1,452	-4.9 -13.4 2.6 2.8	26	624	1,504 9.3 +4.8 2.3 5.0	27	1,493	4.6 -6.3 1.8 2.3							
800	26	1,368	-9.2 -19.2 0.0 2.3	28	2,518	-5.6 -14.5 2.8 2.8	26	824	2,060 -8.2 2.6 5.5 2.8	27	1,207	1.9 -12.7 2.0 5.2							
750	26	2,336	-10.4 -23.3 0.0 3.5	28	3,232	-2.4 +3.4 1.6 2.8	26	2,536	5.7 1.1 +2.2 1.4 1.04	27	1,207	1.9 -12.7 2.0 5.2							
700	26	3,663	-11.2 -26.1 0.0 4.2	28	3,232	-2.4 +2.9 1.6 2.8	26	1,071	1.0 +2.4 1.4 1.04	27	1,207	1.9 -12.7 2.0 5.2							
650	26	3,425	-16.1 -29.1 0.2 5.2	28	4,128	-3.5 +2.2 -12.1 2.0	26	1,071	2.4 +3.0 1.6 2.8 2.8	27	1,057	3.8 -4.2 0.6 1.2							
600	26	4,023	-19.7 -33.0 0.1 5.2	28	4,150	-1.6 +2.3 2.6 2.8	26	1,794	4,325 -5.3 +2.1 0.5 2.0	27	1,207	1.9 -12.7 2.0 5.2							
550	26	4,664	-23.8 -37.0 0.1 5.2	28	4,802	-19.3 -26.7 2.9 2.8	26	2,084	5,002 -9.6 +2.1 0.5 2.0	27	1,207	1.9 -12.7 2.0 5.2							
500	26	5,355	-28.5 -41.0 0.1 5.2	28	5,505	-2.7 +2.3 3.2 2.1	26	2,428	5,731 -14.8 +2.7 5.6 2.8	27	1,207	1.9 -12.7 2.0 5.2							
450	26	6,101	-33.7 -46.6 0.1 5.1	28	7.1 +2.6 6.2 6.7	26	2,868	5,520 -20.1 +3.3 2.8 2.8	27	1,207	1.9 -12.7 2.0 5.2								
400	26	6,917	-39.4 -47.7 0.0 5.0	28	8.7 +2.6 7.0 9.9	26	354	28.8 +2.8 2.8 2.8 2.8	27	1,207	1.9 -12.7 2.0 5.2								
350	25	7,833	-45.3 +4.5 3.0	10	10.3 +2.8 8.0 8.021 -41.0 +4.5 28	364 28 8.0 8.338 -33.5 +4.5 26	27	26.5 28 8.0 8.074 -42.0 +4.5 28	27	1,207	1.9 -12.7 2.0 5.2								
300	25	8,845	-51.1 +5.1 3.0	10	10.8 +2.8 9.0 9.052 -47.1 +5.2 28	41.3 28 9.0 9.398 -42.0 +5.2 28	27	26.5 28 8.0 8.098 -49.3 +5.2 28	27	1,207	1.9 -12.7 2.0 5.2								
250	25	10,231	-53.8 +5.1 29	11.0 +2.8 16.1 10.253 -53.3 +5.2 28	38.5 28 10.0 10.600 -51.2 +5.2 28	27	26.5 28 8.0 10.276 -55.6 +5.2 28	27	1,207	1.9 -12.7 2.0 5.2									
200	25	11,642	-49.9 +5.1 29	9.3 +19.1 16.1 11,681 -56.3 +5.2 28	34.5 28 12.0 10,032 -58.1 +5.2 28	27	26.5 28 8.0 11,684 -57.3 +5.2 28	27	1,207	1.9 -12.7 2.0 5.2									
150	25	12,407	-48.4 +5.1 29	7.1 +19.1 16.1 11,681 -55.5 +5.2 28	34.7 28 12.0 10,032 -58.1 +5.2 28	27	26.5 28 8.0 11,684 -57.3 +5.2 28	27	1,207	1.9 -12.7 2.0 5.2									
150	25	13,359	-47.6 +5.1 29	7.0 +19.1 16.1 13,551 -56.1 +5.2 28	31.6 28 12.0 10,032 -58.1 +5.2 28	27	26.5 28 8.0 11,684 -57.3 +5.2 28	27	1,207	1.9 -12.7 2.0 5.2									
125	25	14,353	-48.1 +5.1 29	7.1 +19.1 16.1 13,669 -57.4 +5.2 28	27.0 28 12.0 10,032 -58.1 +5.2 28	27	26.5 28 8.0 11,684 -57.3 +5.2 28	27	1,207	1.9 -12.7 2.0 5.2									
100	22	16,028	-48.4 +5.1 29	4.9 +11.1 16.0 16,077 -58.6 +5.2 28	26 16,296 -6.7 -7.8 +5.1 28	27	26.5 28 16,056 -59.1 +5.2 28	27	1,207	1.9 -12.7 2.0 5.2									
80	20	17,501	-47.8 +5.1 30	3.9 +10.9 17.9 17,974 -60.3 +5.2 28	27 17,531 -6.9 -6.0 +5.1 28	27	26.5 28 17,451 -59.5 +5.2 28	27	1,207	1.9 -12.7 2.0 5.2									
70	20	18,384	-47.8 +5.1 31	3.0 +10.9 18.0 18,306 -60.3 +5.2 28	27 18,333 -6.7 -6.6 +5.1 28	27	13.2 26 18,287 -59.1 +5.2 28	27	1,207	1.9 -12.7 2.0 5.2									
60	20	19,002	-47.5 +5.1 34	2.5 +8.0 18,927 -59.9 +5.2 28	25 19,363 -6.5 -6.7 +5.1 28	27	10.0 26 19,255 -58.8 +5.2 28	27	8.7 23 19,304 -59.5 +5.2 28	27	1,207	1.9 -12.7 2.0 5.2							
50	19	20,619	-47.0 +5.1 03	2.8 +6.0 20,418 -57.7 +5.2 28	24 20,777 -6.2 -6.8 +5.1 28	27	6.8 26 20,401 -58.0 +5.2 28	27	6.2 22 20,443 -58.6 +5.2 28	27	1,207	1.9 -12.7 2.0 5.2							
40	19	22,098	-47.1 +5.1 06	4.6 +6.0 5 21,826 -57.1 +5.2 28	24 21,860 -6.0 -3.3 +5.1 28	27	4.8 25 21,812 -57.6 +5.2 28	27	5.2 22 21,850 -57.8 +5.2 28	27	1,207	1.9 -12.7 2.0 5.2							
30	17	23,993	-46.6 +5.1 08	6.7 +5.2 21,826 -57.1 +5.2 28	24 23,663 -58.1 +5.1 28	27	4.1 22 23,635 -56.5 +5.2 28	27	2.9 21 23,668 -57.0 +5.2 28	27	1,207	1.9 -12.7 2.0 5.2							
25	17	25,202	-46.9 +5.1 07	8.7 +5.2 21,826 -57.1 +5.2 28	24 24,815 -56.9 +5.1 28	27	3.5 22 24,794 -56.2 +5.2 28	27	1.8 20 24,831 -55.9 +5.1 28	27	1,207	1.9 -12.7 2.0 5.2							
20	15	26,667	-47.0 +5.1 09	1.0 +5.2 21,826 -57.1 +5.2 28	24 26,237 -54.4 +5.1 28	27	2.0 26 21,211 -55.3 +5.2 28	27	0.7 15.6 26,255 -54.9 +5.1 28	27	1,207	1.9 -12.7 2.0 5.2							
15	15	28,617	-47.1 +5.1 10	14 +5.2 21,826 -57.1 +5.2 28	24 28,089 -52.4 +5.1 28	27	3.6 19 28,055 -52.0 +5.2 28	27	3.2 12 28,103 -53.7 +5.2 28	27	1,207	1.9 -12.7 2.0 5.2							
10	6	31,296	-43.1 +5.1 14	30.7 +5.2 21,826 -57.1 +5.2 28	24 30.751 -47.1 +5.1 28	27	12.1 9 30.714 -50.4 +5.2 28	27	1,207	1.9 -12.7 2.0 5.2									

DODGE CITY, KS 926 MB			EL PASO, TX 882 MB			ELY, NV 807 MB			EMPALME, MEXICO 1014 MB			* FAIRBANKS, AK 1008 MB																		
5FC	28	791	-5.8	-9.3	29	+8	28	1+193	3+7	-3+5	29	1+7	28	1,908	-7+4	-14+4	19	4+2	28	12	12-2	6+8	35	1+9	28	135	-3+4	-35+9	04	
1000																			28	129	15.9	5.8	34	2+6	23	208	-26+4	-29+9	06	
950																			28	566	16.9	9	34	3+8	28	570	-20+1	-27+2	08	
900	28	1,011	-1.8	-7+2	27	1+8													28	1,025	15.1	-2.6	33	2+2	28	972	-19+0	-28+2	08	
850	28	1,469	2+2	-10+2	27	4+6	28	1,499	7+3	-4+4	28	3+0							28	1,506	12.1	-5+0	27	2+2	28	1,399	-18+2	-28+8	08	
800	28	1,795	1+3	-12+5	27	6+6	28	1,996	5+0	-6+3	28	5+5	23	1,097	-3+6	-9+7	19	3+6	28	2,011	9.5	-8+8	25	2+9	28	1,851	-18+7	-30+2	07	
750	28	2,151	-1+5	-14+4	27	8+6	28	2,520	1+2	-8+2	27	8+5	28	2,016	-3+4	-11+6	21	3+0	28	2,544	6+6	-12+0	25	3+5	28	2,333	-20+3	-22+2	07	
700	28	3,021	-1+5	-15+5	27	10+3	28	3,495	1+2	-13+7	27	9+5	28	2,530	-3+4	-14+6	24	3+0	28	3,204	6+6	-13+4	25	3+5	28	2,944	-25+5	-34+4	09	
650	28	3,601	-8+2	-21+7	27	11+7	28	3,661	-6+6	-18+8	26	11+3	28	3,405	-9+7	-18+9	27	5+2	28	3,102	6+6	-20+1	24	3+0	28	3,031	-25+5	-36+7	09	
600	28	4,217	-12+3	-25+2	27	13+0	28	4,287	-8+2	-23+2	26	13+3	28	4,219	-11+5	-21+6	28	11+1	28	4,337	-4+4	-23+3	26	9+5	28	3,958	-28+6	-38+8	03	
550	28	4,877	-16+5	-28+8	27	13+9	28	4,957	-12+2	-27+8	27	14+6	28	4,876	-17+6	-25+4	28	13+2	28	5,016	-8+9	-26+6	26	11+9	28	4,577	-51+8	-41+9	02	
500	28	5,586	-22+0	-33+6	27	16+0	28	5,679	-17+1	-31+5	26	17+6	28	5,583	-22+3	-29+8	27	14+5	28	5,747	-13+9	-31+0	26	14+6	28	5,246	-35+5	-46+6	02	
450	28	6,353	-27+4	-38+6	27	18+6	28	6,461	-22+6	-36+6	26	20+9	28	6,349	-27+6	-32+7	27	16+3	28	6,538	-19+5	-35+6	26	17+2	28	5,973	-39+8	-45+9	01	
400	28	7,190	-33+4	-43+6	27	22+2	28	7,315	-28+8	-41+0	26	22+6	28	7,188	-33+8	-38+3	28	17+8	28	7,003	-25+7	-39+5	26	19+5	28	6,775	-44+7	-47+7	06	
350	28	8,118	-40+0	-46+6	27	26+6	28	8,260	-35+5	-44+5	26	27+1	27	8,115	-40+9	-42+5	28	19+4	28	8,359	-33+1	-44+1	26	22+7	27	7,662	-49+3	-50+5	06	
300	28	9,151	-47+5	-56+6	26	29+3	28	9,313	-43+6	-44+5	26	27+3	27	9,142	-48+6	-27	21+9	28	9,421	-41+6	-46+6	26	25+9	27	8,661	-53+3	-53+3	06		
250	27	10,338	-54+9		27	29+4	27	10,518	-52+9		26	27+4	27	10,320	-56+0		24+8	28	10,633	-50+9		26	29+7	27	9,832	-53+6	-53+6	05		
200	27	11,750	-57+6		27	29+7	27	11,934	-59+6		27	26+6	27	11,720	-59+9		25+2	28	12,059	-58+3		27	32+5	27	11,277	-50+4	-50+4	04		
175	27	12,455	-59+9		27	27+8	27	12,769	-59+8		27	25+0	27	12,560	-58+5		24+0	28	12,899	-59+1		27	33+6	27	12,150	-49+4	-53+7	03		
150	27	13,374	-57+2		27	25+8	27	13,732	-60+2		27	24+2	27	13,532	-57+5		22+9	28	13,861	-61+2		26	31+7	27	13,162	-48+7	-52+9	02		
125	27	14,719	-59+9		27	23+8	27	14,662	-62+2		27	23+3	27	14,352	-59+1		27+4	28	14,986	-63+8		26	28+6	27	14,361	-48+6	-51+5	01		
100	26	16,103	-60+9		26	18+8	26	16,233	-63+3		26	16+8	26	16,000	-60+8		15+6	27	16,786	-67+2		26	18+8	27	15,831	-48+3	-51+3	01		
80	26	17,488	-61+3		26	18+4	26	17,585	-66+6		27	15+6	26	17,466	-60+2		27	15+1	26	16,689	-67+2		26	17+7	27	15,831	-48+3	-51+3	01	
70	26	18,176	-63+6		26	13+0	26	18,396	-64+9		27	13+5	25	18,292	-59+3		27	9+7	24	18,489	-67+2		26	17+7	27	16,182	-47+7	-51+9	01	
60	25	19,272	-61+4		27	10+6	26	19,339	-63+7		27	8+9	25	19,260	-58+9		28	6+2	21	19,424	-64+8		26	8+0	27	19,202	-47+7	-51+9	01	
50	25	20,407	-60+0		27	7+6	26	20,462	-61+6		26	5+5	25	20,401	-58+2		28	4+9	21	20,545	-61+7		27	4+2	27	20,409	-46+6	-51+9	01	
40	24	21,807	-59+2		26	3+5	25	21,851	-60+1		26	3+9	25	21,813	-57+7		31+0	19	21,930	-59+9		26	3+2	27	21,892	-46+2	-52+9	01		
30	24	23,616	-57+9		25	3+	23	23,659	-58+3		28	3+2	24	23,532	-57+0		35+8	18	23,745	-56+6		27	2+5	27	23,808	-45+3	-52+6	01		
25	23	24,768	-56+9		26	3+3	24	24,816	-56+6		26	3+1	24	27,878	-57+1		35+4	18	24,903	-56+1		27	2+3	27	25,025	-45+3	-52+6	01		
20	19	26,170	-55+4		25	5+8	18	26,227	-55+4		28	2+6	20	26,197	-56+4		36+3	14	27,323	-53+0		26	4+5	26	26,511	-45+0	-52+6	01		
15	18	28,030	-52+6		24	4+8	13	28,080	-52+8		26	2+3	15	28,045	-53+8		01	4+9	9	28,187	-49+5		25	28,431	-44+4		33	14+8		
10	6	30,+701	-48+1					30,+702	-47+7										15	31,+171	-41+5			30	12,+8					
7																			5	33,+596	-40+2									

RAWINSONDE DATA

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FLINT, MI 994 MB										GLASGOW, MT 934 MB										GRAND JUNCTION, CO 854 MB										e GREAT FALLS, MT 885 MB										GREEN RAY, WI 997 MB									
Standard pressure surface m.	No. of observations	Dynamic height meters		Temperature °C		Dew Point °C		Resultant Wind Speed m.p.s.		Dynamic height meters		Temperature °C		Dew Point °C		Resultant Wind Speed m.p.s.		Dynamic height meters		Temperature °C		Dew Point °C		Resultant Wind Speed m.p.s.		Dynamic height meters		Temperature °C		Dew Point °C		Resultant Wind Speed m.p.s.																	
		Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Dew Point °C	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.															
1000	28	236	-12.7	-17.1	2.0	28	6.9	-18.0	2.0	28	15.3	10	1.2	28	15.7	-13.0	2.0	28	1,571	-6.1	-9.1	1.3	1.6	28	1,430	-6.3	-11.6	2.4	8.1	28	1,425	-6.7	-11.8	2.7	2.2														
950	28	580	-11.3	-15.3	1.0	28	15.0	-12.4	2.8	28	1,418	2.4	1.2	28	1,404	-7.7	-12.7	2.8	6.8	1,983	-3.3	-8.4	1.6	1.9	28	1,905	-6.3	-11.6	2.5	1.0	28	1,874	-6.6	-11.6	2.9	2.9													
900	28	595	-10.9	-15.0	2.8	28	15.5	-12.4	2.6	28	1,404	2.4	1.2	28	1,404	-7.7	-12.7	2.8	6.8	1,983	-3.3	-8.4	1.6	1.9	28	1,905	-6.3	-11.6	2.5	1.0	28	1,874	-6.6	-11.6	2.9	2.9													
850	28	1,136	-9.9	-16.8	2.9	28	1,404	-10.5	2.6	28	1,418	2.4	1.2	28	1,418	-7.7	-12.7	2.8	6.8	1,983	-3.3	-8.4	1.6	1.9	28	1,905	-6.3	-11.6	2.5	1.0	28	1,874	-6.6	-11.6	2.9	2.9													
800	28	2,411	-10.5	-20.2	2.9	28	1,404	-28.5	10.5	28	1,418	2.4	1.2	28	1,418	-7.7	-12.7	2.8	6.8	1,983	-3.3	-8.4	1.6	1.9	28	1,905	-6.3	-11.6	2.5	1.0	28	1,874	-6.6	-11.6	2.9	2.9													
750	28	2,930	-12.6	-21.1	2.9	28	1,404	-28.5	13.2	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	10.8	3,033	-7.6	-14.7	2.6	6.8	28	2,940	-11.7	-15.1	2.7	1.2	28	2,911	-13.6	-22.0	2.9	1.1													
700	28	3,493	-15.0	-24.4	2.9	28	1,404	-28.5	15.9	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	11.6	3,077	-7.6	-14.7	2.6	6.8	28	3,055	-14.7	-19.4	2.7	1.2	28	3,472	-16.2	-24.3	2.9	1.1													
650	28	4,095	-18.5	-26.5	2.8	28	1,404	-28.5	17.9	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	12.7	3,149	-7.6	-14.7	2.6	6.8	28	4,107	-18.4	-25.0	2.8	1.3	28	4,071	-19.3	-27.5	2.8	1.2													
600	28	4,739	-22.5	-29.8	2.8	28	1,404	-28.5	19.4	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	13.8	4,873	-18.3	-27.0	2.6	6.8	28	4,751	-22.6	-37.1	2.8	1.3	28	4,713	-23.5	-31.2	2.8	1.2													
550	28	5,432	-27.0	-33.8	2.8	28	1,404	-28.5	22.7	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	16.3	5,478	-23.2	-31.7	2.6	6.8	28	5,444	-27.7	-34.9	2.8	1.3	28	5,404	-28.0	-35.2	2.8	1.2													
500	28	6,18	-32.0	-37.3	2.8	28	1,404	-28.5	25.5	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	18.7	6,193	-28.2	-36.4	2.6	6.8	28	1,619	-33.1	-38.0	2.8	1.3	28	2,11	-33.1	-38.0	2.8	1.2													
450	28	7,005	-37.7	-41.5	2.8	28	1,404	-28.5	28.6	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	21.9	7,174	-34.8	-41.0	2.6	6.8	28	1,618	-39.6	-42.7	2.7	2.2	28	2,04	-39.6	-42.7	2.8	2.2													
400	28	7,918	-44.0	-48.8	2.8	28	1,404	-28.5	31.3	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	24.7	8,097	-41.8	-46.0	2.6	6.8	28	1,781	-46.0	-51.0	2.7	2.2	28	2,74	-45.2	-51.0	2.8	2.2													
350	28	8,945	-49.8	-54.8	2.8	28	1,404	-28.5	34.7	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	27.1	9,120	-49.2	-54.2	2.6	6.8	28	2,891	-52.5	-56.6	2.7	2.2	28	30.2	-50.6	-56.6	2.8	2.2													
300	28	10,120	-53.7	-58.7	2.8	28	1,404	-28.5	35.5	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	28.0	10,126	-55.5	-57.5	2.6	6.8	28	1,085	-57.5	-59.5	2.7	2.2	28	30.7	-54.8	-59.5	2.8	2.2													
250	28	11,555	-54.5	-59.5	2.8	28	1,404	-28.5	34.4	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	24.9	11,729	-55.5	-57.5	2.6	6.8	28	20.4	-55.3	-57.5	2.7	2.2	28	27.7	-55.3	-57.5	2.8	2.2													
200	28	12,414	-54.1	-59.1	2.8	28	1,404	-28.5	33.4	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	23.9	12,414	-54.1	-59.1	2.6	6.8	28	1,418	-54.1	-59.1	2.7	2.2	28	28.3	-54.1	-59.1	2.8	2.2													
150	28	13,405	-53.6	-58.6	2.8	28	1,404	-28.5	33.6	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	20.3	13,405	-53.6	-58.6	2.6	6.8	28	19.1	-53.6	-58.6	2.7	2.2	28	23.5	-53.6	-58.6	2.8	2.2													
120	28	14,433	-53.4	-58.4	2.8	28	1,404	-28.5	34.6	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	21.9	14,433	-53.4	-58.4	2.6	6.8	28	1,418	-53.4	-58.4	2.7	2.2	28	24.5	-53.4	-58.4	2.8	2.2													
100	28	15,993	-53.3	-58.3	2.8	28	1,404	-28.5	34.7	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	21.8	15,993	-53.3	-58.3	2.6	6.8	28	1,418	-53.3	-58.3	2.7	2.2	28	24.4	-53.3	-58.3	2.8	2.2													
80	28	17,398	-52.8	-57.8	2.8	28	1,404	-28.5	34.8	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	21.7	17,398	-52.8	-57.8	2.6	6.8	28	1,418	-52.8	-57.8	2.7	2.2	28	24.1	-52.8	-57.8	2.8	2.2													
70	28	18,786	-52.7	-57.7	2.8	28	1,404	-28.5	34.9	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	21.6	18,786	-52.7	-57.7	2.6	6.8	28	1,418	-52.7	-57.7	2.7	2.2	28	24.0	-52.7	-57.7	2.8	2.2													
60	28	20,184	-52.6	-57.6	2.8	28	1,404	-28.5	35.0	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	21.5	20,184	-52.6	-57.6	2.6	6.8	28	1,418	-52.6	-57.6	2.7	2.2	28	23.9	-52.6	-57.6	2.8	2.2													
50	28	21,591	-52.5	-57.5	2.8	28	1,404	-28.5	35.1	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	21.4	21,591	-52.5	-57.5	2.6	6.8	28	1,418	-52.5	-57.5	2.7	2.2	28	23.8	-52.5	-57.5	2.8	2.2													
40	28	23,077	-52.4	-57.4	2.8	28	1,404	-28.5	35.2	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	21.3	23,077	-52.4	-57.4	2.6	6.8	28	1,418	-52.4	-57.4	2.7	2.2	28	23.7	-52.4	-57.4	2.8	2.2													
30	28	24,465	-52.3	-57.3	2.8	28	1,404	-28.5	35.3	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	21.2	24,465	-52.3	-57.3	2.6	6.8	28	1,418	-52.3	-57.3	2.7	2.2	28	23.6	-52.3	-57.3	2.8	2.2													
20	28	25,852	-52.2	-57.2	2.8	28	1,404	-28.5	35.4	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	21.1	25,852	-52.2	-57.2	2.6	6.8	28	1,418	-52.2	-57.2	2.7	2.2	28	23.5	-52.2	-57.2	2.8	2.2													
10	28	27,239	-52.1	-57.1	2.8	28	1,404	-28.5	35.5	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	21.0	27,239	-52.1	-57.1	2.6	6.8	28	1,418	-52.1	-57.1	2.7	2.2	28	23.4	-52.1	-57.1	2.8	2.2													
10	28	28,636	-52.0	-57.0	2.8	28	1,404	-28.5	35.6	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	20.9	28,636	-52.0	-57.0	2.6	6.8	28	1,418	-52.0	-57.0	2.7	2.2	28	23.3	-52.0	-57.0	2.8	2.2													
15	28	29,024	-52.0	-57.0	2.8	28	1,404	-28.5	35.7	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	20.8	29,024	-52.0	-57.0	2.6	6.8	28	1,418	-52.0	-57.0	2.7	2.2	28	23.2	-52.0	-57.0	2.8	2.2													
15	28	29,411	-52.0	-57.0	2.8	28	1,404	-28.5	35.8	28	1,418	2.4	1.2	28	1,418	-7.7	-14.9	2.9	20.7	29,411	-52.0	-57.0	2.6	6.8	28	1,418	-52.0	-57.0	2.7	2.2	28	23.1	-52.0	-57.0	2.8	2.2													
10	28	29,799	-52.0	-57.0	2.8	28	1,404	-28																																									

RAWINSONDE DATA

Average monthly values

FEBRUARY 1878

LANDERS, WY 826 MB			LIHUE KALUI, HI 1012 MB			LITTLE ROCK, AR 1001 MB			LONGVIEW, TX 1006 MB			MCGRATH, AK 1010 MB																		
SFC	2:	1,697	-9.8	-13.8	21	+9	26	36	20.6	17.7	0.7	2.6	27	79	+5	-2.0	33	+6	28	124	5.3	2.8	18	.4	28	103	-33.3	-34.4	36	1.0
1000	2:						26	140	19.7	16.1	0.7	3.4	15	217	-2.7	-6.4	35	1.1	22	193	2.7	-1	31	2.25	184	-24.9	-27.9	33	2.2	
950	2:						25	581	16.6	14.8	0.8	4.5	27	589	1.8	-4.1	27	2.0	28	593	5.1	1.5	22	2.5	28	551	-19.3	-26.5	0.5	7.3
900	2:						28	1,040	17.8	11.7	1.0	3.6	27	1,026	2.7	-7.6	26	4.0	28	1,036	6.4	-2.2	25	3.9	28	957	-15.5	-26.3	0.6	11.0
850	2:						28	1,520	10.9	8.4	1.2	2.7	27	1,489	3.0	-9.3	28	5.8	28	1,505	5.9	-4.7	27	5.7	28	1,390	-13.4	-27.8	0.5	12.3
800	2:	1,991	-4.9	-12.6	25	+5	26	2,025	8.2	4.1	14	2.4	27	1,978	1.0	-11.3	28	7.5	28	2,000	4.1	-9.2	28	7.0	28	1,851	-14.2	-28.6	0.5	12.1
750	2:	2,448	-5.9	-14.7	30	3.3	26	2,557	6.9	-2.8	18	2.6	27	2,495	-1.1	-13.6	28	9.3	28	2,522	1.6	-13.3	28	8.9	28	2,339	-15.8	-31.5	0.5	11.7
700	2:	2,987	-8.3	-17.1	29	7.5	26	3,121	4.0	-10.2	21	2.6	27	3,040	-3.4	-15.9	28	11.6	28	3,076	-7	-16.8	28	11.7	28	2,857	-10.0	-33.9	0.4	11.3
650	2:	3,558	-11.9	-20.1	29	11.5	26	3,720	9.2	-12.8	24	3.7	27	3,626	-6.6	-20.5	28	13.4	28	3,665	-3.7	-19.3	27	14.0	28	3,409	-20.6	-35.4	0.5	11.1
600	2:	4,147	-15.5	-23.5	29	14.2	26	4,150	-2.9	-17.7	25	5.7	27	4,247	-1.2	-22.9	28	15.4	28	4,295	-7.2	-22.3	27	16.0	28	3,943	-31.7	-47.0	0.2	12.0
550	2:	4,741	-18.8	-27.8	29	14.8	26	4,744	-2.1	-21.5	26	9.8	27	4,743	-1.4	-24.6	28	17.6	28	4,743	-1.4	-24.6	27	18.3	28	4,274	-27.4	-46.2	0.0	12.8
500	2:	5,158	-22.5	-30.2	28	15.5	26	5,151	-2.8	-27.8	21	2.5	27	5,151	-1.6	-30.5	28	22.4	28	5,151	-1.6	-30.5	27	21.2	28	5,109	-31.6	-43.2	0.1	12.6
450	2:	6,766	-30.5	-36.7	28	16.3	28	6,580	-17.0	-30.1	10.7	2.7	27	6,498	-2.4	-35.0	27	28.6	28	6,469	-22.4	-33.8	26	28.1	28	6,047	-36.3	-46.1	0.1	13.3
400	2:	7,103	-34.4	-40.3	28	19.5	26	7,453	-23.5	-34.3	13.4	2.7	27	7,256	-2.8	-39.2	27	26.9	28	7,325	-27.9	-39.4	26	29.3	28	6,854	-41.7	-46.7	0.1	13.6
350	2:	8,018	-43.6	-39.2	28	22.1	25	8,420	-30.3	-42.3	26	16.5	27	8,200	-16.8	-44.5	27	28.9	28	8,274	-34.8	-43.8	26	32.4	28	7,751	-47.4	-51.6	0.1	15.6
300	2:	9,034	-50.9	28	25.9	26	9,495	-38.3	-46.6	25	22.9	27	9,246	-4.8	-48.0	27	34.7	28	9,329	-43.1	-46.2	26	36.3	28	8,755	-52.5	-52.5	0.1	16.0	
250	2:	10,205	-56.9	26	29.3	25	10,726	-46.6	-51.1	25	31.3	27	10,449	-52.8	-49.0	26	36.8	28	10,533	-52.1	-52.1	27	38.6	28	9,925	-55.3	-55.3	0.1	13.4	
200	2:	11,613	-58.2	28	28.2	28	12,180	-54.6	-54.6	26	34.2	27	11,861	-58.0	-58.0	26	33.9	28	11,955	-58.3	-58.3	26	41.0	28	11,365	-49.9	-53.3	0.1	11.3	
175	2:	12,457	-56.2	28	27.5	28	13,027	-58.8	-58.8	26	34.5	26	12,700	-58.2	-58.2	26	33.5	28	12,794	-58.8	-58.8	26	35.8	28	12,240	-49.1	-53.9	0.1	9.6	
150	2:	13,439	-55.3	28	24.1	27	13,982	-64.0	-64.0	27	32.2	26	13,686	-59.6	-59.6	26	33.0	28	13,757	-61.0	-61.0	26	32.5	28	13,253	-48.6	-51.1	0.1	9.6	
125	2:	14,599	-56.5	27	22.6	27	15,086	-69.1	-69.1	27	25.8	26	14,805	-60.5	-60.5	26	29.4	27	14,882	-63.4	-63.4	26	28.8	28	14,157	-47.5	-47.5	0.1	10.0	
100	2:	16,011	-57.6	27	21.5	26	16,406	-72.4	-72.4	27	18.2	26	16,186	-63.2	-63.2	26	21.2	26	16,245	-65.6	-65.6	26	27.9	28	15,932	-47.5	-47.5	0.1	9.6	
80	2:	17,415	-58.5	27	13,868	27	17,716	-73.8	-73.8	27	10.9	26	17,550	-66.8	-66.8	26	16.9	27	17,597	-66.6	-66.6	27	19.7	28	17,408	-47.1	-50.8	0.1	9.8	
70	2:	18,256	-58.0	27	10.5	25	18,496	-71.9	-71.9	28	7.1	24	18,372	-64.0	-64.0	26	16.7	26	18,405	-66.0	-66.0	26	13.7	28	18,293	-46.9	-50.0	0.1	9.9	
60	2:	19,224	-58.2	27	7.2	24	19,413	-68.8	-68.8	28	2.9	24	19,322	-64.2	-64.2	26	11.2	26	19,352	-65.1	-65.1	25	11.2	28	19,200	-46.0	-50.0	0.1	10.0	
50	2:	20.740	-57.6	27	4.6	16	20,444	-63.1	-63.1	26	2.3	24	20,444	-63.1	-63.1	26	8.2	26	20,466	-62.3	-62.3	26	8.0	28	20,531	-45.6	-53.6	0.1	11.1	
40	2:	21,783	-57.6	28	10.5	24	21,893	-60.6	-60.6	10	2.3	24	21,834	-59.4	-59.4	26	6.2	26	21,851	-60.1	-60.1	26	7.3	28	21,910	-47.1	-51.1	0.1	9.4	
30	2:	23,461	-57.1	33	4.4	24	23,499	-57.6	-57.6	09	4.0	21	23,643	-57.6	-57.6	27	3.4	24	23,649	-57.7	-57.7	26	2.1	28	23,954	-45.5	-51.5	0.1	8.1	
25	2:	24,756	-56.7	34	4.5	24	25	24,854	-56.2	-56.2	08	3.5	24	24,797	-56.6	-56.6	23	1.3	24	24,802	-56.8	-56.8	23	3.0	28	25,171	-45.2	-52.2	0.1	7.9
20	2:	26,186	-55.6	36	5.0	21	26,280	-53.8	-53.8	11	1.5	21	26,218	-54.8	-54.8	24	2.4	26	26,223	-54.8	-54.8	23	3.2	28	25,666	-44.3	-53.7	0.1	6.7	
15	18	28,051	-52.6	06	6.1	17	28,141	-51.4	-51.4	07	1.8	20	28,056	-52.8	-52.8	21	2.0	28	28,075	-52.5	-52.5	22	2.9	28	28,592	-44.9	-53.5	0.1	6.8	
10	5	30,716	-49.0	11	30,803	-46.5	26	4.4	11	30,738	-48.5	25	3.7	12	30,720	-48.5	25	21	31,297	-45.6	0.4	6.8	9	33,736	-47.1	0.4	6.8			

MAJURO, MARSHALL IS.		*	MEDFORD, OR 965 MB				MERIDA, MEXICO 1016 MB				MIDLAND, TX 917 MB				MONTERREY, MEXICO 966 MB				
1010	1010	*	26.2	23.0	C5	5.2	28	401	3.0	.7	19	*.2	28	11	17.6	16.4	08	.4	
5FC	26	3	26.2	23.0	C5	5.2	28	401	3.0	.7	19	*.2	28	11	17.6	16.4	08	.4	
1000	26	94	26.8	22.1	C6	6.3	28	566	3.7	.7	20	*.8	28	149	18.0	18.3	09	3.6	
950	26	547	23.0	20.6	D6	8.6	28	566	3.7	.7	20	*.8	28	593	16.8	15.7	11	1.1	
900	26	1,017	19.9	17.4	C7	7.4	28	1,005	2.8	-1.9	20	*.0	28	1,055	15.9	9.6	13	4.9	
850	26	1,509	17.2	12.4	C8	5.7	28	1,465	-.3	-4.6	22	*.5	28	1,540	13.9	5.6	15	2.6	
800	26	2,026	15.0	5.4	C9	4.1	28	1,948	-3.1	-8.2	24	*.8	28	2,050	11.9	*.4	19	1.8	
750	26	2,473	13.4	-.0	D9	3.2	28	2,455	-5.9	-11.7	25	*.4	28	2,589	10.4	-5.6	23	3.2	
700	28	3,151	10.6	-2.7	D10	2.3	28	2,998	-8.6	-16.4	26	*.1	28	3,160	7.7	-10.0	26	3.0	
650	28	3,765	7.6	-.6	D9	2.1	28	3,566	-11.7	-19.0	26	*.8	28	3,768	4.5	-12.2	26	3.7	
600	28	4,421	4.2	-2.1	D11	2.0	28	4,175	-15.4	-23.4	27	*.4	28	4,415	-.5	-14.9	26	5.1	
550	28	5,123	-.0	-15.4	D9	2.8	28	4,827	-19.6	-27.1	27	*.2	27	5,108	-3.6	-21.0	26	5.9	
500	28	5,887	-.8	-16.1	C8	2.9	28	5,528	-24.5	-31.4	27	*.1	27	5,844	-8.4	-26.3	25	7.2	
450	28	6,630	-.8	-23.8	D8	1.4	28	5,294	-29.4	-35.8	27	*.6	27	6,630	-13.8	-30.0	25	9.5	
400	28	7,606	14.5	-21.5	D10	0.1	28	6,116	-32.2	-38.7	26	*.0	27	7,606	-17.6	-34.6	25	12.5	
350	26	8,688	-21.0	-37.3	D11	2.9	28	6,332	-43.0	-40.9	21	*.1	27	8,525	-27.1	-41.7	25	1.1	
300	26	9,725	-29.5	-44.3	D12	2.7	28	9,C53	-49.7	-27	22.5	*.9	27	9,612	-36.1	-49.4	24	1.0	
250	26	10,999	-39.8	-52.7	D12	2.6	28	17,222	-56.2	-27	26.1	*.1	27	10,854	-45.5	-52.7	26	2.4	
200	26	12,483	-52.3	24	7.9	26	11,634	-59.C	-27	26.4	*.7	27	12,310	-54.6	-56.6	25	2.8		
175	26	13,333	-59.3	25	7.5	28	12,473	-58.2	-27	22.5	*.7	27	13,157	-59.3	-59.3	25	2.5		
150	26	18,281	-67.3	27	5.7	28	13,447	-57.2	-27	20.1	*.7	27	14,109	-64.5	-65.5	25	2.5		
125	26	15,357	-75.5	32	4.8	28	14,602	-57.0	-27	18.6	*.7	27	15,206	-71.1	-71.1	25	2.5		
110	26	16,622	-62.6	01	3.6	27	14,008	-58.2	-27	14.1	*.7	27	16,155	-76.7	-76.7	25	2.5		
80	26	17,871	-79.8	30	2.4	27	17,414	-58.0	-27	10.9	*.7	27	17,786	-77.3	-77.3	25	2.5		
70	26	18,637	-87.5	28	7.1	27	18,255	-58.C	-28	9.0	*.7	27	18,558	-74.1	-74.1	25	2.5		
60	26	19,542	-74.7	28	11.0	27	19,226	-57.1	-29	6.6	*.7	27	19,462	-71.4	-71.4	25	2.5		
50	26	20,639	-65.9	27	11.7	26	20,380	-56.6	-31	4.0	*.6	26	20,554	-66.0	-66.0	25	1.4		
40	26	22,081	-61.5	27	5.9	26	21,478	-56.7	-35	4.0	*.6	26	21,923	-61.4	-61.4	25	1.4		
30	26	23,807	-58.5	09	5.4	26	21,623	-55.9	-02	5.6	*.6	26	23,304	-56.3	-56.3	07	6.2		
25	26	24,056	-52.2	09	15.7	25	24,704	-55.1	-06	4.0	*.6	26	24,523	-55.9	-57.9	27	3.5		
20	26	26,381	-51.5	09	24.0	23	26,228	-55.5	-05	8.5	*.6	26	26,336	-51.6	-51.6	08	2.6		
15	26	28,257	-47.1	09	27.7	20	28,078	-52.6	-05	9.7	*.7	23	28,218	-48.2	-48.2	08	2.3		
10	*	*	*	10	30.728	-51.5	*	*	*	8	30.940	-44.4	*	7	30.726	-47.9	-47.9	25	2.5
7	*	*	*	*	*	*	*	*	*	*	7	33.090	-45.0	*	16.9	*	*	*	3.9

RAWINSONDE DATA

Average monthly values

FEBRUARY 1979

MONETTE, MO 968 MB		NASHVILLE, TN 1000 MB		NOME, AK 1025 MB		NORTH PLATTE, NE 918 MB		OAKLAND, CA 1019 MB										
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C †	Resultant Wind Speed m.p.s.	Dew Point °C †	Dynamic height meters	Temperature °C †	Resultant Wind Speed m.p.s.	Dynamic height meters	Temperature °C †	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C †	Resultant Wind Speed m.p.s.	Dynamic height meters	Temperature °C †	Resultant Wind Speed m.p.s.
5°F 28	4	38	-4.1	-7.6	12	+6	26	180	-1.4	-3.9	0.4	1	4	28	5	-16.7	-26.0	2.6
1000 28						1	2	222	-5.7	-8.6	0.1	1	3	28	189	-12.7	-22.2	0.8
950 28	583	-2.3	-0.6	21	1.3	28	586	-7.7	-4.7	2.4	3	1	28	582	-12.0	-24.5	0.8	
900 28	1,015	-1.4	-8.1	28	5.6	28	1,018	-4.4	-7.1	2.6	5.5	28	985	-11.0	-25.3	0.7		
850 28	1,963	-2	-14.2	28	6.7	28	1,976	-1	-9.8	2.6	7.6	28	1,434	-11.5	-26.3	0.8		
800 28	2,983	-1.1	-2.2	-14.9	28	7.9	2,986	-1.6	-11.5	2.8	8.0	28	1,897	-12.9	-27.1	0.5		
750 28	2,479	-1.7	-16.5	28	9.6	28	2,473	-3.2	-14.6	2.6	10.2	28	2,388	-14.4	-28.0	0.8		
700 28	3,024	-5.1	-8.4	28	11.4	28	3,017	-5.5	-16.4	2.8	11.9	28	2,982	-16.1	-31.7	0.7		
650 28	3,043	-2.9	-2.0	-11.3	28	13.8	3,043	-3.8	-18.2	2.8	14.3	28	2,942	-18.0	-32.4	0.5		
600 28	2,221	-11.4	-2.5	-6.6	28	18.9	2,227	-4.2	-20.9	2.8	14.9	28	4,056	-22.3	-34.5	0.2		
550 28	1,883	-15.0	-28.8	28	18.5	27	1,880	-15.6	-27.2	27	20.0	28	4,960	-20.1	-37.4	0.1		
500 28	5,595	-20.5	-31.1	27	21.8	27	5,596	-20.0	-32.0	27	23.9	28	5,374	-30.6	-40.8	0.0		
450 28	6,367	-25.6	-35.4	27	24.3	27	6,367	-24.9	-31.8	27	27.4	28	6,114	-35.8	-44.4	3.5		
400 28	7,211	-31.5	-41.4	27	26.3	27	7,215	-30.5	-38.9	27	31.3	28	5,923	-41.7	-48.5	3.5		
350 28	8,196	-38.3	-43.4	27	30.4	27	8,155	-37.1	-43.0	27	35.6	28	7,819	-48.0	-54.0	3.4		
300 28	9,186	-46.2	-48.8	26	34.4	27	9,198	-45.3	-37.9	27	39.3	28	8,817	-54.7	-59.7	3.2		
250 27	10,374	-53.8	-53.8	26	39.1	27	10,393	-53.5	-53.5	27	41.6	28	9,971	-58.8	-63.8	3.1		
200 27	11,790	-57.4	-57.4	27	39.5	27	11,811	-57.5	-57.5	26	43.7	28	11,384	-53.8	-58.8	3.0		
175 27	12,635	-56.8	-56.8	27	37.1	27	12,656	-57.9	-57.9	27	41.1	28	12,246	-54.5	-59.7	2.9		
150 26	13,612	-57.2	-57.2	27	31.9	27	13,625	-58.5	-58.5	27	35.2	28	13,251	-50.1	-57.7	2.9		
125 26	14,761	-58.8	-58.8	27	28.0	26	14,770	-60.2	-57.4	27	32.7	28	14,445	-49.2	-57.2	2.8		
100 25	16,195	-61.0	-61.0	27	22.9	26	16,183	-61.3	-57.7	27	25.5	28	15,482	-49.4	-57.2	2.6		
80 25	16,529	-62.8	-62.8	27	16.9	26	17,516	-61.1	-57.9	27	19.0	28	13,766	-47.8	-57.0	2.6		
70 24	16,627	-62.7	-62.7	27	18.0	26	16,335	-63.4	-57.4	27	15.0	26	18,259	-47.1	-57.0	2.6		
60 24	19,303	-61.1	-61.1	24	11.9	24	19,288	-62.4	-57.4	27	12.6	29	19,281	-46.5	-56.5	2.6		
50 24	20,434	-60.4	-60.4	26	7.7	24	20,415	-60.5	-56.9	26	9.3	26	20,494	-46.7	-56.4	2.8		
40 22	21,829	-59.3	-59.3	26	7.0	24	21,810	-59.0	-56.9	27	6.8	25	21,980	-45.1	-56.4	2.8		
30 21	23,640	-58.1	-58.1	26	4.0	23	23,623	-56.9	-56.9	25	2.9	23,928	-44.7	-56.6	2.8			
25 21	24,792	-56.8	-56.8	24	2.5	25	24,782	-55.7	-55.7	23	2.9	25,115	-44.5	-56.5	2.6			
20 19	26,214	-54.8	-54.8	23	2.1	24	26,210	-53.8	-53.8	17	1.8	16	26,594	-44.7	-56.5	2.6		
15 17	28,062	-52.8	-52.8	11	2.8	23	28,073	-51.1	-51.1	16	2.7	9	28,517	-45.2	-52.4	1.3		
10 9	30,738	-48.5			15	30,704	-48.1			23	5.0		30,807	-47.2				

DODGE, NE		PAGO PAGO, AMERICAN SAMOA										PITTSBURGH, PA										PONAPE, CAROLINE IS.								
		1011 MB					998 MB					978 MB					1005 MB													
SFC	28	403	-12.6	-15.4	30	+4	28	5	28.9	24.7	0.7	4.2	28	270	-11.4	-14.7	03	+7	27	359	-9.6	-13.9	C5	+2	28	39	28.0	23.2	0.7	3.3
1000	28	28	998	28	28	28	28	28	28	28	28	28	28	28	23.1	0.7	4.7	11	23	29	-15.7	-19.3	35	1.7	28	83	27.0	22.7	0.7	3.9
950	28	578	-10.5	-12.5	28	+1.2	28	552	23.3	20.8	0.6	5.6	28	582	-7.9	-12.6	30	1.2	27	586	-8.6	-11.7	31	1.7	28	535	23.2	20.9	0.7	7.4
900	28	998	-6.3	-11.9	28	+4.2	28	1,024	20.4	17.5	0.6	6.6	28	1,004	-5.3	-13.5	29	3.9	27	1,006	-8.3	-13.8	30	3.9	28	1,006	19.9	17.5	0.8	8.0
850	28	1,448	-3.0	-11.2	29	6.0	28	1,516	17.6	13.1	0.6	6.0	28	1,454	-9.3	-15.6	28	6.6	27	1,449	-7.9	-15.0	29	6.0	28	1,498	17.3	12.2	0.8	7.1
800	28	1,929	-3.1	-13.8	29	7.6	28	2,033	15.3	9.3	0.5	5.7	28	1,932	-5.0	-17.1	28	8.8	27	1,921	-8.1	-16.6	29	9.7	28	2,016	16.0	6.7	0.8	3.8
750	28	2,438	-5.1	-16.6	29	9.1	28	2,579	12.5	4.7	0.5	4.8	28	2,438	-6.9	-18.2	28	10.3	27	2,422	-8.7	-19.3	29	12.1	28	2,563	13.9	-2.0	0.7	2.6
700	28	2,977	-8.6	-19.9	28	10.8	28	3,155	9.4	-9.5	0.5	4.6	28	2,973	-9.3	-20.7	28	11.7	27	2,955	-10.8	-20.8	29	14.0	28	3,142	10.9	-3.0	0.7	2.9
650	28	3,549	-11.4	-22.6	28	13.1	27	3,768	6.1	-3.3	0.7	5.0	28	3,544	-12.0	-23.4	28	13.7	27	3,532	-13.4	-23.5	29	15.9	28	3,756	7.6	-6.9	0.7	3.6
600	28	4,159	-15.1	-25.4	28	14.6	26	4,422	2.6	-8.3	0.6	5.2	28	4,152	-15.5	-26.0	26	16.3	27	4,127	-16.7	-27.7	29	18.2	28	4,411	3.8	-11.2	0.8	3.5
550	28	4,811	-19.3	-29.3	28	16.4	26	5,121	-1.4	-14.8	0.9	4.7	28	4,804	-19.6	-29.5	28	17.8	27	4,776	-20.5	-28.7	29	20.3	28	5,113	-3.3	-14.2	0.8	2.8
500	28	5,513	-24.1	-33.2	28	18.4	26	5,878	-5.7	-18.8	10	4.0	28	5,506	-24.1	-34.2	28	19.6	27	5,475	-24.9	-32.2	29	23.5	28	5,870	-4.4	-20.2	0.7	4.0
450	28	6,274	-29.4	-38.5	28	19.2	26	6,693	-10.5	-24.3	10	3.7	28	6,266	-29.9	-33.9	27	21.9	27	6,234	-29.8	-36.6	28	26.1	28	6,694	-8.7	-24.3	0.7	5.8
400	28	7,104	-35.6	-43.3	28	21.6	26	7,589	-16.5	-27.1	10	3.0	28	7,096	-35.5	-44.3	28	25.3	27	7,063	-36.2	-40.0	28	28.6	28	7,596	-14.4	-31.1	0.6	6.3
350	28	8,022	-42.1	28	24.4	26	8,583	-23.3	-34.6	10	3.2	28	8,016	-41.9	-45.9	28	29.3	27	7,981	-41.7	-46.2	28	32.5	28	8,599	-21.0	-37.3	0.5	6.7	
300	28	9,047	-48.7	27	27.8	25	9,689	-31.7	-43.1	11	3.7	28	9,043	-54.1	-54.9	28	27	35	24	9,015	-47.1	28	40.4	28	9,715	-29.6	-44.4	0.6	4.4	
250	28	10,230	-54.6	27	30.9	25	10,955	-41.6	13	4.5	28	10,227	-54.4	27	37.9	24	10,208	-52.2	28	42.4	28	10,988	-40.0	-51.9	1.2	3.3				
200	28	11,681	-55.9	27	29.1	25	12,445	-53.9	16	5.2	28	11,680	-56.4	27	37.9	25	11,651	-53.7	28	40.8	28	11,484	-44.0	-52.3	1.5	5.5				
175	28	12,742	-58.6	27	27.6	25	13,270	-50.6	18	5.6	28	12,740	-55.7	27	31.3	25	12,644	-54.1	28	39.2	28	13,123	-45.2	-52.9	1.8	5.2				
150	27	13,900	-55.2	27	26.4	25	14,213	-49.6	18	6.7	27	13,449	-55.6	27	31.3	26	13,475	-54.4	28	38.5	28	14,270	-47.3	-53.3	1.4	5.6				
125	27	14,651	-56.5	27	21.1	25	15,292	-74.4	19	6.5	27	14,630	-56.5	27	27.1	24	15,639	-56.4	28	29.9	28	15,348	-75.5	-11.5	1.3	5.3				
100	27	16,031	-57.8	27	20.2	25	16,574	-78.7	17	6.1	27	16,011	-58.4	27	23.1	23	16,055	-57.5	27	24.3	28	16,415	-82.0	0.7	5.7					
80	27	17,147	-59.4	27	16.5	25	17,852	-76.4	12	5.0	26	17,438	-59.5	27	19.1	21	17,456	-58.5	27	17.6	28	17,086	-79.3	1.2	5.2					
70	27	18,304	-59.2	27	14.2	25	18,627	-73.5	10	7.9	28	18,273	-59.8	27	15.6	24	18,296	-59.0	27	15.7	28	18,635	-74.9	2.8	3.9					
60	27	19,272	-58.4	27	11.9	25	19,534	-71.0	09	10.7	26	19,236	-59.4	27	12.5	20	19,271	-57.7	28	12.4	27	19,542	-70.7	2.7	7.9					
50	27	20,420	-58.0	27	9.5	25	20,626	-66.5	09	13.3	26	20,382	-58.3	26	10.6	20	20,427	-56.3	27	9.3	27	20,636	-65.8	2.7	10.8					
40	27	21,829	-57.5	26	8.6	25	21,991	-62.5	09	15.6	25	21,792	-57.4	26	9.1	18	21,847	-55.6	27	5.9	27	22,004	-62.5	2.8	8.5					
30	26	23,656	-56.9	27	6.0	25	23,787	-57.7	09	19.4	25	23,612	-57.1	26	7.2	18	23,682	-54.7	24	2.1	27	23,797	-57.6	0.9	5.0					
25	26	24,815	-55.7	26	3.8	24	24,943	-55.4	09	22.6	25	24,770	-55.6	23	5.0	18	24,852	-53.6	19	2.2	25	24,954	-56.7	0.9	15.0					
20	26	26,250	-53.9	23	2.0	22	26,380	-51.7	09	26.3	26	26,192	-50.1	23	6.5	15	26,292	-52.3	15	2.0	23	26,376	-53.8	0.9	25.0					
15	22	28,120	-50.9	14	1.5	22	28,264	-47.5	09	34.6	20	28,042	-51.3	22	7.9	14	28,159	-50.6	15	2.1	19	28,246	-49.1	0.9	28.9					
10	10	30,751	-49.3	13	30	986	-40.6	09	30	640	-48.1								12	30	964	-42.2								

PORTLAND, ME 1014 MB				*	QUILLAYATE, WA 1006 MB				RAPID CITY, SD 904 MB				ST CLOUD, MN 985 MB				*	ST PAUL ISLAND, AK 1013 MB							
5FC	28	20	-11.6	-17.8	31	3.0	26	5.8	2.9	1.0	13	1.4	28	966	-10.3	-14.3	03	1.1	28	316	-17.3	-19.7	02		
1000	25	148	-11.0	-18.2	33	4.2	21	115	3.1	2.0	16	2.0							8	28	10	-1.0	-4.2	08	
950	28	522	-11.6	-19.0	33	8.0	26	516	1.9	.4	17	5.7							24	133	-1.8	-5.3	08		
900	28	937	-11.1	-18.8	33	8.2	26	951	-.5	-1.0	20	8.3	19	1,022	-12.0	-15.8	36	8	28	582	-14.8	-16.5	19		
850	28	1,376	-11.6	-19.0	32	8.5	26	1,004	-3.1	-4.3	21	9.0	28	1,493	-12.2	-12.9	28	3.8	28	924	-9.9	-12.4	-15.7	28	
800	28	1,840	-12.8	-20.5	32	9.6	26	1,885	-5.4	-6.4	22	9.3	28	1,921	-9.7	-13.9	29	5.1	28	1,900	-10.1	-16.5	28	5.8	
750	28	2,332	-14.4	-21.6	31	9.8	26	2,389	-6.1	-1.9	23	9.5	28	2,477	-6.6	-15.0	29	6.4	28	2,397	-11.3	-18.4	29	6.9	
700	28	2,854	-16.0	-24.0	30	10.8	26	2,922	-11.2	-18.5	24	10.2	28	2,964	-9.3	-17.0	29	8.6	28	2,922	-13.5	-21.3	29	9.3	
650	28	3,110	-18.4	-24.7	29	12.9	26	3,148	-12.7	-25	11.2	20.3	28	3,151	-12.4	-19.2	29	10.7	28	3,485	-13.4	-23.4	29	11.2	
600	28	3,464	-20.4	-29	12.9	26	3,464	-16.4	-16.4	13.0	26	28	3,460	-16.4	-23.2	29	12.9	28	3,464	-19.9	-26.4	29	13.2		
550	28	4,639	-25.4	-35.7	29	18.1	26	4,733	-22.6	-20	26	16.7	28	4,789	-20.5	-24.2	29	12.9	28	4,724	-20.0	-31	29	12.8	
500	28	5,325	-29.2	-38.0	29	20.8	26	5,425	-27.7	-34	26	16.7	28	5,487	-25.7	-32.2	28	15.2	28	5,413	-28.9	-36.6	29	18.8	
450	28	6,071	-33.9	-40.4	29	22.1	26	6,173	-33.2	-39	26	16.5	28	6,242	-31.3	-37	28	16.9	28	6,159	-33.9	-39.8	28	20.9	
400	28	6,888	-36.8	-44.3	28	25.0	26	6,991	-39.6	-43.1	27	19.7	28	7,035	-37.7	-42.1	29	19.7	28	6,975	-39.4	-44.0	28	23.7	
350	28	7,798	-43.5	-49.0	28	28.4	26	7,895	-45.9	-51.3	27	23.2	28	7,975	-44.5	-50.1	28	21.6	27	7,876	-45.6	-50.1	29	26.3	
300	28	8,822	-48.1	-54.7	28	31.7	26	8,903	-52.5	-52.5	27	24.5	28	8,999	-51.3	-52.5	28	23.4	27	8,888	-51.0	-52.5	29	29.3	
250	28	10,016	-50.9	-57.1	28	32.6	26	10,068	-57.1	-57.1	27	25.4	28	10,157	-56.9	-56.9	28	23.9	27	10,063	-54.7	-55.0	28	31.4	
200	28	11,465	-51.8	-58.1	28	33.1	26	11,481	-55.5	-55.5	27	20.7	28	11,556	-57.3	-57.3	28	26.0	27	11,496	-54.5	-55.0	28	29.1	
175	28	12,329	-52.9	-54.2	28	30.3	26	12,335	-54.2	-54.2	27	17.2	28	12,415	-55.0	-55.0	28	24.6	27	12,353	-53.3	-53.3	28	27.5	
150	28	13,246	-52.6	-52.2	27	26.1	26	13,326	-53.7	-53.7	28	14.8	28	13,401	-54.6	-54.6	27	22.6	25	13,348	-53.9	-53.9	28	26.5	
125	28	14,560	-52.7	-54.1	27	23.4	26	14,600	-52.9	-52.9	28	14.0	28	14,585	-55.9	-55.9	27	21.0	25	14,477	-55.1	-55.1	28	24.6	
100	28	16,940	-52.0	-54.2	27	20.0	26	16,925	-52.1	-52.1	29	10.4	28	16,850	-55.9	-55.9	27	21.0	25	16,750	-54.2	-54.2	27	25.0	
80	28	17,364	-55.1	-57.1	27	16.5	25	17,362	-54.1	-54.1	29	7.9	28	17,392	-54.0	-54.0	28	13.5	25	17,354	-57.4	-57.4	28	18.8	
70	28	18,217	-57.4	-59.9	27	13.6	25	18,221	-53.1	-53.1	28	6.9	28	18,232	-52.8	-55.5	27	12.7	24	18,198	-57.5	-57.5	28	16.4	
60	27	19,198	-54.8	-58.8	27	10,8	24	19,219	-53.0	-53.0	32	6.1	27	19,200	-58.0	-58.0	28	11.6	24	19,172	-57.4	-57.4	28	14.5	
50	26	20,365	-54.4	-57.4	27	8.5	24	20,390	-53.1	-53.1	34	6.1	27	20,351	-57.5	-57.5	28	10,3	23	20,333	-56.5	-56.5	28	13.6	
40	23	21,766	-53.8	-54.8	27	4.8	24	21,827	-53.3	-53.3	36	7.0	26	21,771	-57.3	-57.3	29	7.3	23	21,751	-56.1	-56.1	27	11.4	
30	21	23,639	-53.1	-53.1	25	2.8	23	23,677	-53.4	-53.4	02	9.5	23	23,556	-56.5	-56.5	30	5.5	23	23,573	-56.1	-56.1	27	11.2	
25	21	24,815	-52.7	-52.7	23	9.2	24	24,855	-53.2	-53.2	03	10.8	21	24,779	-54.5	-54.5	32	3.4	21	24,733	-55.7	-55.7	27	10.4	
20	26	26,261	-51.3	-51.3	14	1.6	15	26,320	-51.8	-51.8	05	10.7	20	26,242	-53.2	-53.2	01	3.0	21	26,166	-53.7	-53.7	26	9.3	
15	16	28,136	-49.4	-51.7	17	3.5	12	28,225	-49.9	-49.9	05	13.0	20	28,107	-50.7	-50.7	06	4.7	18	28,051	-51.9	-51.9	27	5.9	
10	7											11	30	817	-47.6	-47.6				21	28,560	-48.0	-48.0	09	9.5
																			18,31	-23.4	-47.5	09	13.4		

RAWINSONDE DATA

Average monthly values

FEBRUARY 1979

SALEM, IL 1001 MB				SALEM, OR 1000 MB				SALT LAKE CITY, UT 872 MB				SAN DIEGO, CA 1004 MB				SAN JUAN, P. R. 1017 MB					
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	
SFC	26	174	-8.0	-11.1	11	5.2	6.1	6.6	28	2.9	18	3.1	28	124	8.6	6.6	03	4.4	27	6	20.8
1000	1	220	-11.7	-14.3	02	1.1	2.4	1.38	2	1.2	1.9	1.6	27	158	10.1	6.0	03	4.6	27	14.9	22.1
950	26	581	-6.2	-9.1	26	3.1	2.8	4.42	2	1.7	2.1	2.6	28	58	11.0	9.9	26	5.9	27	16.0	5.6
900	26	1,010	-2.6	-6.1	16.3	6.0	2.8	9.80	1	1.6	-0.2	20	10.3	28	1,034	9.1	2	2.1	27	1,057	12.5
850	26	1,443	-2.1	-3.1	27	7.9	2.8	1,479	-1.0	-3.3	23	11.9	28	1,506	7.2	-8.3	26	3.2	27	1,541	13.6
d00	26	1,944	-0.7	-1.5	26	9.5	2.1	1,921	-3.7	-7.0	24	12.8	26	2,003	5.6	-11.5	29	3.9	27	2,050	11.8
750	26	2,445	-0.6	-1.8	26	11.8	2.0	2,428	-6.4	-12.3	24	13.1	28	2,485	5.0	-15.0	29	4.7	27	2,589	9.7
700	26	2,995	-7.1	-7.0	26	13.7	2.8	2,965	-9.2	-16.5	25	13.3	28	3,024	8.6	-14.3	27	7.1	27	3,159	7.4
650	26	3,570	-10.1	-21.9	28	15.8	2.8	3,573	-12.7	-19.5	25	14.2	28	3,595	5.2	-18.3	27	9.1	28	3,669	2.0
600	26	4,192	-13.9	-24.7	28	17.5	2.8	4,191	-16.6	-22.6	26	15.7	28	4,238	5.4	-20.4	28	8.4	29	3,761	5.4
550	26	4,838	-17.9	-28.0	28	20.3	2.8	4,790	-20.2	-27.1	26	16.8	28	4,864	5.4	-23.6	27	9.1	28	3,847	1.3
500	26	5,426	-22.6	-33.8	27	21.2	2.8	5,426	-25.1	-31.7	26	18.5	28	5,456	3.3	-23.0	28	10.8	29	3,974	0.9
450	26	6,310	-27.8	-38.2	27	22.2	2.8	6,310	-30.6	-38.1	26	16.5	28	6,318	-29.0	-36.1	28	15.1	28	6,680	-1.2
400	26	7,148	-33.2	-42.1	27	21.6	2.8	7,148	-37.1	-40.9	27	19.0	28	7,150	-35.2	-41.4	28	7.3	27	7,305	-30.5
350	26	8,078	-39.2	-45.9	27	16.3	2.8	7,964	-43.9	-50.2	27	20.5	28	8,059	-42.7	-41.7	27	8.6	27	8,245	-36.8
300	26	9,115	-46.6	-52.6	27	16.0	2.8	9,115	-50.7	-57.0	27	22.0	28	9,090	-50.1	-52.7	28	24.5	28	9,292	-44.6
250	26	10,306	-51.6	-56.1	26	16.4	2.8	10,306	-56.1	-61.1	26	22.1	27	10,256	-56.9	-58.7	28	24.3	27	10,490	-52.7
200	26	11,727	-56.9	-60.9	26	16.9	2.8	11,727	-56.9	-60.9	27	23.0	27	11,659	-58.6	-58.8	27	28.9	27	12,370	-52.4
175	26	12,575	-56.1	-57.8	27	15.5	2.8	12,575	-55.0	-57.2	27	20.4	27	12,572	-57.2	-59.6	27	29.5	27	13,225	-58.0
150	26	13,555	-56.2	-57.8	27	12.4	2.8	13,540	-54.9	-57.8	27	17.1	27	13,478	-56.9	-57.7	27	29.2	27	14,182	-64.4
125	26	14,709	-57.6	-57.6	27	28.5	2.8	14,573	-55.2	-57.2	28	14.8	27	14,630	-58.0	-60.3	27	26.1	26	15,280	-70.5
100	25	16,111	-60.1	-60.1	27	23.6	2.6	15,993	-56.0	-60.0	28	13.9	26	16,030	-58.8	-63.3	27	20.0	26	16,580	-76.4
80	25	17,572	-60.8	-60.8	27	17.9	2.6	17,415	-55.1	-60.9	29	9.6	26	17,470	-59.3	-63.7	26	16.8	25	17,869	-76.9
70	25	18,333	-60.7	-60.7	27	15.6	2.6	18,267	-55.6	-60.7	29	8.8	26	18,266	-59.8	-62.8	27	12.0	24	18,633	-75.5
60	24	19,294	-60.0	-60.0	26	12.2	2.6	19,294	-55.6	-60.0	30	7.1	25	19,238	-59.0	-62.3	27	8.8	24	19,544	-72.0
50	24	20,436	-58.6	-58.6	26	10.4	2.6	20,431	-55.2	-58.6	32	5.3	25	20,328	-58.1	-61.1	28	5.5	25	20,629	-66.2
40	24	21,842	-57.8	-57.8	26	7.2	2.5	21,831	-53.3	-57.8	34	5.4	24	21,798	-57.7	-59.2	28	2.7	25	22,002	-60.3
30	24	23,664	-56.0	-56.0	25	3.9	2.3	23,597	-54.9	-56.0	32	4.2	23	23,597	-56.9	-56.9	30	1.5	24	23,888	-55.4
25	24	24,825	-55.0	-55.0	24	2.9	2.2	24,851	-54.2	-55.0	33	4.2	24	24,844	-56.7	-56.0	33	1.7	24	24,995	-54.4
20	24	26,252	-53.1	-53.1	15	1.8	1.8	26,300	-52.9	-53.9	05	9.1	17	26,241	-54.2	-54.2	30	3.3	23	26,427	-50.7
15	24	28,123	-50.7	-50.7	15	3.1	1.6	28,160	-51.6	-51.6	05	11.7	13	28,112	-51.3	-52.6	29	4.7	21	28,310	-48.4
10	15	30,782	-47.7	-47.7	C9	5.6	1.4	30,851	-48.7	-48.7	07	10.6	28	30,851	-48.7	-48.7	9	31.000	-42.8		
7	5	33,222	-47.6	-47.6																	

SAULT STE MARIE, MI 996 MB				SPOKANE, WA 929 MB				TAMPA BAY, FL 1019 MB				TOPEKA, KS 990 MB				TRUK, CAROLINE IS. 1011 MB					
SFC	26	221	-16.7	-21.3	D6	1.1	28	720	-2.8	-4.4	16	2.8	28	13	10.7	8.6	03	28	1.3	28	2.1
SFC	26	271	-22.3	-27.3	D6	1.1	28	720	-2.8	-4.4	16	2.8	28	171	13.3	8.7	08	1.2	28	98	2.1
1000	8	576	-14.7	-19.5	10	1.5	28	968	-1.7	-4.0	21	6.3	28	603	12.3	8.7	18	1.8	28	23.5	5.7
950	26	986	-14.6	-19.6	23	5.2	28	968	-1.7	-4.0	21	6.0	28	1,056	10.9	3.5	24	1.0	28	20.6	6.7
900	26	1,027	-14.0	-19.5	10	1.5	28	1,019	-1.7	-4.0	21	6.3	28	1,030	10.0	3.5	24	1.0	28	20.3	7.3
850	26	1,501	-8.2	-47.1	21	2.1	28	1,509	5.9	-7.1	30	3.6	28	1,509	9.3	-1.4	23	2.5	28	1,625	1.1
800	26	1,999	-5.0	-7.2	24	3.3	28	2,003	3.7	-11.0	29	5.3	28	2,010	7.6	-7.6	25	6.0	28	2,043	2.5
750	26	2,522	-1.8	-11.8	26	4.3	28	2,524	1.1	-14.8	28	6.9	28	2,540	5.8	-11.7	26	7.8	27	2,622	-5.9
700	3	3,075	-1.2	-16.2	27	5.6	28	3,076	-2.3	-19.3	28	8.1	28	3,101	2.9	-17.7	27	9.4	28	3,155	-10.8
650	26	3,662	-4.6	-26.3	27	7.3	28	3,660	-5.0	-22.5	27	9.3	28	3,698	-5.9	-21.7	27	10.4	28	3,765	-10.8
600	26	4,287	-8.8	-25.0	27	9.6	28	4,282	-9.9	-25.6	27	10.9	28	4,333	-4.4	-18.8	26	14.8	28	4,414	-16.7
550	26	4,956	-13.3	-29.6	27	12.0	28	4,947	-14.5	-28.7	27	12.9	28	5,013	-9.8	-22.2	26	16.9	28	5,109	-17.7
500	26	5,674	-18.0	-33.1	27	15.6	28	5,663	-19.5	-31.3	27	15.0	28	5,744	-13.9	-26.9	26	19.2	28	5,857	-26.9
450	26	6,454	-23.1	-37.3	27	18.2	28	6,437	-25.2	-35.4	27	16.1	28	6,537	-19.1	-31.0	26	21.1	28	6,667	-33.5
400	26	7,300	-29.7	-42.6	27	21.5	28	7,281	-31.1	-41.6	27	17.4	28	7,433	-25.3	-37.9	26	24.3	28	7,553	-19.2
350	26	8,220	-34.3	-46.3	27	24.4	28	8,195	-34.4	-45.4	28	28.0	28	8,360	-32.6	-43.3	27	27.2	28	8,537	-25.4
300	27	9,911	-36.5	-47.3	26	28.1	28	9,825	-35.8	-45.8	28	30.9	28	9,825	-34.2	-41.7	29	16.8	28	8,047	-38.5
250	27	10,489	-35.1	-47.3	26	31.8	28	10,481	-35.1	-47.3	26	24.4	28	10,481	-31.0	-47.9	27	25.7	28	9,436	-33.0
200	27	11,907	-58.5	-58.5	27	31.8	28	11,848	-58.5	-58.5	27	26.0	28	12,072	-57.6	-57.6	26	38.7	28	11,390	-51.1
175	27	12,746	-59.1	-59.1	27	28.3	27	12,700	-59.3	-59.3	26	26.3	28	12,909	-60.1	-59.6	26	39.6	28	13,238	-58.6
150	27	13,712	-59.7	-59.7	27	27.5	27	13,666	-59.6	-59.6	27	26.6	28	13,867	-62.0	-62.0	26	38.1	28	14,189	-66.2
125	26	14,847	-62.6	-62.6	27	25.6	27	14,803	-60.3	-60.3	27	23.1	28	14,985	-65.5	-65.5	26	33.4	28	15,214	-73.7

RAWINSONDE DATA

Average monthly values

FEBR. APRY 1979

YAKUTAT, AK

10^7 mi

OLINE IS.

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SOLAR RADIATION INTENSITIES

Tabulated in langleyes per minute on a surface normal to the direction of the sun.

FEBRUARY 1979

Date	Sun's zenith distance								Date	Sun's zenith distance															
	A.M.				•	P.M.				A.M.				•	P.M.										
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°		78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°							
MAUNA LOA OBSERVATORY, HI																									
Air mass											Air mass														
	3.34	2.67	2.01	1.34	*	1.34	2.01	2.67	3.34		4.64	3.71	2.78	1.86	*	1.86	2.78	3.71	4.64						
22----	1.26	1.33	1.50	1.54	----	----	----	----	----	1-----	----	----	1.41	----	1.44	----	----	----							
23----	1.31	1.37	1.43	1.52	----	----	----	----	----	2-----	----	----	1.41	1.49	1.41	1.25	----	----							
24----	1.20	1.28	1.38	1.50	----	----	----	----	----	4-----	----	----	----	1.46	----	----	----	----							
27----	1.18	1.26	1.35	1.53	----	----	----	----	----	6-----	.97	1.08	1.22	1.40	1.50	1.38	1.25	1.14	1.04						
Aver-	1.24	1.31	1.42	1.52	----	----	----	----	----	13-----	1.04	1.14	1.25	1.37	1.45	1.31	1.15	1.03	.96						
ages										14-----	1.01	1.09	1.21	1.36	1.44	----	----	----	----						
										15-----	.97	1.07	1.18	1.33	1.39	1.24	1.10	.97	.89						
										16-----	----	----	1.13	1.25	1.42	1.31	1.15	1.04	.96						
										17-----	.98	1.09	1.19	1.34	1.43	1.28	1.14	1.03	.95						
										18-----	1.03	1.13	1.24	1.38	1.49	----	----	----	----						
										19-----	----	----	1.18	----	----	----	----	----	----						
										21-----	----	----	1.14	1.29	1.42	----	----	----	----						
										22-----	----	----	----	----	----	1.29	1.14	1.02	.89						
										23-----	.89	1.02	1.14	1.30	----	1.32	----	----	----						
										24-----	.99	1.09	1.19	1.36	----	----	----	----	----						
										25-----	1.07	1.16	1.26	1.39	1.48	1.36	1.21	1.11	1.02						
										26-----	----	----	----	* .73	----	1.30	1.13	1.01	.91						
										27-----	.63	.76	.94	1.21	1.41	1.30	1.15	.99	.90						
										28-----	.93	1.04	1.16	1.32	----	----	----	----	.90						
										Aver-	.96	1.06	1.17	1.34	1.45	1.33	1.17	1.04	.94						
										ages															
											* Solar Eclipse (Not included in average).														

NET RADIATION

Net radiation in langleyes per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

Date	1	2	3	4	5	8	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleyes	-4	-2	-17	-12	-31	-62	-63	-62	-60	-58	-46	-36	-27	-30	-35	-36	-12	-23	-17	-23	-14	-17	-16	-19	-29	-16	-11	-14	-28			

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES: Dates in the table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

- + And also on an earlier date or dates.
- 0 Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch of water equivalent to every 10 inches of snow-fall.

CLIMATOLOGICAL DATA - METRIC UNITS: Data from airport unless otherwise specified.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

- B Number of days maximum 21.1°C. or above for Alaskan Stations.
- Y Peak Gust.
- + And also on an earlier date or dates.
- U Indicates Urban site.
- R Indicates Rural site.
- Ø Station pressures apply to elevations shown in the "Elevations" table of the annual issue of this publication.

Conversion formulae to English Units are as follows:

$$\begin{aligned} 1 \text{ foot} &= 0.3048 \text{ meters} \\ ^\circ\text{F.} &= \frac{9}{5} \times ^\circ\text{C} + 32 \\ 1 \text{ inch} &= 25.4 \text{ millimeters} \\ 1 \text{ mile per hour} &= 0.447 \text{ meters per second} \end{aligned}$$

HEATING DEGREE DAYS: Data from airport unless otherwise specified.

- U Indicates Urban site.
- R Indicates Rural site.

COOLING DEGREE DAYS: Data from airport unless otherwise specified.

- U Indicates Urban site.
- R Indicates Rural site.

STORM SUMMARY:

- o Includes crop damage.
- c Crop damage.
- * No occurrence of storms or unusual weather phenomena reported.
- @ Includes heavy sleet storm.
- # Freezing drizzle and freezing rain, commonly known as glaze.
- Ø For breakdown of "All Others," and for detailed listing of other storms, see the Environmental Data and Information Service, NOAA, monthly publication STORM DATA.
- ‡ No Storm Data Report received for this State.
- ◇ Report Incomplete.
- + Storm damages are placed in categories varying from 1 to 9 as follows:
 - 1 Less than \$50
 - 2 \$50 to \$500
 - 3 \$500 to \$5,000
 - 4 \$5,000 to \$50,000
 - 5 \$50,000 to \$500,000
 - 6 \$500,000 to \$5 Million
 - 7 \$5 Million to \$50 Million
 - 8 \$50 Million to \$500 Million
 - 9 \$500 Million to \$5 Billion

RAWINSONDE DATA (Average Monthly Values):

All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 60° above the horizon, or any obstruction above the horizon. The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors. These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

- * Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.
- + Observations for these stations are scheduled at 0000 G.C.T.
- + Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

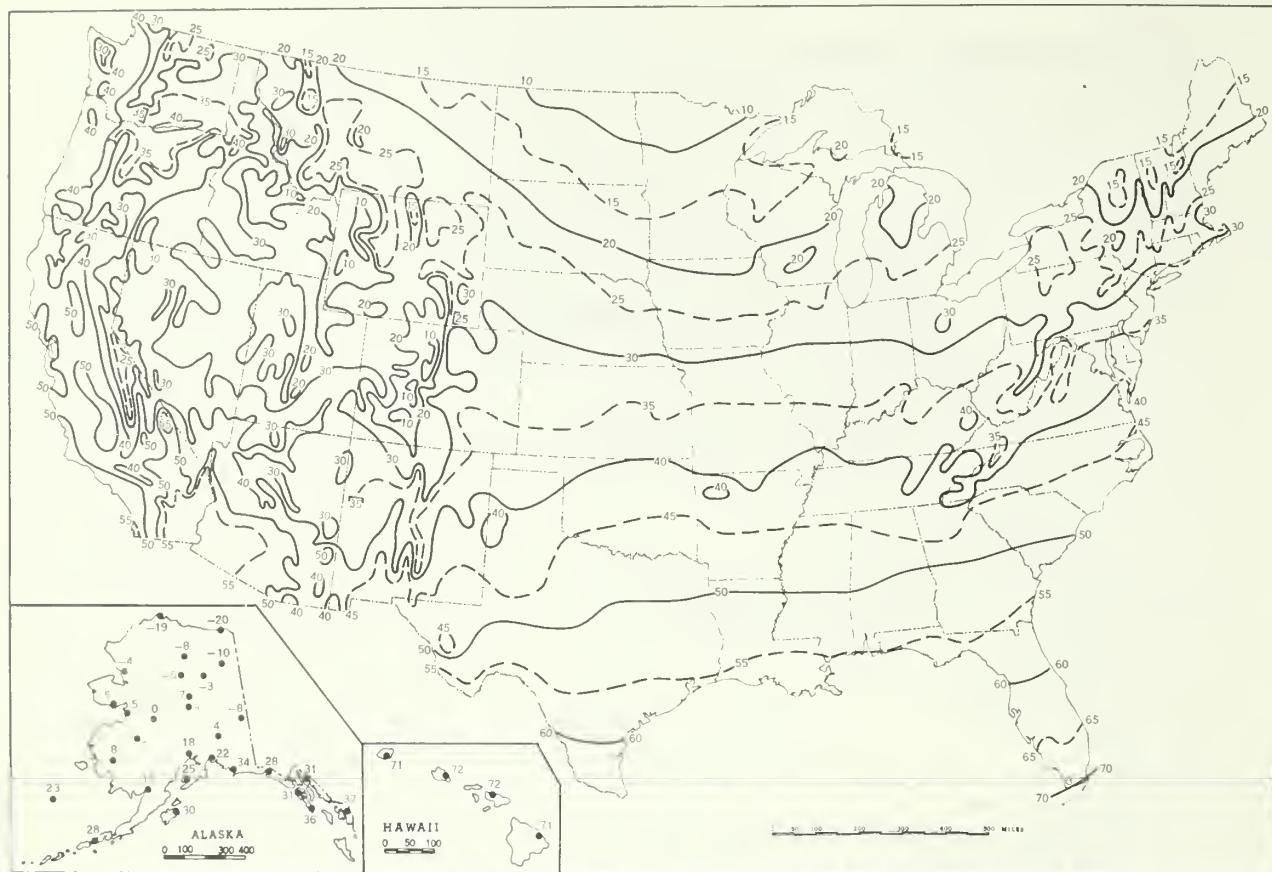
SOLAR RADIATION INTENSITIES: Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

()	Clouds Present	OM	Moderate Oust	HM	Moderate Haze	KS	Slight Smoke
*	Values corresponding to true solar noon	DS	Slight Dust	HS	Slight Haze	M	Moderate Haze-indeterminate
BO	Blowing Dust	F	Fog	I	Intense Haze-indeterminable		
BN	Blowing Sand	GF	Ground Fog	K	Smoke	N	Sand
O	Oust	H	Haze	KI	Intense Smoke	S	Slight Haze-indeterminate
OI	Intense Oust	HI	Intense Haze	KM	Moderate Smoke		

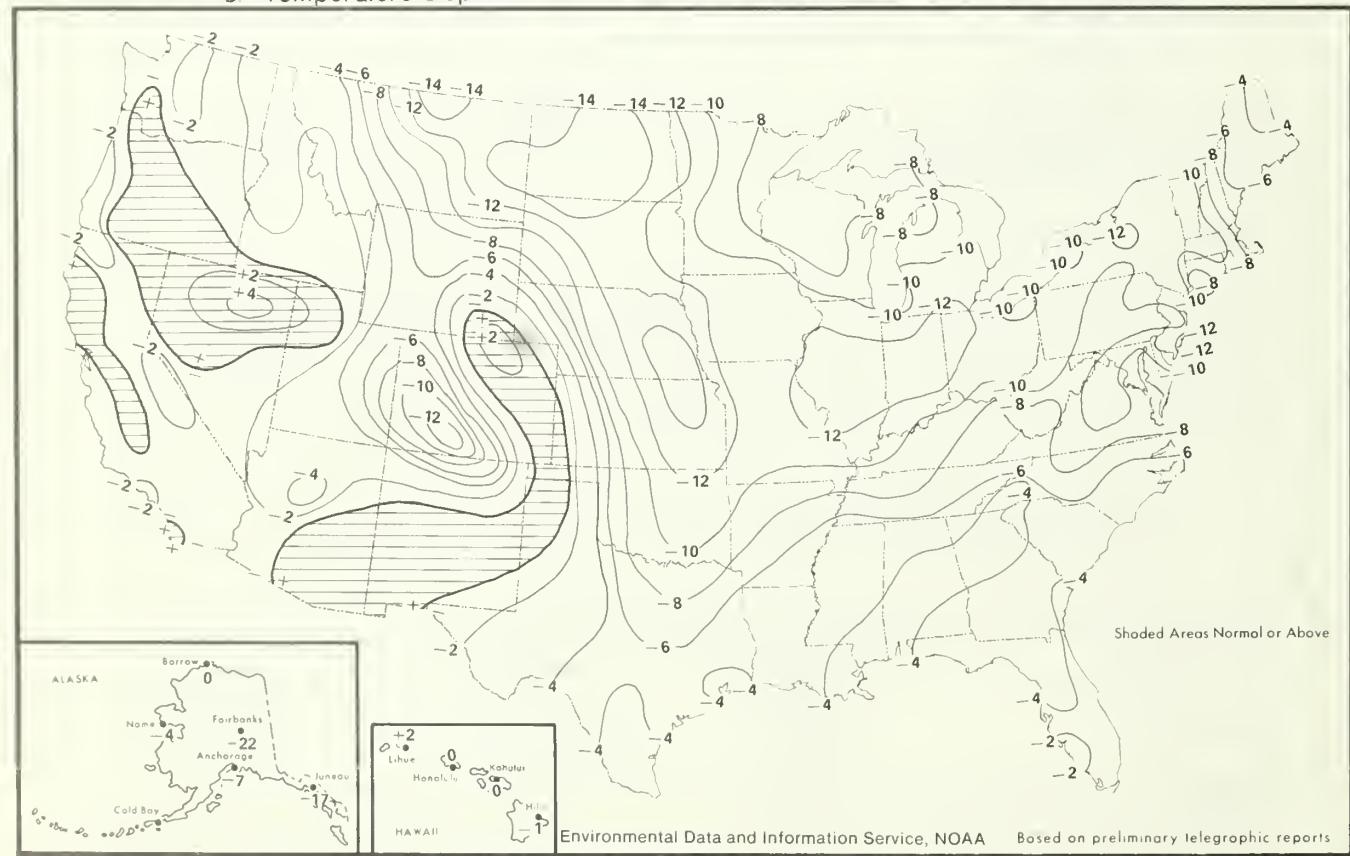
NET RADIATION: The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

Chart 1. A. Normal Daily Average Temperature ($^{\circ}$ F. 1941-70), February.



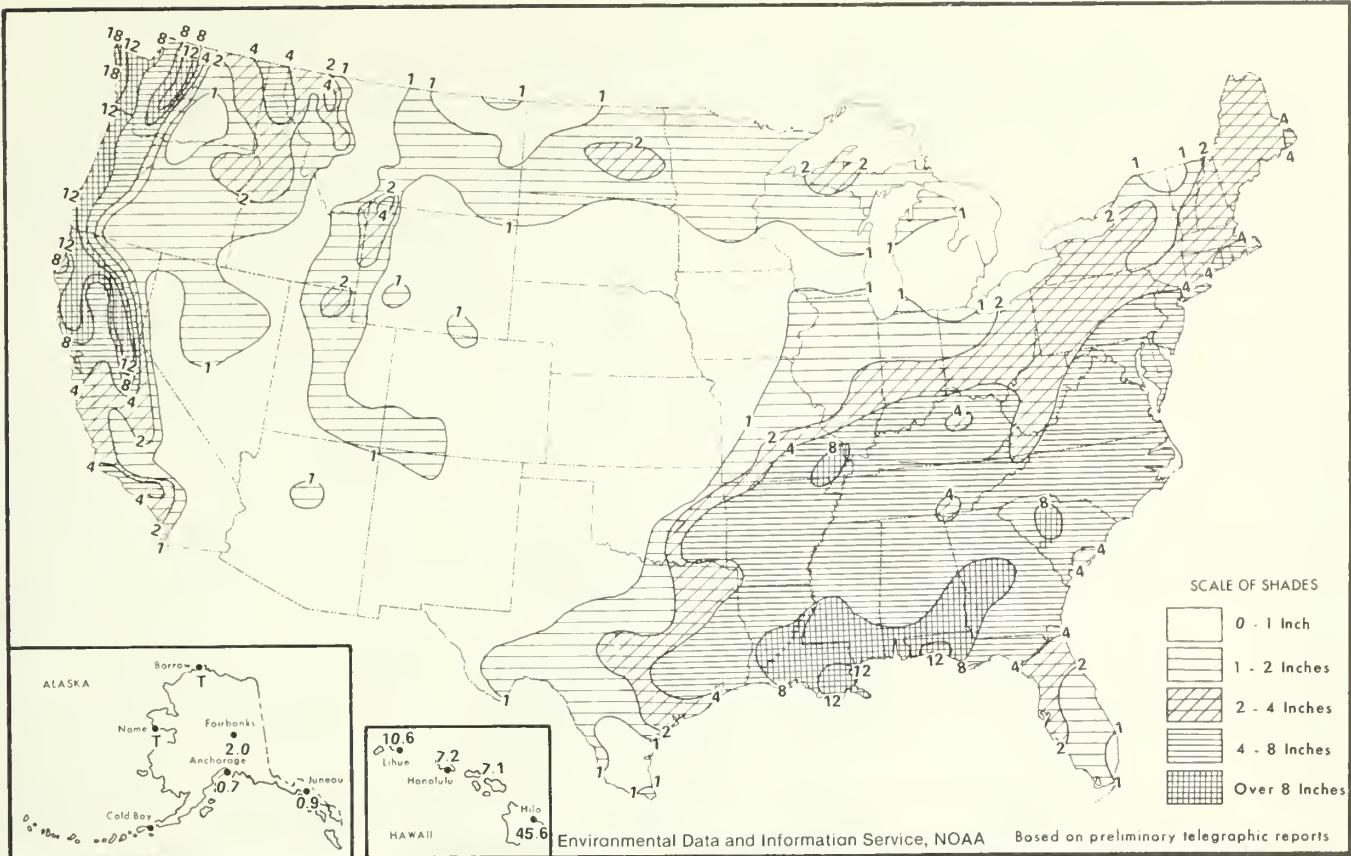
B. Temperature Departure from 30 - Year Mean ($^{\circ}$ F 1941-70), February 1979



Environmental Data and Information Service, NOAA

Based on preliminary telegraphic reports

Chart II. A. Total Precipitation (Inches), February 1979



B. Percentage of Normal Precipitation, February 1979

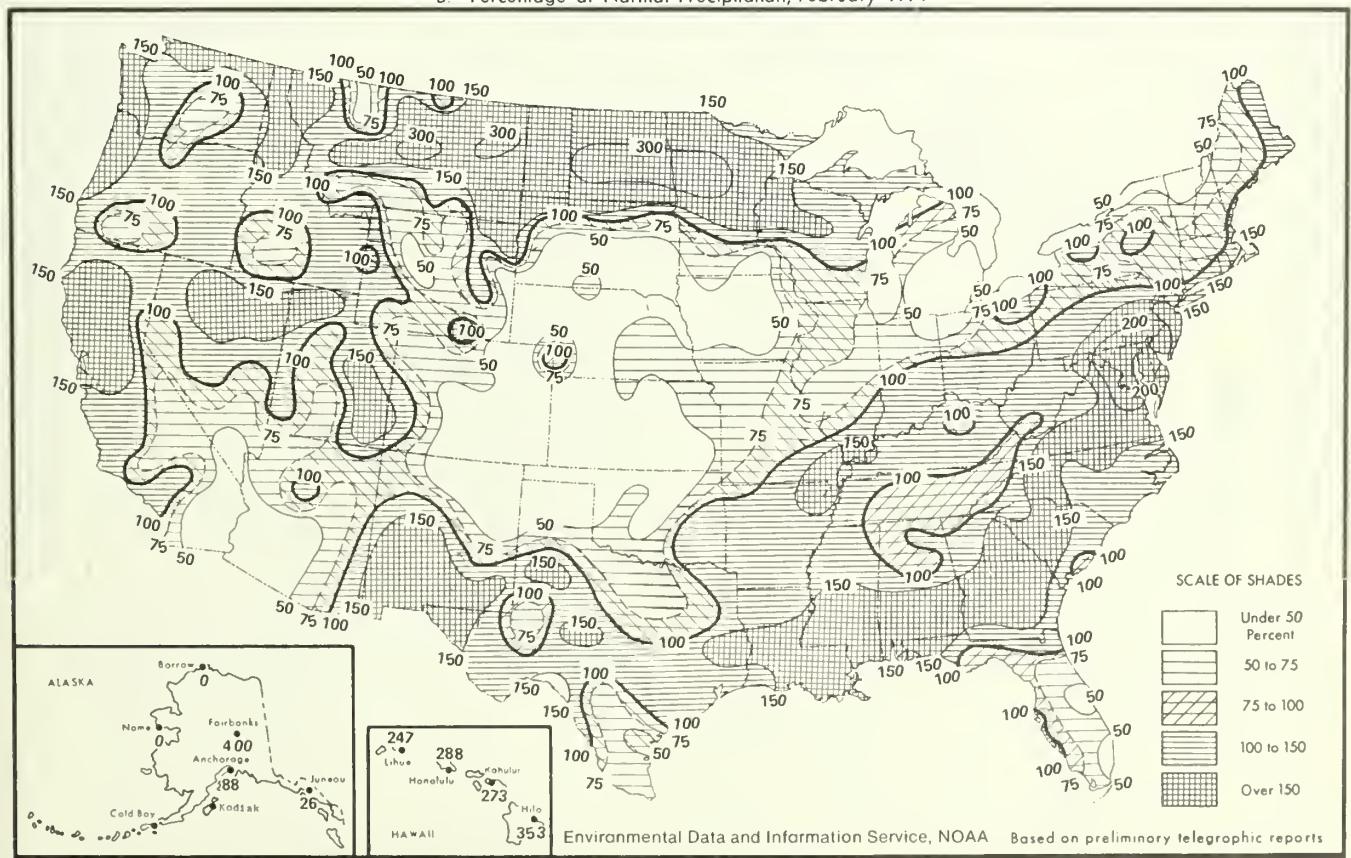
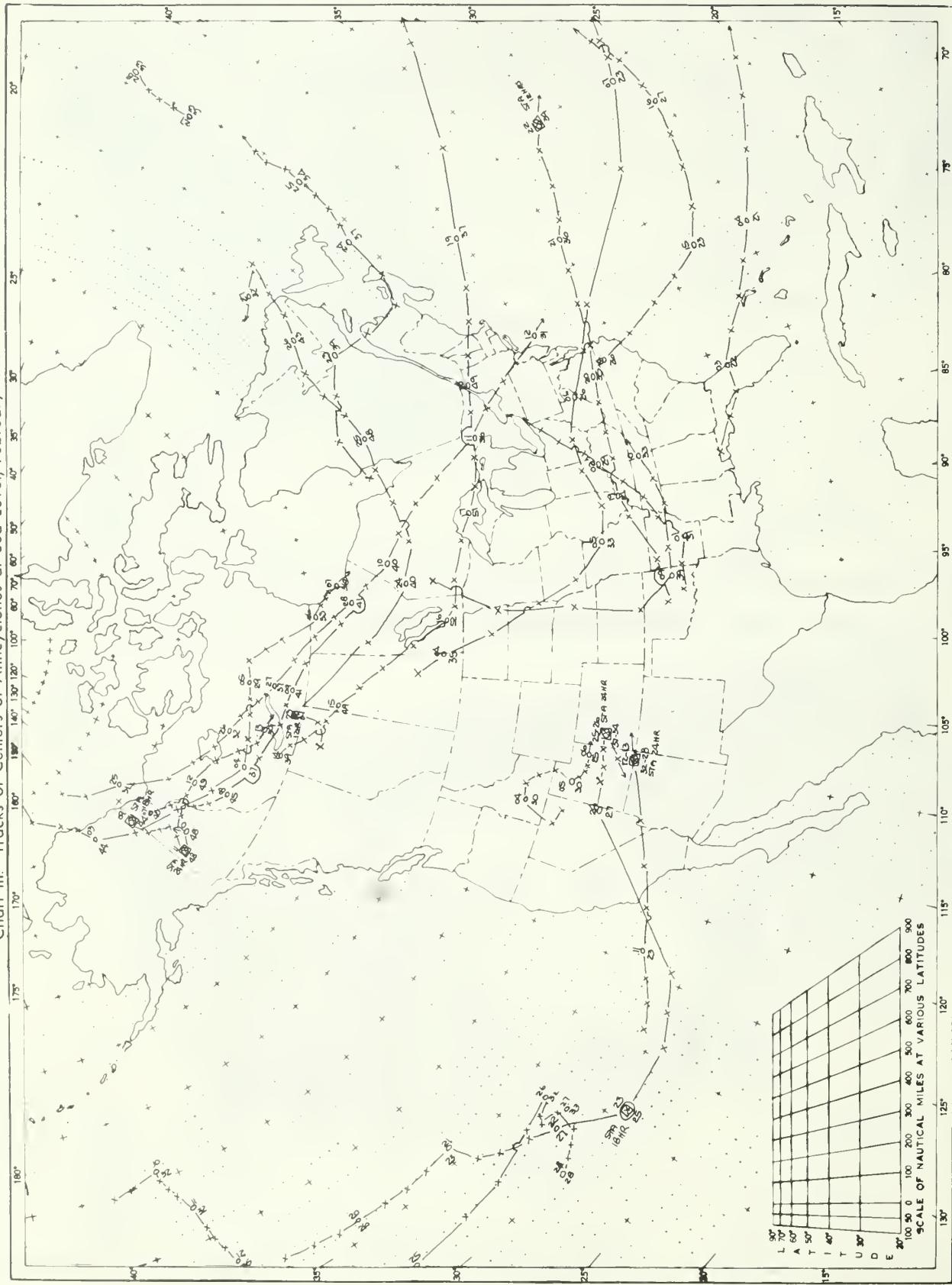
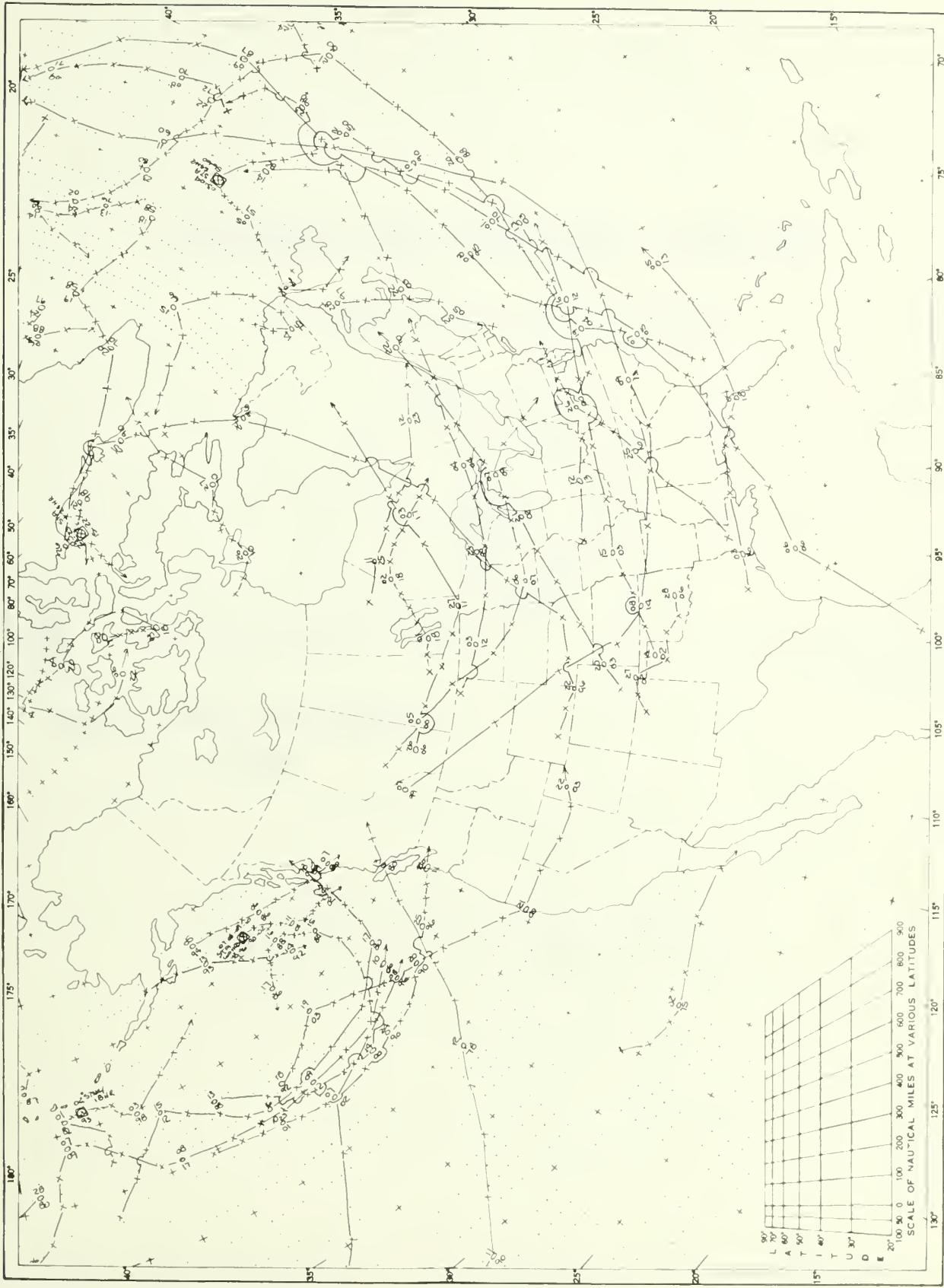


Chart III. Tracks of Centers of Anticyclones at Sea Level, February 1979



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IV. Tracks of Centers of Cyclones at Sea Level, February 1979



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

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MARCH 1979

VOLUME 30

NUMBER 3

CLIMATOLOGICAL DATA

NATIONAL SUMMARY



"I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF
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TION AND IS COMPILED FROM INFORMATION RECEIVED AT
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CAROLINA 28801."

Daniel B. Mitchell

DIRECTOR
NATIONAL CLIMATIC CENTER

noaa

NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION

ENVIRONMENTAL DATA AND
INFORMATION SERVICE

NATIONAL CLIMATIC CENTER
ASHEVILLE, N.C.

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

MARCH 1979

GENERAL SUMMARY OF WEATHER CONDITIONS

Lyle Denny, Climatologist
Environmental Data and Information Service, NOAA

HIGHLIGHTS: Well above normal precipitation prevailed over central and southern California, the southern Plateau, and central and northern Rockies. Some areas in southern California accumulated more than 5 inches. Elsewhere, nearly all of the Great Plains, the western Great Lakes, New England, the central East Coast, and parts of the South recorded more than their normal amounts of precipitation. Local flooding occurred in some areas where melting snow mixed with heavy rain. Average temperatures for the month were generally warmer than normal except in the northern Plains.

Severe weather during the first four days of March dominated the lower Mississippi Valley and the area from southern Alabama into the Appalachians to western North Carolina. Heavy rain, thunderstorms with hail, and tornadoes moved from west to east in the area. Temperatures ranged cooler than normal in the northern Plains, near normal in the West, and warmer in the East.

The heavy rain area moved off the East Coast early in the week of the 5th-11th. More than 2 inches of rain fell along most of the East Coast and into central Florida. An arctic front brought cool air into the Rockies and Plains, and then spread eastward later in the week. Freezing temperatures dipped as far south as the Florida Panhandle. Light rain accompanied the system east of the Mississippi River. Average temperatures for the week were much warmer than normal in the West and Northeast. Northern California averaged 12° above normal, and northern Maine reached 15° over the normal mark. The Mississippi River Valley averaged near or cooler than normal.

Most of the Nation received some measurable precipitation in the week of the 12th-18th. The heaviest amounts fell in the southern and central Plains where

thunderstorms rumbled frequently. The major winter wheat areas of the central Plains, where wheat had begun to break dormancy, welcomed the wetting. Some areas in Texas, Oklahoma, and Kansas totaled more than 2 inches. Elsewhere, moderate rain fell along the West Coast with snow in the higher elevations of the Cascades, the Sierras, and the Plateau. The additional snowpack was helpful, building the water table. It was warmer than normal everywhere but the Appalachians and eastward, where temperatures cooled slightly.

A series of storms moved into the Southwest during the third week. The storm systems brought unwanted rain to southern California and rain or snow to the southern Plateau and central and southern Rockies. The storms moved slowly eastward and into warm, moist air moving northward from the Gulf of Mexico. This situation produced some heavy precipitation from Texas to the western Great Lakes, eastward to the Appalachians and into New England. Thunderstorms were again frequent in the southern States. Warm weather continued over most of the Nation. Only the Southwest was cooler than normal.

The last week of March was similar to the previous week. A series of weather disturbances moved down the West Coast, headed into the Southwest, and edged eastward. Moderate to heavy rain fell along the entire coast and snow, some heavy, in the mountains and Plateau. Heavy rain hit the strawberry area of southern California. Snow covered the ground in the northern Plains, and rain fell in the central Plains. Thunderstorms with heavy rain occurred from central Texas into the Ohio Valley. The Southeast remained dry. Cooler air moved into the northern Plains, the Rockies, and the Plateau.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

MARCH 1979

STATE	Temperature						Precipitation					
	Monthly extremes						Monthly extremes					
	Station	Highst	Date	Station	Lowest	Date	Station	Greatest	Station	Least		
		°F			°F			In.			In.	
Alabama	2 Stations	87	22+	Guntersville	20	26	Dayton 1 N	10.98	Newton	3.10		
Alaska	2 Stations	57	14+	Umiat	-56	4	Yakutat WSO AP	27.35	Lonely	T		
Arizona	Gila Bend	89	12	Hawley Lake	-10	5	Sunrise Mountain	9.82	Yuma WSO AP	.17		
Arkansas	2 Stations	83	20+	3 Stations	17	11	Langley	11.60	Fayetteville Exp Station	2.01		
California	Death Valley	92	10	White Mountain 2	- 6	17	Lytle Creek Ranger Station	14.29	Ocotillo 2	.04		
Colorado	2 Stations	81	29+	Rio Grande Reservoir	-31	4	Independence Pass 5 SW	14.67	Gunnison	.20		
Connecticut	Bulls Bridge Dam	75	31	2 Stations	9	16	Saugatuck Reservoir	6.78	Groton	3.06		
Delaware	Milford 2 WSW	84	31	Wilmington Porter Resrv	15	16	Lewes 1 SW	5.58	Newark University Farm	2.06		
Florida	2 Stations	89	30+	2 Stations	25	26+	Pensacola FAA AP	12.96	2 Stations	.15		
Georgia	3 Stations	88	31+	2 Stations	21	17+	Unicoi State Park	9.49	Folkston 3 SW	.50		
Hawaii	Aloha Stadium-Halawa	90	8	Mauna Kea Obs 111.2	19	25	Hana Airport 355	17.51	3 Stations	.00		
Idaho	Grand View 2 W	74	24	Stanley	-21	3	Pierce	4.15	Anderson Dam	.20		
Illinois	Harrisburg	78	18	Rockelle	- 2	11	Carlyle Reservoir	8.26	Galena 1 N	2.08		
Indiana	Spurgeo 2 N	79	23	3 Stations	1	13+	Mount Vernon	8.28	New Castle	.91		
Iowa	Glenwood	76	29	Milford 4 NW	-10	10	Sac City	7.78	Independence 2 SW	1.90		
Kansas	2 Stations	84	29+	Johnson 11 ESE	5	4	Osborne	7.80	Bird City 11 SSW	1.20		
Kentucky	2 Stations	82	23+	3 Stations	11	17+	Bardwell 2 E	7.08	Warsaw Markland Dam	.71		
Louisiana	Paradis 7 S	86	19	Plain Dealing	24	6-	Many	8.73	Morgan City	1.46		
Maine	Lewiston	73	23	Rangely	-11	13	Eastport	7.72	Jackman	1.54		
Maryland	3 Stations	87	31+	Oakland 1 SE	8	15	Snow Hill 4 N	5.86	Centreville	.97		
Massachusetts	Dunstable	77	23	Stockbridge	0	16	New Salem	6.14	Hatchville	1.94		
Michigan	2 Stations	73	23+	Champion Van Riper Park	-19	12	Marquette FAA AP	6.08	Yale 1 NNE	1.15		
Minnesota	2 Stations	52	16	Tower 3 S	-22	15	Isabella 1 W	5.68	Karlstad	.72		
Mississippi	2 Stations	85	29+	2 Stations	22	6+	Hickory 1 E	14.73	Monticello	3.00		
Missouri	Mansfield	85	19	Berryman 6 NW	5	11	Marble Hill	9.37	Osceola	1.81		
Montana	Grass Range	72	15	Elk Park	-26	1	Cooke City	3.29	Biddle 8 SW	.05		
Nebraska	Crete	82	28	2 Stations	- 1	10	Nebraska City	7.87	Mitchell 5 E	.62		
Nevada	Sunrise Manr Las Vegas	84	8	Mountain City R S	-10	3	Lake Valley Steward	3.92	Amarcosa Farms-Garey	.43		
New Hampshire	Epping	75	23	Mount Washington	-19	16	Pinkham Notch	5.59	Lebanon FAA AP	1.84		
New Jersey	Atlantic City WSO AP	85	31	2 Stations	10	17+	Greenwood Lake	4.63	Bound Brook 2 W	2.00		
New Mexico	2 Stations	83	9	Dulce	-15	4	Bloomfield 3 SE	2.97	12 Stations	.00		
New York	4 Stations	76	31+	Old Forge	-14	13	Piseco	7.21	Hector	.53		
North Carolina	Dunn 4 NW	85	31	Grandfather Mountain	5	15	Lake Toxaway 2 SW	21.00	Washington Main Street	1.95		
North Dakota	Watford City 14 S	56	16	Rugby	-24	10	Tagus	2.07	Fairfield	.14		
Ohio	4 Stations	79	31+	Canfield 1 S	3	15	Chardon	4.75	Lithopolis 2 S	.52		
Oklahoma	Waurika	88	29	Goodwell Research Station	11	4	Hee Mountain Tower	8.45	Goodwell Research Station	.70		
Oregon	2 Stations	82	10+	Seneca	-12	2	Valsetz	11.29	Seneca	.04		
Pennsylvania	Carlisle	83	30	Warren	2	15	Germany	4.95	Donegal 2 NW	.77		
Puerto Rico	2 Stations	93	26	Adjuntas Substation	44	6	Pico Del Este	13.09	Ponce City	.00		
Rhode Island	Providence WSO AP	71	22	North Foster 1 E	7	16	North Foster 1 E	3.19	Block Island WSO AP	1.07		
South Carolina	2 Stations	83	31+	Caesars Head	18	26	Hogback Mountain	10.95	Beaufort 7 SW	1.21		
South Dakota	3 Stations	74	17+	Camp Crook	-18	3	Vermillion 2 SE	4.05	Usta 8 WNW	.09		
Tennessee	Athens	83	31	Tazewell	14	16	Waverly 4 W	8.67	Greeneville Exp Station	2.59		
Texas	Falcon Dam	94	19+	Dimmitt 2 N	13	4	Long Lake 5 SW	10.48	7 Stations	.00		
Utah	Saint George	77	8	Scofield	-17	3	Blowhard Mtn Radar	9.25	Wendover Autob	.08		
Vermont	Rutland	73	23	Mount Mansfield	- 8	16	Searsburg Station	4.78	Montpelier FAA AP	1.87		
Virginia	Fredericksburg Natl Pk	88	31	2 Stations	9	16+	Meadows of Dan 5 SW	7.50	Woodstock 2 NE	2.19		
Virgin Islands	Truman Field FAA AP	92	18	Estate Pearl	58	20+	Ham Bluff L H Station	5.53	East End	1.14		
Washington	Cushman Power House 2	77	23+	Holden Village	1	1	Grays River Hatchery	11.64	Cmak 2 NW	.03		
West Virginia	5 Stations	83	31+	4 Stations	3	16	Snowshoe	6.01	Moorefield 2 SSE	.80		
Wisconsin	2 Stations	66	23+	2 Stations	-18	27+	Oshkosh	5.94	Viroqua	1.20		
Wyoming	South Pass City	72	11	Darwin Ranch	-27	4	Albin	4.05	9 Stations	T		

CLIMATOLOGICAL DATA
METRIC UNITS

MARCH 1979

State and Station	Elevation (ground)	Pressure		Temperature				Precipitation				Wind				Clouds		No. of days (sunrise to sunset)			
		Sea level		Average minimum		Average maximum		Departure from normal		Total		Resultant speed		Fogless mile (1.6 kilometers)		Partly cloudy, 4-7		Cloudy, 8-10		Sunny to unsunny	
		m	mb	m	°C	m	°C	m	mm	mm	m/s	m/s	m/s	m/s	%	%	%	%	%	%	%
ALASKA																					
BIRMINGHAM U	207	996.3	1018.9	19.7	6.4	13.1	0.3	27.2	2.6	-2.2	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
BIRMINGHAM M	189	995.3	1018.6	19.6	5.9	12.9	1.1	27.2	2.8	-2.8	2.0	5.0	6.1	1.2	0.2	2.3	1.4	1.4	1.4	1.4	1.4
HUNTSVILLE	190	995.2	1018.2	22.0	5.2	11.4	0.5	26.7	2.0	-2.6	2.6	5.0	6.8	1.2	0.5	2.0	17.4	1.4	1.4	1.4	1.4
MOBILE	64	1011.2	1019.2	21.0	0.9	16.0	0.8	27.2	2.1	-2.2	2.6	8.3	6.6	1.2	0.1	1.7	3	8	6	17	6.7
MONTGOMERY	59	1011.9	1019.0	21.0	6.4	15.0	1.4	27.2	2.9	-1.1	2.6	2.1	1.3	1.2	0.5	1.6	14.7	1.4	1.4	1.4	1.4
ANCHORAGE	35	1003.1	1008.1	3.1	-3.5	-0.2	4.7	8.3	2.1	-14.4	1	8	29	-5.0	7.1	7.0	5.6	2.0	12	0	24
ANCHORAGE	34	7.9	-23.6	5.2	-0.4	-0.2	-0.2	13.9	1.3	-3.9	3.1	0	5	1.2	1.2	1.2	1.2	0	1.2	0	8.5
BARRON	9	1024.0	1026.2	25.3	-32.6	-9.0	-0.8	-22.8	2.5	-63.9	3	0	31	-32.8	6.8	1.2	1.2	1.2	1.2	1.2	1.2
BARTER ISLAND	12	1001.0	1001.2	4.7	10.8	-7.7	1.7	15.0	2.0	-22.2	5	0	31	-11.7	7.3	1.5	1.5	1.5	1.5	1.5	1.5
BETHEL	38	1001.4	1017.8	-0.2	-2.6	-15.3	1.0	-20.0	1.8	0	31	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
BETLES	196	992.2	1017.8	-3.6	-1.4	-9.0	1.9	7.8	2.2	-1.7	2.4	0	30	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
BIG ODEIA	386	1001.8	998.0	3.8	0.0	1.9	3.6	8.2	2.2	-10.0	7	0	1.6	1.1	9.3	1.8	1.8	1.8	1.8	1.8	1.8
CALO BAY	29	1001.8	1012.8	-5.4	-16.8	-11.1	-1.4	5.0	2.2	-2.2	1	0	31	-16.1	6.6	1.2	1.2	1.2	1.2	1.2	1.2
FARIBANKS	479	994.9	1012.8	-5.4	-0.6	-11.9	-6.2	3.5	2.5	-6.7	2.1	0	29	-13.2	7.4	1.2	1.2	1.2	1.2	1.2	1.2
GULKA BAYS	19	1003.7	1006.3	3.8	-8.0	0.5	2.9	7.2	2.1	-13.3	1	0	26	-3.3	7.6	0.9	0.9	0.9	0.9	0.9	0.9
HOMER	4	1012.7	1013.2	5.3	-1.4	-0.9	2.0	10.6	2.5	-8.8	3.1	0	18	0.1	10.1	1.0	1.0	1.0	1.0	1.0	1.0
JUNEAU	15	1002.7	1006.6	3.2	-5.1	-0.9	5.5	11.1	2.4	-5.6	1.6	0	23	-5.0	7.3	1.0	1.0	1.0	1.0	1.0	1.0
KING SALMON	4	1001.1	1005.2	6.3	0.2	3.3	2.0	10.6	2.4	-17.8	1.4	0.1	20	3.2	2.1	0.8	0.8	0.8	0.8	0.8	0.8
KODIAK	3	1014.9	1015.5	-8.3	-18.7	-13.4	-4.0	2.2	2.5	-20.6	1.4	0.3	31	-17.8	6.9	1.2	1.2	1.2	1.2	1.2	1.2
KOTZEBIE	105	998.0	1011.0	-4.6	-15.3	-9.9	-2.9	7.2	2.5	-21.7	1.7	0	30	-1.7	1.7	1.2	1.2	1.2	1.2	1.2	1.2
MIC GRATH	4	1010.5	1011.3	-5.0	-12.7	-9.5	-1.7	5.0	1.4	-25.0	1.4	0	31	-13.3	7.2	9	11	9	11	9	11
NOPE	7	1000.7	1001.6	1.2	-3.1	-0.9	3.7	5.6	2.5	-12.2	7	0	20	-2.8	8.5	1.2	1.2	1.2	1.2	1.2	1.2
ST. PAUL ISLAND	105	1001.6	1001.7	2.2	-6.9	-2.3	4.3	6.1	2.4	-16.1	3.0	0	31	9.7	5.8	0	0	0	0	0	0
TAKKEENAH	11	1008.8	1009.8	2.5	-2.7	-0.1	2.8	6.7	1.5	-11.1	1	0	31	-3.3	8.2	2.5	2.5	2.5	2.5	2.5	2.5
UNALASKA LEFT	9	1009.5	1010.6	4.1	-1.3	1.4	2.4	8.9	2.5	-8.9	2.9	0	18	-0.6	9.0	6.9	6.9	6.9	6.9	6.9	6.9
VALdez																					
YAKUTAT																					
ARIZONA																					
FLAGSTAFF	215	976.0	1014.8	6.4	22.8	15.8	0.4	28.1	12+	-12.8	7	0	30	4.4	4.5	4.5	4.5	4.5	4.5	4.5	4.5
PHOENIX	338	955.8	1014.0	6.3	20.8	13.0	0.7	27.8	7	1.7	4	0	30	3.3	5.0	5.0	5.0	5.0	5.0	5.0	5.0
TUCSON	788	951.0	1015.3	2.1	6.0	-0.5	2.3	8.9	1.1	0	23	0	0	4.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6
WINSLD	1492	1014.8	1014.8	24.8	10.7	17.8	0.1	31.1	8	6.1	1.8	0	30	3.9	4.5	4	4	4	4	4	4
YUMA	59	1007.5	1014.8	2.1	-0.1	-1.3	1.4	2.4	2.5	-8.9	2.5	0	18	-0.6	9.0	6.9	6.9	6.9	6.9	6.9	6.9
ARKANSAS																					
FOOT SWITH	136	1000.0	1016.7	5.4	11.3	1.1	2.9	27.2	5	-3.9	5	0	7	4.4	6.8	14.6	53	9.6	13	13	13
LITTLE ROCK	178	1007.8	1017.4	6.4	18.7	17.1	0.4	25.0	2.9	-1.7	11	0	5	5.0	6.4	7.9	7.4	7.4	7.4	7.4	7.4
NO. LITTLE ROCK	165																				
CALIFORNIA																					
BAKERSFIELD	145	999.7	1017.2	9.6	14.6	0.9	2.8	2.8	9+	0	0	0	9.4	74	50	29	14	14	14	14	14
BISHOP	1252	A722.3	17.7	0.2	9.0	1.1	2.5	0	8+	-4.4	2	0	13	1.7	67	12	1.2	1.2	1.2	1.2	1.2
BLUE CANYON	1609	#36.0	1014.9	9.5	1.1	5.3	2.0	18.9	6	-6.1	2	0	16	1.7	67	16	12.5	12.5	12.5	12.5	12.5
EUREKA U	13	13.2	6.8	10.0	0.9	17.2	4	2.8	1	0	0	0	43	80	18	13	13	13	13	13	13
FRENO	100	1005.4	1017.2	19.4	8.7	14.1	1.9	26.7	9+	0	0	0	8.3	72	13	0	0	0	0	0	0
LONG BEACH	8	1015.2	1016.7	20.2	10.2	15.2	1.2	30.0	6	3.3	2	0	0	8.9	69	103	65	48	48	48	48
LOS ANGELES	30	1013.2	1016.7	19.3	9.5	14.4	0.7	29.4	7	2.8	0	0	0	9.4	78	149	93	54	54	54	54
LOS ANGELES U	82																				
MT SHASTA R	1077	1017.0	1017.3	12.8	-0.2	5.8	1.2	21.7	13	-6.7	1	0	0	0	69	136	33	80	11	11	11
DALTRAIL	2	1017.0	1017.7	15.8	0.1	12.9	0.9	21.7	11	-0.3	2.1	0	0	8.3	75	67	37	12	12	12	12
RED BLUFF	104	1003.4	1016.2	8.3	13.9	2.1	2.9	27.8	9+	3.9	2	0	0	7.2	70	62	24	12	12	12	12
SACRAMENTO	1377	1017.0	1017.2	18.1	12.0	9.0	2.3	23.9	6	0	0	0	0	8.3	71	121	31	51	51	51	51
SAN JOSÉ R	1615	1015.5	1015.5	10.4	2.1	6.4	0.1	19.4	8+	-4.4	2	0	0	13	75	127	11	11	11	11	11
SAN JOSÉ GO	4	1017.0	1017.5	19.3	15.0	12.5	0.7	28.0	9	7.8	1	0	0	9.4	70	81	47	47	47	47	47
SAN FRANCISCO U	16	1016.9	1017.5	15.9	13.2	0.8	23.3	8	0	0	0	0	0	7.8	78	10	55	55	55	55	55
SAN FRANCISCO J	72																				

CLIMATOLOGICAL DATA METRIC UNITS

METRIC UNITS

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State and Station		Pressure				Temperature				Precipitation				Wind				Visibility (sunrise to sunset)												
		Altitude ft.	mb	mb	mb	°C	°C	°C	°C	°C	°C	°C	°C	mm	mm	mm	mm	No. of days	Snow, ice pellets	Frost	mi/mile (1.6 kilometers)									
CALIFORNIA	STOCKTON	7	1016.6	1016.6	1016.6	19.5	7.6	13.6	2.1	25.0	8	2.8	2	0	0	0	29	>21	14	7	0	0								
COLORADO	ALAMOSA	2297	1015.8	1015.2	1015.2	6.8	-8.6	-0.3	12.8	28+	-19.4	5	0	31	7	2	3	8	76	76	1.3	22	10							
COLORADO SPRINGS	AIRPORT	1873	1013.4	1013.2	1013.2	9.2	-2.4	3.4	1.9	19.4	16+	+9.4	10+	0	25	-6.1	57	60	508	152	1.3	2.2	35							
DENVER	1610	1476	1016.3	1016.3	1016.3	11.1	-1.7	4.7	1.9	19.4	16+	-10.6	3	0	23	-5.0	56	32	1	462	102	4	NE	22						
GRAND JUNCTION	1426	421.3	13.6	13.6	13.6	-0.2	5.1	-0.1	17.8	28	-7.8	4	0	17	-1.7	67	51	32	14	86	0.8	3	SW	29+						
PUEBLO	1426	13.6	13.6	13.6	-1.3	6.2	1.7	2.1	23.3	28	-11.1	4	0	18	59	42	24	9	196	51	23.2	N	22							
CONNECTICUT	BRIDGEFORT	2	1019.0	1010.5	1010.5	9.9	2.3	6.1	2.8	17.8	23	-5.6	16	0	9	-1.1	65	94	5	61	9	1	T	0						
HARTFORD	52	1012.2	1016.8	1016.8	10.6	-0.3	5.1	3.1	22.2	23+	-8.9	16	0	17	-2.8	62	108	11	64	12	0	T	25							
DELAWARE	WILMINGTON	23	1016.6	1016.6	1016.6	13.8	1.1	7.4	2.1	26.7	31	-8.9	16	0	15	-0.6	62	66	>29	23	10	2	T	5						
DIST. OF COLUMBIA	WASHINGTON OUTLES	88	1007.5	1019.5	1019.5	15.5	0.5	8.0	2.6	28.9	30	-8.3	16	0	20	0.6	64	89	1	45	9	3	T	5						
WASHINGTON NATIONAL	3	1017.3	1019.6	1019.6	16.5	5.2	10.8	3.6	29.4	31	-3.9	16	0	4	2.2	60	62	>22	27	8	2	T	0							
FLORIDA	APALACHICOLA	6	1019.6	1020.3	1020.3	20.7	8.6	14.7	-1.3	25.6	20	2.4	26	0	0	10.6	80	39	>81	21	5	2	T	0						
DAYTONA BEACH	5	1019.3	1020.3	1020.3	23.4	12.5	18.0	0.3	28.7	20	0.1	31.1	22	0	0	11.1	68	104	18	91	1	0	T	0						
FORT MYERS	8	1019.3	1019.3	1019.3	26.5	13.9	19.8	2.7	-0.2	7.8	27	0	0	0	1	8.9	69	25	18	42	0	0	T	0						
JACKSONVILLE	1	1019.3	1018.3	1018.3	23.3	8.7	22.7	-1.0	27.8	5	16.1	24	0	0	0	1	9.2	74	26	-13	20	0	0	T	0					
KEY WEST	1	1019.3	1019.3	1019.3	25.5	19.8	22.7	-1.0	30.0	30	0.1	31.3	24	0	0	13.3	65	8	-45	7	4	0	0	T	0					
ORLANDO/MC CRY	29	1016.6	1016.6	1016.6	24.8	16.5	18.1	-0.7	29.4	21	9.4	2.7	0	0	11.1	70	829	169	282	6	5	0	0	T	0					
AFB	34	1014.9	1014.9	1014.9	20.7	10.2	15.5	0.0	25.0	20	1.7	2.6	0	0	12.2	5	10.9	66	48	-103	6	1	0	0	T	0				
PENNSYLVANIA	17	1017.3	1019.6	1019.6	23.0	13.4	19.6	-0.3	28.3	30	7.8	27	0	0	13.3	75	7.8	27	44	6	1	0	0	T	0					
TAMAQUA	6	1020.1	1020.1	1020.1	23.7	13.4	18.6	-0.3	28.3	30	7.8	27	0	0	13.3	75	62	-37	44	6	1	0	0	T	0					
WEST PALM REACH	5	1018.2	1019.6	1019.6	25.1	14.9	20.0	-1.0	28.3	24	7.2	8	0	0	12.8	67	27	-57	18	8	1	0	0	T	0					
GEORGIA	ATLANTA	244	989.5	1018.7	1018.7	19.6	7.0	13.3	2.3	27.8	20	-2.2	26	0	1	5.6	64	69	-76	28	11	2	0	0	T	0				
ATLANTA	308	611.7	1019.0	1019.0	19.7	7.2	13.4	2.8	27.8	20	-2.2	26	0	1	4.4	59	63	-56	47	29	9	1	0	0	T	0				
AUGUSTA	41	1013.9	1013.9	1013.9	21.1	6.1	13.6	1.1	27.8	20	-1.2	26	0	1	5.6	65	6.1	-84	30	6	0	0	0	T	0					
COLUMBUS	136	1005.1	1019.4	1019.4	21.4	7.6	14.7	1.7	28.9	20	-0.6	28.9	20	0	0	3	6.1	63	-36	59	10	0	0	0	T	0				
MACON	194	1016.4	1016.4	1016.4	21.4	7.6	14.5	0.9	27.8	20	-0.6	28.9	20	0	0	3	6.1	63	-95	39	148	12	0	0	0	T	0			
ROME	14	1018.6	1020.4	1020.4	18.9	4.7	11.8	1.6	27.2	28+	-3.3	26	0	0	7.2	62	61	-51	22	8	4	0	0	0	T	0				
HAWAII	HILD. KAHULUI	8	1016.3	1017.5	26.6	17.2	21.9	0.2	29.4	28+	14.4	25	0	0	16.7	75	135	-213	36	19	4	0	0	0	T	0				
LIHUE	15	1016.0	1016.0	1016.0	27.3	18.1	21.6	-0.4	28.9	17+	13.3	25	0	0	16.1	70	71	-61	14	4	0	0	0	0	T	0				
SAVANNAH	31	1012.2	1017.4	1017.4	26.2	18.6	22.2	-0.2	28.9	12	1.4	-13.3	3	0	0	16.7	74	32	-87	18	10	0	0	0	T	0				
POCATELLO	865	916.0	1017.4	1017.4	12.3	0.1	6.2	1.2	18.3	24	-5.0	2	0	16	-2.2	57	12	-13	4	8	0	0	0	0	T	0				
LEWISTON	431	462.9	1018.4	1018.4	8.1	-3.6	2.3	0.4	14.4	14	-13.3	3	0	0	28	-3.9	71	20	-4	7	9	0	0	0	T	0				
ROCKFORD	1356	988.4	1016.5	1016.5	4.1	-4.4	-0.2	-1.3	18.3	22	-18.3	11	0	0	28	-3.9	71	20	-4	7	9	0	0	0	T	0				
ILLINOIS	CAROL.	96	1015.1	1015.7	1015.7	13.1	4.9	9.1	0.3	22.8	18	-7.4	4	11	0	7	114	81	157	51	38	8	0	0	0	T	0			
CHICAGO N. W.	201	990.9	1015.4	1015.4	6.3	-2.5	1.9	-0.8	21.6	18	-15.6	18	0	0	22	-0.6	81	51	178	2.1	22	20	7.5	5	21	7.7	T	0		
CHICAGO N. H.	185	993.2	1015.9	1015.9	6.9	-2.2	2.4	0.3	21.1	18	-16.1	18	0	0	23	-1.1	81	40	35	124	1.7	22	20.6	5	30	5	21	7.7	T	0
HOLLIN. HIGHWAY	177	992.2	1016.7	1016.7	7.8	-3.3	3.3	0.3	21.1	18	-13.9	11	0	0	17	-0.3	78	70	25	15	2	0	0	0	T	0				
PEORIA	199	992.2	1016.7	1016.7	7.8	-3.3	3.3	0.3	21.1	18	-14.6	11	0	0	18	-0.6	80	112	41	165	178	2	0	0	0	T	0			
ROCKFORD	221	988.4	1016.5	1016.5	4.1	-4.4	-0.2	-1.3	18.3	22	-18.3	11	0	0	28	-3.9	71	20	-4	7	9	0	0	0	T	0				

CLIMATOLOGICAL DATA METRIC UNITS

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State and Station	Elevation (ground)	Pressure	Temperature	Precipitation												Wind																
				No. of days						No. of days						No. of days						No. of days										
				Depoture from norma			Depoture from norma			Depoture from norma			Depoture from norma			Depoture from norma			Depoture from norma			Depoture from norma			Depoture from norma							
ILLINOIS SPRINGFIELD	179	994.2	1016.9	9°3	-0.2	4.6	0.5	23.3	18	-12.0	11	0	1.6	1.1	79	95	27	29	15	4	206	51	1.6	23	14.3	5.29	5	2	24			
INDIANA EVANSVILLE	116	1003.4	1017.0	12.7	3.7	8.2	1.3	23.3	18	-7.2	11	0	1.1	2.8	71	160	41	58	17	7	T	22	15.2	SE	3	5	3	23	7.0			
INDIANA FORT WAYNE	241	986.8	1017.4	9.7	0.4	5.1	2.6	23.9	22	-12.2	11	0	1.5	0.0	73	180	24	11	3	2.2	23	14.3	NW	3	5	5	24	8.1				
INDIANAPOLIS	241	987.8	1017.6	11.0	1.6	6.3	2.1	23.9	22	-12.2	11	0	1.5	2.0	78	162	-34	16	16	2.2	23	18.2	NW	4	4	4	24	8.1				
INDIANAPOLIS	236	987.5	1016.6	8.4	-0.4	4.0	2.0	22.8	22	-13.9	11	0	1.7	0.0	77	102	33	14	16	2.0	22	12.5	SE	3	4	4	24	7.9				
SOUTH RENO	104	987.5	1016.6	8.4	-0.4	4.0	2.0	22.8	22	-13.9	11	0	1.7	0.0	77	102	33	14	16	2.0	22	12.5	SE	3	4	4	24	7.9				
BURGESS	211	980.7	1016.1	7.7	-1.9	2.9	0.2	21.7	19	-13.9	11	0	1.9	-1.7	72	107	40	40	13	4	122	51	1.6	27	1.2	3.2	3	6	22			
DEES HOTELS	286	980.7	1016.1	6.4	-0.8	1.8	0.7	22.0	28	-13.9	10	0	2.0	-0.6	71	107	49	35	104	3	104	127	1.7	32	20.6	NW	4	7	20	7.0		
DOUBLETREE	322	976.3	1017.3	3.6	-0.7	0.8	0.7	15.6	30	-16.7	15	0	2.2	-1.7	80	83	-11	24	10	8.4	305	213	1.7	34	1.0	3.5	3	6	22			
ST. LOUIS CITY	234	976.3	1017.3	4.4	-0.4	1.1	0.1	16.7	30	-17.8	10	0	2.0	-3.9	80	83	46	31	12	2	12.0	21.0	1.7	34	1.0	3.5	3	6	22			
WATERLOO	265	983.7	1016.6	4.1	-0.4	0.1	0.2	16.1	30	-15.0	0	0	2.0	-3.3	79	78	21	28	12	2	10.9	254	1.6	34	1.0	3.5	3	6	22			
KANSAS CITY	648	962.4	1016.1	11.8	-1.1	5.4	1.4	26.7	29	-8.3	4	0	0.0	0.0	72	128	89	52	12	4	79	51	0.4	35	17.4	NW	3	9	9	13	6.0	
CONCORDIA	648	962.4	1016.1	11.8	-1.1	5.4	1.4	26.7	29	-8.3	4	0	0.0	0.0	71	128	69	42	12	5	130	76	0.7	29	2.2	NW	3	9	9	13	6.0	
OGDEN CITY	787	923.5	1015.0	13.8	-0.6	7.2	2.1	26.1	29	-11.7	4	0	0.0	0.0	78	79	57	25	12	5	134	102	0.9	29	1.0	NW	3	9	9	13	6.0	
GODDARD	1114	985.1	1014.1	12.4	-0.4	5.5	3.0	22.2	28	-16.5	28	0	0.0	0.0	76	100	45	26	11	5	191	105	0.5	32	1.8	NW	3	9	9	13	6.0	
TOPKAPE	267	984.1	1016.5	11.5	0.3	5.9	1.5	16.5	28	-16.5	28	0	0.0	0.0	75	114	68	37	8	5	41	25	0.3	36	2.0	NW	3	9	9	13	6.0	
WICHITA	403	967.5	1016.0	14.4	2.2	8.3	1.8	26.7	29	-9.4	5	0	1.3	1.7	68	114	37	8	5	41	21.0	0.3	36	2.0	NW	3	9	9	13	6.0		
KENTUCKY	265	985.8	1017.9	13.5	2.7	8.1	2.7	25.6	22	-10.0	11	0	1.1	1.7	68	52	-52	16	2	15	T	2.2	23	3.0	3	7	21	8.0				
COLDINGTON	294	982.1	1017.9	14.3	3.4	8.9	2.4	23.3	22	-8.3	11	0	0.8	1.7	65	82	-40	30	11	4	12.0	21	1.8	22	1.0	NW	3	9	9	13	6.0	
LUDLWISVILLE	145	994.7	1017.5	14.3	3.8	9.1	2.4	24.4	21	-7.8	11	0	2.2	2.2	64	69	-59	31	16	4	23	25	1.8	22	1.0	NW	3	9	9	13	6.0	
LOUISIANA	20	1016.6	1019.1	22.0	9.6	15.8	0.4	27.8	30	2.2	6	0	0.0	0.0	67	108	-22	62	5	2	0	0	0.9	16	12.5	28	23	11	6	14	5.8	
BATON ROUGE	3	1016.9	1018.1	21.5	10.7	16.1	0.4	26.1	19	3.9	6	0	0.0	0.0	74	104	-22	62	5	2	0	0	0.9	16	11.5	28	23	11	6	14	5.8	
LAKE CHARLES	1	1017.6	1018.4	22.6	11.4	17.0	1.1	27.8	20	3.9	6	0	0.0	0.0	74	104	-22	62	5	2	0	0	0.9	16	11.5	28	23	11	6	14	5.8	
NEW ORLEANS	1	1017.6	1017.6	21.4	8.7	15.1	1.3	27.2	9	-2.2	5	0	2	0	71	146	47	92	12	5	0	0	0	0.9	16	12.5	31	24	10	2	19	6.3
SHREVEPORT	77	1007.8	1017.0	21.4	8.7	15.1	1.3	27.2	9	-2.2	5	0	2	0	71	146	47	92	12	5	0	0	0	0.9	16	12.5	31	24	10	2	19	6.3
MARINE	190	992.9	1018.3	4.2	-6.6	-0.1	4.0	17.2	22	-20.6	13	0	2.3	-2.8	73	94	38	26	13	0	106	14	2.0	22.9	0.7	27	1.8	3	5	3	23	8.1
CARRIBOU	13	1015.9	1018.3	5.9	-1.9	2.0	2.0	21.1	17.8	-13.9	16	0	1.8	-2.8	73	106	14	30	12	0	1.4	218	686	0.7	27	1.8	3	5	3	23	8.1	
MARYLAND	45	1013.9	1019.0	15.8	2.4	9.0	3.2	30.6	30	-7.8	16	0	1.1	0.6	59	52	-42	15	8	0	T	0	1.2	27	1.8	3	5	3	23	8.1		
BALTIMORE	45	1013.9	1019.0	15.8	2.4	9.0	3.2	30.6	30	-7.8	16	0	1.1	0.6	59	52	-42	15	8	0	T	0	1.2	27	1.8	3	5	3	23	8.1		
MASSACHUSETTS	192	1017.3	1018.3	8.5	-0.5	4.0	2.2	21.7	23	-11.7	16	0	1.6	-0.6	68	78	36	35	11	1	T	51	0	0.9	26	12.9	30	12	7	8	16	7.1
800 FT. MOUNTAIN	192	1017.3	1018.3	8.5	-0.5	4.0	2.2	22.2	23	-7.2	16	0	1.1	-0.6	68	77	25	30	12	1	T	51	0	0.9	26	12.9	30	12	7	8	16	7.1
WORCESTER	301	979.7	1018.2	-1.3	3.6	2.0	2.7	20.6	23	-12.8	16	0	1.9	-2.8	68	94	-4	44	13	33	51	0	0.9	26	12.9	30	12	7	8	16	7.1	
MICHIGAN (N)	210	989.8	1015.8	4.1	-6.9	-0.4	2.8	16.7	30	-16.1	11	0	2.3	-3.9	82	54	7	17	15	1	122	457	0.9	20	12.1	NW	3	9	9	13	8.1	
DETROIT METROP.	189	992.2	1016.9	8.5	-1.3	3.1	1.2	3.0	23	-17.8	15	0	1.8	-2.8	68	54	7	17	15	1	122	457	0.9	20	12.1	NW	3	9	9	13	8.1	
GRAND RAPIDS	235	987.5	1015.9	8.2	-1.5	3.4	3.1	3.0	21.1	23	0	1.7	-1.1	75	62	-1	20	18	0	137	76	2.2	21	13.9	NW	3	9	9	13	8.1		
HOUGHTON LAKE	239	986.1	1015.9	7.2	-1.8	3.4	2.7	2.1	21.1	23	0	1.8	-1.1	77	60	-13	31	16	0	137	76	2.2	21	13.9	NW	3	9	9	13	8.1		
LAUSING	256	983.7	1015.8	4.7	-1.9	0.5	2.3	16.1	23	-18.3	11	0	2.5	-3.3	81	77	34	26	13	1	103	422	1.0	20	10.3	NW	3	9	9	13	8.1	
MARQUETTE	431	992.2	1015.8	0.6	-3.1	-4.2	2.7	20.6	22	-12.8	11	0	1.7	-0.6	78	65	-4	44	16	0	115	143	2.1	21	18.8	NW	3	9	9	13	8.1	
MUSKEGAN MARIE	191	992.2	1015.8	4.8	-0.6	0.9	0.2	2.7	20.6	22	-12.8	11	0	2.5	-1.7	82	103	44	16	26	0	115	143	2.1	21	18.8	NW	3	9	9	13	8.1
Sault Ste Marie	220	988.5	1015.8	1.0	-6.5	-0.5	-2.7	6.1	30	-19.4	15	0	2.4	-5.6	82	117	42	21	1	1	345	737	0.9	22	13.0	NW	3	9	9	13	8.1	
MINNESOTA	435	962.0	1016.0	-1.6	-8.9	-5.0	-0.3	6.7	16	-22.2	10	0	27	-8.9	74	91	46	20	19	1	422	813	0.5	36	11.6	NE	3	9	9	13	8.1	
INTERNATIONAL FALLS	359	971.0	1016.6	-1.6	-6.6	-0.6	-0.5	7.2	16	-26.7	15	0	28	-11.7	68	42	14	20	19	1	422	813	0.5	36	11.6	NE	3	9	9	13	8.1	

CLIMATOLOGICAL DATA
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MARCH 1979

State and Station	Elevation (ground) m	Pressure		Temperature				Precipitation				Wind							
		Station Q 50° latitude		Average minimum °C	Average maximum °C	Date Lowest†	Date Highest‡	No. of days	Average relative humidity %	Total mm	Cloudy, 0-10 % Partly cloudy, 4-7 % Clear, 0-3 %	Cloudy, 0-10 % Partly cloudy, 4-7 % Clear, 0-3 %	No. of days (sunrise to sunset)	No. of days (sunrise to sunset)	Farthest mile (1.6 kilometers)	No. of days (sunrise to sunset)			
		mb	mb	mb	mb	mb	mb	mb	mb	mm	mm	mm	mm	mm	mm	mm	mm		
MINNESOTA	254	984.4	1016.0	-5.5	-1.7	0.3	7.2	19+	-18.4	15	0	22	65	55	31	16.5	NE 3		
ROCHESTER	395	986.5	1011.6	2.0	-6.8	-0.6	7.2	10	-20.4	10	0	24	56	59	28	5	19		
ST CLOUD	313	977.0	1016.4	0.8	-4.3	-0.9	5.0	31+	-24.4	15	0	27	79	77	30	5	19		
MISSISSIPPI	94	1006.8	1018.8	20.8	14.1	0.7	28.9	19	-1.1	26+	0	2	7.2	69	11.9	21	3		
JACKSON MEDIAN	88	1007.8	1019.2	20.9	7.4	13.8	0.4	27.8	28+	-1.1	26	0	4	6.1	66	21.4	20	10.3	
MISSOURI	270	983.7	1016.6	12.2	1.4	6.8	5.7	25.0	28	-7.8	11+	0	16	1.1	75	9	23	12	
COLUMBIA REGIONAL	309	978.7	1016.2	10.4	0.9	5.7	5.0	23.9	28	-8.3	15	0	18	0.6	75	10	21	19	
KANSAS CITY	226	102.5	1016.4	2.1	7.3	1.6	6.6	26.7	28	-7.2	15	0	15	0.6	85	16	10	10	
KANSAS CITY MUN AP	247	9.5	1017.1	0.2	4.7	0.2	4.2	8.3	25.3	28	-8.3	15	0	15	0.6	85	16	10	10
ST JOSEPH	163	996.3	1017.1	11.9	1.4	6.7	6.7	25.0	11+	-8.3	11	0	15	0.6	92	15	19	5	
ST LOUIS	386	970.5	1016.4	13.6	1.2	7.4	0.7	22.8	28+	-7.8	11	0	16	1.7	71	-4	27	11	
SPRINGFIELD	1	1087	990.3	1016.7	7.5	-9.8	-4.8	-2.3	18.9	24	-12.8	3+	0	23	-5.6	63	28	3	
MONTANA	80	811.5	933.6	1018.7	0.1	-4.1	-1.5	-1.5	11.1	24	-25.0	3	0	31	-6.7	86	1.1	7	
BILLINGS	1116	987.9	1018.4	7.0	-4.1	-0.5	2.3	18.3	24	-18.3	2	0	26	-6.7	59	1	1.1	1.1	
GLASGOW	1778	923.1	1018.1	5.5	-5.8	-0.5	2.0	20.0	24	-24.4	2+	0	27	1.1	59	1	1.1	1.1	
GREAT FALLS	1167	910.5	1018.6	7.4	-4.4	-1.5	2.3	17.8	24	-15.0	3	0	29	-5.6	63	1.4	12	0	
HARVEY	904	912.0	1019.1	7.1	-4.2	-0.9	1.8	17.2	24	-16.1	2	0	26	-6.7	62	0.6	10	0	
HELENA	801	921.8	1017.6	4.1	-6.5	-1.2	0.2	15.6	24	-24.4	3	0	31	-4.4	79	7	10	5	
KALISPELL	972	904.5	1018.6	7.7	-3.3	-2.2	1.4	16.7	24	-11.7	3	0	27	-3.9	69	13	16	0	
MILES CITY	922.8	1015.0	11.5	1.5	-1.5	0.5	3.7	21.7	24	-8.9	12	0	19	-2.8	64	30	12.5	0	
MISSOURI	561	969.2	1016.7	8.4	-3.1	2.7	0.8	21.7	29	-11.7	5	0	25	-2.2	74	141	80	8	
NEBRASKA	259	972.6	1016.3	9.2	-2.1	3.6	1.1	26.0	29	-9.6	15	0	22	-1.1	71	128	96	8	
GRAND ISLAND	471	959.7	1016.9	5.0	-4.6	0.5	0.1	15.6	17	-15.0	10	0	25	-2.8	78	74	53	53	
LINCOLN	846	916.4	1016.2	9.2	-3.7	2.8	1.5	21.7	29	-10.0	10	0	26	-3.9	67	45	33	33	
NORTH PLATTE	298	9.8	1015.9	9.4	-0.8	4.3	1.5	22.8	29	-11.1	15	0	18	-1.1	74	36	6	17	
OMAHA (REPPLEY)	399	1026	977.4	1015.0	6.9	-1.6	1.7	0.2	23.3	29	-14.4	10	0	22	-0.9	70	64	36	36
OMAHA (NORTH)	1206	922.8	1015.0	11.5	-1.5	0.5	3.7	21.7	24	-8.9	12	0	19	-2.8	64	31	18	5	
SCOTTSBLUFF	789	1015.0	6.4	-5.3	0.6	1.0	21.1	17+	-15.6	4	0	28	4.6	26	20	6	12	11	
VALENTINE	ELKO	1539	963.9	1016.4	11.1	-2.4	4.3	2.7	18.3	11	-6.7	31+	0	26	-1.7	72	15	7	14
ELY	1906	907.0	1016.0	8.4	-5.4	1.5	1.1	16.1	17	-15.6	10	0	31	-6.1	62	15	10	5	
LAS VEGAS	659	934.7	1015.3	2.0	-1.0	6.6	13.3	20.1	22.8	-7.8	8	0	25	-0.6	44	24	14	14	
RENO	1342	964.9	1015.8	13.8	-6.5	5.5	0.7	22.8	29	-11.1	15	0	20	-2.8	60	13	5	15	
WINNEMUCKA	1311	968.3	1016.5	13.4	-2.6	5.4	2.3	21.7	14	-12.8	2	0	27	-2.8	58	6	17	8	
NEW HAMPSHIRE	104	1005.4	1018.5	8.4	-3.7	-2.2	3.1	22.8	23	-13.3	16	0	21	-3.3	66	135	11	0	
MT WASHINGTON OBS	1909	984.4	1016.6	13.3	0.8	7.1	2.1	29.4	31	-8.3	16	0	29	-1.3	66	2	16	0	
NEW JERSEY	1	1019.1	9.9	2.6	6.3	1.1	20.0	31	-8.3	16	0	15	0.6	67	92	83	1.3	1.3	
ATLANTIC CITY	2	1019.3	12.9	2.8	8.0	3.1	23.1	31+	-6.7	16	0	9	-0.6	61	93	77	1.1	1.1	
ATLANTIC CITY U	17	1019.3	13.2	8.0	2.8	0.9	26.1	31	-6.7	16	0	8	-0.6	75	41	22	1.1	1.1	
TRENTON U	1	1019.1	12.9	2.8	8.0	3.1	23.1	31+	-6.7	16	0	8	-0.6	61	93	77	1.1	1.1	
NEW MEXICO	1619	936.1	1013.4	17.9	0.3	9.1	1.4	24.4	8	-5.6	5	0	16	-5.6	41	4	15	0	
CLAYTON	1515	934.4	1013.3	18.7	1.8	6.6	1.7	22.8	28	-6.7	4	0	20	-2.8	46	3	2	5	
ROSWELL	1112	988.6	1013.3	18.7	1.8	10.3	0.7	27.2	30	-5.0	11+	0	11	-2.8	50	0	0	1.1	
NEW YORK	84	1009.1	1019.2	9.6	-1.9	3.8	3.1	21.7	23	-11.1	16	0	19	-2.8	67	4.6	19	12	
ALBANY																25	0.9	25	

State and Station

Elevation (ground)
m

Station Q
50° latitude

mb

Average minimum
°C

mb

mb

Average maximum
°C

mb

mb

Date
Lowest†

mb

mb

Date
Highest‡

mb

mb

No. of
days

mb

mb

Average relative humidity
%

mm

mm

Total
mm

mm

mm

Cloudy, 0-10
%
Partly cloudy, 4-7
%
Clear, 0-3
%

mm

mm

Cloudy, 0-10
%
Partly cloudy, 4-7
%
Clear, 0-3
%

mm

mm

No. of days
(sunrise to sunset)

mm

mm

With thunderstorms
2.5 mm. or more
in 24 hours

mm

mm

Depature from normal
mm

mm

mm

Maximun depth
on ground
mm

mm

mm

Residual direction
mm

mm

mm

Residual speed
m/s

m/s

m/s

Directon
mm

mm

mm

Cloudy, 0-10
%
Partly cloudy, 4-7
%
Clear, 0-3
%

mm

mm

Cloudy, 0-10
%
Partly cloudy, 4-7
%
Clear, 0-3
%

mm

mm

Cloudy, 0-10
%
Partly cloudy, 4-7
%
Clear, 0-3
%

mm

mm

Cloudy, 0-10
%
Partly cloudy, 4-7
%
Clear, 0-3
%

mm

mm

CLIMATOLOGICAL DATA

METRIC UNITS

1030 11564

CLIMATOLOGICAL DATA
METRIC UNITS

MARCH 1979

State and Station	Elevation (feet)	Station No.	Sea level	Pressure				Temperature				Precipitation				Wind				No. of days (sunrise to sunset)																
				Average maximum		Average minimum		Departure from normal		No. of days		Snow, ice pellets		Resultant speed		Fastest mile (1.6 kilometers)		Cloudy, B-10		Partly cloudy, A-7		Sky cover to sunsets														
				Date	Lowest	Date	Highest	Date	Lowest	No. of days	High	No. of days	on ground	Total	Speed	Date	Direction	No. of days	sunrise to sunset	No. of days	sunrise to sunset	No. of days	sunrise to sunset													
PENNSYLVANIA				103	1006.8	1019.7	13.9	0.7	7.3	2.3	25.6	30	-6.7	1.6	0	19	-0.7	55	49	-33	15	10	8	13	5.8	66										
HARRISBURG				2	1018.6	1019.6	14.3	2.3	2.8	27.2	31	-8.3	1.6	0	10	0	T	1.0	29	13.9	NW	15	11	4	16	6.0	66									
PHILADELPHIA				347	973.9	1018.5	12.5	-0.2	6.2	2.8	23.9	30+	-11.1	1.5	0	15	-1.7	61	51	25	1.5	24	15.6	14	10	17	7.2	41								
PITTSBURGH				283	984.1	1019.1	10.1	0.4	4.8	2.6	21.1	31+	-10.6	1.5	0	18	-1.1	69	39	25	1.2	25	15.2	13	5	18	7.3	49								
SCRANTON				160	999.7	1019.2	11.6	-0.2	5.7	2.7	21.1	31	-8.9	1.6	0	18	-1.7	63	81	2.8	1.2	2	13.4	9	26	17	6.8	49								
WILLIAMSPORT																																				
RHODE ISLAND				34	1016.9	1019.2	7.8	1.0	4.4	1.7	16.1	30	-7.2	1.6	0	10	-1.7	68	56	-45	35	11	1	T	0	0.8	28	11.6	59							
BLOCK ISLAND PROVINCE				16	1016.9	1019.2	9.8	-0.4	4.7	1.9	21.7	32	-10.0	1.6	0	18	-1.7	68	56	-45	35	11	1	T	0	0.8	28	11.6	59							
SOUTH CAROLINA				12	1018.6	1020.6	20.8	7.3	14.1	0.5	26.1	31	0.2	2.6	0	1	7.2	69	76	-44	35	7	6	0	1.3	19	15.6	85								
CHARLESTON				13	1011.2	1019.4	20.8	5.0	13.7	0.3	24.4	31	2.1	2.6	0	6	5.6	64	90	-35	35	7	6	0	0.9	21	10.3	80								
COLUMBIA				65	1011.2	1019.4	20.8	5.0	13.2	0.9	26.7	31+	-1.7	2.6	0	6	5.6	64	90	-29	46	8	5	0	0.9	21	10.3	80								
GRINNELL SPRINGS				292	983.7	1018.8	18.8	5.8	12.3	1.8	25.6	31+	-2.8	2.6	0	6	5.0	64	106	-29	44	12	2	0	0	0.8	22	13.4	68							
SOUTH OKLAHOMA				395	968.8	1016.7	0.2	-8.4	-4.1	-1.4	5.6	21+	-21.1	10	0	28	-5.0	80	41	17	18	381	381	35	21.0	13	6	18	7.0	54						
HURON				390	903.8	1017.0	8.1	-6.8	-2.1	-0.4	15.0	17	-19.4	10	0	27	-5.0	80	50	23	7	1	66	25	3.0	35	21.0	7.1	54							
RAPIO CITY				964	963.8	1017.1	2.2	-6.4	-2.1	-1.0	20.0	12	-12.2	4	0	28	-3.9	68	12	-13	4	0	0	0	0	0	0	0	0	0	0					
SIOUX FALLS				432																																
MISSISSIPPI				459	964.1	1019.1	15.6	2.5	9.1	1.4	25.0	21	-6.7	16	0	11	1.7	65	80	-19	27	9	2	20	T	1.1	24+	6	9	16						
BRISTOL				203	993.9	1018.9	17.6	4.8	11.2	1.3	25.0	30+	-2.8	12	0	8	5.0	71	121	-22	82	10	1	T	1.2	25	11.2	36	14	53						
CHATTAOGA				299	983.1	1018.2	17.7	5.1	11.7	1.6	26.1	21	-1.7	16	0	5	4.4	65	107	-17	52	9	2	T	1.6	26	13.0	22	23	7	17	70				
KNOXVILLE				79	1019.8	1018.8	17.4	7.4	12.4	1.8	26.1	18	-0.6	6	0	2	4.4	62	168	38	67	11	4	0	0	0	0	0	0	0	0	0	0			
MEMPHIS				180	996.3	1018.3	16.1	4.6	10.4	1.2	24.4	22+	-3.3	11	0	10	3.9	67	125	-32	15	3	15	T	1.5	21	17.0	15	3	16	60					
NASHVILLE				276																																
DAK RIVER																																				
TEXAS				564	952.6	1015.5	19.9	7.4	13.7	1.2	30.0	29	-1.1	4	0	1	3.9	59	131	106	40	12	8	0	1.4	20	16.5	30	15	4	52					
ABILENE				1098	889.9	1014.2	1.3	8.1	8.1	2.8	25.6	28	-6.1	4	0	13	5.0	71	37	18	11	8	5	T	0.9	0	0	0	0	0	0	0	0	0		
AMARILLO				182	993.9	1016.2	21.7	10.6	16.2	0.9	27.8	30	-0.6	5	0	0	8.3	65	96	-47	31	11	6	0	0	0	0	0	0	0	0	0	0			
AUSTIN				6	1015.2	1016.7	10.6	10.1	10.6	1.7	25.2	14.6	-1.7	7	0	0	15.6	76	74	-14	44	22	5	0	0	0	0	0	0	0	0	0	0			
BROWNSVILLE				12	1014.6	1016.1	25.3	14.6	19.6	1.9	29.4	8	5.0	7	0	0	13.3	72	39	11	22	5	1	0	0	0	0	0	0	0	0	0	0			
CORPUS CHRISTI				168	994.9	1016.5	19.4	8.0	13.7	1.2	30.0	29	-1.1	7	0	1	7.8	73	161	96	51	11	6	0	0	0	0	0	0	0	0	0	0			
OEL RIN				313	1014.5	23.4	10.8	17.2	0.2	31.1	24	-6.1	7	0	0	1.7	6	68	49	31	11	8	5	0	0	0	0	0	0	0	0	0	0			
EL PASO				1194	880.8	1012.8	20.7	2.7	11.7	-0.8	26.7	28+	-3.3	11+	0	0	-4.4	35	T	-10	47	0	0	0	0	0	0	0	0	0	0					
GALVESTON				29	1013.5	1017.2	19.2	13.7	16.4	0.3	23.9	5.6	0	0	0	0	1.7	6	85	19	11	0	0	0	0	0	0	0	0	0	0					
HOUROCK				992	902.8	1014.3	10.6	4.6	11.0	2.2	28.3	29	-3.3	5	0	0	10.6	72	73	5	23	12	5	0	0	0	0	0	0	0	0	0	0			
HOLMAN				869	915.3	1013.6	20.0	6.0	13.0	0.6	28.3	29	-2.8	4	0	0	0.6	49	21	6	14	5	3	0	0	0	0	0	0	0	0	0	0			
PORT ARTHUR				1017.3	22.2	1.1	16.9	1.5	27.2	31	-1.7	5	0	0	2	1.1	7	23	160	153	8	6	0	0	0	0	0	0	0	0	0	0				
SAN ANGELO				580	948.2	1015.1	7.3	14.0	0.1	30.6	29	-1.7	5	0	0	4.4	59	57	35	17	8	5	0	0	0	0	0	0	0	0	0	0	0			
SAN ANTONIO				240	987.8	1015.8	23.1	11.7	17.4	1.4	28.9	8	2.2	6	0	0	8.9	62	51	26	13	6	0	0	0	0	0	0	0	0	0	0	0			
VICTORIA				32	1012.9	1016.9	23.5	12.8	18.2	1.3	27.2	8+	-0.7	7	0	0	11.7	71	43	-5	30	12	5	0	0	0	0	0	0	0	0	0	0	0		
WACO				153	998.0	1016.3	20.4	8.9	14.7	0.7	27.2	13	-0.6	5	0	0	8.9	72	109	57	30	14	8	0	0	0	0	0	0	0	0	0	0	0		
WICHITA FALLS				303	979.0	1016.0	5.2	1.1	12.4	1.1	31.1	29	-2.8	4	0	5	5.0	66	87	46	26	9	5	0	0	0	0	0	0	0	0	0	0	0		
UTAH				1533	945.2	1016.6	11.0	-3.2	3.9	0.6	17.8	7	-9.4	3	0	28	0.6	67	44	18	20	11	1	0	0	0	0	0	0	0	0	0	0	0		
MILFORD				1287	1016.5	11.9	0.6	2.0	2.0	16.1	25+	-6.7	3	0	15	-0.6	67	20	-21	5	9	2	91	201	51	11	1	0	0	0	0	0	0	0	0	0
SALT LAKE CITY																																				
VERMONT				101	1005.6	1018.2	7.3	-1.9	2.7	4.3	20.0	23	-12.2	13	0	19	-2.2	73	55	6	29	11	1	41	178	1.1	23	17.9	5	7	19	7.4	42			
BURLINGTON																																				
VIRGINIA				279	985.1	3.1	9.6	9.5	3.8	2.1	28.9	31	-7.2	16	0	10	2.8	0.7	0	96	8	45	7	1	0	0	0	0	0	0	0	0	0	0		
LYNCHBURG																																				
NORFOLK																																				

Passable relative humidity
Maximum depth of snow or ice pellets
Reported from normal
Greatest in 24 hours
Depature from normal
With 25 mm. or more
Max. 32.2 °C at obseve
Min. 0 °C at obseve
Date
Average dew point
No. of days
Temperature
Pressure
State and Station

CLIMATOLOGICAL DATA
METRIC UNITS

MARCH 1979

State and Station	Elevation (ground)	Pressure				Temperature				Precipitation				Wind				Other	
		mb	mb	mb	mb	°C	°C	°C	°C	Total	mm	mm	mm	No. of days	Snow, ice pellets	Fodest mile (1.6 kilometers)	No. of days (sunrise to sunset)	Possible sunshine (sunrise to sunset)	
VIRGINIA	50	1013.2	1010.7	1018.2	1018.8	10.6	2.3	29.4	20	-7.8	16	0	10	4.4	71	66	=20	3.1	14
RICHMOND	350	976.3	1018.8	1017.7	2.4	2.6	9.2	1.8	-6.7	16	0	11	0	0.6	60	1.9	2.6	13.0	14
ROANOKE	3								-5.0	14	0	10					20.1	ESE	24
WALLOP ISLAND																			
WASHINGTON	59	1010.2	1017.6	1019.5	1017.6	12.9	2.0	8.6	2.4	22.8	10	-2.2	10*	0	12	3.3	75	69	53
OLYMPIA	6	1000.7	1017.4	1016.8	1016.8	14.4	2.0	7.5	1.9	21.1	13	-3.9	28	0	11	2.1	11	12	14
QUILLAYUTE	122	998.7	1017.4	1016.8	1016.8	14.2	5.1	9.6	2.1	20.0	22*	0.6	2	0	0	1.1	60	14	12
SEATTLE	718	931.9	1016.8	1016.8	1016.8	10.4	-1.1	4.7	1.1	21.1	13	1.1	2	0	0	1.1	39	24	10.7
TACOMA	1200	940.8	1016.8	1016.8	1016.8	4.7	-1.6	2.7	1.0	17.2	24	-5.6	3*	0	22	-2.2	65	24	8.0
SPOKANE PASS	289	978.7	1017.8	1017.8	1017.8	14.2	2.7	8.9	1.4	22.8	0	-6.7	2*	0	4	-1.1	23	9	1.1
R	321					14.0	-0.7	6.7	1.2	21.1	24	-4.4	2	0	22	-1.7	59	7	1.1
YAKIMA																			
WESTERN INDIAN																			
SAN JUAN P.R.	4	1014.2	1016.6	28.6	22.2	25.4	0.8	33.3	25	19.4	7	1	0	19.4	73	57	5	20	12
WEST VIRGINIA																	0	0	2.9
BECKLEY	763	928.9	1018.4	12.9	2.1	7.5	2.9	23.9	20	-10.6	16	0	12	0.6	67	66	=41	38	10
CHARLESTON	286	944.1	1018.7	16.3	4.2	10.3	3.3	27.2	29	-7.9	16	0	9	0.6	57	76	=26	21	14
ELKINS	594	949.2	1018.5	13.5	-1.4	6.1	2.3	25.0	30	-13.9	16	0	19	0.6	52	52	=48	14	1.5
HUNTINGTON	252	989.5	13.9	15.9	3.5	9.7	2.9	26.7	29	-7.8	16	0	11	0.0	57	21	=46	9	0
PARKERBURG	187					2.0	8.0	1.9	2.0	25.6	22	-8.3	16	0	14	51	=44	21	10
WISCONSIN																			
GREEN BAY	208	989.2	1015.5	2.2	-5.8	-1.8	0.1	13.3	30	-17.8	11	0	26	-4.4	80	114	71	37	16
LA CROSSE	198	981.2	1016.3	4.6	-3.7	0.4	0.1	0.9	15.0	22	-15.0	11	0	20	-3.3	76	51	19	14
MADISON	262	983.2	1015.4	1015.6	4.8	-4.7	0.1	1.1	18.3	22	-16.1	11	0	25	-1.7	86	68	19	18
MILWAUKEE	203	990.2	1015.9	4.1	-2.8	0.7	1.0	17.8	30	-15.0	11	0	19	-2.8	78	106	49	33	13
WYOMING																			
CASPER	1627	935.4	1015.9	7.0	-3.8	1.9	2.4	14.4	16	-11.7	3	0	26	-5.6	63	33	10	11	14
CHEYENNE	1867	908.3	1016.2	8.1	-3.7	2.2	2.4	16.7	14*	-10.0	3	0	27	-8.3	48	34	7	13	14
LANDER	1696	977.0	1011.5	6.9	-4.9	1.0	1.3	15.0	24	-12.8	4*	0	30	-5.6	67	14	6	30	14
SHERIDAN	1208	977.8	1017.8	7.4	-6.1	0.7	1.3	16.7	24	-19.4	3	0	28	-5.0	70	15	5	9	14

HEATING DEGREE DAYS

(Base 65°F.)

MARCH 1979

State and Station	Current season		State and Station	Current season		State and Station	Current season		State and Station	Current season		State and Station			
	This month	Period July through this month		This month	Period July through this month		This month	Period July through this month		This month	Period July through this month				
ALABAMA BIRMINGHAM U	300	2684	2708	BOISE	668	5624	5004	NEBRASKA GRANDE ISLAND	866	6865	5740	TENNESSEE BRISTOL	511	3961	3938
BIRMINGHAM	303	2684	2708	LEWISTON	582	5431	4707	LINCOLN	816	6679	5611	CHATTANOOGA	390	3205	3289
HUNTSVILLE	395	3066	3125	POCATELLO	887	6759	5998	NORFOLK	988	7199	6241	KNOXVILLE	376	3348	3258
MOBILE	152	1594	1644	PEDERIA	884	6700	5440	NORTH PLATTE	862	7183	5918	MEMPHIS	345	3117	3074
HOMESTEAD MONTGOMERY	194	1952	2185	ROCKFORD	1026	6930	6073	OMAHA (EPPLEY)	775	6182	5490	NASHVILLE	449	3688	3475
ALASKA ANCHORAGE	1029	7900	9125	CAIRO U	515	4108	3619	OMAHA (NDRTH)	921	6758	5926	OAK RIDGE	462	3785	3647
ANNETTE	728	5701	5585	CHICAGO O HARE	879	6267	5726	SCOTTSBLUFF	737	6344	5839	TEXAS ABILENE	272	2781	2495
BARROW	2534	15624	1505	CHICAGO MIDWAY	910	6218	5440	VALENTINE	986	7635	6378	AMARILLO	561	4290	3817
BARTR. ISLANDO	2646	15268	15759	MOLINE	884	6700	5755	NEVADA	775	5911	6242	AUSTIN	144	2024	1693
BETHEL	1447	9700	10814	PEORIA	833	6279	5051	ELY	933	6864	6392	BROWNSVILLE	41	736	650
BETLES	1878	12911	12598	SPRINGFIELD	758	5732		LAS VEGAS	270	2468	2465	CORPUS CHRISTI	38	1033	930
BIG DELTA	1354	11458	11793	INDIANAPOLIS	559	4715	4266	REMO	709	5329	2003	DALLAS FT WORTH	261	2659	2294
COLD BAY	110	6610	7529	EVANSVILLE	731	5826	5499	WINNEHCUCA	710	5606	3524	DEL RIO	125	1709	1507
FAIRBANKS	1638	12103	13585	FORT WAYNE	665	5334	5020	NEW HAMPSHIRE	841	6620	6363	EU PASO	362	2610	2589
GULKA NA	1362	11312	12949	WATERBURY	795	5620	5675	COMCORO MT WASHINGTON OBS	1440	11147	11051	GALESSTON	120	1361	1204
HOOVER	987	7444	8771	SOUTH BEND				NEW HAMPSHIRE				HOUSTON INTERCON	135	1683	1411
JUNEAU	967	7549	7306	IOWA				ALBUQUERQUE				LUBBOCK	369	3466	3326
KING SALMON	1089	7929	9454	BUHLINGT				CLAYTON				HIOLANG	297	2973	2523
KODIAK	837	6067	6832	OES MOINES	856	6313	5545	NEW JERSEY	623	4693	4407	PORT ARTHUR	125	1451	1485
KOTZEBUE	1772	11319	11774	GOODLAND	912	6626	6033	ATLANTIC CITY	666	4343	4063	SAN ANGELO	251	2600	2166
MC GRATH	1574	11511	12399	OKLAHOMA	1055	7334	6456	ATLANTIC CITY U	597	4355	4492	SAN ANTONIO	109	1699	1539
NAME	1526	9810	11421	TOPEKA	1038	7492	6257	NEWARK	568	4467	4428	VICTORIA	79	1495	1212
ST. PAUL ISLANDO	1065	7170	8368	WATERBURY	1024	7349	6819	TRENTON U				WACO	217	2519	2002
TALKET TNA	1148	9156	9801	WICHITA	560	5036	4315	NEW MEXICO				WICHITA FALLS	343	3348	2779
UNALAKLEET				KANSAS	720	5809	5070	ALBUQUERQUE	509	3815	3952	UTAH			
VALDEZ	1020	7910	8592	CONCORDIA	615	5169	4566	CLAYTON	660	4897	4566	MILFORD	800	6013	5522
YAKUTAT	935	7471	7534	OODGE CITY	710	5677	5359	ROSWELL	444	3517	3492	SALT LAKE CITY	666	5227	5184
ARIZONA FLAGSTAFF	1005	6340	5954	KENTUCKY	563	4972	4582	NEW YORK	554	4326	4324	VERMONT	866	7005	6822
PHOENIX	143	1406	1492	COVINGTON	522	4554	4313	U. S. A.	603	4269	4534	BURLINGTON			
TUCSON	260	1780	1671	LEXINGTON	514	4294	4249	LYNNCHBURG	489	4070	3888	WYOMING			
WIMSLON	646	4471	4247	LOUISVILLE				CHARLOTTE	350	3010	3039	CASPER	910	7351	6351
YUHA	84	1167	981					GREENSBORO	440	3592	3563	CHEYENNE	893	6416	6036
ARKANSAS FORT SMITH	393	3740	3187	LOUISIANA	178	1846	1637	SEATTLE-TACOMA	398	3093	3286	ELKINS	962	8060	6674
LITTLE ROCK	314	3235	3194	BATON ROUGE	151	1694	1472	SPokane	637	4534	4365	HUNTINGTON	484	4360	4205
NO. LITTLE ROCK	368	3469	2952	LAKE CHARLES	128	1440	1436	WADDELL PASS R	796	6030	5805	PARKERSBURG U	579	4739	4369
CALIFORNIA BAKERSFIELD	211	1796	2023	NEW ORLEANS	216	2348	2097	WALLA WALLA U	517	4943	4241	YAKIMA	641	5934	5211
BISHOP	514	3994	3793	SHREVEPORT				YAKIMA				YAKIMA			
BLUE CANYON	720	4687	4449	MAINE				WEST VIRGINIA				YAKIMA			
EUREKA U	459	3695	3538	CARIBOU	1018	7986	8139	BECKLEY	597	4751	4944	YAKIMA			
FRESNO	234	2255	2408	PORTLAND	905	6424	6342	CHARLESTON	456	4245	4180	YAKIMA			
LONG BEACH	177	1370	1364	BLUE HILL OBS R	790	5654	5449	ELKINS	680	5288	5369	YAKIMA			
LOS ANGELES	237	1359	1439	HARRISBURG	520	4163	4279	HUNTINGTON	680	5288	5369	YAKIMA			
LOS ANGELES U	226	1431	1036	DAYTON				YAKIMA				YAKIMA			
HT SHASTA R	694	5303	4780	DETROIT	841	5771	5457	YAKIMA				YAKIMA			
OAKLAND	294	2301	2332	DETROIT METRO	843	6012	5620	YAKIMA				YAKIMA			
RED BLUFF	248	2193	2398	FLINT	829	6278	6097	YAKIMA				YAKIMA			
SACRAMENTO	313	2591	2476	GRAND RAPIDS	863	6437	5932	YAKIMA				YAKIMA			
SANDBERG R	657	657	657	HOUGHTON LAKE	1053	7421	7145	YOUNGSTOWN	781	5731	5607	YAKIMA			
SAN DIEGO	153	1015	1232	HIGH CIGAM	834	6376	6021	YAKIMA				YAKIMA			
SAN FRANCISCO	319	2564	2421	INTERNATIONAL FALLS	1402	10021	9113	YAKIMA				YAKIMA			
SAN FRANCISCO U	281	2297	2338	HINNEPDLIS	1112	7634	7226	YAKIMA				YAKIMA			
SANTA MARIA	372	2592	2338	ROCHESTER	1183	8348	7242	YAKIMA				YAKIMA			
STOCKTON	262	2398	2518	ST. CLDIO	1260	8692	7796	YAKIMA				YAKIMA			
COLORADO ALAHOSA	1069	8211	7284	MISSISSIPPI	262	2395	2220	YAKIMA				YAKIMA			
COLORADO SPRINGS	825	5958	5805	JACKSON	261	2462	2302	YAKIMA				YAKIMA			
DENVER	751	5593	5158	MERIDIAN	1171	8154	7693	YAKIMA				YAKIMA			
GRAN JUNCTION	732	6040	5048	YAKIMA				YAKIMA				YAKIMA			
PUEBLO	674	5486	4813	YAKIMA				YAKIMA				YAKIMA			
CONNECTICUT BRIIDGEPORT	675	4662	4714	MISSOURI	633	5119	4636	YAKIMA				YAKIMA			
HARTFORD	730	5838	5581	COLUMBIA REGIONAL	698	5520	4879	YAKIMA				YAKIMA			
DELAWARE WILMINGTON	605	4638	4431	KANSAS CITY	758	5900	4979	YAKIMA				YAKIMA			
WILMINGTON				ST. JOSEPH	644	5074	4365	YAKIMA				YAKIMA			
DIST. OF COLUMBIA WASHINGTON DULLES	578	4551	4517	SPRINGFIELD	606	4877	4191	YAKIMA				YAKIMA			
WASHINGTON NATIONAL	425	3612	3074	YAKIMA				YAKIMA				YAKIMA			
FLORIDA APPALACHICOLA U	204	1474	1331	GREAT FALLS	931	7575	6475	YAKIMA				YAKIMA			
DAYTONA BEACH	79	677	880	HAVRE	1024	8642	7579	YAKIMA				YAKIMA			
FORT MYERS	13	259	457	HELENA	930	7862	6926	YAKIMA				YAKIMA			
JACKSDOMVILLE	160	1494	1303	KALISPELL	964	8104	7178	YAKIMA				YAKIMA			
KEY WEST	0	39	64	MILES CITY	1086	8274	6893	YAKIMA				YAKIMA			
MIAMI	13	180	206	MISSOURIA	893	7578	6700	YAKIMA				YAKIMA			
ORLANDO	71	571	720	MISSOURIA	1203	9185	7808	YAKIMA				YAKIMA			
PENSACOLA	188	1512	1511	RHODE ISLAND	931	7575	6475	YAKIMA				YAKIMA			
TALLAHASSEE	217	1703	1529	BLOCK ISLAND	769	4804	4751	YAKIMA				YAKIMA			
TAMPA	53	565	709	PROVIDENCE	755	5342	5146	YAKIMA				YAKIMA			
WEST PALM BEACH	23	267	299	SOUTH CAROLINA				YAKIMA				YAKIMA			
GEORGIA ATHENS	289	2660	2224	ABERDEEN	1245	8663	7597	YAKIMA				YAKIMA			
ATLANTA	279	2664	2224	CHARLESTON	1241	1887	2072	YAKIMA				YAKIMA			
AUGUSTA	265	2398	2447	CHARLESTON U	259	1814	1852	YAKIMA				YAKIMA			
COLUMBUS	219	2068	2283	COLUMBIA	294	2314	2503	YAKIMA				YAKIMA			
HACOM	226	2109	2168	GRANVILLE-SPRTHBRG	336	2994	2990	YAKIMA				YAKIMA			
RDME	360	2984	3154	SOUTH OAKOTA				YAKIMA				YAKIMA			
SAVANNAH	181	1707	1889	ABERDEEN	1245	8663	7597	YAKIMA				YAKIMA			

COOLING DEGREE DAYS

(Base 65°F.)

MARCH 1979

State and station	Current season			Current season			Current season			Current season			Current season			
	This month	Period January through this month	Normals January through this month	State and station	This month	Period January through this month	Normals January through this month	State and station	This month	Period January through this month	Normals January through this month	State and station	This month	Period January through this month	Normals January through this month	
ALABAMA BIRMINGHAM U	11	11	61	HAWAII HILDE	210	525	553	NEBRASKA GRAND ISLAND	0	0	0	SOUTH CAROLINA CHARLESTON	9	11	61	
BIRTHINGHAM	8	9	45	HONOLULU	250	618	678	LINCOLN	0	0	0	CHARLESTON U	5	5	68	
HUNTSVILLE	9	9	27	KAHULUI	206	600	618	NORTH PLATTE	0	0	0	COLUMBIA	13	13	30	
MOBILE	28	34	99	LIHUE	220	707	583	OMAHA (EPPLEY)	0	0	0	GRNVILLE-SPPTNBRC	8	8	13	
MONTGOMERY	13	15	64					OMAHA (NORTH)	0	0	0					
ALASKA ANCHORAGE	0	0	0	IDAHO ROISE	0	0	0	SCOTTSBLUFF	0	0	0	SOUTH DAKOTA SIUX FALLS	0	0	0	
ANNETTE	0	0	0	LEWISTON	0	0	0	VALENTINE	0	0	0					
BAPPOW	0	0	0	POCATELLO	0	0	0	NEVAOA	0	0	0					
BAPTFR ISLAND	0	0	0					ELKO	0	0	0					
RETHEL	0	0	0	ILLINOIS CAIRO U	0	0	16	FLY	0	0	0					
BETTLES	0	0	0	CHICAGO N HARE	0	0	0	LAS VEGAS	0	0	0					
BIG DELTA	0	0	0	CHICAGO MIWAY	0	0	0	RENU	0	0	0					
COLD BAY	0	0	0	MOLINE	0	0	0	WINNFHUCCA	0	0	0					
FAIRFRANKS	0	0	0	PENKRA	0	0	0									
GULKANA	0	0	0	POCKFGRO	0	0	0									
HOMER	0	0	0	SPRINGFIELD	0	0	0	NEW HAMPSHIRE	0	0	0					
JUNEAU	0	0	0					CONCORD	0	0	0					
KING SALMON	0	0	0					MT WASHINGTON OBS	0	0	0					
KODIAK	0	0	0	INDIANA EVANSVILLE	0	0	11									
KOTZEBUE	0	0	0	FORT WAYNE	0	0	0	TEXAS ABILENE	20	29	29					
HC GRATH	0	0	0	INDIANAPOLIS	0	0	0	AMAPILLO	0	0	0					
NUME	0	0	0	SOUTH BEND	0	0	0	AUSTIN	29	38	76					
ST. PAUL ISLAND	0	0	0					BROWNSVILLE	173	274	358					
TALKETNA	0	0	0					COPPER CHIPISTI	140	205	199					
UNALAKLEET	0	0	0	IDAHO RUPPLINGTON	0	0	0	DALLAS FT WORTH	9	10	25					
VALDEZ	0	0	0	DES MCINES	0	0	0	DEL PID	66	75	118					
YAKUTAT	0	0	0	DUKE	0	0	0	EL PASO	0	0	6					
ARIZONA FLAGSTAFF	0	0	0	NEW YORK CITY	0	0	0	GALVESTON	22	22	110					
PHOENIX	11	11	35	NEW YORK KENNEDY	0	0	0	HOUSTRON INTEPCON	62	82	97					
TUCSON	1	1	24	NEW YORK LA GUARDIA	0	0	0	LUBBOCK	0	0	9					
WINSLOW	0	0	0	POCHESTER	0	0	0	HIDALGO	5	5	17					
YUMA	40	60	109	SYRACUSE	0	0	0	POPT ARTHUR	54	75	93					
ARKANSAS FORT SMITH	7	7	15					SAN ANGELO	17	19	42					
LITTLE ROCK	24	24	14	KENTUCKY COVINGTON	2	2	0	SAN ANTONIO	65	81	88					
NO. LITTLE ROCK	7	7	18	LEXINGTON	2	2	0	VICTORIA	78	103	120					
CALIFORNIA BAKERSFIELD	12	12	6	LOUISVILLE	5	5	10	WACO	21	22	44					
BISHOP	0	0	0					WICHITA FALLS	18	20	22					
BLUE CANYON	0	0	0	LOUISIANA RATON ROUGE	44	51	85	UTAH HILFORO	0	0	0					
EUREKA U	0	0	0	LAKE CHARLES	36	40	104	SALT LAKE CITY	0	0	0					
FKESNO	2	2	0	NEW ORLEANS	63	77	118									
LONG BEACH	10	10	0	SHVEPORT	39	47	47									
LOS ANGELES	9	9	12													
LOS ANGELES U	14	14	34	MAINE CARIRUJU	0	0	0									
MT SHASTA R	0	0	0	POPTLAND	0	0	0									
OAKLAND	0	0	0													
RED RUFF	6	6	0													
SACRAMENTO	0	0	0													
SAN OREG P R	0	0	0													
SAN DIEGO	10	10	10													
SAN FRANCISCO	0	0	0													
SAN FRANCISCO U	0	0	0													
SANTA MARIA	0	0	0													
STOCKTON	0	0	0													
COLORADO ALAMOSA	0	0	0													
COLORADO SPRINGS	0	0	0													
DENVER	0	0	0													
GRAND JUNCTION	0	0	0													
PUEBLD	0	0	0													
CONNECTICUT BRIDGEPORT	0	0	0													
HARTFORD	0	0	0													
DELAWARE WILINGTON	4	4	0													
OIST.OF COLUMBIA WASHINGTON DULLES	9	9	0													
WASHINGTON NATIONAL	14	14	0													
FLORIDA APPALACHICOLA U	4	5	92	MISSISSIPPI JACKSON	35	37	68	PACIFIC AREA GUAM TAGUAC R	403	1138	1119	WYOMING CASPER	0	0	0	
OAYTONA BEACH	18	122	182	MEPIOITAN	13	13	68	JOHNSTAN	384	1026	1048	CHEYENNE	0	0	0	
FORT MYERS	124	256	353					KOOP P	511	1490	1441	LANDER	0	0	0	
JACKSONVILLE	36	50	121					WAJALEIN	561	1530	1479	SHERIDAN	0	0	0	
KEY WEST	240	551	706	MISSOURI COLUMBIA REGIONAL	0	0	0	MAJURO	519	1480	1446					
MIAMI	149	320	478	KANSAS CITY	1	1	0	PAGO PAGO	540	1507	1385					
ORLANDO	65	122	260	ST JSPH	0	0	0	TRUK HNEN ISLAND	531	1553	1452					
PENSACOLA	16	18	117	ST LOUIS	2	2	0	WAKE IS	443	1149	1102					
TALLAHASSEE	10	12	102	SPPINGFIELD	0	0	0	YAP R	499	1423	1407					
TAMPA	73	137	268													
WEST PALM BEACH	123	269	394	MONTANA BILLINGS	0	0	0									
GEORGIA ATHENS	15	15	14	GLASGUH	0	0	0									
ATLANTA	13	13	12	GREAT FALLS	0	0	0									
AUGUSTA	9	9	3T	HARVE	0	0	0									
COLUMBUS	71	23	47	HELENA	0	0	0									
MACON	18	19	59	MILES CITY	0	0	0									
ROME	4	4	13	MISSMULA	0	0	0									
SAVANNAH	28	33	72													

STORM SUMMARY

MARCH 1979

STATE	TORNADOES				HAILSTORMS			WINDSTORMS			LIGHTNING			@HEAVY SNOWSTORMS AND BLIZZARDS			# ICE STORMS			φ ALL OTHER					
	NUMBER	DEATHS		INJURIES	DEATHS		INJURIES	DEATHS		INJURIES	DEATHS		INJURIES	DEATHS		INJURIES	DEATHS		INJURIES	DEATHS		INJURIES	DEATHS		
		DEATHS	INJURIES		DEATHS	INJURIES		DEATHS	INJURIES		DEATHS	INJURIES		DEATHS	INJURIES		DEATHS	INJURIES		DEATHS	INJURIES		DEATHS	INJURIES	
Alabama	*	1	1																						
Alaska	*	1	1																						
Arizona																									
Arkansas																									
California		1	1																						
Colorado	*	1	1																						
Connecticut	*																								
Delaware																									
Florida	*	3	2																						
Georgia	*	2	1																						
Hawaii	*																								
Idaho																									
Illinois	*	1	1																						
Indiana																									
Iowa		5	2																						
Kansas	*	2	2																						
Kentucky	*	2	2																						
Louisiana	*	2	2																						
Maine																									
Maryland & DC	*																								
Massachusetts	*																								
Michigan																									
Minnesota																									
Mississippi																									
Missouri		1	1																						
Montana	*																								
Nebraska																									
Nevada																									
New Hampshire	*																								
New Jersey	*																								
New Mexico	*																								
New York																									
North Carolina	*	1	1																						
North Dakota																									
Ohio	*																								
Oklahoma	*	5	3																						
Oregon																									
Pacific																									
Pennsylvania																									
Puerto Rico	*																								
Rhode Island	*																								
South Carolina																									
South Dakota																									
Tennessee		1	1																						
Texas		23	8																						
Utah	*																								
Vermont																									
Virginia	*																								
Virgin Islands	*																								
Washington	*																								
West Virginia	*																								
Wisconsin	*																								
Wyoming	*																								

RAWINSONDE DATA

Average monthly values

MARCH 1979

6015E, 10 916 MB				800THVILLE, LA 1019 MB				BROWNSVILLE, TX 1015 MB				BUFFALO, NY 991 MB				CAPE HATTERAS, NC 1021 MB															
SFC	31	871	2.5	-3.2	14	1.4	29	1	13.6	11.1	09	.8	30	7	17.7	15.7	14	2.7	31	218	.4	-2.0	22	2.6	31	4	8.2	5.4	31	1.1	
1000								29	156	15.5	10.4	12	1.9	30	130	18.2	15.7	14	4.7	5	245	-3.0	-9.6	31	174	10.7	4.7	25	1.4		
950								29	590	13.6	3.9	16	2.4	30	569	16.4	11.5	16	8.1	31	559	1.2	-3.0	24	6.0	31	600	8.6	8.6	25	2.9
900	31	1,010	4.3	-2.7	12	.9	29	1,045	12.1	-1.5	23	3.3	30	1,029	15.0	6.3	17	8.7	31	993	-3	-5.1	25	7.1	31	1,045	6.4	-2.9	26	4.4	
850	31	1,015	3.4	-5.0	31	1.4	29	1,522	10.4	-6.0	24	4.2	30	1,513	15.3	1.7	18	7.8	31	1,447	-1.8	-8.6	26	8.8	31	1,447	4.2	26	25	1.6	
800	31	1,964	-5.5	-6.6	31	2.9	2,025	8.1	-8.9	25	5.9	30	2,022	11.4	-1.4	26	6.9	31	1,036	-6.7	-1.7	27	1.1	31	2,005	2.6	-1.0	26	7.0		
750	31	4,480	-1.2	-1.5	28	3.6	2,056	5.8	-6.5	26	6.5	30	2,059	9.6	-1.4	26	6.3	31	2,040	-3.3	-1.7	27	10.3	31	2,040	9	-15.0	27	4.6		
700	31	3,023	-6.2	-12.5	28	2.0	2,029	3.1	11.6	26	11.1	30	1,528	-3.1	-10.6	24	6.2	31	980	-7.7	-17.1	27	11.9	31	3,076	-2.2	-18.2	26	9.3		
650	31	3,600	-9.6	-18.2	28	5.9	3,711	-1.1	-1.4	26	13.7	30	3,732	-1.4	-14.0	26	11.4	31	3,553	-10.7	-22.4	27	12.5	31	3,662	-5.6	-20.4	27	11.0		
600	31	4,213	-13.4	-22.9	28	7.1	4,346	-5.3	-19.9	27	15.2	30	4,373	-2.3	-16.1	26	11.4	31	4,163	-14.3	-25.9	27	13.4	31	4,285	-9.5	-23.6	27	12.9		
550	31	4,870	-17.7	-27.4	28	7.8	5,023	-9.9	-23.9	27	17.2	30	5,057	-7.5	-19.1	26	16.3	30	4,820	-18.6	-31.2	28	14.1	31	4,952	-13.3	-26.8	27	14.1		
500	31	5,577	-24.7	-32.6	28	7.3	5,753	-14.6	-26.7	27	19.4	30	5,791	-12.6	-25.8	26	16.3	30	5,525	-23.3	-35.4	26	16.9	31	5,659	-18.8	-30.6	26	16.1		
450	29	6,337	-28.5	-38.0	27	8.0	6,593	-20.2	-33.1	27	21.3	30	6,587	-18.0	-32.6	26	19.8	30	6,525	-23.3	-38.3	28	17.8	31	6,447	-24.0	-35.2	28	18.2		
400	29	7,170	-35.2	-43.3	28	8.8	7,429	-26.3	-40.3	27	24.1	30	7,457	-24.0	-35.7	27	24.0	30	7,120	-34.9	-43.9	28	19.7	31	7,295	-30.3	-42.3	28	20.0		
350	28	8,093	-4.5	-2.5	28	8.8	8,361	-33.5	-45.7	27	28.0	30	8,419	-31.3	-42.7	26	28.6	30	8,042	-41.7	-44.2	28	20.7	31	8,234	-37.4	-46.2	28	23.6		
300	26	9,113	-50.6	-50.6	28	9.5	9,422	-41.7	-48.2	27	30.4	30	9,489	-39.6	-49.5	27	32.9	30	9,067	-48.8	-50.8	28	20.8	31	9,278	-45.4	-52.8	28	28.8		
250	27	10,282	-56.9	-56.9	29	10.9	10,636	-49.6	-56.7	27	34.6	30	10,712	-48.7	-57.0	27	38.3	30	10,248	-54.9	-59.0	28	22.0	31	10,473	-53.0	-57.0	28	31.0		
200	26	11,692	-58.8	-58.8	29	12.3	12,073	-56.7	-56.7	27	37.2	30	12,152	-56.4	-57.2	27	41.6	30	11,665	-57.2	-57.2	28	21.9	31	11,896	-56.8	-56.8	28	33.6		
175	26	12,535	-55.6	-55.6	28	11.8	12,916	-58.2	-58.2	27	36.6	30	12,994	-59.1	-59.1	27	39.7	30	12,512	-56.0	-56.0	29	19.7	31	12,740	-57.0	-57.0	28	31.6		
150	26	13,516	-55.7	-55.7	28	13.2	13,883	-60.5	-60.5	26	35.7	29	13,956	-62.3	-62.3	26	37.3	30	13,499	-55.2	-55.2	29	16.2	31	13,718	-57.5	-57.5	28	29.8		
125	26	14,676	-56.5	-56.5	28	12.4	15,106	-65.1	-65.1	26	32.8	29	15,069	-67.4	-67.4	26	30.9	30	14,655	-55.9	-55.9	28	16.7	31	14,886	-60.0	-60.0	28	27.4		
100	26	16,676	-58.4	-58.4	28	10.5	16,352	-69.3	-69.3	26	26.4	29	16,393	-72.5	-72.5	26	24.6	30	16,070	-57.0	-57.0	28	15.3	31	16,629	-62.0	-62.0	28	22.4		
80	25	17,467	-59.2	-59.2	28	9.9	17,465	-69.5	-69.5	26	16.2	29	17,499	-72.9	-72.9	26	14.9	30	16,860	-58.2	-58.2	28	14.0	31	17,626	-68.8	-68.8	28	21.0		
70	25	18,325	-58.8	-58.8	29	7.8	18,325	-69.5	-69.5	27	14.0	18,433	-72.3	-72.3	25	13.8	30	18,321	-58.4	-58.4	27	12.2	31	18,450	-67.7	-67.7	28	13.9			
60	25	19,293	-58.6	-58.6	29	19.7	19,422	-66.3	-66.3	27	5.8	29	19,461	-68.7	-68.7	25	4.6	30	19,291	-58.4	-58.4	27	11.0	31	19,405	-61.1	-61.1	28	18.0		
50	25	20,438	-59.0	-59.0	29	6.2	20,538	-62.5	-62.5	29	1.9	27	20,506	-63.6	-63.6	25	1.4	30	20,439	-57.7	-57.7	28	9.7	31	20,540	-59.8	-59.8	28	6.9		
40	25	21,837	-59.2	-59.2	29	5.2	21,923	-60.4	-60.4	29	2.0	27	21,888	-60.0	-60.0	10	1.1	30	21,850	-57.3	-57.3	27	7.7	30	21,940	-58.0	-58.0	28	4.0		
30	23	23,648	-59.5	-59.5	30	4.5	23,734	-56.1	-56.1	01	2.3	27	23,703	-55.5	-55.5	36	1.9	28	23,673	-55.4	-55.4	27	8.9	30	23,765	-55.1	-55.1	30	3.4		
25	22	24,785	-59.1	-59.1	30	5.8	24,899	-53.9	-53.9	33	1.8	27	24,874	-52.2	-52.2	02	2.1	28	24,837	-54.5	-54.5	27	9.5	27	24,935	-53.3	-53.3	30	2.1		
20	19	26,188	-57.8	-57.8	29	7.8	26,344	-50.3	-50.3	26	2.1	26	26,332	-49.2	-49.2	03	1.7	26	26,273	-52.3	-52.3	26	9.4	26	26,385	-50.4	-50.4	27	4.1		
15	16	28,017	-55.1	-55.1	29	8.9	28,239	-44.1	-44.1	29	2.2	25	28,241	-43.3	-43.3	08	4.3	19	28,149	-48.4	-48.4	25	11.7	24	28,280	-44.8	-44.8	27	4.2		
10	16	30,659	-48.3	-48.3	16	31,031	36.7	16	3.3	31,030	-37.2	11	5.1	31	30,947	-43.3	-43.3	13	31,027	-38.2	13	31,027	-38.2	13	31,027	-38.2	13	31,027	-38.2		

RAWINSONDE DATA

Average monthly values

MARCH 1979

Standard Pressure surface m.b.	CARIBOU, ME 953 MB						CENTREVILLE, AL 1002 MB						CHARLESTON, SC 1019 MB						CHATHAM, MA 1017 MB						CHIHUAHUA, MEXICO 856 MB						
	No. of observations	Dynamic height meters		Temperature °C		Resultant Wind Direction tens of deg.	Speed m.p.s.	Dynamic height meters		Temperature °C		Resultant Wind Direction tens of deg.	Speed m.p.s.	Dynamic height meters		Temperature °C		Resultant Wind Direction tens of deg.	Speed m.p.s.	Dynamic height meters		Temperature °C		Resultant Wind Direction tens of deg.	Speed m.p.s.	Dynamic height meters		Temperature °C		Resultant Wind Direction tens of deg.	Speed m.p.s.
		Temperature °C	Dew Point °C	Temperature °C	Dew Point °C			Temperature °C	Dew Point °C	Temperature °C	Dew Point °C			Temperature °C	Dew Point °C	Temperature °C	Dew Point °C	Temperature °C	Dew Point °C	Temperature °C	Dew Point °C	Temperature °C	Dew Point °C	Temperature °C	Dew Point °C	Temperature °C	Dew Point °C	Temperature °C	Dew Point °C	Temperature °C	Dew Point °C
SFC	31	191	-2.5	-6.2	26	1.0	31	14.0	8.6	5.5	22	1.9	31	13	9.9	7.2	2.9	5	31	16	2.3	-1.9	2.3	1.0	31	1,428	8.2	-1.8	2.3	2.2	
10.0	7	229	-5.7	-9.6	22	1.8	31	18.9	9.3	3.8	21	1.0	30	175	12.8	6.3	2.2	8	31	162	3.8	-1.0	2.6	1.8	31	1,949	9.8	-4.3	2.3	1.9	
9.0	51	540	-3.4	-5.3	25	2.2	31	1.056	10.5	2.2	31	5.9	11.7	24	2.3	3.3	31	569	3.0	-3.3	2.6	3.9	31	1,256	6.2	-8.2	2.4	7.0			
9.0	31	968	-4.1	-6.6	27	3.7	31	1,035	8.4	-1.2	24	5.3	31	1,050	8.9	2.4	2.5	4.5	31	1,005	7.6	-6.3	2.6	4.6	31	1,463	-1.3	-9.6	2.6	5.8	
8.0	31	1,417	-5.5	-9.3	27	4.7	31	1,506	6.5	-6.1	25	6.8	31	1,521	6.7	-1.4	26	6.1	31	1,463	1.3	-9.6	2.6	5.8	30	1,492	9.8	-4.3	2.3	1.9	
8.0	31	1,893	-5.9	-11.6	27	5.7	31	2,002	4.4	-6.4	26	8.6	31	2,017	4.4	-5.9	26	7.6	31	1,945	-3.0	-11.7	26	6.9	31	1,994	9.6	-5.6	4.1	4.1	
7.0	51	2,393	-7.6	-14.6	26	7.1	31	2,525	2.1	-11.1	26	10.2	31	2,541	2.3	-11.3	26	8.8	31	2,454	-5.2	-15.3	27	6.0	31	2,526	6.2	-8.2	2.4	7.0	
7.0	31	2,933	-10.1	-17.1	26	8.0	31	3,079	-8.4	-18.4	27	11.6	31	3,096	-4.5	-14.3	26	9.4	31	2,994	-7.5	-20.1	27	9.2	31	3,088	2.9	-12.4	25	10.3	
6.0	31	3,501	-12.7	-19.7	25	8.1	31	3,668	-4.2	-17.9	27	12.9	31	3,685	-3.9	-17.8	26	10.5	31	3,567	-10.5	-22.2	27	10.6	31	3,685	-2.0	-16.9	2.5	11.4	
6.0	31	4,109	-15.9	-23.3	25	8.4	31	4,294	-8.3	-21.4	27	14.0	31	4,312	-7.6	-21.2	26	12.0	31	4,180	-13.8	-25.2	27	11.7	31	4,321	-4.5	-21.4	25	13.0	
5.5	31	4,760	-19.8	-27.1	25	10.0	31	4,964	-13.0	-25.0	27	15.9	31	4,983	-12.0	-25.5	27	13.3	31	4,836	-17.9	-28.0	27	12.9	31	5,000	-9.0	-25.3	2.6	16.5	
5.0	31	5,461	-24.6	-32.2	25	11.3	31	5,684	-17.6	-31.5	27	18.2	31	5,705	-16.9	-31.0	27	15.5	31	5,542	-22.4	-32.1	27	13.7	31	5,730	-14.2	-28.6	26	19.0	
4.0	31	6,221	-29.5	-36.4	24	12.8	31	6,465	-22.8	-36.0	27	20.2	31	6,488	-22.7	-35.6	27	17.4	31	6,307	-28.0	-37.9	27	14.7	31	6,521	-19.9	-32.7	26	21.5	
4.0	31	7,051	-35.6	-41.5	25	13.0	31	7,318	-29.0	-40.4	27	23.2	31	7,344	-28.9	-40.5	27	20.3	31	7,142	-34.4	-42.4	27	18.0	31	7,336	-33.7	-44.0	26	24.2	
3.0	31	8,994	-48.9	-54.9	26	16.3	31	9,191	-43.8	-54.3	27	29.0	31	9,338	-43.6	-54.3	27	25.5	31	9,065	-51.1	-54.9	27	21.6	31	9,397	-51.0	-54.0	26	26.0	
2.0	31	10,774	-54.6	-61.0	26	16.2	31	10,917	-51.8	-61.0	27	35.4	30	10,953	-51.3	-61.0	27	30.3	31	10,779	-54.2	-61.0	27	26.7	31	10,807	-51.0	-54.0	26	31.2	
1.0	31	11,591	-57.0	-64.6	26	17.4	31	11,945	-56.6	-64.6	27	35.9	30	11,971	-55.5	-64.6	27	34.3	31	11,700	-56.1	-64.6	27	28.6	31	12,038	-56.5	-65.5	26	37.7	
1.0	31	12,248	-55.5	-63.5	26	15.6	31	12,466	-55.5	-63.5	27	35.9	31	12,511	-58.2	-63.5	27	35.7	31	12,546	-56.2	-63.5	27	37.1	31	12,882	-58.3	-65.3	27	37.1	
1.0	31	13,424	-59.9	-67.9	26	15.4	31	13,761	-58.5	-67.9	27	34.0	30	13,783	-58.2	-67.9	27	33.3	31	13,530	-55.5	-67.9	27	31.1	31	13,846	-60.6	-67.9	27	35.1	
1.0	31	14,450	-55.0	-63.0	26	14.1	31	14,899	-61.7	-63.0	27	31.9	30	14,923	-61.7	-63.0	27	30.3	31	14,691	-56.2	-63.0	27	27.6	31	14,971	-65.1	-63.0	27	30.9	
1.0	31	14,606	-56.4	-64.4	26	14.2	31	16,270	-65.0	-64.4	27	24.7	30	16,292	-65.1	-64.4	27	24.4	31	16,103	-58.2	-64.4	27	14.5	31	16,317	-68.8	-64.4	26	23.5	
0.0	31	17,424	-56.6	-64.6	26	11.6	31	17,626	-65.6	-64.6	27	17.0	30	17,650	-65.4	-64.6	27	17.3	31	17,506	-58.7	-64.6	27	11.3	31	17,651	-69.1	-64.6	26	15.8	
0.0	31	18,267	-57.2	-65.2	26	11.7	31	18,440	-64.7	-65.2	27	13.5	30	18,465	-64.4	-65.2	28	12.7	31	18,341	-58.7	-65.2	27	10.2	31	18,450	-67.3	-65.2	26	11.5	
0.0	26	19,238	-57.1	-65.1	26	11.2	30	19,381	-63.7	-65.1	27	8.8	30	19,412	-62.8	-65.1	28	8.3	31	19,311	-58.1	-65.1	27	8.7	24	19,383	-65.2	-65.1	26	6.1	
0.0	27	20,389	-56.6	-64.6	26	10.1	30	20,505	-61.5	-64.6	27	5.9	30	20,540	-61.1	-64.6	29	5.3	31	20,460	-58.1	-64.6	27	7.9	21	20,502	-61.8	-64.6	25	2.2	
0.0	26	21,804	-57.0	-65.0	26	9.8	30	21,895	-59.6	-65.0	27	4.8	30	21,936	-58.2	-65.0	29	3.4	31	21,868	-57.2	-65.0	26	7.0	19	21,890	-59.1	-65.0	27	1.4	
0.0	22	23,634	-55.8	-63.8	25	10.0	30	23,709	-56.4	-63.8	26	2.7	27	23,763	-55.1	-63.8	28	1.9	31	23,695	-55.3	-63.8	26	6.9	17	23,713	-54.5	-63.8	26	3.0	
0.0	19	24,796	-55.1	-63.1	26	11.4	30	24,872	-54.5	-63.1	26	2.8	27	24,935	-52.2	-63.1	28	2.8	28	24,861	-54.2	-63.1	26	6.8	15	24,884	-53.1	-63.1	26	4.4	
0.0	17	26,215	-53.6	-61.6	27	12.4	27	26,313	-50.3	-61.6	27	5.9	27	26,390	-48.9	-61.6	27	4.8	27	26,299	-52.2	-61.6	26	9.7	14	26,338	-49.0	-61.6	27	5.7	
0.0	13	28,066	-51.3	-60.3	27	16.1	27	28,213	-45.2	-60.3	27	8.9	24	28,315	-42.6	-60.3	29	6.9	23	28,178	-48.6	-60.3	27	11.6	7	28,178	-49.0	-60.3	27	5.7	
0.0	7	30,660	-57.6	-66.7	26	16.1	27	30,961	-37.1	-66.7	26	10.6	31	30,996	-36.2	-66.7	27	9.7	27	30,782	-42.8	-66.7	27	11.7	6	30,846	-42.1	-66.7	27	11.4	

GODDE CITY, KS 923 MB	EL PASO, TX 861 MB						ELY, NV 807 MB						EMPALME, MEXICO 1012 MB						FAIRBANKS, AK 996 MB											
	EL PASO, TX 861 MB			ELY, NV 807 MB			EMPALME, MEXICO 1012 MB			FAIRBANKS, AK 996 MB																				
	Temperature °C	Dew Point °C	Resultant Wind Direction tens of deg.	Speed m.p.s.	Temperature °C	Dew Point °C	Resultant Wind Direction tens of deg.	Speed m.p.s.	Temperature °C	Dew Point °C	Resultant Wind Direction tens of deg.	Speed m.p.s.	Temperature °C	Dew Point °C	Resultant Wind Direction tens of deg.	Speed m.p.s.	Temperature °C	Dew Point °C	Resultant Wind Direction tens of deg.	Speed m.p.s.										
SFC	31	791	2.3	-1.1	33	1.1	31	1,193	6.2	-3.5	31	.7	31	1,908	-2.9	-7.5	19	2.8	31	12	13.6	6.3	34	1.5	30	135	-13.3	-17.5	01	1.5
10.0	7	229	-5.7	-9.6	22	1.8	31	18.9	9.3	3.8	21	1.0	30	175	12.8	6.3	2.2	1.0	31	162										

RAWINSONDE DATA

Average monthly values

MARCH 1979

FLINT, MI 988 MB				GLASCOW, MT 934 MB				GRAND JUNCTION, CO 851 MB				GREAT FALLS, MT 887 MB				GREEN BAY, WI 989 MB					
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C ↑	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C ↑	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C ↑	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C ↑	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C ↑	Resultant Wind Speed m.p.s.	
5 FC	30	23.6	.9	-1.6 21 1.4	31	6.96	-7.3	-8.7	02	1+2	31	1,472	1+5	-2+1	10	1+3	31	1,118	-1+4	30	
1000	30	5.6	1.6	-4.6 23 4.5	31	9.90	-1.6	-6.0	31	3+6	30	1,529	.9	-5+6	12	1.3	31	1,462	.5	30	
950	30	5.6	1.6	-4.6 25 6.5	31	1,455	-2.2	-8+3	31	6.7	17	1,529	-3.7	-3+3	15	2.2	31	1,946	-2.3	30	
850	30	1,437	-1.4	-8+8 26 8.5	31	9.21	1,926	-3.7	-11.6	31	8.2	31	1,972	-1.3	-5+3	15	2.7	31	1,409	-2.7	30
800	30	1,919	-2.5	-5.9 26 9.5	31	2,434	-6.0	-14+8	31	9.8	31	2,489	-1.7	-7+5	25	2.1	31	1,890	-3.3	30	
750	30	2,430	-4.5	-12.0 26 10.2	31	2,971	-8.9	-17.4	31	10.3	31	3,035	-5.1	-10+2	25	2.4	31	2,399	-5.2	30	
700	30	2,971	-6.9	-15.5 26 10.7	31	3,511	-11.7	-20.6	31	11.5	31	3,613	-9.0	-13+7	26	4.3	31	2,939	-7.7	30	
650	30	3,516	-10.0	-19.9 26 11.6	31	4,084	-15.3	-25.5	30	12.1	31	4,228	-12.8	-19+6	27	5.4	31	3,512	-10.7	30	
600	30	4,159	-13.5	-25.0 27 12.7	31	4,152	-15.3	-25.5	30	12.1	31	4,488	-11.5	-18+7	29	9.1	30	4,124	-14.3	30	
550	30	4,818	-17.7	-29.1 27 13.3	31	4,804	-19.5	-29+3	30	12.6	31	4,887	-17.1	-25+5	27	6.5	31	4,830	-19.3	30	
500	30	5,522	-22.6	-34.3 27 15.0	31	5,504	-24.7	-34+5	30	13.6	31	5,555	-22.1	-32+1	27	7.7	31	5,532	-24.2	30	
450	30	6,287	-28.2	-38.6 27 16.3	31	6,282	-30.3	-40.0	30	15.0	31	6,362	-27.5	-38+2	27	11.6	30	5,484	-23.0	30	
400	30	7,121	-34.5	-43.7 27 17.9	31	7,089	-36.9	-45+3	30	16.0	30	7,199	-34.3	-44+2	27	8.0	31	7,121	-36.0	30	
350	30	8,043	-41.6	-46.6	27	18.2	31	8,002	-43.7	30	17.1	29	8,117	-41.8	27	8.8	31	8,037	-43.4	30	
300	30	9,070	-48.9	-52.7	27	19.4	31	9,019	-50.9	30	17.7	28	9,135	-49.9	26	10.4	31	9,054	-51.1	29	
250	30	10,250	-55.0	-57.6	27	23+1	31	10,190	-56.3	30	17.9	28	10,312	-55.2	27	14.1	31	10,221	-57.3	30	
200	30	11,666	-57.6	-57.6	27	23+1	31	11,603	-56.6	30	16.6	27	11,733	-55.9	27	17.3	31	11,627	-57.9	30	
175	30	12,510	-57.0	-57.0	27	22+5	31	12,453	-54.8	29	14.8	27	12,585	-54.5	27	16.0	31	12,472	-55.9	30	
150	30	13,490	-55.6	-55.6	27	18+	31	13,492	-54.1	29	13.7	27	13,571	-55.6	27	16.0	31	13,455	-55.2	29	
125	30	14,650	-56.5	-56.5	27	18+2	31	14,610	-55+4	29	12.9	27	14,700	-56.0	27	16.4	31	14,618	-56.5	29	
100	30	16,400	-57.7	-57.7	27	18+3	31	16,010	-56+4	29	11.3	27	16,132	-57.5	27	16.8	30	16,060	-57.4	29	
80	30	17,466	-58.5	-58.5	27	18+3	31	17,466	-57.0	29	9.5	27	17,513	-58.0	27	17.6	30	17,330	-58.0	29	
70	29	18,304	-58.6	-58.6	27	12+1	30	18,293	-57.5	29	9.6	27	18,367	-58.0	27	12.9	30	18,279	-57.7	29	
60	29	19,273	-58.6	-58.6	27	10+8	30	19,266	-57.8	30	9.2	27	19,330	-59.7	27	7.9	29	19,256	-58.1	29	
50	29	20,419	-58.7	-58.7	27	9+9	29	20,415	-58.1	30	9.0	27	20,477	-58.7	27	6.8	29	20,403	-58.5	30	
40	28	21,825	-58.0	-58.0	27	8+7	26	21,821	-58.9	30	8.0	27	21,866	-59.9	28	6.6	28	21,804	-59.3	30	
30	28	23,693	-56.9	-56.9	27	8+8	26	23,626	-59.0	30	7.2	27	23,667	-59.4	29	4.7	28	23,602	-59.8	30	
25	28	24,801	-55.5	-55.5	27	9+1	26	24,770	-58.9	31	7.2	29	24,808	-58.2	28	5.6	28	24,743	-59.4	31	
20	27	26,237	-53.1	-53.1	26	9+9	27	26,170	-58.1	30	7.6	26	26,222	-55.2	27	9.7	27	26,144	-58.5	29	
15	22	28,107	-49.1	-49.1	25	12+6	25	27,993	-56.2	29	10.0	16	28,068	-51.9	27	15.1	20	27,955	-57.1	29	
10	7	30,790	-45.2	-45.2	14	30,606	-50.8	7	30,799	-42+4	12	30,559	-52.8	27	22.6	14	30,677	-47.2	26		
	7															5	33,006	-43.5			

* INTERNATIONAL FALLS, MN 971 MB				* ISLE OF CISNE 1013 MB				JACKSON, MS 1008 MB				JOHN F. KENNEDY INT'L AP NY 1020 MB				JOHNSTON IS., PACIFIC AREA 1015 MB															
SFC	31	359	-9.5 -13.2	01	.5	31	10	25.3	21.0	08	4.3	31	100	9.5	7.0	19	.9	28	5	3.7	-3.4	31	1.5	31	3	24.3	20.5	.06	7.3		
1000						31	123	24.8	20.6	08	5.3	27	168	10.6	6.7	19	1.2	27	172	2.8	-3.9	28	3.1	133	23.3	18.8	.06	7.6			
950	31	530	-8.4 -11.3	35	.6	31	571	21.0	18.6	08	6.6	31	562	11.0	3.3	22	4.0	26	582	2.0	-3.2	26	3.3	31	579	19.5	16.8	.06	8.4		
900	31	950	-7.8 -11.0	31	1.5	31	1,039	16.1	13.4	09	5.9	31	1,032	9.2	-4.2	24	5.5	28	1,017	-1.5	-5.4	28	5.8	31	1,045	16.3	13.8	.06	8.3		
850	31	1,395	-7.4 -11.7	30	3.1	31	1,527	15.3	9.4	08	3.7	31	1,505	5.7	-4.9	24	7.4	28	1,484	-1.4	-9.6	28	6.5	31	1,528	15.3	12.8	.06	8.3		
800	31	1,867	-8.2 -14.5	30	4.3	31	2,039	13.1	4.0	07	2.6	31	2,003	5.6	-8.5	25	9.2	28	1,952	-1.1	-15.5	26	7.6	31	2,046	14.2	11.0	.06	9.9		
750	31	2,201	-9.6 -16.4	30	5.0	31	2,580	10.4	5.4	06	2.0	31	2,528	3.6	-11.1	26	10.1	28	2,469	-1.1	-17.8	26	6.3	31	2,558	11.4	-6.6	.07	5.7		
700	31	2,698	-11.1 -16.6	29	5.0	31	2,810	10.4	5.4	06	2.0	31	2,748	3.6	-10.2	26	10.2	28	2,810	-7.0	-20.3	28	10.3	31	3,152	9.2	-12.4	.06	4.6		
650	31	3,444	-13.7 -17.3	28	2.8	27	7.9	31	3,763	6.2	-12.1	36	1.3	31	3,673	-3.8	-17.0	27	12.9	28	3,585	-9.9	-22.2	27	11.2	31	3,765	6.2	-15.6	.04	3.5
600	31	4,069	-16.9 -25.9	29	9.7	31	4,415	2.9	-16.6	31	2.6	31	4,301	-7.0	-21.1	27	13.9	28	4,198	-13.6	-24.6	28	11.6	31	4,414	2.3	-18.0	1.9	3.0		
550	31	4,718	-20.6 -30.6	29	11.4	31	5,111	-1.9	-21.7	30	4.3	31	4,972	-12.1	-26.3	27	16.4	28	4,855	-17.6	-29.8	28	13.4	31	5,110	-2.3	-22.7	35	3.5		
500	31	5,416	-25.4 -34.4	7	28	13.1	5,864	-7.4	-26.4	29	5.1	31	5,693	-17.1	-30.8	27	18.0	28	5,561	-22.7	-35.1	27	13.3	31	5,859	-7.5	-26.8	33	5.1		
450	31	6,173	-30.5 -40.1	28	14.8	31	6,676	-12.9	-30.8	30	7.7	31	6,476	-22.3	-36.6	27	20.7	28	6,326	-27.9	-40.1	28	13.8	31	6,672	-12.8	-31.1	32	8.0		
400	31	7,000	-36.6 -45.6	27	16.6	31	7,562	-19.7	-36.0	28	10.3	31	7,330	-28.6	-41.1	27	24.6	28	7,178	-33.8	-44.6	28	15.8	31	7,560	-18.7	-36.5	32	10.6		
350	31	7,914	-34.4	27	17.8	31	8,542	-26.5	-40.0	27	13.5	31	8,276	-35.7	-45.9	27	27.6	28	8,108	-40.6	-45.0	27	14.6	31	8,545	-25.1	-41.6	32	13.4		
300	31	8,932	-50.4	27	20.0	31	9,635	-34.6	-47.3	27	16.7	31	9,327	-33.8	-51.4	27	30.6	27	9,125	-48.1	-51.4	27	15.1	31	9,645	-32.5	-47.6	31	17.6		
250	31	10,166	-56.2	27	21.7	31	10,883	-44.4	-47.3	27	16.7	31	10,529	-1.9	-5.1	27	32.6	22	10,309	-54.7	-57.1	27	16.1	31	10,908	-16.0	-53.8	30	20.4		
200	31	11,520	-56.3	27	19.7	30	12,343	-54.8	-22.5	31	11,957	-56.7	27	34.2	21	11,714	-56.4	-59.7	27	16.6	31	12,388	-52.0	-56.6	29	21.3					
175	31	12,372	-54.6	28	18.3	30	13,186	-6.0	-6.0	25	21.3	31	12,809	-55.7	-57.7	27	34.8	21	13,550	-55.7	-57.7	27	17.5	31	12,411	-6.0	-66.0	29	21.3		
150	31	13,361	-54.5	28	17.2	30	14,153	-6.3	-6.3	26	16.6	31	13,567	-59.2	-59.7	27	34.4	21	14,707	-59.7	-59.7	27	16.6	30	15,280	-73.2	-30	19.2			
125	31	14,527	-55.2	28	16.8	30	15,226	-11.9	-26	17	13.9	31	14,907	-62.2	-62.2	27	31.4	21	14,707	-62.2	-62.2	27	16.6	30	15,280	-73.2	-30	19.2			
100	29	19,246	-26	20	16.9	30	16,148	-7.0	-27	17	13.9	31	16,172	-56.8	-56.8	27	21.7	21	16,116	-58.6	-58.6	27	14.1	30	16,563	-79.8	-29	12.5			
80	29	17,368	-56.7	28	14.0	30	17,786	-79.5	-27	7.1	30	17,626	-6.6	-27	27	16.7	21	17,519	-58.6	-58.6	28	12.0	30	17,819	-81.0	-30	7.4				
70	21	18,206	-57.1	28	12.7	30	18,549	-76.6	-27	4.4	30	18,434	-65.4	-27	27	12.0	21	18,359	-58.4	-58.4	27	10.1	30	18,576	-77.4	-30	6.7				
60	18	19,179	-57.5	27	12.7	28	19,448	-71.1	-28	2.6	30	19,372	-65.0	-27	27	8.4	21	19,130	-57.7	-57.7	27	8.9	30	19,474	-71.2	-27	2.4				
50	18	20,336	-57.9	28	12.0	28	20,544	-64.5	-34	1.3	28	20,489	-61.9	-28	27	6.2	21	20,462	-57.4	-57.4	27	7.7	30	20,571	-64.9	-23	1.8				
40	13	21,740	-57.9	27	10.4	27	21,930	-57.7	-05	3.1	28	21,878	-59.8	-28	27	3.7	21	21,894	-56.8	-56.8	27	6.2	30	21,947	-60.5	-11	1.1				
30	12	23,543	-58.1	27	10.9	27	23,766	-52.5	-08	6.3	27	23,691	-56.5	-30	24.5	20	23,728	-54.6	-54.6	26	5.8	30	23,761	-55.4	-09	4.3					
25	12	24,693	-57.2	27	11.3	26	24,948	-50.5	-08	7.8	27	24,853	-54.4	-28	3.9	17	24,696	-52.9	-52.9	25	5.7	29	24,927	-53.1	-08	7.6					
20	12	26,111	-55.7	27	11.4	25	26,410	-47.3	-09	10.1	27	26,295	-50.8	-27	4.6	16	26,351	-50.5	-50.5	26	4.9	28	26,379	-49.5	-06	12.0					
15	12	27,948	-54.4	27	13.3	22	28,330	-44.1	-10	12.9	27	28,194	-44.5	-27	7.6	12	28,242	-46.5	-46.5	27	28,282	27	28,455	-45.5	-09	15.8					
10	6	30,565	-49.7	27	12	31,065	-36.1	-24	30,955	-36.6	-24	9.2	27	30,955	-36.6	-24	7	33,435	-37.6	-37.6	7	33,435	23	31,013	-40.5	-16.1					

RAWINSONDE DATA

Average monthly values

MARCH 1979

LANDER, WY 827 MB		LITHUE KAUAI, HI 1014 MB		LITTLE ROCK, AR 996 MB		LONGVIEW, TX 1003 MB		MCGRATH, AK 998 MB	
5FC	31	1,697	-2.6	-6.6	25	1.0	31	34	20.1
1000							31	79	8.5
950							31	103	11.5
900							31	203	11.5
850							31	566	11.5
800	31	1,958	-8	-7.9	31	.6	31	1,012	6.7
750	31	2,472	-2.6	-11.3	30	2.5	31	2,497	1.2
700	31	3,161	-5.9	-14.3	29	4.5	31	3,049	-1.9
650	31	3,593	-9.4	-16.3	29	1.1	31	3,192	-13.7
600	31	4,207	-13.3	-23.4	29	6.7	31	4,392	-6.6
550	31	4,664	-17.9	-28.6	29	7.9	31	5,081	-5.2
500	31	5,569	-23.0	-34.6	29	6.6	31	5,821	-10.7
450	31	6,333	-28.0	-39.7	28	9.4	31	6,622	-16.6
400	31	7,164	-35.6	-45.2	28	9.4	31	7,496	-23.3
350	31	8,082	-43.0		28	10.6	31	8,463	-29.7
300	31	9,099	-53.3		28	9.5	31	9,542	-37.4
250	31	10,571	-57.1		29	12.1	31	10,900	-54.2
200	31	12,671	-58.4		29	22.6	31	12,245	-55.0
175	31	12,516	-58.6		28	13.3	31	13,100	-57.2
150	31	13,498	-58.3		28	14.3	31	14,061	-6.3
125	31	14,659	-56.7		28	14.4	31	15,164	-69.9
100	31	16,067	-58.3		27	12.5	31	16,479	-74.9
80	31	17,468	-59.4		27	9.5	31	17,761	-76.3
70	31	18,304	-59.2		26	9.4	31	18,539	-72.9
60	31	19,272	-59.0		27	8.5	31	19,455	-68.1
50	31	20,414	-59.6		27	7.3	30	20,562	-6.3
40	31	21,607	-61.7		28	5.5	30	21,949	-59.2
30	30	23,602	-60.0		29	5.8	28	23,776	-54.6
25	26	24,735	-59.1		29	5.8	28	24,950	-52.1
20	23	26,148	-57.4		28	8.6	27	26,409	-48.7
15	18	27,973	-54.6		27	14.0	24	28,326	-44.5
10					18	31,064	40.9	13	5.8
7								30,905	-37.4
								30,965	-37.2

MAJUNG, MARSHALL IS.			*	MEDFORD, OR			MER10A, MEXICO			MIDLAND, TX			MONTERREY, MEXICO																		
1011 MB				970 MB			1014 MB			915 MB			963 MB																		
SFC	31	3	26.7	24.0	06	6.3	31	401	4.9	2.0	31	+2	31	11	19.6	18.1	07	1.0	31	874	7.5	.6	13	.3	31	423	15.2	11.6	04	.5	
1000	31	97	27.0	22.5	06	6.3	31	31	1,033	3.0	31	11	134	22.3	19.2	10	3.8	31	579	19.6	16.1	12	9.0	31	567	15.4	11.0	08	.9		
950	31	550	23.6	20.0	06	11.5	3w	575	6.6	2.0	30	+5	31	579	19.6	16.1	12	9.0	31	1,044	17.7	10.7	12	5.8	31	9.1	1,025	13.9	8.9	12	2.3
910	31	1,021	26.5	17.9	07	9.7	31	1,013	5.8	.5	17	31	1,044	17.7	10.7	12	5.8	31	1,008	9.5	.4	16	.9	31	3,111	1,507	13.3	3.1	16	3.1	
850	31	1,514	17.6	14.5	08	8.7	31	1,479	3.4	-2.0	18	2.1	31	1,532	16.0	4.6	14	2.7	31	1,482	9.3	-3.6	2.6	1.2	31	1,222	2,200	2.9	2.0	2.9	3.1
800	31	2,033	16.0	6.6	09	6.6	31	1,969	.9	-6.5	22	2.5	31	2,049	13.6	3.0	20	1.4	31	1,983	7.2	-5.7	2.4	5.0	31	2,016	12.2	-2.2	2.0	2.9	
750	31	2,540	14.1	1.6	09	6.2	31	2,485	-2.2	-8.8	24	3.6	31	2,587	11.1	-2.7	24	1.6	31	2,512	4.7	-9.1	2.5	7.7	31	2,555	9.8	-7.7	2.4	3.9	
700	31	3,164	11.3	-2.4	09	6.6	31	3,030	-5.6	-14.3	25	5.1	31	3,160	8.0	-7.8	25	2.0	31	3,071	1.0	-13.6	25	8.5	31	3,125	6.9	-13.2	2.6	7.1	
650	31	3,776	8.5	-7.5	09	6.3	31	3,607	-9.4	-18.9	25	5.1	31	3,767	4.5	-12.2	27	3.6	31	3,663	-2.8	-18.2	25	10.5	31	3,729	2.6	-15.6	2.6	10.1	
600	31	4,433	4.7	-1.6	09	6.6	31	4,222	-13.2	-25.2	25	4.9	31	4,415	.9	-17.0	28	6.7	31	4,291	-7.5	-21.7	25	13.2	31	4,370	-2.1	-17.6	25	12.1	
550	31	5,136	7	-13.4	09	7.5	31	4,879	-17.8	-28.7	26	5.2	31	5,109	-3.2	-20.8	28	9.2	31	4,963	-12.2	-28.3	25	15.5	31	5,055	-7.1	-21.2	25	14.4	
500	31	5,897	-3.7	-1.6	09	7.7	31	5,584	-22.6	-33.1	26	4.7	31	5,855	-8.4	-25.9	27	11.2	31	5,684	-17.2	-34.0	26	16.4	31	5,791	-12.2	-28.3	26	16.9	
450	31	6,722	-8.2	-24.7	08	9.0	31	6,349	-28.3	-39.1	26	4.2	31	6,655	-14.0	-30.0	27	13.7	31	6,467	-22.6	-37.5	26	21.1	31	6,588	-17.8	-31.6	26	19.9	
400	31	7,627	-13.8	-31.5	07	7.7	31	7,182	-35.0	-44.1	27	4.1	31	7,547	-20.3	-34.8	27	16.5	31	7,320	-29.0	-41.7	26	24.0	31	7,458	-24.3	-36.8	26	22.9	
350	31	8,632	-20.4	-36.4	07	4.7	31	8,102	-42.3	-46.8	28	4.7	31	8,522	-27.9	-42.4	27	18.0	31	8,265	-35.5	-46.9	26	28.1	31	8,420	-31.4	-41.1	26	26.3	
300	31	9,752	-26.6	-43.6	09	8.3	31	9,125	-49.7	-59.0	30	5.9	31	9,600	-36.5	-49.0	27	20.7	31	9,318	-43.3	-52.1	26	32.1	31	9,491	-39.5	-47.4	26	31.2	
250	28	11,032	-39.1	-51.8	19	2.0	30	10,293	-55.7	-59.7	29	7.6	30	10,850	-45.1	-59.7	27	25.0	31	10,524	-51.2	-62.1	26	36.1	31	10,714	-48.6	-58.6	27	35.6	
220	28	12,244	-44.4	-54.4	21	2.7	30	11,704	-57.6	-62.4	29	8.7	30	12,309	-54.5	-62.4	27	27.1	31	11,953	-56.4	-62.4	26	37.6	31	12,156	-56.5	-62.5	26	37.1	
175	27	13,377	-50.8	-58.5	21	2.1	30	12,549	-56.2	-62.4	29	9.7	30	13,155	-59.4	-62.4	27	25.9	30	12,795	-57.2	-62.4	26	35.8	31	13,299	-59.1	-62.5	26	35.0	
150	27	14,328	-66.5	-65.5	33	4.6	29	13,530	-55.4	-62.4	28	10.4	29	14,101	-64.4	-64.4	26	24.7	30	13,768	-58.1	-62.7	26	32.5	31	13,955	-62.7	-62.7	26	33.5	
125	26	14,104	-74.6	-60.4	34	4.0	30	14,021	-67.6	-70.4	28	10.9	30	15,027	-67.6	-70.4	26	24.0	30	14,906	-62.1	-62.1	26	28.5	31	15,064	-67.4	-67.4	26	28.6	
100	26	16,681	-82.1	-81.1	05	4.2	30	16,092	-59.3	-62.4	28	8.1	28	16,517	-75.5	-75.5	27	19.9	30	16,273	-65.5	-65.5	26	24.3	31	16,394	-72.2	-72.2	26	22.2	
85	26	17,924	-81.3	-81.3	03	3.0	30	17,488	-59.7	-62.4	29	7.0	27	17,800	-74.7	-74.7	27	11.9	30	18,521	-65.3	-65.3	26	15.0	30	18,704	-72.7	-72.7	26	14.1	
70	26	18,689	-74.2	-74.2	27	5.4	30	18,324	-59.6	-62.4	29	5.8	28	18,568	-75.8	-75.8	27	7.7	27	18,444	-64.9	-64.9	26	10.2	30	18,600	-65.6	-65.6	26	9.9	
60	26	19,596	-76.2	-76.2	29	3.0	30	19,288	-59.6	-62.4	29	5.2	28	19,471	-70.0	-70.0	26	3.7	27	19,346	-66.8	-66.8	26	3.7	27	19,446	-66.8	-66.8	26	3.7	
50	26	20,692	-65.7	-65.7	27	9.5	30	20,427	-59.7	-62.4	30	3.6	27	20,574	-64.8	-64.8	04	27	20,505	-61.9	-61.9	27	6.3	28	20,521	-63.1	-63.1	24	1.4		
40	26	22,067	-66.0	-67.7	26	5.6	30	21,823	-59.6	-62.4	29	3.9	27	21,956	-58.7	-62.4	05	2.7	27	21,992	-60.2	-60.2	28	5.7	28	21,901	-59.5	-59.5	07	.8	
30	21	23,875	-57.0	-57.0	09	8.8	30	23,622	-59.4	-62.4	30	2.9	27	23,787	-53.6	-62.4	07	4.2	27	23,696	-57.7	-57.7	27	5.2	27	23,722	-55.1	-55.1	01	1.1	
25	25	25,029	-55.4	-55.4	09	16.5	30	24,765	-59.0	-62.4	29	3.0	27	24,968	-50.9	-62.4	07	4.6	27	24,855	-55.0	-62.4	27	6.6	27	24,895	-52.0	-52.0	31	1.7	
20	26	26,459	-56.0	-56.0	09	22.9	29	26,171	-57.1	-62.4	30	4.7	25	26,431	-48.2	-62.4	08	5.0	27	26,293	-50.8	-62.4	27	7.9	25	26,350	-46.7	-46.7	32	1.9	
15	16	28,350	-45.3	-45.3	09	28.2	25	28,004	-55.3	-62.4	29	8.4	26	28,355	-43.4	-62.4	09	9.3	26	28,192	-46.3	-62.4	27	11.7	24	28,246	-43.7	-43.7	01	0.9	
10	5	31,035	-39.6	-39.6	7	16	30,650	-48.6	-62.4	26	16.7	6	31,107	-37.4	-62.4	08	8	33,420	-35.2	-62.4	25	14.0	10	30,971	-37.5	-37.5					

RAWINSONDE DATA

Average monthly values

MARCH 1979

MONETT, MO 964 MB				NASHVILLE, TN 997 MB				NOME, AK 1010 MB				NORTH PLATTE, NE 916 MB				OAKLAND, CA 1016 MB				
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C †	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C †	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C †	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C †	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C †	Resultant Wind Speed m.p.s.
550	31	4,36	-2	1.0	16	1	1	31	160	6.0	-1.3	2.4	31	5	-10.1	3.1	31	2,8	7.5	4.0
1,000	31	54.3	5.2	3	19	1	4	31	215	7.0	-1.6	2.3	31	6	-8.0	2.8	31	2,8	7.5	4.0
950	30	54.3	5.2	-1.0	24	3	19	31	575	7.0	-1.9	2.4	31	6	-8.0	2.8	31	2,8	7.5	4.0
900	31	1,959	5.8	-2.7	7	27	7	31	1,010	5.0	-2.4	7.4	31	6	-6.0	4.4	31	1,944	5.8	-2.7
850	31	1,467	4.4	-2.7	7	27	7	31	1,483	3.2	-4.5	2.4	31	5	-1.3	4.0	31	1,340	4.4	-2.7
800	31	1,959	2.7	-7.0	27	67	31	1,974	1.6	-6.5	2.5	31	9	-11.0	2.0	31	1,100	12.0	-19.9	
750	31	2,479	-2.7	-9.6	28	9.0	31	2,492	1.7	-10.2	2.5	31	9	-2.2	2.9	31	2,298	-14.0	-22.7	
700	31	3,030	-2.9	-12.3	38	9.9	31	3,041	-3.3	-13.1	26	31	10	-2.2	2.9	31	2,819	-16.9	-26.6	
650	31	3,643	-6.2	-18.6	28	10.0	31	3,624	-6.5	-17.9	29	31	10	-3.6	3.7	31	3,372	-19.9	-29.4	
600	31	4,235	-9.9	-23.3	38	12.3	31	4,245	-10.5	-22.1	22	31	11	-6.6	3.1	31	3,962	-22.9	-34.1	
550	31	4,901	-14.2	-28.2	27	14.1	31	4,909	-15.1	-26.4	24	31	12	-6.6	3.1	31	4,595	-26.9	-36.7	
500	31	5,617	-19.2	-32.0	27	15.6	31	5,622	-20.3	-31.9	26	14.8	31	5,276	-31.3	31	4,563	-27.9	-34.0	
450	31	6,392	-24.8	-38.4	27	16.8	31	6,394	-25.7	-37.8	26	16.5	31	6,011	-32.0	31	4,854	-31.6	-37.9	
400	31	7,236	-31.3	-43.5	27	17.7	31	7,237	-32.1	-43.3	26	18.8	31	6,825	-41.1	31	4,446	-37.6	-44.6	
350	30	8,172	-38.5	-46.2	26	19.1	31	8,169	-38.8	-45.7	26	22.2	31	7,724	-47.1	26	7,68	8,086	-41.5	
300	30	9,211	-46.3	-52.6	26	22.5	31	9,208	-46.0	-52.6	26	25.5	31	8,729	-52.5	27	8,43	9,113	-49.5	
250	30	10,404	-53.0	-59.0	26	26.7	30	10,404	-52.8	-59.0	27	26.8	31	9,905	-52.1	25	7,87	10,286	-56.3	
200	30	11,825	-57.8	-63.0	26	30.9	30	11,825	-57.7	-63.0	27	29.6	29	11,368	-48.7	25	7,43	11,697	-57.3	
175	30	12,668	-57.2	-67.2	27	28.3	30	12,667	-58.0	-67.2	27	30.0	29	12,248	-47.9	25	6,73	12,547	-55.4	
150	30	13,645	-56.8	-68.8	27	27.3	30	13,641	-57.5	-68.8	27	27.1	29	13,265	-47.8	25	7,03	13,533	-55.0	
125	30	14,796	-58.6	-70.8	27	24.6	30	14,787	-59.6	-70.8	27	24.8	29	14,467	-48.8	25	6,41	14,693	-56.6	
100	30	16,190	-60.9	-73.0	27	19.0	30	16,173	-61.7	-73.0	27	20.1	27	15,929	-49.6	27	5,73	16,102	-58.4	
80	29	17,572	-61.6	-74.0	27	13.0	30	17,552	-62.4	-74.0	27	14.7	27	17,385	-50.1	27	4,93	17,502	-59.3	
70	26	18,647	-61.6	-74.0	27	11.6	30	18,626	-62.4	-74.0	28	11.2	27	18,474	-50.8	26	4,51	18,360	-59.6	
60	26	19,731	-61.6	-74.0	27	9.0	30	19,711	-62.3	-74.0	26	8.8	26	19,526	-50.4	29	5,49	20,301	-59.4	
50	25	20,476	-60.9	-74.0	27	7.8	26	20,460	-60.4	-74.0	26	7.6	26	20,442	-51.6	30	5,29	20,210	-50.0	
40	24	21,672	-59.1	-74.0	27	7.1	26	21,655	-59.0	-74.0	26	5.6	27	21,686	-53.0	31	6,49	21,836	-60.1	
30	24	23,682	-57.2	-74.0	27	7.5	30	23,670	-57.2	-74.0	29	4.2	23	23,732	-55.0	32	6,49	23,444	-57.7	
25	24	24,838	-55.8	-74.0	27	6.5	29	24,830	-54.9	-74.0	27	3.7	22	24,911	-55.6	33	7,47	24,790	-57.6	
20	22	26,266	-53.4	-74.0	26	8.2	26	26,265	-51.1	-74.0	26	6.3	21	26,335	-56.1	33	8,47	25,210	-54.4	
15	19	26,131	-49.2	-74.0	26	13.0	26	26,159	-45.6	-74.0	26	9.0	16	26,148	-56.9	34	8,66	23,069	-50.5	
10	14	30,835	-40.4	-74.0	26	16.4	20	30,925	-38.0	-74.0	25	16.6				21	30,761	-43.4	26	

OMAHA, NE 967 MB				PAGO PAGO, AMERICAN SAMOA 1010 MB				PEDRIA, IL 992 MB				PITTSBURGH, PA 975 MB				PONAPE, CAROLINE 15. 1005 MB														
SFC	31	403	-1.1	-3.4	32	2.2	31	5	30.3	24.9	0.7	2.6	31	200	1.0	-1.9	21	1.1	31	359	2.4	-3.2	22	1.2	31	39	26.1	23.6	0.6	3.2
1000	31	54.2	-0.5	-3.1	30	2.1	31	550	24.1	21.4	-0.7	2.2	30	2.3	0.7	-2.6	23	3.7	31	571	3.5	-3.1	24	3.4	31	53	20.4	17.2	0.7	3.7
950	31	54.2	-0.4	-5.1	28	4.2	31	1,022	24.1	17.9	0.5	-2.5	31	982	1.3	-6.1	26	6.1	31	1,009	24.5	-5.6	25	6.7	31	1,009	10.8	17.6	0.7	8.8
850	31	1,432	-0.6	-6.5	26	5.8	31	1,516	18.0	14.7	0.5	-2.4	31	1,443	1.0	-6.4	26	7.3	31	1,469	1.7	-7.6	26	8.3	31	1,501	17.4	13.3	0.8	8.0
800	31	1,49.4	-0.6	-8.9	27	7.9	31	2,034	15.6	10.7	0.5	-2.5	31	1,929	-3	-10.1	26	8.4	31	1,954	-1.8	-9.7	26	10.7	31	2,019	16.5	5.7	0.9	6.2
750	31	2,435	-1.4	-13.3	28	9.3	31	2,580	12.6	6.2	0.5	-2.6	31	2,444	-2.4	-12.1	26	9.3	31	2,466	-3.6	-12.5	27	12.1	31	2,567	14.6	-4.0	1.0	5.4
700	31	2,982	-0.4	-15.1	28	9.9	31	3,158	9.7	1.1	0.5	-2.5	31	2,989	-5.1	-14.5	27	10.2	31	3,009	-6.2	-15.4	27	13.5	31	3,147	11.1	-3.3	10.0	5.4
650	31	3,563	-7.6	-18.5	29	10.7	31	3,770	5.4	-2.5	0.5	-3.3	31	3,568	-8.2	-18.6	27	11.0	31	3,586	-8.7	-19.9	27	14.3	31	3,763	7.8	-6.3	0.9	6.5
600	31	4,181	-11.7	-21.9	29	11.1	31	4,423	3.0	-7.9	0.7	-3.2	31	4,185	-12.0	-22.0	27	11.0	31	4,202	-12.5	-24.3	27	14.2	31	4,418	4.1	-9.5	0.9	7.6
550	31	4,842	-16.3	-26.0	26	11.6	31	5,124	-9.1	-11.6	0.7	2.8	31	4,846	-16.4	-27.2	27	13.4	31	4,861	-16.9	-30.1	26	14.9	31	5,121	-3.3	-13.2	0.9	8.1
500	31	5,552	-21.3	-30.8	26	12.1	31	5,879	-5.3	-18.4	0.6	2.5	31	5,556	-21.5	-31.9	27	13.4	31	5,569	-22.0	-33.7	27	15.9	31	5,880	-3.6	-18.3	0.9	9.6
450	31	6,322	-27.0	-36.6	27	13.6	31	6,699	-9.8	-22.7	0.7	1.4	31	6,324	-27.1	-37.8	27	14.4	31	6,336	-27.5	-39.7	27	16.9	31	6,706	-8.3	-23.7	0.9	9.5
400	31	7,159	-33.5	-43.1	27	15.6	31	7,598	-15.7	-29.0	0.3	1.0	31	7,162	-33.4	-42.9	27	15.9	31	7,173	-33.6	-44.2	27	19.4	31	7,611	-13.7	-30.5	0.9	9.2
350	31	8,086	-40.4	-46.0	26	16.1	31	8,595	-22.6	-36.4	1.9	1.1	31	8,089	-40.3	-46.5	27	17.1	31	8,100	-40.3	-46.9	28	20.6	31	8,615	-20.5	-35.9	0.9	7.3
300	31	8,997	-48.3	-54.3	26	18.3	31	9,105	-31.0	-43.7	2.4	2.8	31	9,119	-48.8	-54.0	27	19.5	31	9,120	-48.7	-54.3	28	22.9	31	9,315	-28.6	-41.2	1.0	5.4
250	31	9,907	-55.7	-61.3	26	19.3	31	10,990	-30.5	-43.7	2.4	2.8	31	9,914	-55.6	-61.8	27	20.5	31	9,915	-55.5	-61.4	28	25.1	31	10,401	-34.4	-48.6	1.0	6.0
200	31	11,710	-67.4	-73.4	22	22.4	31	12,447	-53.6	-53.6	2.3	8.1	31	11,717	-57.9	-57.9	27	22.4	31	11,739	-57.3	-57.4	28	27.9	31	12,502	-51.6	-64.1	1.4	7.5
175	31	12,556	-55.7	-62.6	20	29.1	31	13,292	-60.4	-60.4	24	10.1	30	12,545	-57.0	-62.7	27	24.5	31	12,561	-56.4	-62.4	28	27.0	31	13,355	-58.7	-63.7	1.3	6.7
150	31	13,539	-55.5	-62.7	20	21.1	31	14,236	-67.7	-67.7	24	11.9	30	13,545	-55.9	-65.9	27	20.5	29	13,569	-56.0	-65.0	28	21.0	31	14,305	-66.7	1.0	6.6	6.6
125	30	14,700	-56.4	-62.7	21	18.5	31	15,314	-74.3	-74.3	24	10.8	28	14,699	-57.0	-62.7	27	19.4	29	14,726	-57.0	-62.7	28	20.7	31	15,187	-74.5	0.8	7.4	6.0
100	30	16,111	-58.2	-62.7	27	15.5	31	16,594	-79.6	-79.6	22	6.6	28	16,105	-59.1	-62.7	27	17.3	29	16,135	-57.8	-62.7	28	17.7	31	16,659	-82.2	0.9	8.2	6.2
80	30	17,513	-59.2	-62.7	27	14.5	30	17,863	-77.0	-77.0	12	3.6	28	17,505	-59.2	-62.7	27	14.4	29	17,539	-58.7	-62.7	28	13.6	31	17,905	-80.3	0.8	8.2	2.3
70	30	18,350	-59.2	-62.7	28	12.1	29	18,639	-73.1	-73.1	10	6.4	28	18,340	-59.9	-62.7	27	11.5	29	18,377	-59.3	-62.7	28	11.3	31	18,670	-74.6	2.1	4.1	4.1
60	30	19,315	-59.5	-62.7	28	11.	29	19,549	-70.3	-70.3	10	8.8	27	19,303	-59.2	-62.7	27	11.2	29	19,343	-59.2	-62.7	28	10.3	31	19,577	-70.6	2.7	8.8	4.0
50	30	20,457	-59.3	-62.7	28	9.	29	20,644	-65.7	-65.7	09	11.5	26	20,450	-58.2	-62.7	27	9.2	28	20,464	-58.3	-62.7	28	9.1	30	20,672	-65.8	2.7	10.0	4.0
40	28	21,859	-59.1	-62.7	28	8.4	29	22,012	-62.1	-62.1	09	14.5	23	21,856	-58.3	-62.7	27	9.3	27	21,893	-57.3	-62.7	28	6.7	31	22,043	-61.2	2.6	6.2	2.6
30	28	23,667	-58.3	-62.7	27	8.	28	23,819	-55.4	-55.4	09	20.1	23	23,672	-56.7	-62.7	26	10.0	27	23,719	-55.7	-62.7	28	6.5	30	23,849	-56.8	0.9	7.3	0.9
25	28	24,818	-58.6	-62.7	26	9.4	25	24,990	-52.6	-52.6	09	23.7	24	24,828	-54.7	-62.7	26	11.1	26	24,885	-53.6	-62.7	28	7.0	30	25,007	-55.5	0.9	15.9	0.9
20	25	26,242	-53.2	-62.7	26	12.1	23	26,445	-48.9	-48.9	09	27.9	26	26,267	-51.5	-62.7	26	11.9	22	26,327	-51.3	-62.7	26	9.2	30	26,443	-51.5	0.9	24.2	0.9
15	22	26,111	-49.9	-62.7	26	14.7	21	28,352	-44.2	-44.2	09	34.1	20	28,131	-47.8	-62.7	24	13.6	20	28,224	-46.7	-62.7	27	11.4	28	28,334	-46.7	0.9	29.8	0.9
10	15	30,789	-44.0	-62.7	26	27.6	12	31,118	-36.9	-41.3	08	30,796	-41.3	10	30,940	-41.3	-42.0	27	20	31,053	-40.2	-42.0	27	20	31	30,053	-40.2	0.9	35.5	

PORTLAND, ME 1016 MB				GUILLAYATE, WA 1010 MB				RAPID CITY, SD 903 MB				ST CLOUD, MN 977 MB				ST PAUL ISLAND, AK 1001 MB															
SFC	31	20	.1	-3.9	29	.5	30	58	4.0	2.4	11	.8	30	966	-2.0	-5.2	34	3.5	31	316	-6.2	-8.4	35	.9	31	10	-1.2	-3.7	08	4+2	
1000	28	163	1.4	-4.2	28	1.1	28	150	6.1	2.2	13	.9	30	966	-2.0	-5.2	34	3.5	31	536	-4.8	-7.0	32	1.7	31	43	-2.2	-5.1	10	4+7	
950	31	560	5.5	-5.2	26	2.8	30	561	5.3	-1	16	2.3	31	966	-2.0	-5.2	34	3.5	31	962	-4.3	-7.3	30	4.0	31	486	-6.0	-9.9	12	4+8	
900	31	993	-1.4	-6.3	26	3.7	30	1,001	3.1	-3.3	19	3.5	22	1,018	-.8	-5.3	33	4.1	31	1,413	-3.6	-9.9	29	5.3	31	1,294	-7.9	-14.4	13	4+7	
850	31	1,447	-3.1	-9.8	27	4.9	30	1,463	.9	-7.6	20	4.2	30	1,452	.0	-6.0	31	7.0	31	1,413	-3.6	-9.9	29	5.3	31	1,294	-7.9	-14.4	13	4+7	
800	31	1,924	-4.4	-12.4	32	6.0	30	1,948	-1.7	-12.1	22	4.2	30	1,937	-1.3	-9.5	31	8.0	31	1,892	-3.9	-13.1	29	6.5	31	1,763	-9.9	-18.7	15	5+4	
750	31	2,433	-6.6	-15.8	27	7.0	30	2,459	-4.3	-15.8	23	4.2	30	2,450	-3.3	-13.9	31	8.7	31	2,400	-5.6	-13.4	28	7.2	31	2,259	-12.2	-21.6	15	5+8	
700	31	2,963	-9.2	-17.7	27	8.5	30	2,999	-7.2	-20.4	26	4.7	30	2,993	-6.2	-18.0	31	9.1	31	2,930	-8.0	-16.2	26	9.8	31	2,741	-12.2	-21.6	16	6+4	
650	31	3,400	-10.0	-20.4	27	9.1	30	3,514	-8.0	-20.3	26	6.3	30	3,499	-6.8	-14.1	31	9.3	31	3,514	-8.0	-16.6	28	13.3	31	3,342	-11.5	-20.9	17	7+6	
600	31	3,400	-15.6	-26.0	27	10.4	30	3,505	-12.8	-26.2	26	7.1	30	3,484	-11.4	-24.1	31	9.5	31	3,423	-12.3	-22.6	28	12.1	31	3,938	-20.9	-30.7	17	7+6	
550	31	4,801	-19.1	-26.4	27	12.4	30	4,940	-18.2	-26.4	26	7.0	30	4,860	-17.7	-24.9	30	10.0	31	4,777	-21.8	-27.6	28	13.7	31	4,576	-25.0	-34.6	17	8+1	
500	31	5,545	-23.9	-32.8	27	13.2	30	5,545	-22.9	-35.5	26	7.7	30	5,546	-22.7	-33.7	29	11.0	31	5,481	-23.5	-33.8	28	14.3	31	5,252	-29.4	-38.8	16	9+3	
450	31	6,265	-29.1	-37.4	27	12.9	28	6,315	-28.5	-39.7	28	8.7	29	6,310	-28.4	-39.2	29	12.1	31	6,243	-29.1	-39.0	28	15.3	31	6,006	-34.5	-40.1	18	10+6	
400	31	7,087	-35.0	-43.1	27	12.5	28	7,146	-34.8	-43.9	28	9.6	29	7,142	-35.1	-45.8	28	13.5	31	7,070	-35.5	-44.9	27	17.0	31	6,820	-39.9	-42.6	18	12+2	
350	31	8,019	-41.6	-46.4	27	17.6	27	8,067	-41.4	-46.7	28	29	10.5	29	8,061	-42.5	-43.8	28	14.3	31	7,993	-42.5	-44.9	27	18.5	31	7,724	-45.5	-48.2	18	12+2
300	31	9,046	-46.2	-52.1	26	18.9	26	9,101	-46.9	-50.6	30	10.7	29	9,081	-50.6	-50.6	28	15.0	31	9,015	-49.8	-52.8	27	20.1	31	8,738	-50.1	-51.1	19	11+1	
250	31	10,230	-54.7	-59.7	27	21.2	26	10,279	-56.2	-59.7	30	13.1	29	10,247	-56.1	-59.7	28	15.2	31	10,190	-56.2	-59.7	27	20.9	31	9,926	-50.7	-50.7	20	10+8	
200	31	11,649	-56.8	-62.8	28	20.4	25	11,690	-58.6	-62.8	31	12.2	29	11,698	-57.8	-62.8	28	15.9	31	11,600	-58.6	-62.8	27	19.3	31	11,388	-47.8	-50.0	20	9+0	
175	31	12,498	-55.6	-62.4	27	17.4	25	12,532	-56.8	-62.4	30	10.3	29	12,495	-55.9	-62.4	28	16.1	30	12,450	-55.2	-62.4	27	17.6	31	12,270	-74.5	-75.5	20	8+5	
150	31	13,478	-54.6	-62.4	27	16.8	23	13,499	-55.5	-62.4	30	10.8	29	13,478	-55.2	-62.4	28	15.6	30	13,436	-54.9	-62.4	27	15.9	31	13,289	-47.5	-50.5	20	8+3	
125	30	14,644	-55.2	-62.4	26	14.8	23	14,661	-56.2	-62.4	30	7.9	29	14,637	-56.9	-62.4	27	14.7	29	14,599	-55.9	-62.4	27	15.6	31	14,492	-48.6	-50.5	20	6+5	
100	30	16,061	-57.3	-62.4	27	14.0	23	16,073	-58.0	-62.4	30	7.3	29	16,048	-57.9	-62.4	27	13.0	29	16,015	-57.3	-62.4	28	14.2	31	15,957	-49.1	-51.7	18	5+7	
80	29	17,468	-57.8	-62.4	27	11.8	23	17,477	-58.4	-62.4	30	6.4	27	17,452	-58.2	-62.4	28	12.1	28	17,423	-58.2	-62.4	28	12.7	31	17,148	-50.0	-51.9	19	4+3	
70	29	18,310	-57.9	-62.4	27	10.9	23	18,318	-58.7	-62.4	31	5.2	27	18,291	-58.8	-62.4	28	10.6	28	18,264	-58.5	-62.4	28	12.6	31	18,291	-50.4	-51.6	18	3+6	
60	29	19,283	-57.6	-62.4	27	9.2	21	19,298	-59.1	-62.4	31	4.8	26	19,260	-59.2	-62.4	28	9.2	28	19,233	-58.8	-62.4	28	11.4	31	19,297	-50.6	-51.7	17	2+7	
50	29	20,434	-57.4	-62.4	27	8.3	21	20,422	-58.7	-62.4	32	3.5	26	20,402	-59.3	-62.4	28	9.5	27	20,376	-58.6	-62.4	28	10.7	30	20,466	-51.2	-52.0	14	2+4	
40	29	21,847	-56.9	-62.4	27	7.7	21	21,813	-59.0	-62.4	32	4.0	26	21,798	-59.8	-62.4	28	9.1	25	21,771	-59.2	-62.4	28	9.8	30	21,934	-52.1	-53.0	10	2+8	
30	26	23,673	-55.6	-62.4	26	6.7	20	23,657	-59.1	-62.4	33	4.2	26	23,598	-59.8	-62.4	29	6.8	25	23,575	-58.9	-62.4	28	8.9	30	23,790	-53.5	-55.0	07	3+3	
25	24	24,262	-54.2	-62.4	26	6.1	19	24,612	-58.7	-62.4	34	3.5	26	24,735	-59.9	-62.4	28	7.6	25	24,727	-57.9	-62.4	27	9.9	30	24,960	-54.4	-56.4	06	4+5	
20	26	26,276	-53.0	-62.4	26	10.0	19	26,215	-58.4	-62.4	34	3.9	24	26,165	-56.4	-62.4	27	9.8	24	26,140	-55.3	-62.4	25	11.5	30	26,388	-55.2	-57.0	05	5+5	
15	20	28,154	-50.7	-62.4	27	9.2	18	28,032	-57.1	-62.4	31	5.8	23	28,010	-52.1	-62.4	26	13.2	22	27,980	-52.7	-62.4	25	16.5	27	28,201	-55.5	-57.0	04	6+3	
10	10	30,783	-47.0	-62.4	26	6	30,625	-52.6	-62.4	31	15	30,675	-45.8	-62.4	25	22.4	10	30,657	-45.7	-62.4	25	15.3	30	847	-55.0	-59.0	04	5+9			

RAWINSONDE DATA

Average monthly values

MARCH 1979

SALEM, IL 996 MB				SALEM, OR 1010 MB				SALT LAKE CITY, UT 871 MB				SAN DIEGO, CA 1001 MB				SAN JUAN, P. R. 1016 MB				
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind
5 F.C. 31	174	3-3	6-3	2-6	6	23	6-1	2-5	31	2-1	6-1	4-6	31	12-8	2-3	-1-1	17	2-1	8-5	16
1 U.C.C. 31	215	-1	5-7	2-6	26	157	7-5	2-1	25	2-1	5-5	4-6	31	1,492	3-5	-3-4	16	2-2	11-3	7-6
950 31	55-4	3-7	6-6	2-4	23	5-8	7-1	1-4	27	1-2	4-2	1-9	31	565	10-8	3-8	20	1-2	11	14-8
900 31	1,94-6	1-0	-6-2	2-6	6-3	28	1,012	5-1	-1-2	2-4	5-5	2-4	31	1,973	1-0	-6-4	18	1-7	31	1,014
850 31	1,45-6	1-0	-5-5	2-6	7-0	26	1,476	2-8	-5-3	2-4	3-4	3-1	31	1,981	4-0	-9-3	24	2-0	11	1,531
800 31	1,94-4	5-7	-7-3	2-6	6-8	26	1,965	2-8	-8-4	2-4	4-1	2-6	31	2,489	-2-5	-8-6	26	1-5	31	2,503
750 31	2,46-0	-9-9	-9-1	2-6	9-0	28	2,480	-2-8	-12-0	2-5	4-7	3-1	31	3,033	-6-1	-12-4	28	2-1	31	3,055
700 31	3,00-7	-4-0	-13-6	2-6	9-9	28	3,023	-6-1	-17-9	2-5	5-4	3-1	31	3,609	-9-8	-17-1	27	5-5	31	3,641
650 31	3,56-8	-7-4	-18-6	2-6	10-2	28	3,600	-9-3	-20-7	2-5	5-5	3-1	31	4,222	-13-5	-21-9	30	5-0	31	4,265
600 31	4,27-8	-11-2	-22-4	2-6	10-9	28	4,214	-13-1	-23-7	2-5	5-2	3-1	31	4,822	-13-5	-21-9	26	5-0	31	4,251
550 31	4,86-9	-15-7	-27-6	2-6	12-5	28	4,871	-17-9	-29-3	2-7	5-2	3-1	31	4,879	-17-9	-27-6	29	5-7	31	4,933
500 31	5,58-2	-20-5	-32-6	2-7	14-3	28	5,577	-22-9	-35-4	2-7	5-9	3-1	31	5,584	-23-0	-33-5	29	6-7	31	5,650
450 29	6,34-7	-25-9	-37-5	2-7	16-1	28	6,342	-28-2	-41-1	2-6	5-6	3-1	31	6,348	-28-8	-39-0	28	7-0	31	6,427
400 29	7,18-8	-32-4	-42-9	2-7	16-9	28	7,175	-34-6	-44-0	2-6	5-8	3-1	31	7,179	-35-6	-45-5	27	7-6	31	7,274
350 29	8,11-6	-39-7	-43-6	2-7	18-9	28	8,097	-41-8	-49-3	2-9	5-5	3-1	31	8,096	-42-9	-27-5	27	7-9	31	8,214
300 29	9,15-2	-47-6	-20-8	2-7	20-8	27	9,125	-49-4	-31	5-5	3-1	9,111	-50-6	28	7-8	30	9,258	-44-8	27	29
250 29	10,34-0	-53-4	-24-5	2-7	10-30	28	10,301	-56-2	-33	5-5	3-1	10,288	-56-7	28	10-6	31	10,459	-51-5	27	29
200 29	11,74-6	-56-5	-28-4	2-7	11,708	27	11,708	-58-9	-31	5-9	3-1	11,693	-57-4	28	13-1	31	11,893	-55-0	26	32
175 29	12,61U	-57-1	-27	27	12,551	-56-4	29	12,543	-55-7	28	12,543	-55-7	28	12,745	-55-5	26	31-1	30	13,188	-59-3
150 29	13,59U	-55-8	-27	24-5	13,533	-56-0	29	13,523	-55-4	27	13,523	-55-4	27	13,725	-57-1	26	30-6	30	14,140	-65-3
125 29	14,74U	-57-6	-27	21-9	14,691	-56-8	29	14,683	-57-3	27	14,683	-57-3	27	14,870	-60-0	27	25-2	30	15,236	-70-6
100 29	16,14-9	-59-4	-28-3	16-1	16,100	-58-3	29	16,087	-59-1	27	16,087	-59-1	27	16,252	-63-4	26	19-3	30	16,540	-76-6
90 28	17,51U	-60-1	-27	14-1	17,502	-58-7	29	15,931	-57-8	27	15,931	-57-8	27	17,620	-64-4	26	12-6	30	17,818	-77-8
70 28	18,37U	-60-5	-28	12-2	17,518	-58-6	30	15,434	-58-1	27	16,299	-58-1	27	18,439	-63-4	26	9-6	30	18,568	-75-2
60 26	19,33-6	-60-1	-28	10-3	19,310	-59-0	31	4,71	19,281	-59-6	27	19,281	-59-6	27	6-1	29	19,493	-55-3	31	
50 27	20,24-4	-59-7	-28	8-5	20,424	-59-0	31	4,03	20,241	-59-7	28	6-8	25,205	-60-9	26	3-3	26	20,790	-63-9	
40 27	21,87-3	-58-4	-27	7-6	21,851	-59-0	31	3-4	21,814	-60-2	28	5-1	25,191	-60-0	26	2-8	26	21,757	-56-9	
30 26	23,59U	-56-2	-27	7-0	23,550	-59-1	30	4-6	23,560	-59-9	29	5-0	23,560	-59-9	29	4-4	26	23,807	-53-8	
25 26	24,855	-54-7	-26	7-4	24,804	-58-2	31	5-4	24,747	-59-4	29	5-1	24,885	-55-6	28	5-7	26	24,985	-51-5	
20 26	26,296	-51-3	-25	9-5	26,214	-56-9	31	5-6	26,194	-57-6	29	7-5	26,318	-53-0	27	7-4	24	26,480	-48-0	
15 21	21,183	-47-3	-25	12-7	22	28,047	-54-7	29	8-6	27,996	-53-8	27	19	28,183	-47-6	27	13-2	24	28,355	-45-5
1C 1 ^o	30,900	-40-3	-26	13-8	12	30,674	-49-7	28	14-3	30,687	-45-5	27	21-5	30,830	-43-0	14	31,120	-37-5		

RAWINSONDE DATA

Average monthly values

MARCH 1979

WASHINGTON DULLES INT. AP 1010 MB										WAYCROSS, GA 1015 MB										WEST PALM BEACH, FL 1019 MB										WINNEMUCCA, NV 868 MB										WINSLOW, AZ 851 MB									
Standard pressure surface mb.	No. of observations	Resultant Wind					Resultant Wind					Resultant Wind					Resultant Wind					Resultant Wind					Resultant Wind					Resultant Wind																	
		Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.													
SFC	30	85	2.7	-6	10	.6	44	9.5	7.5	22	.9	16.5	12.5	5	1.8	31	1,312	* 4	-4.6	10	.7	31	1,487	* 4	-4.8	19	1.6	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.																
1000	25	55	2.5	-5	26	1.0	50	12.6	6.8	21	.8	18.8	12.6	5	1.0	31	1,000	0.2	2.4	10	.0	31	1,985	3.6	-6.2	26	3.2	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.																
950	30	581	2.9	-2.0	26	3.1	56	12.4	2.9	21	.6	15.5	10.6	6	1.0	31	1,000	0.2	2.4	10	.0	31	1,985	3.6	-6.2	26	3.2	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.																
900	30	1,021	3.5	-3.4	26	5.0	104	12.0	4.0	21	.5	1.0	2.6	31	1,021	0.2	2.4	10	.0	31	2,056	-1.1	-9.4	26	4.4	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.																		
850	30	4,403	1.4	-6.5	26	10.4	17.5	1.5	1.5	25	4.0	1.0	12.4	6.2	12	2.2	31	1,522	7.9	-1.1	31	1,500	0.2	1.7	1.3	31	1,479	3.6	-2.3	10	.7	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.												
800	30	1,970	-1.0	-10.0	27	2.2	8.6	31	2,020	5.8	31	2.044	9.1	-8.1	2.8	31	1,971	2.2	-5.3	26	1.2	31	1,985	3.6	-6.2	26	3.2	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.																
750	30	2,485	-2.2	-13.7	27	9.5	2.6	2,546	3.6	-10.5	26	8.7	31	2,577	7.3	-11.7	2.9	31	2,489	-1.0	3.2	31	3,055	-3.2	-13.2	25	5.5	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.																
700	30	3,031	-4.4	-17.0	26	10.4	31	3,103	4.4	-13.2	26	10.7	31	3,141	4.1	-14.3	2.8	31	3,036	-4.8	-11.6	28	3.2	31	3,055	-3.2	-13.2	25	5.5	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
650	30	3,611	-7.7	-19.9	26	11.7	31	3,694	-3.1	-16.1	26	11.8	31	3,740	-5.0	-16.4	2.8	31	3,615	-9.0	-16.5	28	3.8	31	3,638	-6.8	-17.8	25	6.6	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
600	30	4,230	-11.7	-22.6	26	12.5	31	4,323	2.6	12.9	31	4,378	-1.0	-19.7	2.8	31	4,230	-12.9	-21.5	28	4.2	31	4,259	-10.5	-24.0	26	7.5	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.																
550	30	4,891	-25.7	-26.7	26	13.7	31	4,997	-11.2	-25.3	26	14.3	31	5,061	-7.7	-23.4	2.8	31	4,888	-17.3	-26.9	28	4.2	31	4,923	-15.0	-29.4	26	9.0	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
500	30	5,602	-20.6	-31.6	27	15.1	31	5,722	-16.1	-21.3	28	16.4	31	5,796	-12.9	-27.6	2.8	31	5,637	-20.2	-34.9	28	4.5	31	5,637	-20.2	-34.9	24	10.6	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
450	30	6,373	-26.2	-36.3	27	15.9	31	6,507	-21.7	-34.1	28	18.8	31	6,593	-17.7	-31.4	2.8	31	6,360	-28.1	-38.2	28	4.8	31	6,408	-25.9	-39.2	27	12.6	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
400	30	7,218	-32.8	-42.1	27	17.3	31	7,363	-27.9	-36.5	28	22.4	30	7,466	-23.3	-36.6	2.8	31	7,251	-32.4	-44.4	28	6.0	31	7,251	-32.4	-44.4	27	15.7	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
350	30	8,143	-39.7	-45.7	27	19.6	31	8,312	-34.8	-45.8	28	23.8	30	8,431	-30.6	-42.8	2.8	31	8,115	-42.3	-47.4	28	6.3	31	8,181	-39.6	-50.2	27	17.7	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
300	30	9,177	-47.3	-53.7	27	22.5	31	9,368	-42.5	-48.6	28	28.8	30	9,505	-38.7	-50.2	2.8	31	9,454	-50.3	-53.8	28	7.4	31	9,216	-47.1	-53.3	27	21.9	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
250	30	10,361	-55.1	-59.1	27	25.8	31	10,577	-50.7	-59.1	28	32.7	30	10,734	-47.5	-59.0	2.8	31	10,317	-56.0	-59.0	28	8.7	31	10,403	-53.3	-59.3	27	28.0	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
200	30	11,773	-58.0	-62.0	28	27.0	31	12,028	-57.5	-62.0	28	35.6	30	12,181	-55.4	-62.3	2.8	31	12,040	30	11,727	-57.8	-62.0	29	10.3	31	11,832	-55.5	-62.0	27	29.9	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.												
150	30	13,598	-59.4	-65.6	27	22.3	31	13,818	-59.3	-65.6	27	37.0	30	13,993	-61.0	-65.5	2.8	31	13,557	-55.5	-65.5	28	13.2	31	13,667	-56.5	-65.5	27	26.9	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
125	30	14,748	-57.6	-64.4	27	20.8	31	14,950	-63.5	-64.4	27	30.6	30	15,111	-66.7	-66.7	2.8	31	14,715	-57.3	-66.7	28	12.8	31	14,817	-59.4	-66.7	27	23.2	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
100	30	16,149	-59.9	-69.9	27	16.7	31	16,306	-67.4	-69.9	27	24.9	30	16,443	-71.8	-71.8	2.8	31	16,204	-62.1	-71.8	28	9.7	31	16,204	-62.1	-71.8	27	17.8	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
850	30	17,540	-60.5	-70.5	27	13.3	31	17,650	-67.5	-70.5	27	16.6	30	17,756	-71.6	-71.6	2.8	31	17,513	-59.8	-71.6	28	8.2	30	17,598	-62.4	-71.6	27	13.1	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
750	30	18,372	-60.6	-70.6	28	10.8	31	18,456	-66.5	-70.6	28	11.4	30	18,548	-69.7	-70.6	2.8	31	18,348	-59.6	-70.6	28	6.7	30	18,403	-62.0	-70.6	27	9.7	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
650	30	19,405	-59.2	-69.2	28	6.6	31	19,592	-65.1	-69.2	28	7.9	30	19,757	-66.4	-69.2	2.8	31	19,524	-62.3	-69.2	28	4.0	30	19,456	-60.6	-69.2	26	6.0	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
600	30	19,498	-55.9	-65.9	28	6.8	31	19,614	-61.4	-65.9	28	7.4	30	19,782	-67.8	-65.9	2.8	31	19,581	-59.8	-65.9	28	4.0	30	19,482	-61.2	-65.9	26	6.9	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
550	30	20,499	-19.7	-55.6	23	9.3	31	21,422	1.8	-9.4	22	1.8	31	21,533	-13.9	0.9	6.5	31	20,422	-13.9	0.9	20	4.4	28	21,463	-58.1	-68.1	26	6.7	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
510	30	21,490	-23.4	-55.6	23	11.3	31	21,524	1.1	-13.9	22	1.1	31	21,633	-75.1	11	10.9	31	21,422	-13.9	0.9	20	4.4	28	21,463	-58.1	-68.1	26	6.7	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
500	30	21,582	-37.4	-59.9	25	13.0	31	21,682	-4.3	-17.9	22	0.9	31	21,780	-68.8	10	6.9	31	21,582	-13.9	0.9	20	4.4	28	21,463	-58.1	-68.1	26	6.7	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
450	30	21,613	-32.3	-39.3	26	15.3	31	21,704	-9.2	-24.0	09	09	31	21,800	-24.0	09	6.9	31	21,613	-82.0	10	6.9	31	21,613	-82.0	06	2.0	2.0	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.															
400	30	21,655	-36.1	-43.5	26	18.3	31	21,606	-14.6	-29.8	09	09	31	21,625	-74.9	31	2.0	31	21,625	-74.9	31	2.0	31	21,625	-74.9	31	2.0	2.0	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.															
350	30	21,785	-44.5	-54.5	27	19.3	31	21,609	-21.4	-35.5	09	09	31	21,704	-65.0	31	2.0	31	21,704	-65.0	31	2.0	31	21,704	-65.0	31	2.0	2.0	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.															
300	30	21,873	-50.9	-59.9	27	21.3	31	21,722	-30.0	-42.5	11	4.7	31	21,824	-50.8	09	5.0	31	21,722	-30.0	-42.5	11	4.7	31	21,824	-50.8	09	5.0	5.0	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.														
250	30	21,949	-54.4	-64.4	27	20.2	31	21,093	-40.4																																								

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

MARCH 1979

Date	Sun's zenith distance								Date	Sun's zenith distance										
	A.M.				•	P.M.				A.M.				•	P.M.					
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°		60.0°	70.7°	75.7°	78.7°		60.0°	70.7°	75.7°	78.7°		
MAUNA LOA OBSERVATORY, HI																				
Air mass										TUCSON, AZ							Air mass			
	3.34	2.67	2.01	1.34	*	1.34	2.01	2.67	3.34		4.64	3.71	2.78	1.86	*	1.86	2.78	3.71	4.64	
3-----	1.19	1.26	1.35	1.48	1.59	----	----	----	----	3-----	----	.95	1.09	1.27	1.45	1.31	1.14	1.02	.93	
4-----	1.19	1.28	1.36	1.48	1.58	----	----	----	----	4-----	.94	1.04	1.16	1.31	1.45	1.30	1.16	1.03	.95	
5-----	1.20	1.28	1.32	1.48	1.60	----	----	----	----	5-----	.99	1.09	1.20	1.34	1.48	1.31	1.16	1.04	.93	
6-----	1.21	1.30	1.37	1.46	1.58	1.60	1.37	1.29	1.26	6-----	.97	1.07	1.19	1.30	1.47	1.29	1.15	1.04	.95	
7-----	1.19	1.28	1.37	1.48	1.58	----	----	----	----	7-----	.95	1.05	1.18	1.32	1.47	1.32	1.12	.99	.87	
8-----	1.20	1.31	1.43	1.50	----	1.49	1.38	1.31	1.24	8-----	.93	1.05	1.17	1.32	1.43	----	1.13	----	----	
15-----	1.14	1.22	1.34	1.46	----	----	----	----	----	10-----	.92	1.01	1.13	1.28	1.40	1.27	1.10	.97	.86	
16-----	----	----	----	1.58	1.47	1.32	1.23	1.12	----	11-----	.76	.86	.99	1.20	1.34	1.22	1.04	.90	.74	
22-----	1.26	1.32	1.38	1.51	1.57	1.45	1.36	1.28	1.25	22-----	.85	.96	1.09	1.24	1.39	1.20	1.04	.92	.80	
23-----	1.08	1.21	1.35	1.48	1.64	1.47	1.38	1.30	1.22	23-----	----	.87	1.07	1.26	1.42	1.24	1.10	.98	.89	
29-----	1.08	1.17	1.28	1.41	1.65	1.48	1.35	1.25	1.16	14-----	.90	1.01	1.13	1.26	1.43	1.26	1.08	.95	.84	
30-----	----	----	----	----	1.58	1.55	1.35	1.26	1.17	15-----	.85	.95	1.07	1.26	1.42	1.24	1.10	.98	.89	
Aver-	ages	1.17	1.26	1.22	1.48	1.60	1.50	1.36	1.27	1.20	17-----	----	1.10	1.24	1.42	1.21	1.10	----	----	
										23-----	----	.96	1.06	1.22	1.42	1.24	1.08	.93	.82	
										24-----	.76	.87	1.02	1.20	1.40	1.25	1.11	1.00	.90	
										25-----	.89	1.00	1.12	1.28	----	1.26	1.12	1.01	.91	
										26-----	.82	.92	1.09	1.25	1.44	1.26	1.10	----	----	
										29-----	----	----	1.17	----	1.17	.97	.85	.74		
										30-----	.84	.97	1.11	1.26	----	1.24	1.09	.96	.87	
										31-----	.82	.93	1.07	1.24	1.43	----	----	----	----	
										Aver-	.88	.98	1.11	1.26	1.43	1.26	1.10	.97	.87	

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langley	-36	-25	5	2	8	19	3	29	4	7	-10	-28	19	-5	34	19	47	-13	-47	-27	-15	3	23	39	63	52	40	102	-88	-59	66	8

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES:

Data in the table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

+ And also on an earlier date or dates.

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch of water equivalent to every 10 inches of snow-fall.

CLIMATOLOGICAL DATA - METRIC UNITS: Data from airport unless otherwise specified.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.

Y Peak Gust.

+ And also on an earlier date or dates.

U Indicates Urban site.

R Indicates Rural site.

Ø Station pressures apply to elevations shown in the "Elevations" table of the annual issue of this publication.

Conversion formulae to English Units are as follows:

1 foot = 0.3048 meters

$^{\circ}\text{F.} = \frac{9}{5} \times ^{\circ}\text{C} + 32$

5

1 inch = 25.4 millimeters

1 mile per hour = 0.447 meters per second

HEATING DEGREE DAYS: Data from airport unless otherwise specified.

U Indicates Urban site.

R Indicates Rural site.

COOLING DEGREE DAYS: Data from airport unless otherwise specified.

U Indicates Urban site.

R Indicates Rural site.

STORM SUMMARY:

o Includes crop damage.

C Crop damage.

* No occurrence of storms or unusual weather phenomena reported.

@ Includes heavy sleep storm.

Freezing drizzle and freezing rain, commonly known as glaze.

Ø For breakdown of "All Others," and for detailed listing of other storms, see the Environmental Data and Information Service, NOAA, monthly publication STORM DATA.

‡ No Storm Data Report received for this State.

◇ Report Incomplete.

+ Storm damages are placed in categories varying from 1 to 9 as follows:

1 Less than \$50

2 \$50 to \$500

3 \$500 to \$5,000

4 \$5,000 to \$50,000

5 \$50,000 to \$500,000

6 \$500,000 to \$5 Million

7 \$5 Million to \$50 Million

8 \$50 Million to \$500 Million

9 \$500 Million to \$5 Billion

RAWINSONDE DATA (Average Monthly Values):

All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 60° above the horizon, or any obstruction above the horizon. The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygrometers. These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.C.T.

+ Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

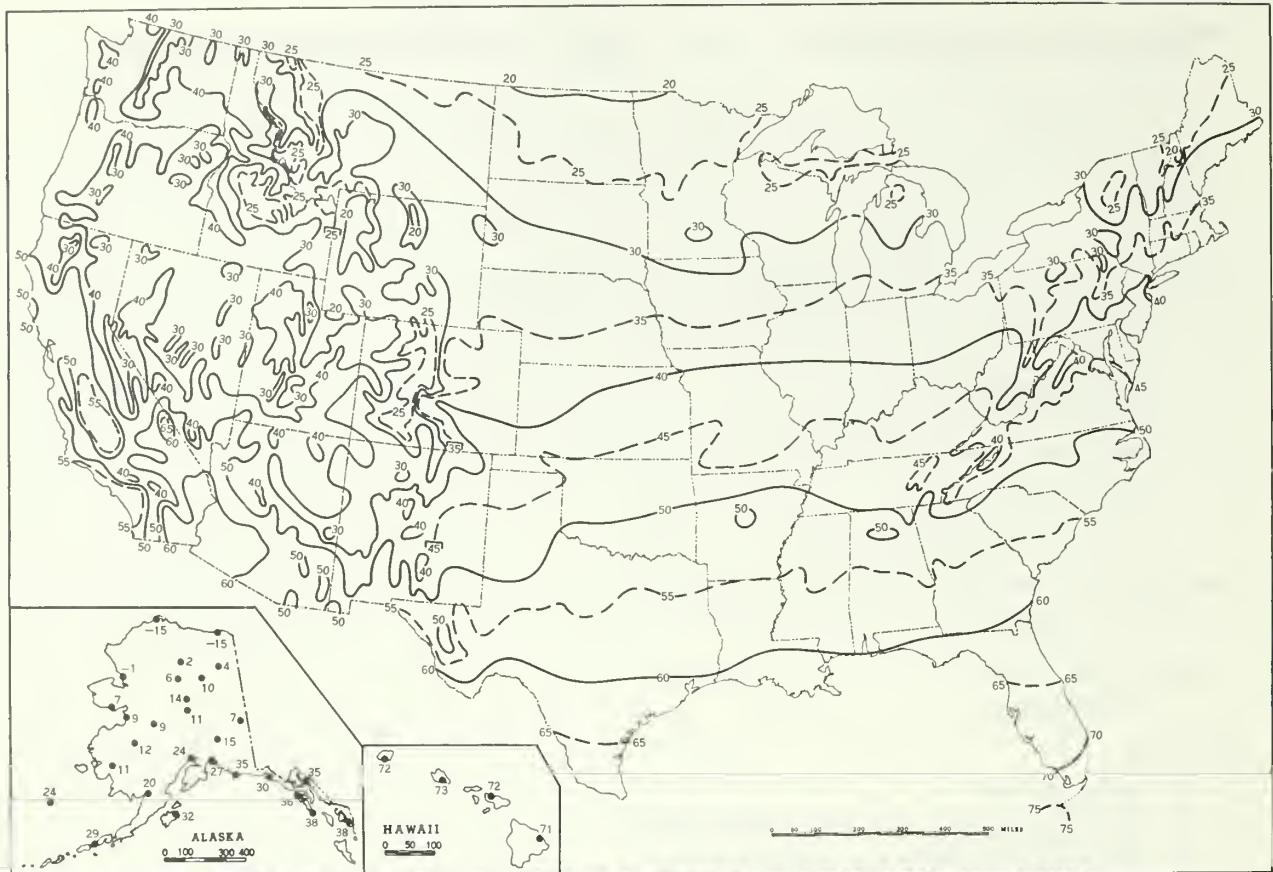
SOLAR RADIATION INTENSITIES: Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

()	Clouds Present	DM	Moderate Dust	HM	Moderate Haze	KS	Slight Smoke
*	Values corresponding to true solar noon	DS	Slight Dust	HS	Slight Haze	M	Moderate Haze-indeterminate
BD	Blowing Dust	F	Fog	I	Intense Haze-indeterminable	minal	
BN	Blowing Sand	GF	Ground Fog	K	Smoke	N	Sand
D	Dust	H	Haze	KI	Intense Smoke	S	Slight Haze-indeterminate
DI	Intense Dust	HI	Intense Haze	KM	Moderate Smoke		

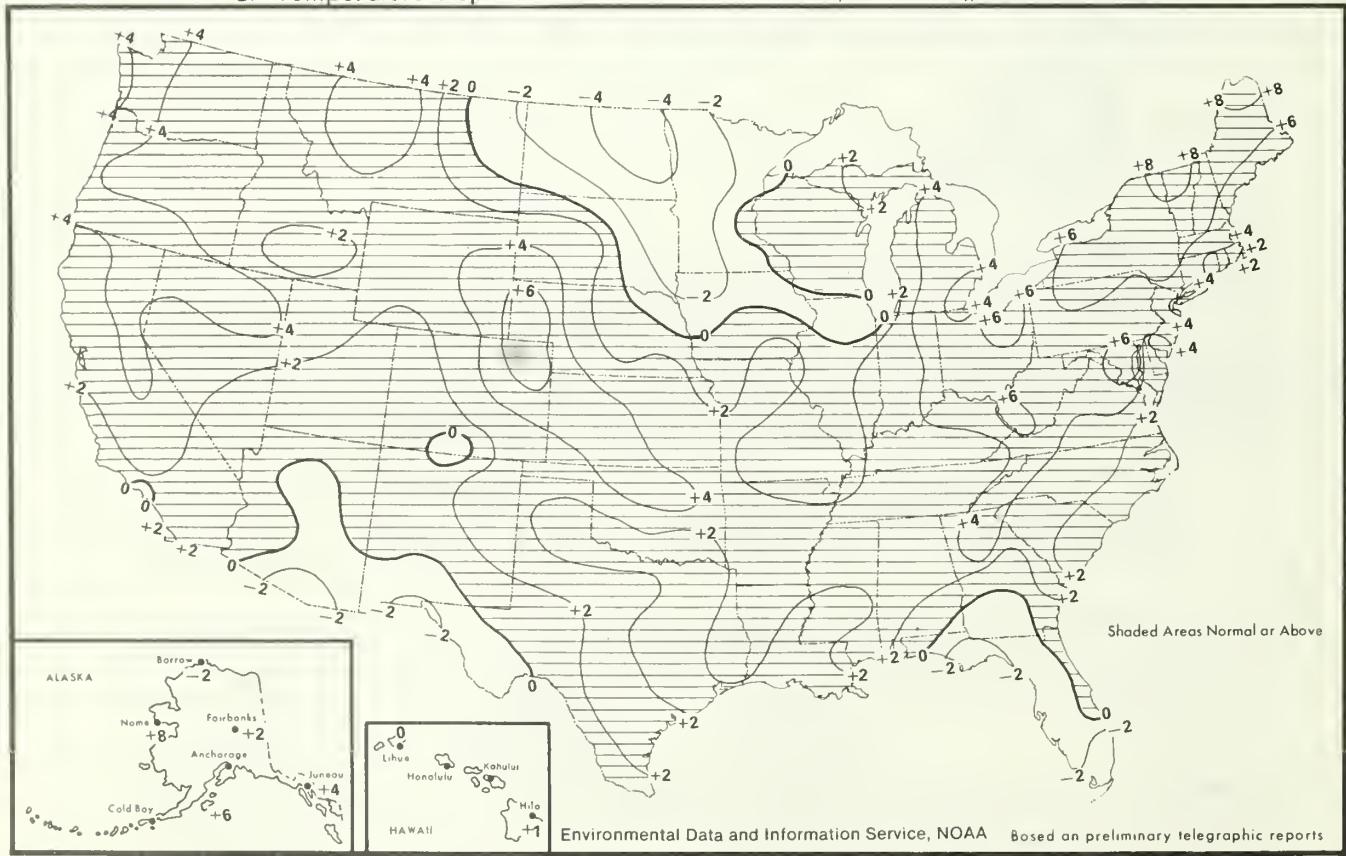
NET RADIATION: The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

The data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

Chart 1. A. Normal Daily Average Temperature ($^{\circ}\text{F}$. 1941-70), March.

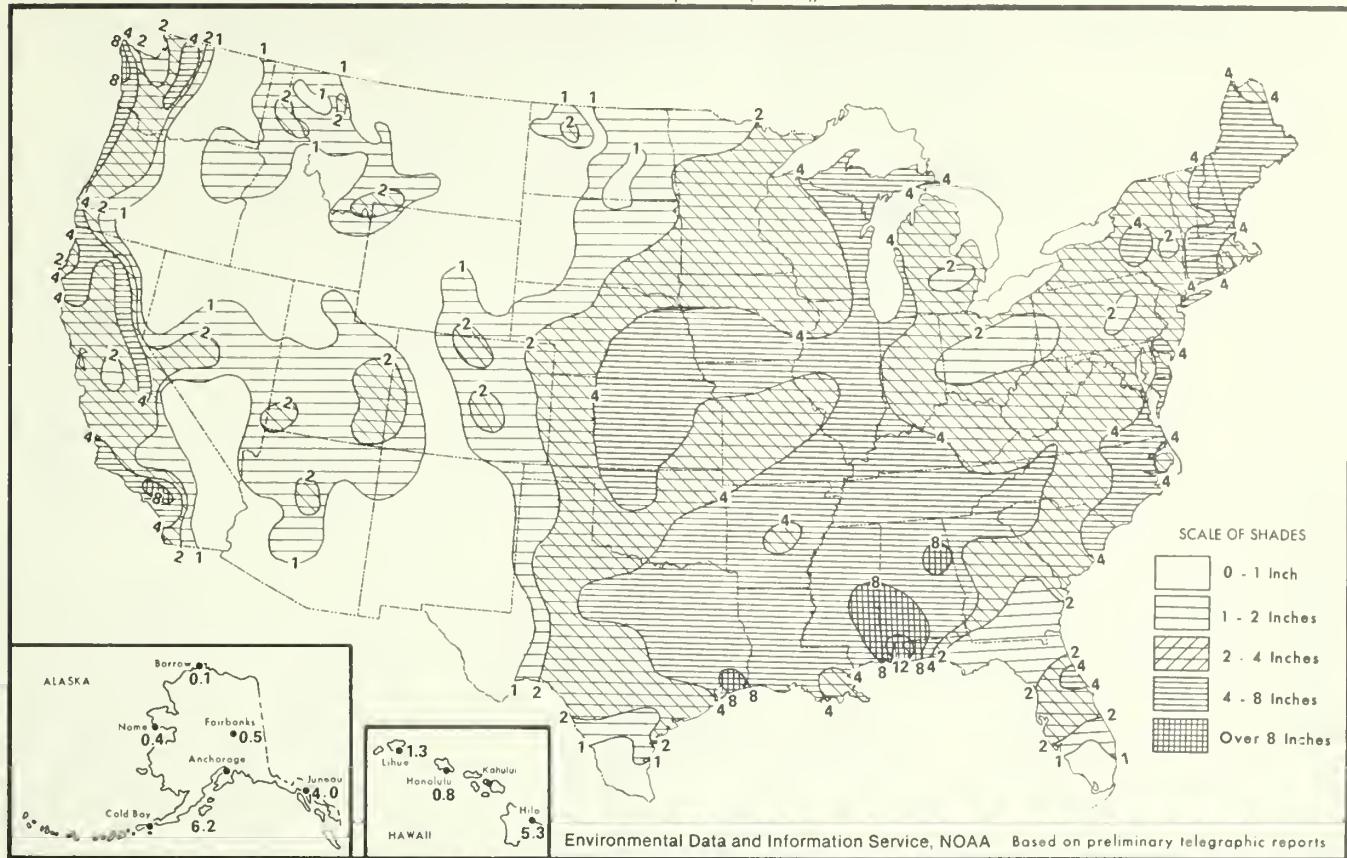


B. Temperature Departure from 30 - Year Mean ($^{\circ}\text{F}$ 1941-70), March 1979



Environmental Data and Information Service, NOAA Based on preliminary telegraphic reports

Chart II. A. Total Precipitation (Inches), March 1979



B. Percentage of Normal Precipitation, March 1979

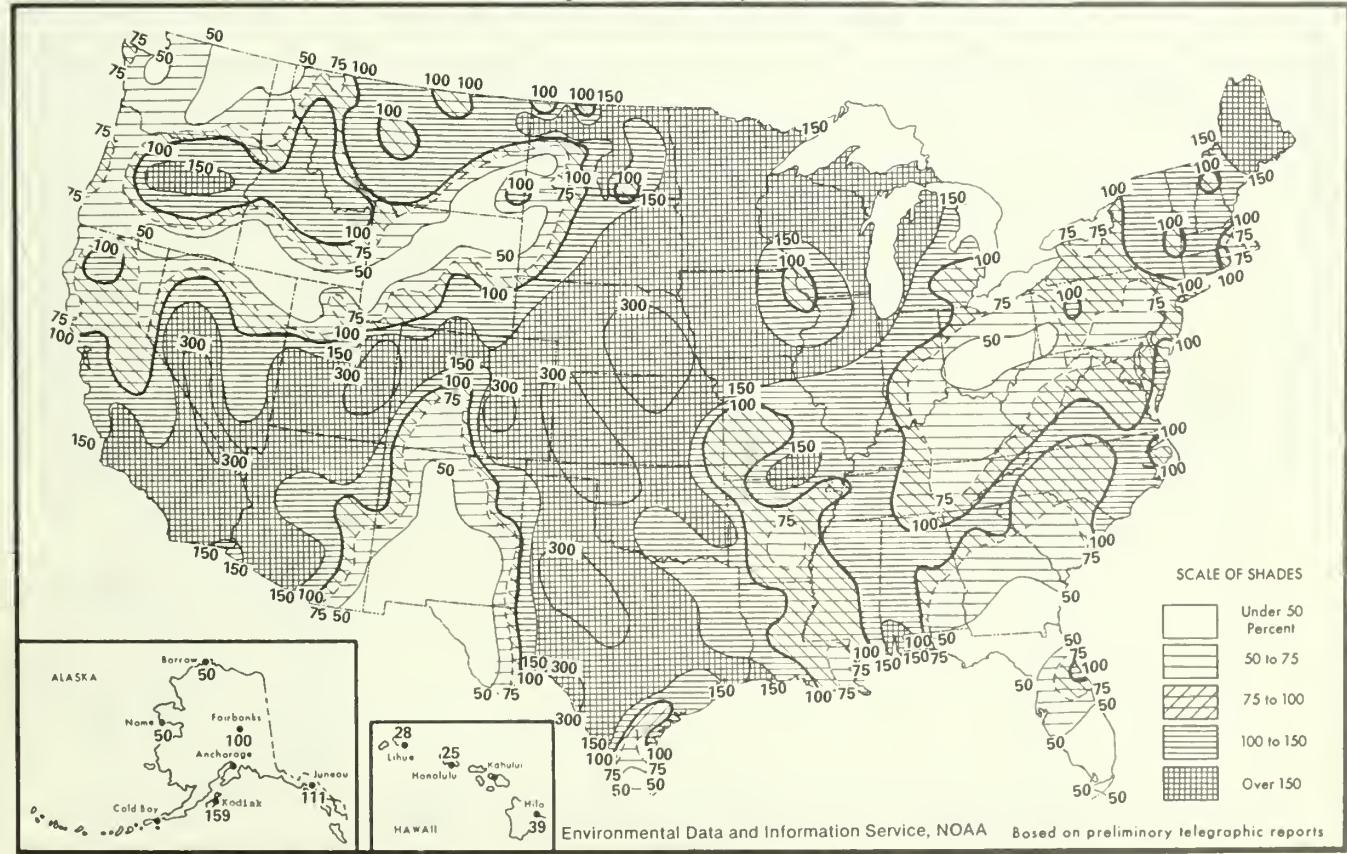
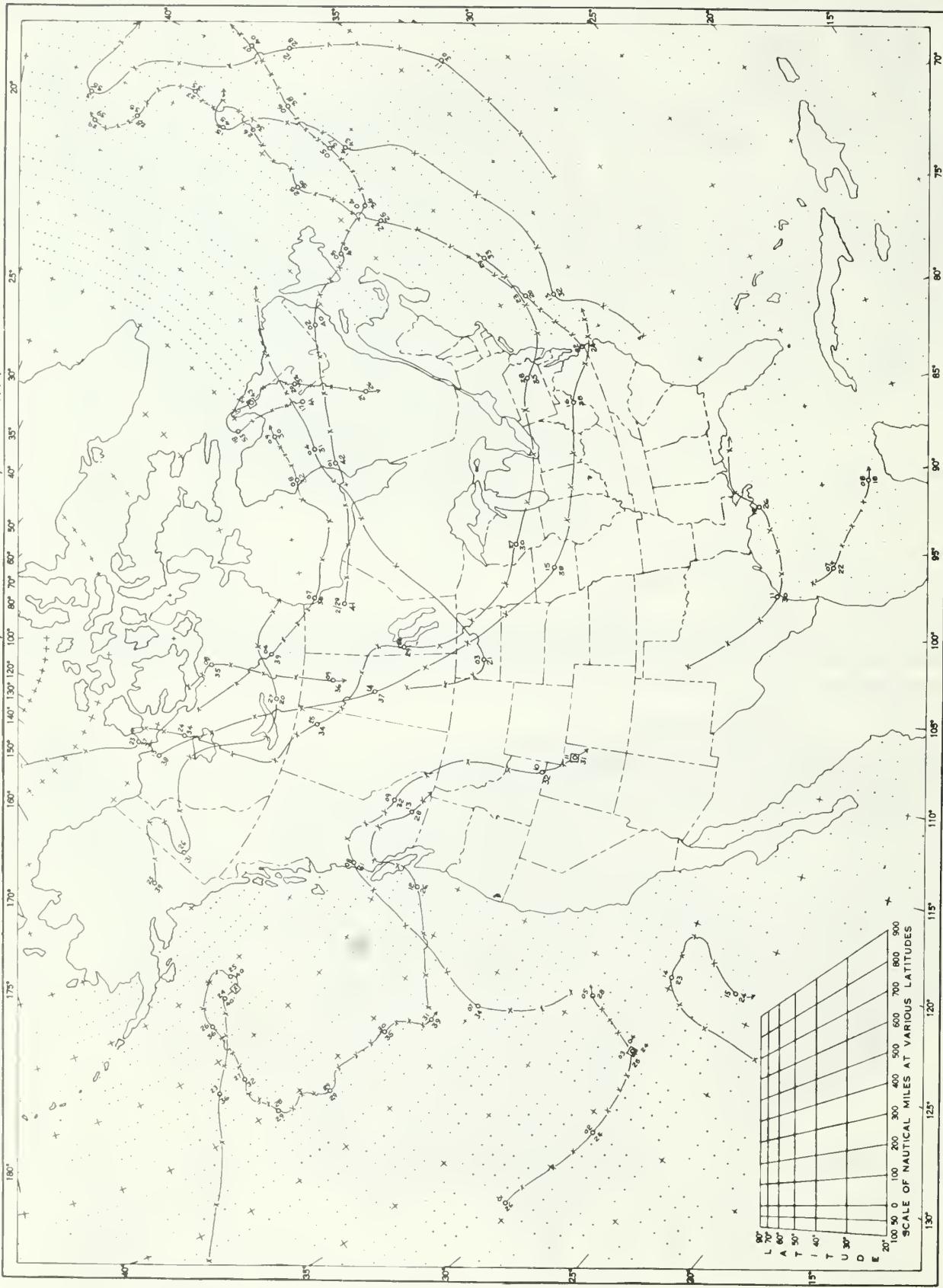
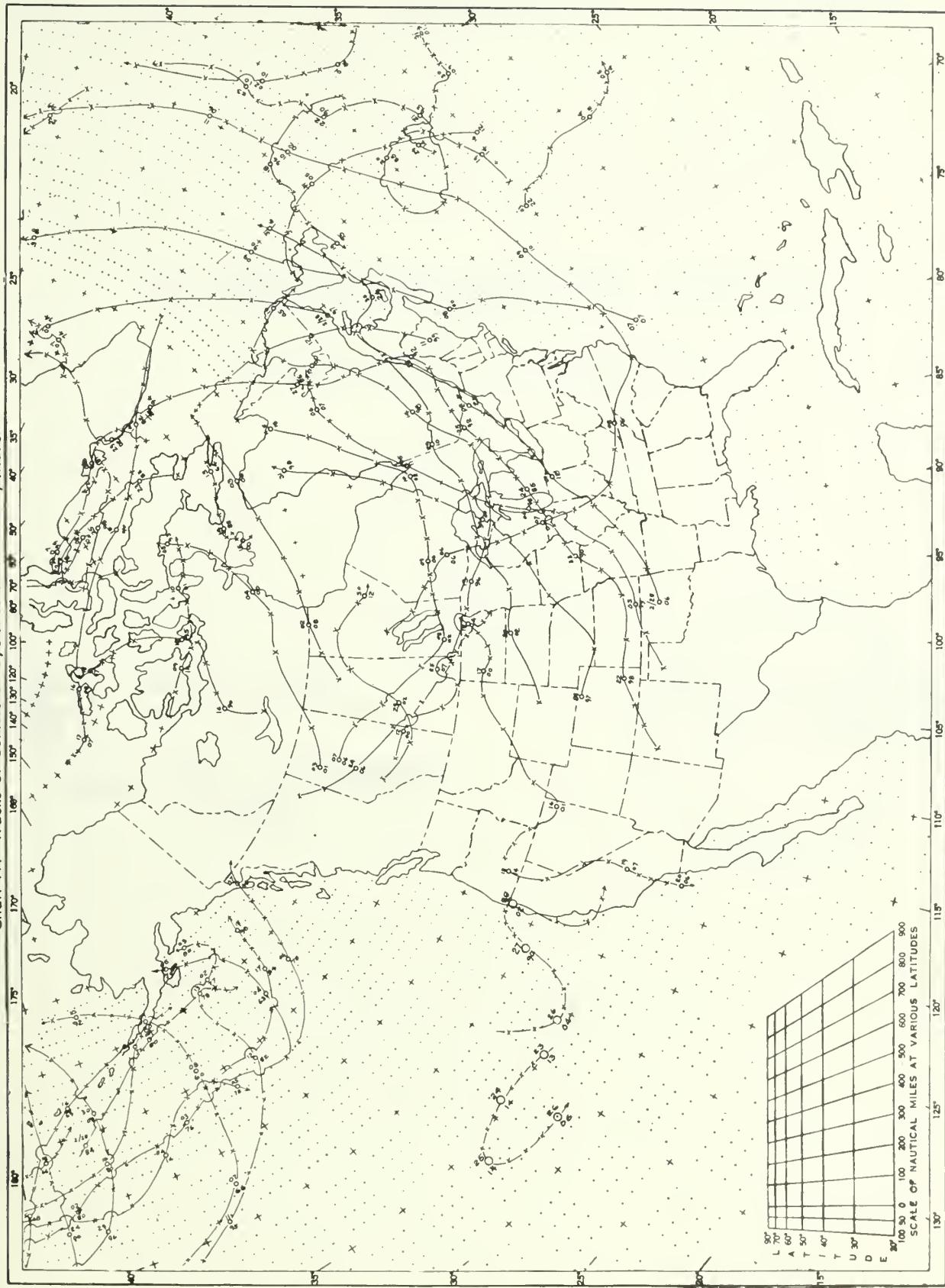


Chart III. Tracks of Centers of Anticyclones at Sea Level, March 1979



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IV. Tracks of Centers of Cyclones at Sea Level, March 1979



USCOMM-NOAA-ASHEVILLE, N.C. 1979-2070

Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track
 indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

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APRIL 1979

VOLUME 30

NUMBER 4

CLIMATOLOGICAL DATA

NATIONAL SUMMARY



"I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION AND IS COMPILED FROM INFORMATION RECEIVED AT THE NATIONAL CLIMATIC CENTER, ASHEVILLE, NORTH CAROLINA 28801."

Daniel B. Mitchell

DIRECTOR
NATIONAL CLIMATIC CENTER

noaa

NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION

ENVIRONMENTAL DATA AND
INFORMATION SERVICE

NATIONAL CLIMATIC CENTER
ASHEVILLE, N.C.

C O N T E N T S

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

APRIL 1979

GENERAL SUMMARY OF WEATHER CONDITIONS

Lyle Denny, Climatologist
Environmental Data and Information Service, NOAA

HIGHLIGHTS: April averaged near-normal temperatures west of the Rockies, but most areas to the east were cooler than normal. The northern Plains averaged 6 to 8° cooler, while the western portion of the Corn Belt became 4 to 5° cooler. New England and Florida were slightly warmer than normal.

Moderate to heavy rain accumulated from the Sierras in California northward and across the Plateau and northern Rockies. Most areas east of the Rockies had normal or above rainfall. Severe weather hit most sections of the Nation east of the Rockies. Severe flooding occurred in several areas, and record floods plagued North Dakota, southeastern Texas, Mississippi, Alabama, and Florida.

In the early part of April's first week, a series of storm systems moved rapidly from western Canada south-eastward into the central United States and then eastward. Cool air met warm, moist Gulf air triggering heavy rain which reached into the South along a line from eastern Texas to the Ohio Valley and the Appalachians. More than 5 inches caused flooding in Mississippi and Alabama. A Pacific storm dumped rain in the Northwest and snow in the northern Rockies later in the week. April began with near-normal temperatures in the West and Southeast. Cold weather returned to the northern Plains and pushed southward into Texas.

The second week (9th-15th) also brought heavy rain in the South. A storm system moved into the Pacific Northwest causing rain with snow in the higher elevations of the Plateau and northern Rockies. A new storm center formed in Colorado and moved northeastward trailing behind it a cooler air mass which moved eastward. Again, the cooler air moving into warmer, moist air set off heavy rain. More than 2 inches fell from Oklahoma to Lake Michigan. As the cooler

air moved through the South, 5 inch-plus rains fell from northern Mississippi through northern Georgia. Some points in northeastern Mississippi measured 18 inches of rain during the week; severe flooding resulted.

Another weather system moved onto the central West Coast early in the week after mid-April (16th-22d). Rain fell along the coast northward and through the Plateau and northern Rockies. The frontal system moved through the Southwest remaining essentially dry but showers and thunderstorms broke out in western Texas as the front moved into that area. At mid-week, the front sat nearly north-south from central Manitoba in Canada to western Texas and moved slowly eastward. Light rain or showers fell along the front; the only severe weather occurred from central Texas through Louisiana, where some areas recorded over 10 inches of rain during the week. Temperatures in most of the Nation ranged warmer than normal, as much as 12° in the eastern slopes of the central Rockies. The East and West Coasts were near normal.

The last week of the month contained a mixture of weather systems. The old frontal system weakened and moved off the East Coast, but an intense low pressure system formed on its trailing end in Louisiana and edged eastward carrying heavy rain and severe weather to the Southeast. Almost at the same time, a disturbance moved through the southern Gulf of Mexico and turned northward to deluge southeastern Florida. Considerable crop damage resulted from the very heavy rain and flooding. Another front from the West caused heavy rain and severe weather through the Mississippi Valley and in southern Nebraska. Cooler air moved into the Plains and the South, but the West and New England remained warm.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

APRIL 1979

STATE	Temperature						Precipitation					
	Monthly extremes						Monthly extremes					
	Station	Highst	Date	Station	Lowest	Date	Station	Greatest	Station	Least		
		°F			°F			In.			In.	
Alabama	Bankhead Lock and Dam	90	21	Heflin	29	10	Clanton	22.00	Mobile WSO AP	.405		
Alaska	4 Stations	76	30	Umiat	-42	14	Adak	6.64	2 Stations	T		
Arizona	6 Stations	98	30+	Hawley Lake	3	4+	Sunrise Mountain	2.07	46 Stations	.00		
Arkansas	4 Stations	89	25+	Lead Hill	25	5	Crossett 2 SSE	15.68	Siloam Springs	.296		
California	Mecca Fire Station	100	26	White Mountain 2	-5	18	Gasquet Ranger Station	7.55	95 Stations	.00		
Colorado	Lamar	89	24+	Rio Grande Reservoir	-28	2	Squaw Mountain	5.47	3 Stations	T		
Connecticut	3 Stations	80	24+	Wigwam Reservoir	17	8	Stevenson Dam	7.97	Falls Village	.404		
Delaware	Dover	81	1	2 Stations	27	8	Wilmington Porter Reservoir	5.50	Bridgeville 1 NW	.314		
Florida	Clewiston U S Eng	96	14	Smith Creek	36	6	Fort Lauderdale	19.47	2 Stations	.40		
Georgia	Douglas	92	18	2 Stations	29	10+	Walaska	15.51	Glenville	.208		
Hawaii	Puukohola Heiau 98.1	89	30+	Mauna Kea Obs 111.2	18	15	Kapala Ranch 36	23.41	Mauakea Obs 111.2	.15		
Idaho	2 Stations	81	27+	Island Park Dam	-6	19	Pierce	4.39	Lifton Pumping Station	.02		
Illinois	3 Stations	84	21+	Keweenaw 1 E	7	6	Mount Pulaski	10.84	Fulton Dam 13	.279		
Indiana	Charlestown Ord Plant	86	21	2 Stations	14	7+	Tell City Power Plant	10.04	Fort Wayne WSO AP	.217		
Iowa	2 Stations	81	20+	Waukon	7	6	Vinton	5.33	Mapleton 4 NW	.150		
Kansas	Hugoton	91	24	Ashland	11	4	Caldwell	4.95	Richfield 10 WSW	.52		
Kentucky	Jackson	87	22	2 Stations	20	7+	Columbus	13.26	Ashland	.281		
Louisiana	4 Stations	89	20+	Ashland 2 S	31	5	Bayou Sorrel Lock	18.53	New Orleans D P S 6	.304		
Maine	East Hiram	75	27	2 Stations	1	9	Jonesboro	9.61	Jackman	.276		
Maryland	Cumberland 2	85	25	McHenry 2 NW	15	7	Frostburg 2	4.78	Potomac Filter Plant	.195		
Massachusetts	Chester 2	85	24	2 Stations	15	11+	New Salem	7.10	Nantucket FAA AP	.299		
Michigan	Vanderbilt 11 ENE	79	25	Champion Van Riper Park	-12	7	Monroe	6.24	Kenton	.40		
Minnesota	5 Stations	78	24+	Karlstad	-22	6	Thief River Falls	D 4.24	Collegeville St John U	.33		
Mississippi	Wiggins 3 SSE	89	17	University	31	5	Mount Washington	24.10	Bay Saint Louis	.427		
Missouri	Carthage	87	20+	6 Stations	20	6	New Madrid	12.75	Trenton	.184		
Montana	3 Stations	86	18+	Elk Park	-10	3	Hinsdale 4 SW	3.96	Western Montana Br Station	.40		
Nebraska	2 Stations	90	19	Chambers	11	6	Bertrand	5.79	Agate 3 E	.17		
Nevada	Sunrise Manr Las Vegas	95	30	Clover Valley	7	3	Carlin Gold Mine	2.12	10 Stations	.00		
New Hampshire	Concord WSO AP	77	28+	Mount Washington	-1	8	Flinckham Notch	7.35	Lancaster	.165		
New Jersey	Hammonston 2 NNE	82	1	Essex Fells Service Bldg	21	4	West Wharton	5.24	New Milford	.210		
New Mexico	3 Stations	93	25+	Chama	-3	2	Portales	2.48	8 Stations	.00		
New York	Gowanda State Hospital	84	25	Franklinville 1 SSW	2	8	Boonville 2 SSW	6.79	Prattsburg 2 NW	D 1.59		
North Carolina	3 Stations	88	2+	Grandfather Mountain	21	7	Lake Toxaway 2 SW	12.76	Sloan 3 S	.194		
North Dakota	Medora	83	18	2 Stations	-22	6+	Petersburg 2 N	4.82	Reeder 13 N	.70		
Ohio	3 Stations	85	26+	Carpenter 4 NW	15	7	Cincinnati-Fernbank	6.88	2 Stations	.250		
Oklahoma	Beaver	92	25	Hooker	7	4	Heavener 1 SE	7.86	Goodwell Research Station	.54		
Oregon	Portland KGW-TV	84	26	Christmans Valley	8	18	Government Camp	12.72	Ontario KSRV	.26		
Pennsylvania	Lewistown	89	25	Jamestown 2 NW	11	6	Bakerstown 3 NW	5.75	Raymond	.114		
Puerto Rico	2 Stations	95	22+	Cerro Maravilla	49	1	Pico Del Este	15.12	Ponce City	.00		
Rhode Island	2 Stations	74	23	2 Stations	25	21+	North Foster 1 E	5.69	Block Island WSO AP	4.02		
South Carolina	Sandhill Exp Station	89	2	Caesars Head	28	10	Hogback Mountain	14.86	Brookgreen Gardens	.160		
South Dakota	2 Stations	87	23	Deerfield 4 NW	-5	3	Victor 1 ESE	3.54	Rapid City WSO AP	.31		
Tennessee	5 Stations	86	21+	Tazewell	24	7	Huntingdon Water Plant	12.90	Greenville Exp Station	.343		
Texas	Rio Grande City 3 W	103	12	Gruver	12	4	Conroe	19.30	10 Stations	.00		
Utah	Saint George	86	29	Silver Lake Brighton	-8	13	Snowbird	6.30	6 Stations	.00		
Vermont	Vernon	80	25	Mount Mansfield	6	8	Mount Mansfield	6.27	Gilman	.172		
Virginia	2 Stations	86	2+	Big Meadows	16	7	Diamond Springs	7.54	Washington National WSO AP	.188		
Virgin Islands	2 Stations	92	30+	3 Stations	66	15+	Ham Bluff Light House Station	5.73	Frederiksted	.72		
Washington	3 Stations	84	30+	2 Stations	16	1	Rainier Paradise R S	10.13	Smyrna	.03		
West Virginia	Spencer	88	22	Spruce Knob	13	7	Thomas	5.83	Martinsburg FAA AP	.165		
Wisconsin	2 Stations	80	23	Amery	-5	6	Burlington	6.32	Eagle River	.46		
Wyoming	Colony	85	18	Old Faithful	-16	2	Black Mountain	2.61	2 Stations	T		

CLIMATOLOGICAL DATA
METRIC UNITS

APRIL 1979

State and Station		Pressure		Temperature				Precipitation				Wind				No. of days (sunrise to sunset)								
		Sqd. 18V.E.	Sqd. 18V.E.	Average minimum	Average maximum	Date	Highest	Date	Lowest	No. of days	25 mm. or more	Departure from normal	Greater than 24 hours	Departure from normal	Cloudy, 8-10	Pretty cloudy, 4-7	Sky cover, tenth's	Possible sunshine						
ALABAMA	BIRMINGHAM U	207	994.2	1016.8	23.6	10.9	17.3	-0.9	28.9	20	2.2	6	0	0	11.7	72	349	190	10	0	0.6	6		
	BIRMINGHAM	189	993.9	1016.8	21.4	9.8	17.4	0.1	28.9	20	2.8	10	0	0	8.9	67	189	232	11	5	0.6	58		
	HUNTSVILLE	190	1004.1	1015.8	25.8	15.6	20.7	-0.9	27.2	20+	3.9	7+	0	0	13.9	76	103	39	49	8	0.5	17		
	MOBILE	64	1004.1	1015.8	24.2	13.6	18.9	0.4	28.3	12+	6.1	6	0	0	11.7	65	258	145	101	10	0	5		
	MONTGOMERY	50	1009.1	1016.3																	0.1	16		
ALASKA	ANCHORAGE	35	1011.5	1016.4	7.2	0.3	3.8	1.9	17.2	30	-6.6	14	8	15	-1.1	71	24	10	8	0	0.6	3		
	ANCHORAGE	34	1012.2	1016.2	10.8	2.5	6.7	0.7	20.0	27	-1.1	16+	0	0	2.2	76	57	-186	29	10	0	0.5	76	
	ANNEVILLE	19	1021.4	1022.4	-14.4	-22.2	-18.8	0.9	2.2	29+	-2.4	11	0	30	-18.6	78	3	-1	5	0	2.8	14		
	BARROW	12	1020.3	1022.2	-13.0	-20.6	-16.8	0.5	2.6	29+	-35.6	15	0	30	-18.9	88	0	3	5	0	16.5	45.6		
	BARTER ISLAND	19	1005.8	1011.4	3.0	-3.6	-0.3	0.3	13.9	11	-10.6	30	0	26	-2.2	84	99	88	24	0	1.6	5		
	BETHEL	196	993.6	1018.7	-0.1	-11.0	-5.5	0.9	11.7	29	-26.7	1	0	26	27	11	11	0	0	1.4	19.7	21		
	BETLES	386	1006.4	1010.2	6.9	-5.0	1.0	2.4	22.2	30	-18.3	15+	1	20	-7.4	23	25	53	1.1	2	15.2	8.0		
	BIG DELTA	29	1006.4	1010.2	7.4	2.4	4.9	4.3	11.7	17	-52.3	29	0	1	-1.7	84	166	127	30	5	1.5	22		
	COLD BAY	133	998.0	1016.2	5.7	-6.9	-0.6	1.1	22.8	30	-21.1	1	26	-7.4	63	21	13	12	10	0	0.8	7		
	FAIRBANKS	479	1011.2	1016.2	6.7	-0.3	3.6	1.9	10.6	30+	-5.0	13	0	17	-4.9	76	51	0	5	0	0.5	51		
	GULFKAIA	19	1015.9	1016.6	11.0	-0.9	5.1	1.2	18.9	30	-10.5	15	0	14	-1.1	70	25	19	0	0	0.4	67		
	HOMER	14	1016.0	1016.7	8.2	0.2	4.2	4.5	13.6	20	-10.0	15	0	14	-1.1	71	30	8	10	0	0.6	6.6		
	JUNEAU	15	1010.8	1012.7	9.1	-0.9	4.1	4.8	13.9	28	-2.2	5	0	29	-10.0	82	11	22	15	0	0.6	5.3		
	KING SALMON	4	1011.2	1015.6	-3.1	-11.6	-7.3	3.2	13.9	28	-3.3	14	0	29	-10.0	81	10	11	9	0	0.6	7.7		
	KODIAK	4	1013.9	1014.2	-9.1	-11.6	-7.3	4.1	2.0	30	-22.2	15	0	22	-7.2	63	50	20	15	0	0.6	7.1		
	KOTZEBUE	105	1007.0	1014.9	3.7	-5.8	-1.1	-1.1	2.0	30	-15.6	30	0	22	-7.2	67	57	20	18	0	0.6	7.1		
	MCGRAH	4	1005.7	1007.7	-6.7	-3.6	3.7	4.4	7.2	25	-17.2	13	0	30	-7.2	61	23	13	0	0	0.6	7.1		
	NOME	7	1004.6	1005.2	4.3	-0.2	2.3	4.2	7.2	25	-3.3	13+	0	34	0.0	85	82	17	22	0	0.6	7.1		
	ST. PAUL ISLAND	105	1003.2	6.3	-3.2	1.6	1.3	17.8	30	-12.0	2	0	26	75	47	24	11	0	4.0	8.0	0			
	UNALASKA/BEFT	11	1016.3	1017.4	7.8	-0.7	3.6	1.6	13.3	28	-5.0	1	19	-3.6	76	28	50	17	7	0	0.6	6.6		
	VALOEZ	9	1015.9	1016.9	7.1	-0.4	2.8	0.6	17.6	18	0	23	0	23	0.0	83	49	-16	29	8	0	0.6		
	YAKUTAT	9	1015.9	1016.9	7.1	-0.4	2.8	0.6	17.6	18	-5.6	18	0	23	0.0	83	49	-16	29	8	0	0.6		
ARIZONA	FLAGSTAFF	2135	972.2	1010.8	14.1	-4.4	4.8	-0.8	20.0	29+	-10.6	11	0	28	-0.9	27	1	-26	7	3	0.6	73		
	PHOENIX	788	923.5	1010.4	30.2	12.1	21.2	1.3	36.1	22	-3.9	11	14	2.0	-3.3	26	5	23	10	0	0.6	96		
	TUCSON	1492	1004.6	1005.2	27.0	9.6	18.7	0.1	32.2	29+	2.2	11	13	0	2.0	7.5	41	23	12	0	0.6	97		
	WINSLOW	1492	1004.6	1005.2	22.1	22.1	22.4	0.3	27.8	18	-5.0	4+	0	9	0	9	17	23	12	0	0.6	9.1		
	YUMA	1704.1	1011.2	31.1	13.9	22.5	0.7	35.6	26+	9.4	11+	17	0	1.1	28	0	-3	0	0	0	0.6	9.8		
ARKANSAS	FORT SMITH	136	984.3	1015.0	21.6	9.6	15.6	-1.2	30.0	25+	0.7	5	0	1	8.9	69	122	245	112	7	0	0.6		
	LITTLE ROCK	78	1006.1	1015.6	21.5	10.8	16.2	-1.0	28.9	19	2.2	5	0	0	0.7	5	87	9	5	0	0.6	6.2		
	NO. LITTLE ROCK	165																				78		
CALIFORNIA	BAKERFIELD	165	998.0	1016.6	24.5	10.1	17.3	0.3	31.1	5	5.6	19+	0	0	7.2	55	7	=22	0	0	0	1.4	35	
	BISHOP	122	971.3	1014.8	22.7	3.0	10.3	1.3	5.8	0.4	27.8	30+	-1.0	1.8	0	4	28	139	102	1.1	0	0.6	8.8	
	BLUE CANYON	1609	1017.1	1014.7	27.0	7.2	10.6	0.7	18.5	27	2.2	19	0	0	0	0	25	39	102	1.1	0	0.6	8.9	
	EUREKA U	13	1014.8	1013.8	13.8	9.7	17.1	1.3	29.4	5	5.6	20+	0	0	6.7	55	100	25	17	0	0	0.4	8.0	
	FRESNO	100	1004.7	1016.5	24.4	7.2	17.7	2.0	29.4	13	8.3	2.3	0	0	9.4	63	52	=30	2	1	0	0.6	92	
	LONG BEACH	8	1013.9	1015.1	23.7	12.1	17.9	2.0	29.4	13	9.4	2.2	0	0	9.4	63	52	=30	2	1	0	0.6	9.2	
	LOS ANGELES	30	1011.5	1015.2	19.6	11.7	15.7	0.8	23.3	25+	9.4	22+	0	0	10.6	76	0	=28	0	0	0	0.6	9.9	
	LOS ANGELES U	82	1017.0	1016.6	22.4	10.6	15.6	0.6	28.3	5	7.8	2.3	0	0	0	0	0	=20	0	0	0	0.6	9.6	
	MT. SHASTA D	1077	992.0	1016.8	13.9	-0.7	1.3	-0.7	12.8	0.4	27.8	30+	-6.7	19	0	22	0	28	14	25	7	0	0.6	8.8
	DAHLIA	1018	1013.5	1016.9	16.9	1.3	5.8	0.8	16.1	29	-2.8	19+	0	0	2.1	73	15	=25	7	6	0	0.6	8.4	
	REO BLUFF	104	1003.4	1016.1	13.3	6.7	10.6	0.3	25.0	7	3.9	2.7	0	0	0	0	0	33	11	0	0	0.6	8.4	
	SACRAMENTO	1375	1015.9	1011.0	20.4	7.2	13.8	0.2	22.2	29	-2.8	19	0	0	4	5	23	=20	8	5	0	0.6	8.7	
	SACARBOROUGH	161	1016.5	1014.6	14.4	3.9	9.2	0.4	24.4	7.2	2.2	19	0	0	0	0	0	33	16	9	14	0	0.6	8.7
	SAN FRANCISCO	4	1014.2	1015.4	20.8	14.1	15.5	2.4	24.4	4	11.1	1	0	0	0	0	0	0	2.1	29	8	0	0.6	7.6
	SAN FRANCISCO U	16	1018.3	1019.0	17.1	9.0	13.1	0.1	20.5	25	5.6	20+	0	0	2.3	74	18	=23	9	8	0	0	0.6	7.6
	SANTA MARIA	72			19.3	4.9	12.2	-0.6	24.4	25+	-0.6	12.2	0	0	-0.6	18	0	=32	1	0	0	0	0	5

CLIMATOLOGICAL DATA METRIC UNITS

METRIC UNIT

State and Station		Elevation (ground)		Pressure		Temperature		Precipitation		Wind		Frost-free days (sunrise to sunset)		No. of days (sunrise to sunset)		Possibly sunshiny					
										Cloudy, 8-10		Partly cloudy, 4-7		Cloudy, 0-3		Cloudy, 0-3					
										Min. 0 °C or lower	Max. 32.2 °C or above	Min. 0 °C or lower	Max. 32.2 °C or above	Min. 0 °C or lower	Max. 32.2 °C or above	Min. 0 °C or lower	Max. 32.2 °C or above				
CALIFORNIA	STOCKTON	Q 1014.6	S 1014.6	m 23.3	mb 8.4	°C 15.9	°C 1.1	27.2	14	2.8	1.9	0	0	20	+15	10	4	0	0		
COLORADO	ALAMOSA	15.0	-4.0	5.2	0.1	22.8	16	-14.4	2	0	24	11	-5	4.6	25	0.9	7	17.0	36		
COLORADO	COLORADO SPRINGS	1011.3	1011.3	16.3	1.6	26.1	23	-11.1	4	0	8	4.6	10	24	2.3	0.8	1.4	6.2	5.3		
DENVER	DEER JUNCTION	1009.6	1009.6	16.7	2.3	25.6	23	-10.0	0	7	3.6	13	23	7	1	0.8	1.1	10	5.5		
GRAND JUNCTION	PUEBLO	1011.2	1011.2	18.2	1.4	27.5	16	-2.8	3	0	7	11	8	4	0	0.4	1.4	12	5.6		
GRAND JUNCTION	PUEBLO	1011.2	1011.2	19.7	2.3	11.0	0.1	28.9	18	-6.1	4	0	6	-19	12	4	0.4	1.4	12	5.7	
CONNECTICUT	BRIDGEPORT	1016.2	1016.7	12.3	6.1	23.3	23	0.0	8	0	1	1.7	6.1	11.5	29	0	0	35	17.0	28	
HARFORD	1010.5	1016.1	15.1	3.7	9.4	0.7	25.6	24	-1.1	19+	0	5	1.1	14.9	54	12	0	32	18.8	NW	
DELAWARE	WILMINGTON	23	1014.2	15.8	4.9	10.3	=0.9	25.0	23	-2.8	8	0	3	2.8	64	102	21	35	13	1	T
DIST. OF COLUMBIA	WASHINGTON NATIONAL	1005.4	1017.3	17.1	5.3	11.2	-0.5	26.7	25	-1.7	20+	0	4	4.4	68	52	=23	14	12	0	0
WASHINGTON	WASHINGTON NATIONAL	1014.9	1017.4	17.9	8.6	13.3	-0.2	26.1	25	1.7	7	0	0	5.6	64	48	=25	12	11	0	0
FLORIDA	APALACHICOLA	6	1016.3	1016.7	25.1	15.8	20.4	0.3	28.4	16	8.3	6	0	17.2	84	-7	40	9	5	0	0
DAYTONA BEACH	1015.9	1017.4	22.7	17.1	2.4	1.4	3.0	+2.1	13	10.0	R+	1	0	18.1	70	101	49	6	4	0	0
FORT MYERS	1016.3	1017.4	26.0	18.7	24.6	1.6	31.1	13	6.1	7	5	0	14.7	74	79	28	49	5	1	0	0
JACKSONVILLE	KEY WEST	1015.6	1016.2	28.3	20.3	0.3	0.3	30.6	13	21.1	22.1	0	0	21.1	77	106	42	8	6	0	0
MIAAMI	1016.9	1017.1	28.8	22.1	25.9	1.6	32.2	27	19.4	20	1.6	7	0	17.2	64	61	69	4	3	0	0
ORLANDO/MC CAY AFB	1013.9	1017.3	29.7	23.0	1.2	0.6	32.2	14	8.9	17	4	0	15.6	69	27	43	34	2	0	0	
PENSACOLA	1011.5	1016.0	25.4	16.1	29.7	0.7	29.4	19	6.7	0	0	15.0	74	66	=42	25	3	4	0	0	
TALLAHASSEE	1016.2	1016.5	26.5	19.6	-0.4	29.4	19	3.3	6	0	0	16.4	76	265	162	R4	8	6	0	0	
TAMPA	1016.6	1017.3	26.5	18.6	28.4	1.2	30.6	19	12.4	1	0	16.4	75	14	=39	11	3	4	0	0	
WEST PALM BEACH	5	1017.3	28.4	18.7	23.6	0.3	32.0	25	12.2	7	1	0	16.7	75	14	=39	11	3	4	0	
GEORGIA	ATHENS	987.5	1016.3	22.9	11.0	0.4	27.8	21	2.2	10	0	0	9.4	66	206	95	98	8	3	0	0
ATLANTA	980.0	1016.8	22.7	11.3	17.1	0.9	27.8	21	2.2	10	0	0	8.3	60	301	184	126	30	0	0	0
AUGUSTA	41	1011.2	1015.7	24.3	10.2	17.3	-0.4	28.3	12	2.8	6	0	0	10.6	69	134	48	41	30	0	0
COLUMBIA	136	1002.7	1016.6	25.3	13.1	19.2	-1.1	30.6	11	5.0	10	0	0	11.7	67	272	157	115	9	0	0
MACON	108	1003.7	1016.6	24.7	11.5	18.1	-0.7	27.8	21	3.9	10+	0	0	11.7	71	174	84	67	0	0	0
ROME	109	1011.1	23.1	9.7	16.4	0.5	28.9	21	2.8	6	0	0	11.7	66	290	169	68	7	0	0	0
SAVANNAH	14	1015.9	1017.6	26.0	13.6	19.8	0.9	30.0	13	7.2	6	0	0	11.7	66	23	58	6	2	0	0
HAWAII	HILo	8	1016.9	1016.0	27.6	0.9	30.6	16+	16.7	7	0	0	18.3	80	251	=76	58	28	0	0	0
HONOLULU	2	1015.2	1015.7	28.3	19.2	23.8	0.0	30.0	8	15.6	28+	0	0	17.2	70	14	=21	9	7	0	0
KAHULUI	15	1013.2	1015.5	27.3	18.6	22.9	-0.3	28.9	11	14.4	29+	0	0	17.2	75	74	=33	10	14	0	0
LIHUE	31	1010.8	1016.1	26.7	18.3	22.5	-0.4	28.9	11	15.0	14	0	0	17.2	75	27	=55	10	14	0	0
IDAHO	801SE	865	916.0	1014.4	15.8	2.7	9.3	-0.2	23.3	30+	-5.0	1	0	8	-0.6	53	41	12	17	11	0
LEWISTON	431	1014.6	1014.2	13.7	-0.3	4.6	0.9	-0.2	23.5	30+	-0.7	22.8	16	-6.7	-2.8	56	16	11	5	10	1
POCATELLO	1358	1014.5	1014.2	13.0	-0.3	4.6	0.7	-0.2	23.5	30+	-0.7	22.8	16	-6.7	-2.8	56	16	11	5	10	1
ILLINOIS	CAIRO II	96	991.9	1016.7	12.5	1.4	14.3	-1.4	27.8	20	0.6	6	0	0	9.7	69	115	45	13	0	0
CHICAGO O HARE	201	994.2	1017.1	11.2	2.4	7.5	-1.8	25.0	12	-7.2	6+	0	0	7	2.2	75	125	39	15	20.5	29
CHICAGO MIDWAY	185	996.2	1015.6	13.8	2.2	3.7	0.6	22.9	12	-8.9	6	0	0	7	2.3	70	127	57	11	25.9	53
MOLINE	177	996.2	1017.0	13.8	2.2	3.7	-0.6	23.3	20	-7.8	6	0	0	7	2.8	70	102	35	12	21.9	53
PEORIA	199	992.9	1017.0	13.8	3.7	8.7	-0.7	25.0	20	-6.7	6	0	0	6	3.9	73	114	51	20	18.3	53
ROCKFORD	221	988.8	1017.4	11.4	0.6	6.1	-2.9	23.3	23	-10.6	6	0	0	1.1	73	132	34	58	14	20.6	29

CLIMATOLOGICAL DATA
METRIC UNITS

APRIL 1979

State and Station	Pressure		Temperature						Precipitation						Wind						No. of days (sunrise to sunset)												
	Elevation (ground)	Sea level	Average minimum	Average maximum	Depature from normal	Highesi	Lowest	Date	Min. 0°C or above	Max. 32.2°C or above	Average dew point	Depature from normal	Total	Greatest in 24 hours	With thunderstorms	2.5 mm. or more	No. of days	Snow, ice pellets	Maximum depth on ground	Resultant speed	Resultant direction	Date	Cloudy, 8-10	Partly cloudy, 4-7	Clear, 0-3								
ILLINOIS	179	994.2	1016.8	15.2	5.2	10.2	-1.5	26.1	20	-5.0	6	0	4	4.4	70	182	77	113	12	5	T	0.4	21	16.1	NW	5	4	8	18	7.6	48		
SPRINGFIELD																																	
INDIANA	116	1003.1	1017.0	17.6	7.2	12.4	-1.3	27.2	20	-1.7	6	0	2	6.1	68	154	51	37	13	6	T	0	0.1	4	18.8	SE	12	6	7	17	6.9	52	
EVANSTON																																	
FORT WAYNE	241	986.8	1017.1	13.6	2.9	8.2	-1.4	23.9	12	-7.2	7	0	8	2.8	70	55	+35	12	17	2	T	1.0	26	20.1	W	5	4	4	22	8.0	61		
INDIANAPOLIS	241	987.8	1017.2	15.0	4.8	9.9	-1.4	26.1	12	-5.6	6	0	5.6	79	80	+19	31	17	5	T	0.5	25	17.9	NW	5	4	5	21	7.8	40			
SOUTH BEND	236	988.2	1016.6	12.9	2.8	7.9	-1.1	25.0	12	-5.6	7	0	9	2.8	72	147	45	28	16	6	T	0.4	30	20.5	SW	5	3	5	22	7.9	49		
IDAHO	211	981.0	1016.2	13.9	3.3	8.7	-2.1	22.8	23	-7.8	6	0	8	2.2	66	100	4	39	10	4	T	0	0.4	32	13.0	SW	11	3	5	10	16	7.2	
BURLINGTON	286	981.0	1016.2	13.5	3.1	8.1	-2.1	22.8	23	-7.8	6	0	8	2.2	66	100	4	39	13	4	T	0.3	20.3	12.7	NW	5	4	4	13	13	6.7		
OSES MOUNTAINS	322	976.0	1016.2	11.6	1.3	6.3	-2.1	21.7	22	-10.6	6	0	12	6.0	60	+45	14	13	10	T	1.0	102	120	W	5	4	3	13	13	6.6			
QUABECUE	334	976.0	1016.2	14.5	1.7	8.1	-1.6	27.8	18	-8.3	6	0	15	1.7	68	59	4	28	8	2	T	0.3	9	18.3	W	5	4	4	13	13	6.6		
SIOUX CITY	265	985.1	1017.3	12.2	1.6	6.9	-1.7	22.2	22	-9.9	6	0	14	1.1	70	111	24	73	11	4	T	0.3	11.9	102	NW	5	4	4	13	13	6.6		
WATERTON																																	
KANSAS	444	961.6	1014.6	17.4	3.8	10.7	-0.8	28.3	16	-5.0	6	0	9	3.9	66	39	+18	11	10	5	T	0.4	64	51	SW	11	9	8	13	5.9	70		
CONCORDIA	47	968.7	1012.8	19.3	5.2	12.3	0.8	31.1	16	-5.0	4	0	5	4.4	66	50	+6	16	9	2	T	0.4	2.0	20.1	NE	5	3	3	11	5.5	57		
ODGE CITY	47	922.1	1012.8	10.4	2.6	10.4	1.1	28.3	19	-5.0	6	0	10	3.3	67	28	+8	15	14	3	T	0.4	1.4	16.5	SW	11	3	3	11	5.5	55		
GODDARD	1114	984.5	1015.4	18.6	4.3	10.9	-1.6	27.8	17	-4.9	6	0	7	6.1	76	16	+32	21	12	0	T	0.3	10.8	12.8	SW	11	7	8	15	6.5	55		
TOPEKA	403	983.4	1015.4	17.4	4.3	10.9	-1.6	27.8	16	-2.0	6	0	2	5.6	64	37	+38	12	7	4	T	0.1	15	15.2	N	5	3	12	10	5.2	65		
WICHITA																																	
KENTUCKY	265	985.8	1017.7	15.8	5.2	10.5	-1.7	26.7	21	-4.4	6	0	2	4.4	70	124	32	33	14	4	T	0	1	26	13.4	SW	11	9	8	31	6+	41	
COVINGTON	294	981.7	1017.3	17.8	6.4	12.1	-0.8	26.7	21	-1.7	7	0	2	5.0	65	125	27	57	12	0	T	0	0.7	23	14.8	SW	11	6	7	17	7.1	41	
LEXINGTON	145	999.3	1016.9	18.1	7.5	12.8	-0.5	27.2	21	-1.1	6	0	2	5.6	65	186	82	64	11	3	T	0	0.7	25	15.6	SW	11	6	8	16	6.9	41	
Louisville																																	
LOUISIANA	270	1012.9	1015.4	15.3	1.3	20.4	-0.2	29.4	1	6.7	6	0	0	15.6	77	292	162	145	8	7	T	0	1	12	10.7	SW	11	5	6	19	7.3	41	
BATON ROUGE	23	1012.9	1014.1	16.0	2.4	16.0	-0.1	30.0	13	6.7	5	0	0	16.1	81	161	51	96	10	8	T	0	1	14	13.0	SW	11	6	6	18	7.0	46	
LAKE CHARLES	1	1013.5	1014.5	17.7	2.6	17.7	1.4	29.4	18	+0.2	5	0	0	14.4	72	124	19	61	12	0	T	0	1	14	12.5	SW	11	7	8	18	6.8	48	
NEW ORLEANS	77	1004.7	1014.0	24.5	13.0	18.9	-0.2	31.1	16	2.2	5	0	0	14.4	77	188	57	84	14	6	T	0	0.9	11	10.3	SW	11	7	5	18	6.8	48	
SHREVEPORT																																	
MAINE	190	991.62	1013.5	10.1	1.1	5.1	-0.3	21.1	23	-3.9	8	0	15	0.6	74	165	80	91	18	1	T	0	1	37.8	178	SW	11	3	3	24	8.3	41	
CARIBOU	13	1013.5	1015.9	10.2	1.1	5.7	-0.3	21.1	23	-3.9	8	0	15	0.6	74	165	80	91	18	1	T	0	1	37.8	154.6	SW	11	6	6	20	7.5	41	
MARYLAND																																	
BALTIMORE	45	1011.2	1017.0	16.8	6.7	11.7	-0.4	25.0	25	-1.1	7	0	1	4.4	64	86	8	47	10	0	T	0	1.2	32	14.3	SW	11	7	8	4	18	6.7	50
MASSACHUSETTS	192	1014.6	1015.7	12.2	3.1	7.7	-0.3	23.9	24	-3.3	8	0	0	2.5	24	7	15	77	13	1	T	0	0.6	32	13.9	SW	11	7	5	6	19	7.2	49
BLUE HILL 84 R	301	977.7	111.6	2.4	7.1	-0.3	23.3	24	-4.4	8	0	13	-0.6	66	114	17	46	16	1	T	0	0.6	32	13.9	SW	11	7	5	6	19	7.2	49	
BOSTON																																	
WORCESTER																																	
MICHIGAN	210	997.9	1016.7	9.4	0.7	5.1	0.6	25.0	24	-6.7	7	0	15	-0.6	71	77	15	21	13	1	T	0	0.7	36	14.8	SW	11	7	6	17	7.1	46	
DETROIT	189	992.2	1016.7	10.8	2.0	5.7	-2.2	21.1	19	-6.7	6	0	0	8	0.6	68	117	74	44	41	3	T	0	0.4	27	16.5	SW	11	5	5	20	7.6	37
METROPOLITAN	235	988.2	1016.3	11.4	2.6	7.0	-0.7	22.8	23	-7.2	7	0	0	9	0.6	70	59	+13	10	18	1	T	0	0.6	30	18.3	SW	11	5	5	20	7.6	37
FLINT																																	
GRAND RAPIDS	239	987.1	1016.8	12.1	1.6	6.9	-1.1	24.2	23	-7.8	7	0	10	-1.1	71	90	4	20	16	2	T	0	0.6	28	6	SW	11	5	5	21	7.9	43	
HOUGHTON LAKE	350	973.9	1016.9	9.9	-1.1	4.4	-1.1	22.2	23	-13.9	7	0	17	0.6	75	121	21	21	21	2	T	0	0.6	33	16.1	SW	11	5	5	21	7.9	43	
LANSING	256	984.4	1016.6	11.8	2.1	6.9	-1.1	23.9	23	-7.2	5	0	0	12	2.2	75	68	-5	12	16	2	T	0	0.5	27	19.8	SW	11	5	6	19	7.8	44
MARQUETTE	431	993.6	1016.9	10.2	0.0	5.1	-1.4	21.1	24	-8.2	7	0	17	0.6	73	74	-6	28	17	12	T	0	0.6	30	12.0	SW	11	5	6	19	7.8	44	
MUSKOKA MARIE	220	990.2	1017.2	7.4	-1.9	2.8	-0.7	23.3	24	-8.2	7	0	17	-1.7	74	96	-6	25	14	4	T	0	0.6	30	17.9	SW	11	5	4	7	19	7.5	55
MINNESOTA	435	964.8	1017.5	6.1	-3.3	1.4	-2.3	15.6	22	-16.7	6	0	19	-4.4	67	29	-4.4	107	10	0	T	0	1.4	36	1.4	SW	11	5	6	19	7.5	53</	

CLIMATOLOGICAL DATA

METRIC UNITS

APRIL 1979

State and Station	Elevation	Pressure		Temperature						Precipitation						Wind										
		mb	mb	°C	°C	°C	°C	No. of days	Snow, ice pellets	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm						
MINNESOTA RUFHESTER ST CLOUD	256 395 313	985.8 968.2 970.0	1016.8 1016.9 1017.0	11.8 10.6 9.2	1.5 0.7 1.2	6.7 -0.3 -2.1	25.6 -2.3 22.8	23 23 23	-12.2 -12.9 -16.7	6 6 6	0 0 0	10 12 18	-1.7 0.0 -0.1	58 53 -7	18 127 0.3	18.0 18.8 17.8	NW NW NW	5 5 30	5 5 30	7 20 7.6	52					
JACKSON HERIDIAN	94 88	1004.0 1015.4	1015.9 1016.4	24.1 11.9	12.3 18.0	18.2 -0.6	30.6 29.4	17 11	4.4 2.8	6 6	0 0	13.3 12.2	80 75	247 273	11 13	11 13	13.0 13.0	1.0 0.6	9 8	10.3 10.3	11 11	22+ 22+	6 6	7 7	17 17	6.9 6.9
MISSOURI COLUMBIA REGIONAL KANSAS CITY MUN AP ST JOSEPH ST LOUIS SPRINGFIELD	270 309 220 247 163 386	983.7 978.3 1015.5 1015.5 926.3 969.9	1016.2 1015.5 1015.5 1015.7 1016.7 1015.5	17.1 5.6 6.0 6.0 18.0 12.0	6.3 5.6 12.3 10.9 10.9 5.4	11.7 -0.9 -0.9 -0.9 11.6 11.6	28.3 26.1 25.0 27.8 26.9 27.8	20 10 -3.9 1.4 -2.1 25.0	-2.2 -3.9 -3.3 1.4 -3.3 2.5	6 0 0 0 0 -1.6	0 0 0 0 0 0	4 3 2 6 6 6	5.0 5.0 4.4 6.2 6.1 6.1	129 71 60 73 73 70	31 65 29 18 12 11	14 12 12 7 4 0	6 7 15 12 20 0	12 12 12 12 20 0	15.2 15.2 14.8 14.8 15.2 13.4	NW E E E S S	12 10 6 6 10 11+	7 9 15 15 5 10	20 7.8 6.7 6.7 9 15	38		
MONTANA BILLINGS GLASGOW GREAT FALLS HAIRE HELENA KALISPELL MILES CITY MISSOULA	1087 696 1116 1166 1180 1188 1194 801 972	988.3 931.9 1015.5 1015.4 921.4 1014.1 904.9 919.7 1015.1	1013.1 1015.5 1015.4 1015.4 1015.4 1014.6 1013.3 1013.7 1015.1	13.0 -2.3 -1.2 -1.2 -1.4 -0.7 -1.2 -0.6 -0.3	0.2 -2.3 -1.2 -1.2 -1.4 	6.4 -0.6 -1.5 -1.5 -1.4 -0.6 -0.6 -0.2 -0.3	-0.6 -0.6 -1.5 -1.5 -1.4 	26.6 22.2 22.2 22.2 22.2 21.7 21.7 22.2 22.2	17 17 16 16 16 16 16 17 17	-10.0 -1.0 -1.0 -1.0 -1.0 -9.4 -9.4 -9.4 -9.4	5 0 0 0 0 0 0 0 0	0 21 18 18 18 18 18 18 18	14 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0	82 32 57 52 44 57 59 73 67	30 22 22 22 18 22 28 19 26	-9 32 57 51 34 28 12 13 26	94 198 198 198 198 198 198 198 198	2.1 1.5 1.8 1.8 1.8 1.8 1.8 1.8 1.8	32 102 102 102 102 102 102 102 102	16.1 13.9 13.9 13.9 13.9 13.9 13.9 13.9 13.9	NW NW NW NW NW NW NW NW NW	13 12 12 12 12 12 12 12 12	4 7 7 7 7 7 7 7 7	23 19 19 19 19 19 19 19 19	8.0 8.4 8.4 8.4 8.4 8.4 8.4 8.4 8.4	
NEBRASKA GRAND ISLAND LINCOLN NORFOLK NORTH PLATTE OMAHA (REPPLEY) OMAHA (NORTH) SCOTTSBLUFF VALENTINE	561 359 471 840 298 399 1206 789	948.0 972.2 1015.2 1015.4 915.3 1013.4 1014.0 1011.5 921.4	1015.0 1015.5 1015.5 1015.5 1015.5 1015.5 1015.5 1015.5 1015.5	15.8 3.2 1.4 1.4 1.4 1.4 1.4 1.4 1.4	2.3 3.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2	9.1 9.8 -0.9 -0.9 -0.9 -0.9 -0.9 -0.9 -0.9	-0.9 -0.9 -0.9 -0.9 -0.9 -0.9 -0.9 -0.9 -0.9	26.1 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0	17 19 18 18 18 18 18 18 18	-7.2 -7.2 -7.2 -7.2 -7.2 -7.2 -7.2 -7.2 -7.2	6 0 0 0 0 0 0 0 0	0 18 18 18 18 18 18 18 18	83 42 42 42 42 42 42 42 42	20 9 9 9 9 9 9 9 9	56 114 114 114 114 114 114 114 114	5.6 25 25 25 25 25 25 25 25	T T T T T T T T T	13 14 14 14 14 14 14 14 14	8 8 8 8 8 8 8 8 8	1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8						
NEVADA ELKO ELY LAS VEGAS WINNEMUCUA	1529 1906 471 840 1342 1311	942.5 906.0 594.9 955.7 844.5 867.3	1013.5 1015.2 1015.4 1015.4 1015.4 1015.4	15.0 1.2 1.4 1.4 1.4 1.4	0.3 -2.9 -2.9 -2.9 -1.0 -1.2	8.0 8.4 8.4 8.4 8.4 8.4	2.4 -0.8 -0.8 -0.8 -0.8 -0.8	24.4 20.0 20.0 20.0 20.0 20.0	15 15 15 15 15 15	3 0 0 0 0 0	0 24 24 24 24 24	52 42 42 42 42 42	11 6 6 6 6 6	1.7 2.5 2.5 2.5 2.5 2.5	26 26 26 26 26 26	13.0 16.1 16.1 16.1 16.1 16.1	23 20.6 20.6 20.6 20.6 20.6	1.7 1.7 1.7 1.7 1.7 1.7	4.8 4.8 4.8 4.8 4.8 4.8							
NEW HAMPSHIRE CONCORD MT WASHINGTON OBS	104 1909	1003.6	1016.2	13.0 -1.4	0.5 -7.7	6.8 -4.5	0.0 0.7	25.0 28.9	28+ 28	0 0	17 126	-1.1 64	79 126	5 14	130 102	1.0 1.0	30 152	7 7	3 5	20 22	4.8 3.4					
NEW JERSEY ATLANTIC CITY NEWARK TRENTON U	20 2 17	1013.0 1015.6 1016.6	1016.4 1016.5 1016.6	15.9 1.2 1.2	10.7 -0.3 -0.3	10.3 1.0 1.0	0.3 0.3 0.3	22.8 33.0 33.0	-2+ 2+ 2+	0 0 0	1.1 1.1 1.1	0 0 0	76 59 59	1.1 1.1 1.1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0						
NEW MEXICO ALBUQUERQUE CLAYTON ROSENBL	1619 1515 1112	935.1 1010.0 1009.8	1016.0 1016.5 24.3	4.6 10.5 7.4	13.8 10.5 15.9	0.6 0.1 0.5	29.4 28.3 31.7	15 24 24	13+ 24 24	0 0 0	6 4 4	-4.4 -1.1 -2.9	33 4 3	3 3 3	27 16.1 16.1	N 30 102 102	8 8 8	13 12+ 12+	9 5 5	4.5 4.0 4.0						
NEW YORK ALBANY	84	1006.1	1016.7	13.2	1.7	7.4	-0.8	25.0	24	-4+ -4+ -4+	0 0 0	14 14 14	1.1 1.1 1.1	67 67 67	99 99 99	30 30 30	23 23 23	14 14 14	0 0 0	1.7 1.7 1.7	28 28 28	18.8 18.8 18.8	5 5 5	17 17 17	4.9	

CLIMATOLOGICAL DATA
METRIC UNITS

APRIL 1979

State and Station	Elevation (ground)	Pressure		Temperature						Precipitation						Wind						No. of days (sunrise to sunset)																
		Sea level		Average minimum	Average maximum	Date	Highesr	Lowest	Total	No. of days	Snow, ice pellets	Total	Resultant speed	Speed	Date	Cloudy, 8-10	Partly cloudy, 4-7	Cool, 0-3	Sky cover, 0-100% (sunrise to sunset)	Possible sunshine (% of day)																		
		mb	mb	°C	°C	°C	°C	°C	mm	mm	mm	m/s	m/s	mm	%	%	%	%	%	%	%	%	%	%														
NEW YORK	485	957.0	1016.5	10.4	1.2	5.8	-1.2	23.3	25	-7.8	8	0	14	-0.6	68	80	-1	39	12	185	127	1.3	28	21.0	6	6	3	21.7-4	46									
BINGHAMTON	215	990.5	1016.5	11.4	2.2	6.8	-0.3	26.7	25	-7.2	8	0	8	1.7	75	80	-1	221	16	19	103	121	1.8	24	21.9	6	3	6	21.7-9	41								
BUFFALO	40	1013.2	1016.4	15.6	7.3	11.4	0.3	27.2	25	0.0	8	0	20	2.8	61	61	0	1	13	0	12	13	0	1.2	3.4	18.3	6	6	6	1.2	41							
NEW YORK UPTON	4	1115.9	1016.5	14.7	7.0	10.8	0.9	23.3	23	0.0	8	0	20	2.8	62	67	-14	19	13	0	1	0	0.8	3.4	17.9	28	6	6	8	1.4	61							
NEW YORK KENNEDY	3	1115.9	1017.9	13.9	6.0	9.9	-1.0	23.9	23	0.0	8	0	20	2.8	67	90	0	23	12	1	1	0	0	1.3	3.4	18.3	6	6	6	1.0	61							
NEW YORK LA GUARIA	167	996.3	1016.9	11.6	1.7	6.7	-1.2	26.1	25	-6.7	8	0	11	1.1	71	96	26	22	15	0	513	229	1.7	25	25.8	6	6	6	7	19.7	43							
ROCHESTER	125	1001.7	1016.8	12.4	2.1	7.3	-0.8	26.1	25	-5.6	8	0	11	0.0	63	99	21	26	14	0	259	127	1.4	27	21.3	6	6	7	21.7-3	39								
SYRACUSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
NORTH CAROLINA	652	941.1	1017.1	19.6	6.9	13.9	0.0	25.6	22	0.0	6	0	1	7.2	70	184	95	49	9	4	0	0	1.2	33	11.6	23	6	6	12	5.6	62							
ASHEVILLE	224	989.5	1016.8	22.0	9.3	14.9	-0.3	27.2	22+	0.6	20	0	0	10.6	75	68	-10	42	5	3	0	0	0.8	22	15.6	29	13.0	6	6	8	15.6	48						
CHARLOTTE R	273	985.1	1016.9	21.8	8.3	15.7	0.3	26.9	22	2.2	7	0	0	8.3	66	164	-78	70	9	2	0	0	0.5	29	13.0	9+	10.0	6	6	6	15.6	69						
GREERSONDO	132	1016.3	1017.0	22.2	12.4	22.2	0.3	28.3	23	1.0	17	0	0	7.2	65	82	2	36	6	1	0	0	0.7	28	14.8	6	6	6	15.9	64								
RALEIGH	132	1016.3	1017.5	22.4	12.0	18.7	1.3	29.4	1	5.6	7	0	0	8.9	69	67	-11	35	5	1	0	0	0.6	20	11.2	26	9.0	6	6	6	13.5	50						
WILMINGTTON	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
NORTH DAKOTA	502	955.3	1016.5	6.8	-3.4	1.7	-4.4	22.2	18	-18.3	2	0	22	-2.8	77	74	-13	10	8	2	185	76	1.3	20	20.1	6	6	10	19	8.1	45							
BISMARCK	273	982.7	1016.4	6.6	-2.2	2.2	-3.5	17.8	24	-17.8	6	0	17	-1.7	74	77	-24	3R	14	1	102	0.2	35	19.2	6	6	1	25	9.0	45								
FARGO	579	945.8	1015.9	6.6	-3.8	1.4	-4.3	24.4	18	-18.3	5	0	26	-2.8	77	43	11	16	13	1	257	203	1.4	36	15.2	6	6	7	19	7.7	57							
MILLISTON	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
OHIO	362	972.2	1017.1	13.6	2.6	8.1	-1.1	25.6	25	-6.1	7	0	10	1.1	66	91	7	26	15	3	41	51	1.1	26	13.4	27	6	6	4	21	7.7	52						
CINCINNATI AREA 06	237	987.5	1017.2	13.4	2.8	8.1	-1.8	28.3	21	-4.4	6	0	3	2.2	70	78	-10	21	15	3	10	1	0	1.2	27	6	6	4	21	7.8	34							
CLEVELAND	247	987.1	1017.4	15.4	4.6	10.1	-0.6	26.1	25	-5.0	6	0	0	5.6	77	102	8	26	13	2	8	1	0	1.2	26	18.9	2	11	1	17	7.7	29						
COLUMBUS	303	801.4	1016.9	15.8	4.5	10.2	-0.6	26.7	21	-5.6	7	0	5	4.4	71	92	7	23	13	2	0	0	1.4	26	19.2	5	3	3	21	8.0	40							
MANSFIELD	395	911.5	1017.0	12.9	2.1	7.5	-1.6	23.3	23	-5.0	21	0	11	2.2	73	102	27	33	18	2	102	0	25	0.9	29	20.1	5	3	6	19	7.6	44						
TOLEDO	204	973.9	1017.2	13.4	2.0	7.8	-0.9	27.2	25	-5.6	6	0	12	2.2	72	102	29	33	18	2	0	0.8	27	17.4	6	3	6	21	7.9	55								
YOUNGSTOWN	359	911.5	1017.0	12.9	2.1	7.5	-1.6	23.3	23	-5.0	6	0	11	2.2	73	102	27	33	18	2	102	0	25	0.9	27	17.4	6	3	6	21	7.9	55						
OKLAHOMA CITY	392	967.8	1013.9	20.6	8.3	14.5	-1.3	28.9	16	1.0	4	0	0	8.3	69	71	-18	36	8	4	0	0	1.2	16.5	5W	11	10	8	12	5.8	68							
TULSA	198	990.2	1014.2	22.2	10.0	16.1	0.1	31.1	25	3.3	6	0	0	8.9	66	114	8	60	8	3	0	0	1.1	17	16.1	23	11	9	12	9	5.5	53						
DODGE	2	1017.3	1018.0	13.6	5.5	9.6	0.8	20.6	26	-0.1	10	0	0	6.7	87	111	-6	18	0	0	1	0	0	0	0	0	0	0	0	0	0							
BURNS II	1265	1004.4	1018.1	15.6	4.8	10.2	0.1	21.7	30	-7.8	18	0	18	5.6	75	121	3	8	19	0	0	0	2.4	15.0	26	0	0	0	0	0	0							
EUGENE	109	969.5	1017.6	16.7	4.0	10.6	0.5	23.9	25	-1.1	3	0	0	4.4	71	57	31	17	14	3	0	0	1.3	23	12.1	0	0	0	0	0	0							
NEEDHAM	396	961.2	1015.7	15.7	4.7	10.2	-0.3	28.3	29	1.1	20	0	0	2.8	63	30	4	6	14	1	0	0	2.9	19.8	27	20	0	0	0	0	0	0						
PENDLETON	452	1016.3	1017.5	16.6	6.8	11.7	1.4	28.3	26	3.0	19	0	0	7.2	78	63	6	12	18	1	0	0	2.9	15.0	26	6	2	2	8	20	7.8	55						
SALEM	6	1010.2	1017.7	16.0	4.5	10.3	0.4	25.6	26	0.0	19	0	1	6.1	77	96	43	33	15	1	163	25	1.1	21	10.3	1	5	2	23	8.5	53							
SEXTON SUMMIT R	1169	831.4	1017.0	10.4	6.1	0.1	17.6	25	-3.3	18	0	11	0	1	6.1	77	96	43	33	15	1	163	25	1.1	20.1	12	1	5	2	23	8.5	53						
PACIFIC AREA	110	1013.9	1014.4	27.4	30.7	22.9	25.2	-0.2	24	20.6	7	0	0	20.6	76	48	-54	10	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
JOHNSTON R	29	1005.8	1014.4	27.4	30.7	22.9	25.2	-0.2	24	20.6	13	1	0	20.6	76	48	-37	7	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
KORD R	2	1009.8	1014.4	25.0	27.3	25.7	-0.2	24	20.6	13	1	0	0	20.6	76	48	-37	7	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
KALIFORNIA	3	1009.4	1014.4	29.3	30.4	26.5	-0.8	31.1	7	22.2	24	0	0	23.3	83	83	-37	58	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
MAJURO	4	1010.5	1010.6	30.1	30.9	27.0	-0.3	32.2	18	0	0	0	0	20.6	22	0	0	69	102	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PAGO PAGO	37	1017.0	1017.1	23.0	27.0	26.7	-0.1	32.2	18	0	0	0	0	21.7	10	1	0	97	147	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PONAPE R	37	1017.0	1017.1	23.0	27.0	26.7	-0.1	32.2	18	0	0	0	0	21.7	10	1	0	97	147	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUK MOUNTAIN ISLAND	2	1009.5	1016.3	25.1	27.7	26.7	0.3	31.7	21	0	0	0	0	22.2	8	0	0	516	182	167	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WAKE	3	1009.3	1016.6	23.9	27.0	26.7	0.9	31.7	21	0	0	0	0	22.2	16	0	0	21.1	73	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YAP R	13	1008.1	1014.4	23.8	31.4	27.6	0.0	32.2	19	4	0	0	0	21.7	17	4	0	511	60	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PENNSYLVANIA	118	1003.1	1017.3	15.0																																		

CLIMATOLOGICAL DATA
METRIC UNITS

APRIL 1979

State and Station	Pressure		Temperature						Precipitation						Wind																			
	Elevation (ground)		Depotiture from normal	Average minimum	Average maximum	Depotiture from normal	Date	Lowest	Highest	Depotiture from normal	Average relative humidity	Min. 0 °C or lower	Max. 32.2 °C or above	No. of days	Total	Depotiture from normal	Greatest in 24 hours	With thunderstorms	No. of days	Snow, ice pellets	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Cloudy, 8-10	Partly cloudy, 4-7	Sky cover to sunset	Possible sunshine %					
	Station	mb																																
PENNSYLVANIA	103 HARRISBURG	1017.7	1017.7	15.8	4.7	10.2	-1.3	26.7	25	-1.7	11+	0	3	2.2	60	91	16	26	11	0	1	31	15.6	29	6	8	6	6.6	56					
PHILADELPHIA	1015.9	1017.0	16.3	6.2	9.8	-0.3	26.1	25	-1.1	8	0	2	3.9	62	104	20	29	14	0	1	33	18.3	28	6	9	3	18.7	52						
PITTSBURGH	347	972.9	1017.2	15.4	4.0	8.0	-1.2	28.3	25	-5.6	7	0	5	2.2	63	81	-6	25	14	1	36	1.2	24	6	4	7	19	7.5	31					
SCRANTON	283	982.4	1017.1	13.0	3.0	8.0	-1.2	25.0	24	-4.4	8	0	11	0	61	94	16	40	14	0	112	7.6	29	17.4	6	5	7	18	7.0	51				
WILLIAMSPORT	160	998.0	1017.3	3.6	9.1	-0.8	-0.6	25.6	25	-5.0	8	0	6	1.7	62	69	-18	18	15	0	10	0.9	28	17.4	6	7	6	17	6.9	51				
RHODE ISLAND	BLOCK ISLAND PROVIDENCE	34	1014.2	1016.4	10.7	4.1	7.4	0.0	18.9	29+	-1.1	4	0	2	1.1	66	130	36	50	15	0	28	T	0.8	32	14.3	27	5	7	18	7.3	55		
SOUTH CAROLINA	CHARLESTON U	12	1015.6	1017.7	24.7	11.8	18.3	0.2	27.8	22	4.6	7	0	0	11.7	69	97	22	59	7	2	0	0	1.6	21	14.3	22	4	10	5	15	5.9	79	
COLUMBIA	65	1008.8	1016.8	23.0	4.4	9.3	16.9	26.7	21+	10.8	10+	0	0	8.9	65	174	85	89	8	3	0	0	0.6	24	12.5	30	6	9	10	11	5.7	73		
GRINNELL SPOT BORG	292	982.1	1015.5	22.4	10.2	16.3	0.9	28.3	19*	2.3	17	0	0	8.3	64	258	148	87	9	2	0	0	0.5	33	12.1	54	8	14	4	12	5.0	67		
SOUTH DAKOTA	ABERDEEN	395	968.2	1015.3	9.7	-0.1	4.8	-1.9	22.8	18	-11.7	5	0	16	7.4	75	77	37	9	178	102	102	6	1.6	15	17.9	5	0	6	24	8.4	57		
HURON	390	968.5	1014.0	11.5	0.1	5.8	-1.9	24.4	23+	-10.6	6	0	17	0.6	73	77	38	11	6	2	0.6	11	15.6	32	5	2	13	15	7.4	51				
RAPID CITY	364	964.2	1016.3	14.4	-0.7	6.9	-0.1	30.0	18	-7.8	6+	0	19	-1.1	62	8	45	6	2	0.6	11	15.6	32	5	2	13	15	7.4	51					
SIOUX FALLS	432	965.1	1016.3	12.3	1.2	6.7	-1.1	26.7	18	-10.6	6	0	18	0.0	66	70	11	42	16	3	38	25	0.6	11	15.6	32	5	2	13	15	7.4	51		
TENNESSEE	459 BRISTOL	263.1	1017.3	6.5	13.0	-0.5	26.7	21	-2.2	7	0	1	5.0	64	93	10	11	2	0	0	0	0.9	26	11.2	26	6	10	4	16	6.3	57			
CHATTANOOGA	203	992.6	1017.0	21.7	9.5	15.5	-0.2	28.3	21	-3.3	7	0	0	8.9	68	190	78	73	12	5	0	0	0.3	35	9.4	35	8	9	8	13	5.5	79		
KNOXVILLE	299	881.7	1016.5	21.6	9.4	15.5	-0.2	28.3	21	1.1	7	0	0	7.8	68	109	18	33	12	2	0	0	0.6	30	11.6	25	8	9	8	13	5.5	79		
MEMPHIS	79	1006.1	1015.4	22.3	12.2	17.2	0.3	29.4	20	5.0	5	0	0	8.9	60	291	154	92	13	5	0	0	0.8	11	20.6	24	11	9	4	17	6.4	65		
NASHVILLE	180	995.3	1017.1	20.0	8.7	17.3	-1.3	27.2	21	1.1	7	0	0	7.8	69	194	92	94	14	5	0	0	0.1	28	10.3	16	11	1	2	17	6.4	53		
OAK RIDGE	276	-	-	21.3	6.7	14.0	-0.7	29.4	21	-1.1	7	0	1	7.8	69	133	26	37	13	0	0	0	0	0	15.2Y	4	10	9	11	5.8	53			
TEXAS	ABILENE	544	950.2	1012.6	11.6	17.9	-0.6	34.4	25	2.2	4	1	0	8.9	62	44	19	24	8	9	0	0	1.9	15	16.1	5W	11+	8	9	13	5.9	69		
AMARILLO	1098	886.0	1011.7	20.2	4.8	12.5	-1.6	30.6	24+	-5.6	4	0	5	2.8	59	33	2	13	8	4	1	2.5	18	16.5	25	11	10	7	13	5.5	76			
AUSTIN	182	890.9	1012.8	24.4	14.4	19.4	-0.9	34.4	25	5.0	5	1	0	13.3	72	76	-13	33	10	5	0	0	1.2	9	12.5	20	4	8	18	6.4	66			
BROWNSVILLE	6	1010.5	1011.2	28.7	20.3	24.5	1.1	34.4	25	11.7	5	1	0	20	80	99	67	55	18	6	0	0	3.2	13	23.2	13	1	17	7.3	57				
CORPUS CHRISTI	12	1010.5	1012.0	28.0	19.0	23.5	1.1	32.2	15	10.6	5	1	0	11.1	80	94	39	38	8	5	0	0	3.3	11	13.0	25	10	4	8	18	6.4	66		
DALLAS - FORT WORTH	168	992.6	1013.9	23.7	18.0	20.4	-0.4	32.2	15	12.3	1	0	1	1.1	68	52	-58	36	8	6	0	0	1.4	12.5	10	15	1	15	7	14	6.4	66		
DEL RIO	313	975.3	1011.0	27.3	15.1	21.2	-1.0	36.1	25	8.2	4	1	0	12.8	64	39	-1	31	6	5	0	0	2.5	13	19.4	21	9	14	12	5.5	55			
EL PASO	1194	879.1	1009.2	27.2	17.9	17.6	-0.2	33.3	24	-2.2	4	1	0	12.8	70	136	71	49	17	2	0	0	2.0	28	18.3	27	10	1	20	1.0	96			
GALVESTON	29	1009.5	1013.1	22.5	18.0	18.2	0.2	28.3	13	12.8	5	0	0	16.1	71	125	55	55	11	1	0	0	0	13.0	18	8	3	19	7.1	39				
HOUSTON INTERCON	992	1011.5	1012.4	24.2	8.9	16.6	1.0	32.2	24	-3.3	4	1	0	1.3	50	30	2	10	6	7	0	0	1.6	9	10.3	26	11	13	8	6.5	75			
LUBBOCK	869	913.3	1010.7	24.9	9.1	17.0	-0.9	32.2	24	1.1	4	1	0	1.1	54	50	20	41	2	2	0	0	1.3	15	22.8	21	11	16	8	4.2	44			
MIDLAND	1013.2	1012.2	25.2	16.1	20.3	0.3	30.0	12	8.3	6+	1.1	0	0	1.1	57	41	20	41	13	2	0	0	1.3	15	21.1	23	7	17	16	6.8	68			
PORT ARTHUR	5	946.2	1012.1	25.5	11.8	18.8	-1.0	32.8	25	6.7	14+	0	0	1.0	50	48	80	134	9	6	0	0	1.2	14.3	33	12	9	9	12	5.5	66			
SAN ANGELO	580	984.4	1012.3	25.7	16.1	20.9	0.1	30.6	25	7.8	15	0	0	1.4	54	60	75	130	7	5	0	0	1.2	14.3	33	12	9	9	12	5.5	66			
SAN ANTONIO	32	1008.8	1012.3	25.9	12.0	21.5	0.0	31.7	11	7.2	5	0	0	1.7	50	131	64	61	10	6	0	0	1.9	11	17.2	20	5	5	5	20	7.3	46		
VICTORIA	153	995.3	1013.3	23.8	12.0	18.2	1.8	31.1	8	6.1	5+	0	0	1.2	53	35	67	110	5	0	0	0	1.2	13.4	28	11	8	9	16.6	66				
WACO	303	971.3	1013.7	23.6	9.8	16.7	-1.1	30.1	6+	1.1	4+	0	0	10.0	50	69	-11	33	10	6	0	0	1.4	12.5	23	11	7	9	14	6.4	66			
WICHITA FALLS	UTAW	1533	943.6	1013.1	17.3	-0.5	8.4	0.0	23.3	16+	-7.2	11	0	4	0.0	53	16	-7	14	4	2	135	51	19.2	\$ 17	9	13	8	5.0	71				
SALT LAKE CITY	1287	968.9	1012.6	17.1	4.1	10.6	1.0	25.6	16	-1.7	2+	0	4	0.0	53	26	-27	10	8	2	196	152	0.6	18	15.2	\$ 23	7	17	16	6.8	68			
VERMONT	101	1003.7	1016.4	11.2	1.6	6.4	0.3	23.3	25	-4.4	8	0	4	0.6	70	92	25	23	14	1	213	102	0.6	29	14.3	NW	7	8	4	18	7.0	42		
BURLINGTON	279	983.1	1016.3	19.8	9.1	14.5	1.1	26.7	22	-1.1	7	0	1	6.7	65	83	13	22	9	1	0	0	0	0	0.9	31	14.8	67	6	7	9	14	6.4	66

CLIMATOLOGICAL DATA
METRIC UNITS

APRIL 1979

State and Station	Pressure		Temperature						Precipitation						Wind						No. of days (sunrise to sunset)												
	Elevation (ground) m	Sea level mb	Average maximum °C	Departure from normal °C	Date Lowest†	Date Highest‡	Max 32.2°C or above °C	Min. 0°C or lower °C	Average dew point °C	Max 32.2°C or above mm	No. of days above normal	Departure from normal mm	2.5 mm. or more With thunderstorms	Total mm	Maximum depth on ground mm	Snow, ice pellets mm	Resultant speed m/s	Direction	Cloudy, 8-10 Partly cloudy, 4-7 Clear, 0-3 Possible sunshine %														
VIRGINIA	50	1010.5	1017.0	21.3	8.0	14.7	0.3	29.4	1	-1.1	7	0	1	8.3	71	101	30	37	9	0	0.6	32	13.0	NW	7	7	16	6.5					
RICHMOND	350	974.9	1016.8	19.1	7.2	13.2	-0.1	25.6	12	0.0	7	0	1	5.6	64	101	30	30	13	0	0	1.3	30	14.3	NW	6	11	13	6.5				
ROANOKE				16.0	7.6	11.8	-0.6	22.2	23	0.6	8	0	0	0	0	0	0	34	8	0	0	21.0Y	NW	6									
WALLOPS ISLAND	3																																
WASHINGTON	59	1009.5	1016.8	15.9	3.6	9.8	0.8	25.0	26	0.0	10+	0	2	4.4	72	56	23	15	1	0	0	1.7	22	12.5	SE	12	4	2	7.8				
OLYMPIA	55	1009.1	1014.4	13.4	3.5	8.4	0.8	26.1	26	-1.7	16	0	3	1.7	70	34	18	0	0	0	0.7	24	10.3	SE	12	4	2	8.2					
DUVALLETT	122	1000.0	1016.5	14.6	6.6	10.0	0.4	21.7	27	2.1	1	0	0	4.4	71	21	68	17	0	0	0	1.3	20	13.0Y	NW	12	4	7	7.3				
SEATTLE-TACOMA	718	929.9	1014.1	13.6	6.1	10.4	1.2	24.4	26	2.2	1	0	0	6.5	65	18	1	11	8	1	0	2.1	20	14.8	NW	13	4	3	7.8				
SPOKANE PASS R	1206	877.8	1014.9	5.9	-0.7	2.0	0.7	16.1	27	-4.4	7	0	20	1.5	153	=15	17	1377	2261	0	0	0	10.3	NW	17+								
STAMPEDE PASS R	289	976.3	1014.9	17.1	6.6	11.8	0.3	26.1	30	1.1	1	0	0	4.5	9	11	0	0	0	0	1.7	26	12.5	SE	17	3	9	18					
WALLA WALLA U	321	975.2	1014.9	17.5	2.0	9.8	0.1	25.6	29	-3.3	19	+*	0	-1.1	49	4	-9	3	2	0	0	0	1.7	30	17	NW	16	9					
YAKIMA																																	
WEST INDIES	4	1014.2	1016.7	29.3	23.3	26.3	3	1.1	31.1	28	+*	21.7	16	0	0	21.1	77	109	22	36	17	2	0	0	4.2	7	12.5	E	23	3	16	11	3.5
SAN JUAN P.R.																																	
WEST VIRGINIA	763	928.2	1016.6	16.5	5.5	11.0	0.1	24.4	21	-5.0	7	0	6	3.9	66	79	-5	24	14	1	1	0.8	26	12.5	SE	12	4	3	7.7				
CHARLESTON	286	983.1	1017.4	18.8	6.9	12.8	-0.6	27.2	25	-1.7	7	0	2	3.9	60	97	12	23	15	2	1	1.0	26	13.0	NW	12	5	6	19	7.1			
ELKINS	594	946.2	1017.2	16.2	2.9	9.0	-0.3	26.1	25	-7.2	7	0	12	4.4	59	72	-6	19	19	76	25	0	1.1	29	12.5	SE	12	6	5	7	7.9		
HUNTINGTON	252	984.8	1017.0	19.1	7.2	13.1	-0.1	27.8	25	-2.2	7	0	2	4.4	59	72	-11	20	18	1	1	0	0	1.1	29	17.9	NW	12	5	7	7.4		
PARKERSBURG	187			17.1	5.7	11.4	-1.2	28.3	25	-3.3	7	0	4	5.7	57	30	-30	17	12	0	0	0	0	0	0	0	0	0	0	0			
WISCONSIN	208	990.9	1017.1	10.8	-0.1	5.4	-1.2	22.8	23	-10.0	6	0	15	0.6	73	49	-19	14	12	1	127	102	0.8	2	18.3	W	5	4	6	20	7.6		
GREEN BAY	198	992.6	1017.4	13.0	2.2	7.6	-1.1	26.7	23	-9.4	6	0	10	1.1	66	45	-21	8	2	25	0.6	33	0.6	3	6	21	4	4	3	11	7.1		
LA CROSSE	262	985.1	1016.9	11.5	0.0	5.8	-1.6	23.9	23	-11.1	6	0	16	1.0	78	62	-5	16	13	1	185	152	0.3	5	19.7	NW	5	3	11	16	7.1		
MILWAUKEE	205	991.5	1017.3	9.4	1.8	5.6	-1.4	22.2	25	-8.3	7	0	8	0.6	72	68	62	14	3	20	25	0.7	35	23.2	NW	5	2	11	17	7.9			
WYOMING	1627	933.7	1011.7	14.4	-1.4	6.5	0.6	23.9	17	-9.4	2	0	22	-3.9	55	21	-16	6	2	23.4	51	2.4	26	14.8	23	13	4	9	17	7.2			
CASPER	1867	907.7	1010.5	14.4	-0.1	7.2	1.2	23.9	18	-6.7	2	0	16	1.1	44	20	-20	11	8	2	102	51	2.4	26	18.8	NW	12	4	13	13	7.7		
CHEYENNE				14.2	-0.9	6.7	0.7	22.8	23	-10.9	2	0	19	-5.0	50	43	-17	26	7	0	279	279	2.1	22	14.8	S	18	6	15	9	5.7		
LANDER	1596	925.2	1011.6	12.1	-2.7	-1.7	-1.7	25.6	17	-11.7	2	0	26	-1.7	67	33	-21	13	10	0	279	127	2.3	30	15.2	NW	2	4	9	17	4.9		
SHERIDAN	1208	975.7																															

HEATING DEGREE DAYS

(Base 65°F.)

APRIL 1979

State and Station	Current season			Current season			Current season			Current season			Current season		
	This month	Period July through this month	Normals	This month	Period July through this month	Normals	This month	Period July through this month	Normals	This month	Period July through this month	Normals	This month	Period July through this month	Normals
ALABAMA BIRMINGHAM U	92	3221	3270	1740 BUISF	481	6105	5484	NEBRASKA GRAND ISLAND	492	7357	6201	TENNESSEE BRISTOL	283	4244	4208
HUNTSVILLE	145			LEWISTON	448	5879	5148	LINCOLN	463	7142	6030	CHATTANOOGA	152	3357	3454
MOBILE	8	1602	1644	POCATELLO	623	73R2	6580	NIRFOLK	533	7732	6741	KNOXVILLE	167	3515	3431
MONTGOMERY	39	1991	2261	ILLINOIS CAIRO U	225	4333	3795	NORTH PLATTE	491	7674	6440	MEMPHIS	121	3238	3205
ALASKA ANCHORAGE	781	8681	10016	CHICAGO N HARE	580	6847	6212	OMAHA (EPRLEY)	451	6633	5881	NASHVILLE	213	3901	3651
ANNETTE	621	6322	6251	CHICAGO MIDWAY	606	6824	5893	OMAHA (NORTH)	514	7272	6382	OAK RIDGE	230	4015	3867
BARRON	1978	17602	17882	MOLINE	521	7221	6191	SCOTTSDALE	447	6791	6403	TEXAS ABILENE	86	2865	2599
BARTER ISLANDO	1897	17165	17704	PEDRIA	510	6789	5901	VALENTINE	574	8229	6954	AMARILLO	319	4609	4092
BETHEL	998	10698	12029	ROCKFORD	658	7588	6577	ELKJ	553	6444	6887	AUSTIN	37	2061	1737
BETTLES	1280	14191	14933	SPRINGFIELD	435	6167	5414	FLY	675	7539	7103	BROWNSVILLE	0	730	650
BIG DELTA	929	12387	12861	EVANSVILLE	326	5041	4529	LAS VEGAS	66	2534	2591	CORPUS CHRISTI	1	1034	930
COLD BAY	720	7330	8486	FORT LAYNE	542	6368	5970	RENO	536	5865	5549	OALLAS FT WORTH	78	2737	2382
FAIRANKS	1018	13119	13585	INDIANA EVANSVILLE	455	5789	5407	WINNEBICOA	532	6138	6121	OEL RIO	8	1717	1523
GULKA	793	8241	9171	FORT LAYNE	560	6380	6182	NEW HAMPSHIRE CONCORD	617	7237	6987	EL PASO	118	2728	2678
HOMER	712	8261	8089	SOUTH REND				MT WASHINGTON OBS	1229	12376	12320	GALVESTON	12	1373	1224
JUNEAU	784	8683	10459	NEW HAMPSHIRE MT WASHINGTON OBS				NEW JERSEY				HOUSTON INTERCON	23	1706	1434
KING SALMON	620	6687	7725	NEW JERSEY				ATLANTIC CITY				LUBBOCK	134	3600	3516
KODIAK				NEW JERSEY				ATLANTIC CITY U				MIAMI	106	3079	2621
KOTZEBUE	1340	12699	14334	RURLINGTON	515	6828	5961	NEW YORK U	406	5099	4606	PORT ARTHUR	12	1463	1518
MG GRATH	1040	12551	13554	DES M INF5	532	7158	6498	NEW YORK U	427	4770	4498	SAN ANGELO	60	2720	2240
NAMEK	1176	11086	12804	DUROUOF	632	7966	6981	NEWARK	386	4741	4891	SAN ANTONIO	20	1719	1570
ST. PAUL ISLAND	840	8030	9463	SIOUX CITY	546	8038	6731	NEW YORK LA GUADIA	446	4940	4764	VICTORIA	13	1508	1227
TALKETNA	894	10050	10773	WATERLOO	613	7962	7147	ROCHESTER	626	6571	6388	WACO	59	2578	2058
UNALAKleet				NEW YORK SYRACUSE				NEW YORK LA GUADIA	591	6621	6360	WICHITA FALLS	130	3478	2891
VALDEZ	792	8702	9474	NEW YORK SYRACUSE				NEW MEXICO				WICHITA FALLS			
YAKUTAT	894	8305	8401	KANSAS CONCEANIA	411	6220	5449	ALBUQUEROUE	241	4056	4234	WICHITA FALLS			
ARIZONA FLAGSTAFF	722	7082	6641	DONGF CITY	343	5512	4910	CLAYTON	416	5313	4997	WICHITA FALLS	531	6544	6056
PHOENIX	30	1436	1552	GONOLANO	424	6101	5848	ROSWELL	161	3678	3677	SALT LAKE CITY	414	5641	5658
TUCSON	76	1856	1752	TOPEKA	401	6100	5112	NEW YORK ALBANY	579	6844	6596	VERMONT	641	7646	7482
WINDLOW	314	4785	4594	LEXINGTON	337	5397	4923	RINGHAMONT	667	6996	6890	WICHITA FALLS			
YUMA	1	1168	1005	LEXINGTON	337	4891	4614	RUFFALD	619	6655	6548	WICHITA FALLS			
ARKANSAS FORT SMITH	175	3915	3319	LOUISIANA RATON ROUGE	19	1855	1670	NEW YORK RUFALD	369	4605	4711	LYNCHBURG	265	4335	4148
LITTLE ROCK	110	3345	3333	LOUISIANA LAKE CHARLES	19	1713	1494	NEW YORK GREENSBORO	397	4666	4987	NORFOLK	213	3425	3435
NO. LITTLE ROCK	149	3618	3069	LOUISIANA SAINT LOUIS	19	1448	1464	NEW YORK RALEIGH	446	4940	4764	RICHMOND	218	3834	3875
CALIFORNIA BAKERSFIELD	R7	1883	2163	LOUISIANA SHREVEPORT	50	2398	2162	NEW YORK VILMINGTON	579	6844	6596	STAMPEDE PASS R	840	8601	8247
BISMAR	291	4285	4130	MAINE CARIRIJU	354	4517	4619	NEW YORK NORTH OAKOTA	268	3912	4123	WALLA WALLA U	345	3288	4611
BLUE CANYON	671	5358	5082	MAINE PORTLAND	708	8694	8988	NEW YORK RISMARCK	691	9929	8583	WALLA WALLA U	456	6390	5676
EUREKA U	412	4107	3997	MAINE PORTLAND	677	7101	7011	NEW YORK FARGO	861	10112	8840	WALLA WALLA U			
FRESNO	96	2351	2590	MAINE ROSTIN	481	5447	5374	NEW YORK WILLISTON	906	9979	8681	WALLA WALLA U			
LONG BEACH	41	1411	1517	MAINE WORCESTER	601	6698	6492	OHIO AKRON	550	6177	5960	WALLA WALLA U			
LOS ANGELES	137	1496	1634	MAINE WORCESTER				OHIO CINCINNATI AREA '78	402	5215	4719	WALLA WALLA U			
LOS ANGELES U	90	1511	1160	MAINE WORCESTER				OHIO CLEVELAND	552	5840	5870	WALLA WALLA U			
MT. SANTA R	623	5926	5341	MAINE WORCESTER				OHIO COLUMBUS	449	5714	5513	WALLA WALLA U			
OAKLAND	244	2545	2602	MASSACHUSETTS BLUE HILL 085 R	573	6227	6010	OHIO DAYTON	445	5726	5462	WISCONSIN GREEN BAY	691	8351	7669
REO RLUFF	172	2365	2616	MASSACHUSETTS DETROIT METRO	604	6616	6139	OHIO MANSFIELD	557	6347	5953	WISCONSIN LA CROSSE	569	7625	7154
SACRAMENTO	236	2827	2703	FLINT	606	6884	6670	OHIO TOLEDO	577	6656	6120	WISCONSIN MAISON	671	7597	7361
SANGERB R	43	4111	1517	GRAND RAPIDS	607	7044	6487	OHIO YOUNGSTOWN	568	6299	6126	WISCONSIN MILWAUKEE	681	7350	7006
SAN DIEGO	45	1000	1376	HOUGHTON LAKE	742	8103	7838	OKLAHOMA OKLAHOMA CITY	217	4198	3659	WYOMING CASPER	631	7982	7020
SAN FRANCISCO	277	2841	2712	HOUGHTON LAKE	708	7259	6510	OKLAHOMA TULSA	164	4181	3652	WYOMING CHEYENNE	597	7013	6705
SAN FRANCISCO U	250	2547	2629	INDIANA DETROIT	712	7938	7913	OKLAHOMA TULSA				WYOMING LANDER	620	8680	7337
SANTA MARIA	326	2918	2641	INDIANA DETROIT	621	6392	5964	OKLAHOMA TULSA				WYOMING SHERIDAN	727	8728	7165
STOCKTON	126	2524	2724	INDIANA DETROIT	604	6616	6139	OKLAHOMA TULSA				WYOMING SHERIDAN			
COLORADO ALAMOSA	766	8915	7998	INDIANA DETROIT	606	6984	6744	OKLAHOMA TULSA				WYOMING SHERIDAN			
COLORADO SPRINGS	494	6452	6069	INDIANA DETROIT	708	7259	6510	OKLAHOMA TULSA				WYOMING SHERIDAN			
DENVER	473	6066	5683	INDIANA DETROIT	708	7259	6510	OKLAHOMA TULSA				WYOMING SHERIDAN			
GRANJO JUNCTION	377	6417	5452	INDIANA DETROIT	708	7259	6510	OKLAHOMA TULSA				WYOMING SHERIDAN			
PUEBLO	391	5877	521R	INDIANA DETROIT	708	7259	6510	OKLAHOMA TULSA				WYOMING SHERIDAN			
CONNECTICUT BRIDGEPORT	460	5122	5212	INDIANA DETROIT	910	9786	9074	OREGON ASTORIA	467	4858	4646	WYOMING SHERIDAN			
HARTFORD	473	6311	6100	INDIANA DETROIT	923	10494	9917	OREGON ASTORIA	618	7073	6605	WYOMING SHERIDAN			
DELAWARE WILMINGTON	424	5062	4R12	MISSISSIPPI JACKSON	69	2464	2294	OREGON EUGENE	432	4834	4317	WYOMING SHERIDAN			
OIST.OF COLUMBIA	3R3	4934	4R74	MISSISSIPPI MERITIAN	69	2531	2381	OREGON PEORIA	410	4621	4586	WYOMING SHERIDAN			
WASHINGTON OULDR	273	3885	4139	MISSOURI COLUMBIA REGIONAL	360	5479	4957	OREGON PORTLAND	432	5931	4950	WYOMING SHERIDAN			
WASHINGTON NATIONAL				KANSAS CITY	400	4920	5215	OREGON PORTLAND	351	4646	4400	WYOMING SHERIDAN			
FLORIDA APPALACHICOLA U	13	1407	1361	KANSAS CITY	482	6382	5306	OREGON PORTLAND	438	5135	5096	WYOMING SHERIDAN			
DAYTONA BEACH	5	682	897	KANSAS CITY	364	5438	4637	OREGON PORTLAND	376	4753	4743	WYOMING SHERIDAN			
FORT MYERS	0	259	457	KANSAS CITY	665	4527	7595	OREGON PORTLAND	458	6007	5696	WYOMING SHERIDAN			
JACKSONVILLE	13	1507	1327	KANSAS CITY	342	5219	4466	OREGON PORTLAND	438	5463	5107	WYOMING SHERIDAN			
KEY WEST	0	39	64	KANSAS CITY	662	8766	7687	OREGON PORTLAND	552	6386	6030	WYOMING SHERIDAN			
MIAMI	0	180	229	KANSAS CITY	705	8979	7484	OREGON PORTLAND	497	5733	5763	WYOMING SHERIDAN			
ORLANDO	0	571	733	KANSAS CITY	636	8074	6R01	OREGON PORTLAND				WYOMING SHERIDAN			
PENSACOLA	6	1518	1574	KANSAS CITY	853	10038	8474	OREGON PORTLAND				WYOMING SHERIDAN			
TALLAHASSEE	28	1731	1563	KANSAS CITY	722	8287	7123	OREGON PORTLAND	5R3	5387	5342	WYOMING SHERIDAN			
TAMPA	0	565	714	KANSAS CITY	733	9375	8221	OREGON PORTLAND	540	5842	5677	WYOMING SHERIDAN			
WEST PALM BEACH	0	267	299	KANSAS CITY	665	4527	7595	OREGON PORTLAND				WYOMING SHERIDAN			
GEORGIA ATHENS	92	2752	2955	KANSAS CITY	662	8766	7687	OREGON PORTLAND				WYOMING SHERIDAN			
ATLANTA	97	2761	3064	KANSAS CITY	625	8203	7333	OREGON PORTLAND				WYOMING SHERIDAN			
AUGUSTA	79	2467	2537	KANSAS CITY				OREGON PORTLAND				WYOMING SHERIDAN			
COLUMBUS	34	2102	2373	KANSAS CITY				OREGON PORTLAND				WYOMING SHERIDAN			
MACON	62	2171	2234	KANSAS CITY				OREGON PORTLAND				WYOMING SHERIDAN			
ROME	127	3111	3309	KANSAS CITY				OREGON PORTLAND				WYOMING SHERIDAN			
PAVANNAH	17	1724	1957	KANSAS CITY				OREGON PORTLAND				WYOMING SHERIDAN			

COOLING DEGREE DAYS

(Base 65°F.)

APRIL 1979

State and station	Current season			Current season			Current season			Current season			Current season		
	This month	Period January through this month	Normals January through this month	This month	Period January through this month	Normals January through this month	This month	Period January through this month	Normals January through this month	This month	Period January through this month	Normals January through this month	This month	Period January through this month	Normals January through this month
ALABAMA BIRMINGHAM U	60	51	144	HAWAII HONOLULU	271	796	769	NEBRASKA GRAND ISLAND	0	0	8	SOUTH CAROLINA CHARLESTON	71	82	118
BIRMINGHAM	63	52	107	KAHULUI	299	917	972	LINCOLN	7	7	8	CHARLESTON U	72	77	144
HUNTSVILLE	16	25	73	LIHUE	255	855	882	NORFOLK	2	2	0	COLUMBIA	36	49	86
MORILE	144	178	226	ROATAN	229	936	937	NORTH RALPH	0	0	6	GRNVILLE-SPRTNBRO	28	36	37
MONTGOMERY	77	92	147	IDAHO RUISLE	0	0	0	OMAHA (ERRLEY)	8	8	10	SOUTH DAKOTA SIOUX FALLS	3	3	0
ALASKA ANCHORAGE	0	0	0	LEWISTON	0	0	0	OMAHA (NORTH)	1	1	6	ABERDEEN	0	0	0
ANNETTE	0	0	0	ROCKFELL	0	0	0	SCOTTSBLUFF	8	8	0	HURON	0	0	0
BARRON	0	0	0	REDFERNS	0	0	0	VALENTINE	4	4	0	RAPID CITY	4	4	0
BARTRIS ISLAND	0	0	0	REDWOOD	0	0	0	NEVADA	0	0	0	SIOUX FALLS	3	3	0
BETHEL	0	0	0	ROCKFORD	0	0	0	ELKO	0	0	0	TENNESSEE BRISTOL	1	1	18
BETTLES	0	0	0	ROCKFORD	0	0	0	FLY	0	0	0	CHATTANOOGA	12	12	48
BIG DELTA	0	0	0	ROCKFORD	0	0	0	LAS VEGAS	104	104	104	KNOXVILLE	20	35	56
COLD BAY	0	0	0	ROCKFORD	0	0	0	RENO	0	0	0	MEMPHIS	68	87	79
FAIRBANKS	0	0	0	ROCKFORD	0	0	0	WINNEMUCCA	0	0	0	NASHVILLE	5	16	48
GULKA	0	0	0	ROCKFORD	0	0	0	NEW HAMPSHIRE	0	0	0	OAK RIDGE	5	7	34
HOMER	0	0	0	ROCKFORD	0	0	0	CONCORD	1	1	0	TEXAS ABILENE	67	96	139
JUNEAU	0	0	0	ROCKFORD	0	0	0	MT WASHINGTON OBS	0	0	0	AMARILLO	12	20	20
KING SALMON	0	0	0	ROCKFORD	0	0	0	NEW JERSEY ATLANTIC CITY	0	5	0	AUSTIN	102	140	228
KODIAK	0	0	0	ROCKFORD	0	0	0	NEW JERSEY NEWARK	2	2	0	BROWNSVILLE	339	613	655
KOTZEBOYE	0	0	0	ROCKFORD	0	0	0	NEW JERSEY TRENTON U	1	1	0	CORPUS CHRISTI	289	494	437
MC GRATH	0	0	0	ROCKFORD	0	0	0	NEW MEXICO ALBUQUERQUE	5	5	6	DALLAS FT WORTH	67	77	119
NAME	0	0	0	ROCKFORD	0	0	0	CLAYTON	1	1	0	DEL RIO	172	247	344
ST. PAUL ISLAND	0	0	0	ROCKFORD	0	0	0	ROSWELL	35	35	26	FL PASO	84	84	62
TAKEETNA	0	0	0	ROCKFORD	0	0	0	NEW YORK NEW YORK U	4	4	0	GALVESTON	128	150	256
UNALAKLEET	0	0	0	ROCKFORD	0	0	0	NEW YORK NEW YORK KENNEDY	0	0	0	HOUSTON INTERCON	142	224	252
VALDZ	0	0	0	ROCKFORD	0	0	0	NEW YORK LA GUARDIA	0	0	0	LUBBRICK	44	44	49
YAKUTAT	0	0	0	ROCKFORD	0	0	0	NEW YORK ROCHESTER	1	1	0	MIDLAND	43	48	94
ARIZONA FLAGSTAFF	0	0	0	ROCKFORD	0	0	0	NEW YORK SYRACUSE	2	2	0	PORTRTH ARTHUR	156	231	243
PHOENIX	191	202	176	KANSAS CONCESSION	5	6	10	NEW YORK RINGTONHANTUN	0	0	0	SALT LAKE CITY	2	2	0
TUCSON	101	102	120	KANSAS DOUGIE CITY	23	25	14	NEW YORK RUFALF	6	6	0	UTAH MILFORD	0	0	0
WINSLOW	2	2	9	KANSAS GOOLANDO	3	3	0	NEW YORK GREENSBURG	26	32	22	SALT LAKE CITY SALT LAKE CITY	2	2	0
YUMA	232	292	319	KANSAS TOPEKA	7	11	22	NEW YORK RALEIGH	28	34	27	VERMONT BURLINGTON	2	2	0
ARKANSAS FORT SMITH	33	40	63	KANSAS WICHITA	14	19	31	NEW YORK WICHITA	84	95	77	VIRGINIA LYNCHBURG	12	23	8
LITTLE ROCK	48	72	54	KENTUCKY COVINGTON	8	10	8	NORTH CAROLINA ASHEVILLE	1	1	6	NORFOLK	13	24	18
NO. LITTLE ROCK	39	46	72	KENTUCKY LEXINGTON	8	10	21	CAPE HATTERAS R	23	25	17	RICHMOND	30	46	18
CALIFORNIA BAKERSFIELD	40	52	77	KENTUCKY LOUISVILLE	10	15	23	CHARLOTTE	28	32	34	ROANOKE	7	17	10
BISHOP	0	0	19	KENTUCKY NEW ORLEANS	141	192	220	GREENSBURG	26	32	22	WALLOPS ISLAND	0	1	0
BLUE CANYON	0	0	0	KENTUCKY SHREVEPORT	198	275	255	WILMINGTOM	84	95	77	WALLOPS ISLAND	0	1	0
EUREKA U	0	0	0	KENTUCKY LEXINGTON	86	133	154	NORTH DAKOTA BISMARCK	0	0	0	WALLOPS ISLAND	0	1	0
FRESNO	37	39	41	KENTUCKY LOUISVILLE	0	0	0	FARGO	0	0	0	WALLOPS ISLAND	0	1	0
LONG BEACH	25	35	23	KENTUCKY NEW ORLEANS	0	0	0	WILLISTON	0	0	0	WALLOPS ISLAND	0	1	0
LOS ANGELES	0	9	21	KENTUCKY NEW ORLEANS	0	0	0	OHIO AKRON	5	5	0	WALLOPS ISLAND	0	1	0
LOS ANGELES U	17	31	59	KENTUCKY NEW ORLEANS	0	0	0	CINCINNATI ABBE DB	11	13	17	WALLOPS ISLAND	0	1	0
MT SHASTA R	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	CLEVELAND	6	6	0	WALLOPS ISLAND	0	1	0
DAKLAND	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	COLUMBUS	7	7	0	WALLOPS ISLAND	0	1	0
REO BLUFF	0	6	53	KENTUCKY NEW ORLEANS	0	0	0	DAYTON	12	13	5	WALLOPS ISLAND	0	1	0
SACRAMENTO	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	MANSFIELD	4	4	0	WALLOPS ISLAND	0	1	0
SANDERSON R	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	TOLEDO	0	0	0	WALLOPS ISLAND	0	1	0
SAN DIEGO	6	16	25	KENTUCKY NEW ORLEANS	0	0	0	YOUNGSTOWN	7	7	0	WALLOPS ISLAND	0	1	0
SAN FRANCISCO	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	OHIO AKRON	5	5	0	WALLOPS ISLAND	0	1	0
SAN FRANCISCO U	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	CINCINNATI ABBE DB	11	13	17	WALLOPS ISLAND	0	1	0
SANTA MARIA	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	CLEVELAND	6	6	0	WALLOPS ISLAND	0	1	0
STOCKTON	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	COLUMBUS	7	7	0	WALLOPS ISLAND	0	1	0
COLORADO ALAMOSA	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	DAYTON	12	13	5	WALLOPS ISLAND	0	1	0
COLORADO SPRINGS	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	MANSFIELD	4	4	0	WALLOPS ISLAND	0	1	0
DENVER	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	TOLEDO	0	0	0	WALLOPS ISLAND	0	1	0
GRAND JUNCTION	6	6	0	KENTUCKY NEW ORLEANS	0	0	0	YOUNGSTOWN	7	7	0	WALLOPS ISLAND	0	1	0
PUEBLO	1	1	6	KENTUCKY NEW ORLEANS	0	0	0	OHIO AKRON	5	5	0	WALLOPS ISLAND	0	1	0
CONNECTICUT BRIDGEPORT	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	CINCINNATI ABBE DB	11	13	17	WALLOPS ISLAND	0	1	0
MARTFORD	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	CLEVELAND	6	6	0	WALLOPS ISLAND	0	1	0
DELAWARE WILMINGTON	1	5	0	KENTUCKY NEW ORLEANS	0	0	0	COLUMBUS	7	7	0	WALLOPS ISLAND	0	1	0
OIST. OF COLUMBIA WASHINGTON DULLES	5	14	0	KENTUCKY NEW ORLEANS	0	0	0	DAYTON	12	13	5	WALLOPS ISLAND	0	1	0
WASHINGTON NATIONAL	9	23	7	KENTUCKY NEW ORLEANS	0	0	0	MANSFIELD	4	4	0	WALLOPS ISLAND	0	1	0
FLORIDA APRALACHICOLA U	134	139	221	KENTUCKY NEW ORLEANS	69	106	163	TOLEDO	0	0	0	WALLOPS ISLAND	0	1	0
DAYTONA BEACH	271	353	340	KENTUCKY NEW ORLEANS	57	70	159	YOUNGSTOWN	0	0	0	WALLOPS ISLAND	0	1	0
FORT MYERS	344	600	606	KENTUCKY NEW ORLEANS	0	0	0	OHIO AKRON	5	5	0	WALLOPS ISLAND	0	1	0
JACKSONVILLE	171	181	733	KENTUCKY NEW ORLEANS	0	0	0	CINCINNATI ABBE DB	11	13	17	WALLOPS ISLAND	0	1	0
KEY WEST	417	968	1099	KENTUCKY NEW ORLEANS	10	10	27	CLEVELAND	6	6	0	WALLOPS ISLAND	0	1	0
MIAMI	391	711	778	KENTUCKY NEW ORLEANS	3	4	12	COLUMBUS	5	5	0	WALLOPS ISLAND	0	1	0
ORLANDO	260	382	462	KENTUCKY NEW ORLEANS	0	0	0	DAYTON	12	13	5	WALLOPS ISLAND	0	1	0
PENSACOLA	146	164	247	KENTUCKY NEW ORLEANS	9	11	26	MANSFIELD	4	4	0	WALLOPS ISLAND	0	1	0
TALLAHASSEE	103	115	223	KENTUCKY NEW ORLEANS	10	10	29	TOLEDO	17	19	21	WALLOPS ISLAND	0	1	0
TAMPA	243	420	487	KENTUCKY NEW ORLEANS	0	0	0	YOUNGSTOWN	0	0	0	WALLOPS ISLAND	0	1	0
WEST PALM BEACH	287	556	664	KENTUCKY NEW ORLEANS	0	0	0	OHIO AKRON	5	5	0	WALLOPS ISLAND	0	1	0
GEORGIA ATMENS	25	40	49	KENTUCKY NEW ORLEANS	0	0	0	CINCINNATI ABBE DB	11	13	17	WALLOPS ISLAND	0	1	0
ATLANTA	33	46	39	KENTUCKY NEW ORLEANS	0	0	0	CLEVELAND	6	6	0	WALLOPS ISLAND	0	1	0
AUGUSTA	29	38	91	KENTUCKY NEW ORLEANS	0	0	0	COLUMBUS	7	7	0	WALLOPS ISLAND	0	1	0
COLUMBUS	46	109	124	KENTUCKY NEW ORLEANS	0	0	0	DAYTON	12	13	5	WALLOPS ISLAND	0	1	0
MACON	57	76	149	KENTUCKY NEW ORLEANS	0	0	0	MANSFIELD	4	4	0	WALLOPS ISLAND	0	1	0
SAVANNAH	105	138	168	KENTUCKY NEW ORLEANS	0	0	0	TOLEDO	17	19	21	WALLOPS ISLAND	0	1	0
ILLINOIS MONTANA	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	YOUNGSTOWN	0	0	0	WALLOPS ISLAND	0	1	0
GILLINGS	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	OHIO AKRON	5	5	0	WALLOPS ISLAND	0	1	0
GLASGOW	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	CINCINNATI ABBE DB	11	13	17	WALLOPS ISLAND	0	1	0
GREAT FALLS	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	CLEVELAND	6	6	0	WALLOPS ISLAND	0	1	0
HELENA	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	COLUMBUS	7	7	0	WALLOPS ISLAND	0	1	0
KALISPELL	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	DAYTON	12	13	5	WALLOPS ISLAND	0	1	0
MISSOULA	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	MANSFIELD	4	4	0	WALLOPS ISLAND	0	1	0
PENNSYLVANIA ALLEGHENY	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	TOLEDO	17	19	21	WALLOPS ISLAND	0	1	0
FRIE	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	YOUNGSTOWN	0	0	0	WALLOPS ISLAND	0	1	0
HARRISBURG	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	OHIO AKRON	5	5	0	WALLOPS ISLAND	0	1	0
RHIADELRHIA	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	CINCINNATI ABBE DB	11	13	17	WALLOPS ISLAND	0	1	0
RITTSBURGH	0	0	0	KENTUCKY NEW ORLEANS	0	0	0	CLEVELAND	6	6	0	WALLOPS ISLAND	0	1	0
SCRANT															

STORM SUMMARY

APRIL 1979

STATE	TORNADOES				HAILSTORMS				WINDSTORMS				LIGHTNING				@HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				φ ALL OTHER									
	NUMBER	DAYS	DEATHS	INJURIES	† DAMAGE	DEATHS	INJURIES	PROB. PROPERTY	† DAMAGE	DEATHS	INJURIES	PROB. PROPERTY	† DAMAGE	DEATHS	INJURIES	PROB. PROPERTY	† DAMAGE	DEATHS	INJURIES	PROB. PROPERTY	† DAMAGE	DEATHS	INJURIES	PROB. PROPERTY	† DAMAGE									
Alabama	2	2				5					4				1												7	3	7	6				
Alaska	*																										5	?	6	?				
Arizona																											2	?	6	?				
Arkansas	*	29	4			55	7				4		?			6	6																	
California	*															1	05	C																
Colorado																37	7	?																
Connecticut	*															3	6	?																
Delaware	*															1	5	1																
Florida		2	1			11	6				05		C			4	6	?																
Georgia	*	9	4														4	6	?															
Hawaii	*																4	4	4															
Idaho		1	1			1					?	?	?			1	37	7	?															
Illinois																	3	6	?															
Indiana		1	1	1		4					?	?	?			1	5	1																
Iowa																	5	4	5															
Kansas	6	3				3	5				4	5				10	6	?																
Kentucky	1	1				6	6				3					5	6	?																
Louisiana		3	3			4	6										10	6	?															
Maine	*																5	4	5															
Maryland																	2	4	4															
Massachusetts																1	10	7	5															
Michigan	2	1				6	5				4	3				1	7	5	3	3							2	7						
Minnesota																	1	6	5															
Mississippi	1	1				20	6				4					7	5	3	3									4	5	5				
Missouri	5	1															2	3	4															
Montana	*																5	4	4															
Nebraska																	2	3	4															
Nevada	*																1	5	5															
New Hampshire	*																1	5	5															
New Jersey																	2	3	4															
New Mexico	1	1				2	4				4					2	1	5	5	2														
New York	1	1				3	5				4					1	5	5	2	2														
North Carolina	4	1									4					2	1	5	5	2														
North Dakota																	1	5	5	2	2													
Ohio																	2	1	5	5	2													
Oklahoma	17	3	3	112	7						5	5	?			2	6	5	5	2														
Oregon											?	?	?				2	6	5	5	2													
Pacific	*																?	6																
Pennsylvania	*	1	1			4					?	6					?	6																
Puerto Rico	*																?	6																
Rhode Island	*					5					4					16	4	6	5	4	19	4	7	?										
South Carolina	1	1									3	6	6			1	4	3	4	19	4	7	?											
South Dakota																	4	?	4	4	19	4	7	?										
Tennessee	1	1				4	8				3	6	6			1	4	3	4	19	4	7	?											
Texas	31	7	53	1814	8												1	4	3	4	19	4	7	?										
Utah	*																1	4	3	4	19	4	7	?										
Vermont	*																4	?	4	4	19	4	7	?										
Virginia	*																4	?	4	4	19	4	7	?										
Virgin Islands	*																4	?	4	4	19	4	7	?										
Washington	*																4	?	4	4	19	4	7	?										
West Virginia																	4	?	4	4	19	4	7	?										
Wisconsin																	4	?	4	4	19	4	7	?										
Wyoming	*																4	?	4	4	19	4	7	?										

RAWINSONDE DATA

Average monthly values

APRIL 1979

BOISE, ID 914 MB				BOOTHVILLE, LA 1014 MB				PROWNSVILLE, TX 1010 MB				BUFFALO, NY 990 MB				CAPE HATTERAS, NC 1017 MB															
5FC	3Q	871	5.1	-7.5	15	+4	30	1	18.9	17.5	13	1.6	30	7	21.6	20.2	15	2.0	30	218	3.4	1.0	23	1.9	10	4	13.4	10.6	10	1.0	
1000								30	124	20.3	16.4	14	3.5	29	96	21.7	19.9	15	1.2						150	15.3	9.1	27	2.3		
950								30	566	18.3	14.4	16	6.4	30	537	20.2	15.8	16	7.1	30	557	4.1	-2.0	24	2.8	30	583	12.8	6.2	26	4.9
900	30	997	6.7	-4.0	30	+6.0	30	1,029	16.2	7.9	18	5.4	30	1,004	19.1	10.2	17	7.4	30	996	2.3	-3.4	25	4.7	30	1,036	10.0	3.0	27	4.8	
850	30	1,465	5.0	-3.2	30	+3.0	30	1,512	13.8	4.1	19	5.4	30	1,494	16.9	7.1	18	5.6	30	1,456	8.	-5.8	27	6.8	30	1,509	7.7	-4	27	7.2	
800	30	1,957	1.4	-5.2	30	+4.0	30	2,022	11.0	1.5	22	5.2	30	2,000	14.7	2.7	20	6.2	30	1,942	-1.1	-8.2	28	8.2	30	2,008	5.3	-3.7	27	8.6	
750	30	2,474	-2.3	-7.7	28	+5.3	30	2,559	8.4	-4.1	23	5.7	30	2,551	12.8	-3.7	21	6.2	30	2,455	-3.	-11.2	27	9.1	30	2,533	2.8	-7.3	27	10.6	
700	30	3,018	-6.1	-10.9	27	+6.0	30	3,124	5.0	-5.5	24	7.9	30	3,129	9.2	-0.3	23	6.4	30	2,998	-6.9	-14.6	28	10.6	30	3,089	2.1	-11.9	27	11.7	
650	30	3,595	-10.0	-15.8	27	+7.3	30	3,727	1.7	-10.9	25	10.2	30	3,738	-10.5	-23	5.3	30	3,576	-4.6	-18.6	28	11.4	30	3,680	-2.4	-16.6	27	11.3		
600	30	4,207	-13.9	-21.4	27	+8.4	30	4,368	-2.4	-15.1	25	11.8	30	4,385	-1.1	-14.1	27	7.3	30	4,193	-12.1	-22.5	28	12.7	30	4,111	-5.9	-20.6	28	15.2	
550	30	4,814	-18.0	-26.1	27	+9.5	30	5,052	-7.1	-19.5	26	12.4	30	5,076	-5.3	-17.4	26	10.4	30	4,854	-16.4	-27.4	28	13.5	30	4,949	-10.4	-21.7	28	17.5	
500	30	5,459	-22.8	-33.3	27	+10.2	30	5,701	-12.4	-25.4	26	13.4	30	5,730	-10.5	-21.3	26	12.2	30	5,545	-21.5	-32.0	28	14.0	30	5,649	-14.0	-29.5	28	19.3	
450	30	6,333	-26.0	-37.4	27	+10.4	30	6,594	-17.5	-29.4	26	14.3	30	6,619	-15.7	-21.9	15.1	10.1	30	6,419	-25.8	-35.9	28	17.2	30	6,505	-20.3	-33.2	28	20.6	
400	29	7,212	-33.0	-42.2	26	+12.1	30	7,460	-20.9	-33.0	19	15.0	30	7,484	-17.1	-21.1	16.2	12.2	30	7,161	-31.4	-41.7	27	19.4	30	7,264	-26.4	-30.6	28	22.7	
350	29	8,098	-40.6	-47.7	26	+12.8	29	9,418	-31.1	-41.2	26	20.8	28	8,446	-29.2	-42.5	22	14.4	28	8,115	-31.4	-41.7	27	21.7	30	8,321	-33.5	-43.4	28	25.6	
300	28	9,133	-37.8	-47.5	27	+16.2	28	9,480	-39.5	-47.5	26	24.6	28	9,493	-37.7	-44.5	21	25.1	30	9,157	-45.5	-53.5	26	21.3	30	9,162	-41.5	-48.0	28	29.5	
250	28	10,318	-55.0	-57.0	27	+17.5	28	10,712	-48.8	-50.8	26	29.7	28	10,777	-47.6	-52.6	27	28.1	30	10,351	-53.5	-63.5	27	27.6	30	10,599	-50.5	-63.5	28	32.7	
200	28	11,727	-59.0	-59.0	27	+17.7	28	12,144	-59.1	-59.1	26	35.0	28	12,215	-57.0	-57.0	27	34.1	30	11,768	-58.2	-58.2	27	26.8	30	12,023	-59.5	-59.5	28	34.7	
175	28	12,567	-58.0	-58.0	27	+16.9	28	12,975	-61.7	-61.7	26	35.7	28	13,052	-61.0	-61.0	27	36.2	30	12,607	-58.7	-58.7	27	27.8	30	12,854	-61.5	-61.5	28	36.8	
150	28	13,581	-57.0	-57.0	27	+15.3	27	13,927	-67.5	-67.5	26	33.3	27	14,007	-64.3	-64.3	27	35.6	30	13,570	-57.5	-57.5	26	20.7	30	14,088	-61.6	-61.6	28	32.2	
125	28	14,695	-57.4	-57.4	27	+13.4	27	15,047	-64.9	-64.9	26	29.9	27	15,109	-67.5	-67.5	26	32.7	30	14,711	-57.4	-57.4	26	19.4	30	14,933	-62.8	-62.8	27	29.3	
100	28	16,102	-58.1	-58.1	27	+12.3	27	16,396	-68.3	-68.3	26	23.4	27	16,479	-71.4	-71.4	27	21.2	30	16,118	-58.2	-58.2	27	18.7	29	16,107	-63.5	-63.5	28	24.5	
80	28	17,506	-58.9	-58.9	28	+10.7	27	17,730	-68.4	-68.4	27	16.0	28	17,759	-72.0	-72.0	26	14.4	30	17,543	-58.3	-58.3	27	15.0	29	17,478	-63.3	-63.3	28	24.7	
70	28	18,344	-58.5	-58.5	28	+10.5	27	18,532	-67.6	-67.6	27	11.1	28	18,594	-70.6	-70.6	26	9.0	30	18,784	-58.0	-58.0	27	13.2	29	18,500	-62.4	-62.4	28	22.7	
60	28	19,314	-58.3	-58.3	28	+9.0	27	19,457	-66.4	-66.4	28	7.0	28	19,495	-67.4	-67.4	26	3.6	30	19,358	-56.9	-56.9	28	10.8	29	19,459	-60.2	-60.2	28	20.2	
50	28	20,462	-58.3	-58.3	28	+8.5	27	20,596	-59.0	-59.0	28	3.1	28	20,593	-60.9	-60.9	24	.7	20	20,514	-56.2	-56.2	28	9.2	29	20,405	-57.5	-57.5	29	19.0	
40	28	21,640	-58.0	-58.0	28	+8.5	27	21,007	-55.1	-55.1	30	2.0	28	21,099	-56.7	-56.7	28	7.0	28	21,007	-54.2	-54.2	27	22.0	29	21,045	-55.0	-55.0	28	21.0	
30	28	22,667	-58.2	-58.2	28	+8.4	27	22,815	-56.0	-56.0	31	0.5	28	22,815	-57.5	-57.5	0.6	4.2	29	22,730	-56.7	-56.7	28	7.0	29	22,664	-56.4	-56.4	28	22.8	
25	28	25,805	-58.4	-58.4	28	+8.6	27	25,064	-67.5	-67.5	30	2.6	28	25,064	-70.3	-70.3	0.6	4.6	29	24,001	-50.1	-50.1	26	12.0	29	25,007	-56.4	-56.4	26	24.8	
20	27	26,293	-51.6	-51.6	27	+11.5	26	26,551	-44.4	-44.4	09	3.6	27	26,551	-56.5	-56.5	0.8	0.8	28	26,254	-47.9	-47.9	26	12.9	27	26,560	-45.8	-45.8	26	24.4	
15	26	28,179	-48.1	-48.1	27	+13.3	26	28,486	-41.4	-41.4	09	4.2	27	28,478	-41.7	-41.7	0.8	0.8	26	28,377	-45.8	-45.8	27	12.6	27	28,490	-42.9	-42.9	27	24.5	
10	21	30,916	-42.3	-42.3	27	+16.3	9	31,237	-34.7	-34.7	16	11.1	27	31,104	-36.1	-36.1	11	6.7	31	31,111	-40.5	-40.5	15	11,262	27	31,27	-37.7	-37.7	28	17.0	

BAWINSONDE DATA

Average monthly values

APRIL 1979

RAWINSONDE DATA

Average monthly values

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GLASGOW, MT 933 MB				GRAND JUNCTION*, CO 849 MB				GROFAT FALLS, MT 886 MB				GREEN BAY, WI 991 MB				GREENSBORO, NC 945 MB						
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	Dew Point °C	Direction tens of deg	Speed m.p.s.	Resultant Wind	Dew Point °C	Direction tens of deg	Speed m.p.s.	Resultant Wind	Dew Point °C	Direction tens of deg	Speed m.p.s.	Resultant Wind	Dew Point °C	Direction tens of deg	Speed m.p.s.			
5 F.C. 30	696	-1+0	-2+3	05	1.7	30	1,472	6+4	-2+2	13	1+2	30	1,118	+9	-4+7	24	1+4	30	210	1-7		
1000	2,440	-	-	-	-	-	-	5+1	-	-	-	30	1,451	-2+0	-	-	5	221	1-5	-2+2		
950	-	-	-	-	-	-	-	-	-	-	-	30	1,451	-2+0	-	-	10	551	2-1	-		
900	30	98.2	-7	-3+4	35	2+2	-	-	-	-	-	30	1,451	2+0	-5+3	26	4+6	30	1,442	-1+7		
850	36	1,440	-4	-6+1	32	3+6	20	1,492	6+0	-3+1	12	2+1	30	1,451	-9+8	-7+8	28	6+0	30	1,492	-1+7	
800	30	1,923	-2+6	-8+9	31	4+5	30	1,964	-5+4	18	2+8	30	1,978	-9+8	-7+8	28	6+0	30	1,924	-2+4		
750	30	2,492	-4+9	-12+4	29	6+8	30	2,490	3+2	-7+8	23	3+7	30	2+51	-4+2	-9+3	28	6+5	20	2,436	-4+7	
700	30	2,973	-8+0	-15+5	29	8+4	30	3,045	-1+3	-11+1	25	4+9	30	2,991	-7+7	-11+7	29	7+6	30	2,977	-6+9	
650	30	3,456	-11+1	-20+1	29	9+1	30	3,631	-5+9	-13+8	26	6+2	30	3,585	-11+0	-16+7	28	8+7	30	3,453	-10+1	
600	30	4,156	-15+1	-24+1	29	10+7	30	4,253	-10+3	-19+2	25	7+9	30	4,175	-15+2	-21+0	28	9+5	30	4,185	-13+8	
550	30	4,800	-19+3	-28+3	29	12+0	30	4,917	-14+6	-25+8	26	10+5	30	4,877	-19+4	-27+2	28	10+9	30	4,827	-17+9	
500	30	5,511	-24+0	-34+5	29	13+3	30	5,632	-19+7	-32+7	27	12+4	30	5,527	-24+1	-32+1	27	11+3	30	5,528	-22+7	
450	30	6,471	-29+5	-38+9	29	14+0	30	6,406	-25+0	-37+0	27	14+3	30	6,288	-29+4	-36+3	27	12+2	30	6,293	-28+1	
400	30	7,310	-35+8	-43+5	29	14+8	30	7,248	-31+7	-41+3	26	15+4	30	7,119	-35+7	-42+9	27	12+7	30	7,145	-34+5	
350	30	8,168	-41+6	-48+4	28	15+0	30	8,030	-39+0	-46+6	26	16+7	30	8,033	-41+0	-46+0	27	12+0	30	8,040	-40+5	
300	30	9,039	-46+2	-50+2	28	15+6	30	9,221	-41+6	-48+1	26	17+1	30	9,057	-50+1	-53+0	27	13+9	30	9,070	-49+4	
250	30	10,214	-55+7	-57+7	27	16+9	30	10,407	-50+6	-58+6	28	20+2	30	10,270	-54+1	-56+1	26	16+5	30	10,267	-53+1	
200	30	11,630	-63+6	-64+4	27	15+9	30	11,818	-58+4	-62+2	30	11,446	-67+3	27	15+5	30	11,690	-59+2				
175	30	12,480	-55+5	-55+5	28	15+0	30	12,658	-58+4	-62+0	27	20+5	30	12,497	-56+4	-57+0	27	15+0	30	12,539	-57+4	
150	30	13,464	-58+4	-58+4	28	13+7	30	13,628	-58+0	-62+7	27	19+3	30	13,468	-55+8	-58+0	28	12+8	30	13,511	-56+1	
125	29	14,623	-55+7	-57+7	28	11+2	30	14,777	-58+2	-62+7	27	17+9	30	14,678	-56+1	-58+1	28	11+1	30	14,669	-56+6	
100	28	16,037	-56+6	-56+6	28	11+0	29	16,178	-58+9	-62+7	27	15+0	30	16,042	-57+4	-57+4	28	9+0	29	16,077	-57+6	
80	28	17,450	-57+3	-57+3	28	10+1	29	17,573	-60+1	-62+1	27	13+1	30	17,515	-57+8	-58+0	28	9+0	29	17,493	-57+9	
70	28	18,295	-57+1	-57+1	28	9+1	28	18,419	-59+5	-62+0	27	10+2	30	18,293	-57+8	-58+0	28	8+9	29	18,326	-57+8	
60	27	19,283	-57+0	-57+0	28	8+8	27	19,378	-58+8	-62+8	28	8+7	30	19,246	-57+6	-57+6	28	8+8	29	19,299	-57+4	
50	27	20,436	-56+9	-56+9	29	7+9	27	20,524	-58+2	-62+7	27	7+1	30	20,417	-57+5	-57+5	28	7+7	28	20,463	-56+7	
40	26	21,055	-56+3	-56+3	29	7+6	26	21,939	-56+3	-62+7	27	7+2	30	21,827	-57+2	-57+2	27	7+0	28	21,880	-56+0	
30	26	23,688	-54+6	-54+6	29	7+0	23	23,776	-51+3	-62+7	27	8+3	30	23,450	-56+0	-56+0	28	8+1	27	23,717	-52+8	
25	26	24,860	-53+4	-53+4	28	7+3	22	24,960	-51+0	-62+7	27	10+3	30	24,815	-54+3	-54+3	28	7+1	26	24,896	-51+4	
20	26	26,304	-51+6	-51+6	27	7+9	20	26,424	-47+7	-62+7	27	12+6	30	26,252	-52+3	-52+3	28	9+0	26	26,452	-49+4	
15	24	28,187	-48+0	-48+0	27	10+4	19	28,336	-43+4	-62+7	26	16+3	27	28,149	-49+0	-50+0	27	10+1	22	28,244	-46+8	
10	16	30,698	-46+2	-46+2	28	12+0	13	31,062	-37+7	-62+7	27	13+4	30	30,877	-43+4	-43+4	27	13+4	12	30,934	-41+1	
7	5	33,366	-37+7	-	-	-	-	-	-	-	-	7	33+2	-8	-38+3	-	-	-	-	-	-	-

ISLE OF CAYMAN		JACKSON, MS 1005 MB										JOHN F. KENNEDY INT. AP NY 1016 MB										JOHNSTON 15** PACIFIC AREA 1015 MB										KHF WEST, FL 1016 MB											
1011	MR	10	26.0	22.5	10	4.9	29	100	13.8	13.1	10	.7	30	5	6.8	.9	34	.8	30	3	24.3	20.6	.7	6.7	30	3	24.2	20.0	12	4.2	1012	19.0	12	4.5	1013	23.6	16.1	13	6.3				
1000	30	109	25.5	22.4	10	5.6	25	144	15.7	11.7	10	1.0	30	141	6.9	.5	35	1.6	30	130	23.2	19.2	.7	6.9	30	140	20.0	16.1	13	6.3	1014	19.0	12	4.5	1015	23.6	16.1	13	6.3				
950	30	560	21.8	19.4	10	7.3	29	570	15.7	8.1	16	2.2	30	562	5.6	-.4	32	1.0	30	574	19.5	17.5	.7	7.6	30	587	20.0	16.1	13	6.3	1016	19.0	12	4.5	1017	23.6	16.1	13	6.3				
900	30	1,029	19.2	15.0	11	7.0	29	1,028	13.7	5.2	20	3.6	30	1,003	4.5	-.4	27	4.0	30	1,040	16.2	14.2	.7	6.8	30	1,052	17.0	12.3	14	4.8	1018	19.0	12	4.5	1019	23.6	16.1	13	6.3				
850	30	1,519	16.4	10.2	11	5.8	29	1,508	11.1	1.4	22	4.9	30	1,488	2.7	-.6	32	6.0	30	1,525	13.2	10.0	.0	4.9	30	1,533	14.4	7.8	16	3.0	1020	19.0	12	4.5	1021	23.6	16.1	13	6.3				
800	30	2,033	13.9	4.3	11	4.7	29	2,012	8.5	.0	70	5.8	30	1,957	.7	-.7	27	7.0	30	2,035	11.8	1.2	0.0	7.0	30	2,044	12.4	-.7	18	3.1	1022	19.0	12	4.5	1023	23.6	16.1	13	6.3				
750	30	2,575	11.5	-.6	12	4.1	29	7,543	5.7	-.4	29	7.6	30	2,473	-.6	1.6	10	27	8.0	30	2,574	10.5	4.6	9.7	1.3	30	2,588	11.0	7.5	19	3.6	1024	19.0	12	4.5	1025	23.6	16.1	13	6.3			
700	30	3,150	9.3	-.7	7.9	1.4	27	2,79	3.104	2+	9.7	2.0	93	3	3,020	-.4	-.7	15.0	2.8	9.7	30	3,144	8.7	13.0	9.1	4.5	30	3,160	7.0	12.4	13	3.2	1026	19.0	12	4.5	1027	23.6	16.1	13	6.3		
650	30	3,761	6.4	-.1	11.5	1.4	20	2,9	7,701	-.3	13.1	2.6	104	3.9	3,062	-.7	1.1	16.1	2.7	11.0	30	3,755	5.6	15.6	4.6	2.9	30	3,768	4.3	11.3	12	3.5	1028	19.0	12	4.5	1029	23.6	16.1	13	6.3		
600	30	4,413	3.1	-16.1	1.5	1.1	29	4,377	-.4	16.1	0	2.6	12.8	10	4,222	-.10.5	-.7	20.0	27	12.7	30	4,020	2.1	17.2	7.9	2.0	30	4,113	4.2	16.6	26	2.6	1030	19.0	12	4.5	1031	23.6	16.1	13	6.3		
550	30	5,133	1.2	-1	19.2	1.9	28	5,018	8.5	22.1	2.6	13.8	3.0	4,881	14.6	2.0	21.0	2.7	14.0	30	5,167	2.4	22.6	2.9	3.6	30	5,105	3.9	21.5	26	7.2	1032	19.0	12	4.5	1033	23.6	16.1	13	6.3			
500	30	5,855	1.6	-6.0	24	24	1.7	29	5,844	1.4	1.4	27	2.8	26	5,745	1.0	5.0	5.0	2.7	1.0	30	5,850	1.2	22.6	2.9	4.5	30	5,861	4.6	25.0	27	8.8	1034	19.0	12	4.5	1035	23.6	16.1	13	6.3		
450	29	6,499	1.1	-5.5	27.5	24	3.4	29	6,545	1.4	18.4	3.2	24	18.2	29	6,775	24.5	3.5	16.0	2.0	10.0	30	6,788	20.8	19.6	29	10.7	30	6,559	13.9	29.7	26	10.4	1036	19.0	12	4.5	1037	23.6	16.1	13	6.3	
400	29	7,179	1.8	-5.5	32.0	24	5.6	29	7,180	2.5	19.4	3.8	26	19.2	30	7,275	20.8	4.0	18.8	2.0	10.0	30	7,272	16.0	19.6	29	10.7	30	7,563	20.2	30.4	27	17.7	1038	19.0	12	4.5	1039	23.6	16.1	13	6.3	
350	29	8,561	2.9	-2.9	37.8	25	8.4	29	8,367	3.2	13.3	4.0	26	21.0	30	8,162	37.6	4.0	43.2	2.6	20.0	30	8,532	29.0	32.0	41.1	29	15.3	29	8,524	27.5	40.8	27	15.7	1040	19.0	12	4.5	1041	23.6	16.1	13	6.3
300	29	9,661	3.3	-1.1	45.0	25	1.8	29	9,432	4.9	19.4	4.6	26	24.0	30	9,296	45.1	5.1	28	24.0	9.6	30	9,677	34.0	47.0	47.5	28	21.1	29	9,412	35.8	47.8	27	17.6	1042	19.0	12	4.5	1043	23.6	16.1	13	6.3
250	29	10,917	4.7	-2.7	25	17.3	29	10,647	5.2	2.6	29	7.0	20	10,492	52.4	5.1	28	28.2	29	10,478	43.5	5.1	27	26.5	29	10,453	45.7	52.4	27	21.1	1044	19.0	12	4.5	1045	23.6	16.1	13	6.3				
200	29	12,386	5.4	-5.0	24	18.4	29	12,072	59.8	26	36.7	7.0	11,427	58.1	28	20.6	24	12,184	54.4	5.4	27	32.9	29	12,105	55.7	55.7	26	27.4	1046	19.0	12	4.5	1047	23.6	16.1	13	6.3						
175	29	13,231	-6.0	5.5	24	12,901	47.4	26	36.6	17.2	16.7	59.0	29	13,188	60.5	5.5	27	34.5	29	13,114	60.2	5.5	26	34.5	29	13,146	60.2	5.5	26	29.5	1048	19.0	12	4.5	1049	23.6	16.1	13	6.3				
150	29	14,175	6.7	-1.1	24	19.5	29	13,851	63.0	26	33.9	27	11,629	58.8	27	21.7	29	14,133	66.8	6.8	27	33.0	29	14,100	64.4	6.8	27	33.0	29	14,040	64.4	6.8	27	28.6	1050	19.0	12	4.5	1051	23.6	16.1	13	6.3
125	29	15,261	7.4	-7.4	26	15.5	29	14,973	63.7	26	31.1	27	14,777	58.4	27	21.0	29	15,219	72.6	7.6	28	26.9	29	15,203	68.4	7.6	27	25.7	1052	19.0	12	4.5	1053	23.6	16.1	13	6.3						
100	29	16,556	7.6	27	9.3	29	16,735	65.9	27	22.6	27	16,176	59.0	28	17.4	29	16,515	75.6	7.6	29	16,472	29	16,529	72.5	7.6	27	20.5	1054	19.0	12	4.5	1055	23.6	16.1	13	6.3							
80	29	17,842	7.7	0.0	21	1.9	28	17,687	66.1	26	17.2	25	17,560	59.1	28	13.7	29	17,400	76.4	7.6	29	8.6	29	17,437	73.3	7.6	28	13.3	1056	19.0	12	4.5	1057	23.6	16.1	13	6.3						
70	29	18,613	7.5	-2.5	28	1.1	27	18,500	65.3	27	12.8	26	18,118	58.2	28	12.5	29	18,560	73.1	7.6	28	5.9	29	18,421	71.9	7.6	28	7.6	1058	19.0	12	4.5	1059	23.6	16.1	13	6.3						
60	29	19,516	7.0	-9.9	05	1.1	27	19,493	63.1	28	9.6	21	19,391	57.6	28	10.4	29	19,497	67.2	7.6	27	2.1	29	19,534	68.1	7.6	28	3.6	1060	19.0	12	4.5	1061	23.6	16.1	13	6.3						
50	29	20,619	6.9	-6.9	08	2.4	26	20,576	66.0	27	5.9	20	20,543	56.1	28	7.0	29	20,617	62.4	7.6	27	1.0	29	20,652	60.8	7.6	28	1.0	1062	19.0	12	4.5	1063	23.6	16.1	13	6.3						
40	29	22,020	55.4	-54.4	08	4.6	26	21,982	55.9	27	5.4	21	21,970	53.4	27	7.0	29	22,027	58.7	09	09	5.6	29	22,057	55.7	09	07	2.6	1064	19.0	12	4.5	1065	23.6	16.1	13	6.3						
30	29	23,878	-5.6	06	08	8.9	26	23,830	51.9	27	3.5	20	23,836	50.3	26	8.7	27	23,829	53.9	09	09	9.7	29	23,908	50.2	09	07	0.7	1066	19.0	12	4.5	1067	23.6	16.1	13	6.3						
25	29	25,071	-6.6	08	09	11.4	26	25,024	49.2	26	3.0	27	25,044	48.4	25	9.3	26	25,009	51.4	09	09	13.4	26	25,101	47.9	09	09	4.7	1068	19.0	12	4.5	1069	23.6	16.1	13	6.3						
20	24	26,593	-5.4	09	09	14.1	23	26,498	46.0	26	4.4	20	26,416	46.3	25	10.6	26	26,470	48.3	09	09	16.7	21	26,589	48.5	09	10	5.3	1070	19.0	12	4.5	1071	23.6	16.1	13	6.3						
15	21	28,477	-0.8	09	09	17.7	22	28,435	42.5	27	5.2	19	28,477	45.2	27	12.9	23	28,388	43.9	09	09	20.1	20	28,567	41.2	09	10	5.3	1072	19.0	12	4.5	1073	23.6	16.1	13	6.3						
10	1u	31,244	-37.5	09	17	31,191	39.9	27	8.2	10	31	31	28.1	40.3	27	6	33,570	-36.4	09	09	20.5	7	31,287	-37.0	09	10	6.3	1074	19.0	12	4.5	1075	23.6	16.1	13	6.3							

RAWINSONDE DATA

Average monthly values

APRIL 1979

KING SALMON, AK 1013 MB												KOPOR, CAROLINE IS. 1006 MB												KOTZFREU, AK 1015 MB												LAKE CHARLES, LA 1013 MB												LANDER, WY 826 MB											
Standard pressure surface mb.	No. of observations	Dynamic height meters			Temperature °C			Dew Point °C			Resultant Wind Speed m.p.s.			No. of observations	Dynamic height meters			Temperature °C			Dew Point °C			No. of observations	Dynamic height meters			Temperature °C			Dew Point °C			No. of observations	Dynamic height meters			Temperature °C			Dew Point °C			No. of observations	Dynamic height meters			Temperature °C			Dew Point °C			Resultant Wind Speed m.p.s.					
		Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.		Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.													
5FC 15 15 1.4 -2.2 16 3.0 30 28.0 24.4 97 2.6 24 5 -9.3 -12.1 10 4.4 30 5 16.9 15.6 10 1.2 3n 1.697 1.2 1.2	1000 15 116 2.0 -2.2 17 4.2 29 27.2 24.7 97 3.4 1.9 1.68 -7.3 -13.2 9 5.1 30 117 17.9 13.9 12 2.2	950 15 530 2.4 -4.6 18 7.2 30 23.7 22.0 97 4.8 2.4 5.19 -7.0 -12.8 8 7.1 30 54.6 17.2 9.1 15 4.2	900 15 961 -15.5 2.1 8.6 30 1.013 19.0 17.6 97 4.8 2.4 9.40 -8.4 -15.1 5 6.2 30 1.017 15.4 6.7 18 4.5	850 15 1,413 -5.2 -9.0 20 8.6 30 1.507 18.2 13.6 97 3.6 2.4 1.582 -10.0 -17.0 16 5.7 30 1.500 13.1 3.5 21 4.4	870 15 1,888 -6.7 -15.5 21 8.7 30 2.026 16.3 6.8 98 3.2 2.4 1.582 -11.8 -19.3 14 5.2 30 2.004 10.3 4.9 23 2.2	750 15 2,390 -9.6 -21.0 21 9.8 30 2.474 13.9 2.9 98 3.1 2.4 2.34 14.1 21 5.1 30 2.53 7.9 -5.6 23 6.9	700 15 2,921 -11.4 -22.3 21 11.0 30 3.153 11.0 2.7 98 2.6 2.4 2.4 16.5 21 5.1 30 3.109 4.6 -9.6 24 2.6	650 15 3,486 -16.4 -24.0 21 11.8 30 3.768 7.6 -4.6 98 2.9 2.4 3.1 1.19 -19.5 26.6 9 5.1 30 3.175 1.1 -1.1 23 1.1	670 15 4,088 -18.0 -27.3 20 13.0 30 4.424 4.1 -9.2 98 3.1 2.4 3.1 2.14 -22.4 20.6 6 5.1 30 4.148 -2.8 -2.8 24 2.6	550 14 4,731 -2.2 -31.4 20 14.3 30 5.127 2.9 -13.4 98 3.4 2.4 3.4 2.42 -24.0 33.7 12 5.1 30 5.012 -12.9 -22.4 27 1.7	520 14 5,371 -2.2 -31.4 20 14.3 30 5.127 2.9 -13.4 98 3.4 2.4 3.4 2.42 -24.0 33.7 12 5.1 30 5.012 -12.9 -22.4 27 1.7	450 14 6,180 -3.4 -41.6 21 14.5 30 5.709 -6.3 -24.7 98 4.4 2.4 6.064 -75.7 -40.0 23 9.3 30 6.561 -18.4 -14.4 26 1.2	400 14 7,003 -3.7 -45.4 21 13.0 30 7.614 -17.6 -30.3 98 4.2 2.4 6.074 -67.1 -41.3 23 11.6 30 7.429 -24.9 -38.6 26 1.2	350 14 7,915 -4.4 -41.1 22 11.0 30 8.619 -20.0 -36.2 98 3.6 2.4 6.771 -77.1 -47.3 24 11.4 30 8.389 -31.1 45.1 21 1.7	300 14 8,931 -5.0 -50.8 30 9.738 -29.1 -43.1 10 4.0 2.4 8.775 -53.0 24 24 14.7 30 9.457 -40.2 50.5 26 1.1	250 14 10,107 -5.4 5.5 30 11.014 -39.3 -51.2 10 4.0 2.4 9.946 -54.0 24 24 14.7 30 10.674 -49.6 50.5 26 1.1	220 14 11,539 -5.4 5.4 30 12,503 -51.0 12 6.4 23 11.393 50.4 24 23 11.5 30 12.106 -58.6 50.5 26 1.1	175 14 12,403 -5.1 7.7 30 13,357 -5.8 12 5.7 23 12.267 -49.5 24 23 10.5 30 12.939 -61.1 50.5 26 1.1	150 14 13,403 -5.1 7.3 30 14,311 -6.8 12 5.5 23 12.275 -49.9 24 23 8.9 30 13,892 -62.7 50.5 26 1.1	125 14 14,587 -5.1 6.6 30 15,398 -7.5 12 5.5 23 15.224 14.464 -50.9 25 20.0 30 15,015 -4.7 4.7 26 29.8 30 14,499 -57.5 27 1.1	100 14 16,029 -5.3 1.1 26 7.3 30 16,680 -7.9 6.6 08 4.2 2.1 15.917 -51.8 25 5.6 26 16,367 -6.7 9 26 22.2 30 16,103 -58.7 27 1.0	80 14 17,461 -5.4 3.3 26 5.2 30 17,934 -7.9 4.0 08 3.9 2.0 17.356 -6.2 25 4.8 26 17,700 -6.8 6 26 18.0 30 17,504 -59.0 27 1.0	70 14 18,318 -5.4 2.2 25 4.0 30 18,705 -7.5 3.5 28 1.2 2.0 18.218 -5.3 27 4.0 26 18.513 -6.6 8 27 11.5 30 18,493 -58.8 28 1.0	60 14 19,301 -5.4 8.8 25 3.3 30 19,616 -6.8 7.7 27 4.8 2.0 19.211 -5.3 28 4.2 26 19.447 -6.9 9 27 8.1 30 19,310 -58.9 28 0.9	50 12 20,460 -5.5 2.2 25 2.9 30 20,721 -6.4 7.7 27 4.4 2.0 20.408 -5.3 28 4.2 26 20.572 -6.0 10 27 4.4 26 20,455 -58.5 28 0.8	40 12 21,883 -5.5 7.7 25 2.9 30 21,091 -5.9 4.4 27 4.5 2.0 21,889 -5.1 28 4.5 27 21,974 -5.3 11 27 2.1 26 21,867 -5.0 10 27 1.1	30 12 23,711 -5.6 3.3 25 2.9 30 23,922 -5.4 9.9 27 4.5 2.0 23,644 -5.6 35 7.4 25 23,824 -51.6 11 27 1.7 26 23,694 -50.1 12 2.1	25 9 24,866 -5.6 4.0 25 2.9 30 25,098 -5.1 1.1 27 4.9 2.0 25,211 -5.1 35 7.4 25 25,491 -51.1 12 2.1 2.9 26 25,466 -51.5 12 2.1	20 9 26,286 -5.5 8.8 25 2.9 30 26,552 -4.2 2.9 27 4.9 2.0 26,726 -5.6 32 0.1 26 26,491 -46.1 11 2.1 2.9 26 26,319 -50.6 12 2.1	15 8 28,113 -5.4 7.7 25 2.9 30 28,467 -4.5 5.9 27 3.1 2.0 28,074 -5.5 34 0.4 26 28,421 -42.4 12 2.1 2.9 26 28,292 -46.6 12 2.1	10 22 31,197 -5.3 3.9 25 2.9 30 31,284 -3.7 0.9 27 3.1 2.0 31,186 -3.9 34 1.1 26 31,184 -39.6 12 2.1 2.9 30 30,911 -40.4 12 2.1	7 6 33,648 -3.7 0.9 27 3.1 2.0 33,770 -32.9 7 33,770 -32.9 34 1.1 26 31,184 -39.6 12 2.1 2.9 30 30,911 -40.4 12 2.1																											

LIHUE KAUAI, HI 1012 MB												LITTLE ROCK, AR 995 MB												LONGVIEW, TX 1000 MB												MCGREGOR, AK 1002 MB												MAJURO, MARSHALL IS. 1011 MR															
SFC	30	Dynamic height meters			Temperature °C			Dew Point °C			Resultant Wind Speed m.p.s.			No. of observations	Dynamic height meters			Temperature °C			Dew Point °C			No. of observations	Dynamic height meters			Temperature °C			Dew Point °C			No. of observations	Dynamic height meters			Temperature °C			Dew Point °C			No. of observations	Dynamic height meters			Temperature °C			Dew Point °C			No. of observations	Dynamic height meters			Temperature °C			Dew Point °C		
		Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.		Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.																	
5FC 30 36 20.1 -3.6 27 1.0 30 79 12.1 8.6 05 .5 30 21.1 10 1.6 29 874 11.0 4.8 17 1.6 30 101 1.7 4.4 1.7 3n 2.7 24.4 0.7 5.6	1000 30 141 20.7 -16.5 05 2.2 7 18 11.5 8.0 17 1.5 30 14.9 12.0 2.2 30 5.60 14.9 7.6 16 2.0 30 170 1.7 2.0 1.7 3n 1.697 2.3 23.3 0.7 4.5	950 30 584 17.5 -14.7 05 3.0 30 5.61 12.9 5.4 19 2.2 30 1.500 14.9 12.0 2.2 30 5.72 2.2 2.2 1.7 3n 0.552 2.3 21.4 0.8 4.8	900 30 1,044 20.2 -11.7 08 1.9 30 1.014 11.5 2.7 22 4.0 30 1.016 13.0 4.7 20 3.9 30 9.55 14.0 4.7 2.2 3n 0.552 2.3 18.5 0.8 4.0	850 30 1,525 11.1 -8.1 22 1.2 30 1.491 9.0 5.4 19 2.2 30 4.8 1.495 11.1 2.2 30 1.517 11.0 2.2 2.2 3n 0.552 2.3 15.7 0.9 4.2	800 30 2,029 8.4 -2.1 23 1.3 30 1.991 6.5 -5.5 20 4.5 30 6.5 20.0 2.2 30 2.511 18.8 4.1 2.2 3n 0.552 2.3 12.7 0.9 4.2	750 30 2,552 7.6 -10.2 25 1.4 30 2.004 2.6 3.1 20 4.8 30 2.004 22.6 4.1 2.2 3n 0.552 2.3 10.9 0.9 4.2	700 30 3,072 6.0 -14.0 27 1.5 30 3.005 2.7 -8.1 20 4.8 30 3.005 24.0 4.1 2.2 3n 0.552 2.3 9.1 0.9 4.2	650 30 3,512 3.4 -1.2 27 1.6 30 3.067 -2.6 -1.1 20 4.8 30 3.068 18.9 4.1 2.2 3n 0.552 2.3 8.1 0.9 4.2	600 30 4,077 3.1 -20.1 27 1.7 30 4.067 -8.1 -1.1 20 4.8 30 4.068 18.9 4.1 2.2 3n 0.552 2.3 7.1 0.9 4.2	550 30 4,594 -5.4 5.5 27 1.7 30 4.594 -1.1 -1.1 20 4.8 30 4.595 18.9 4.1 2.2 3n 0.552 2.3 6.1 0.9 4.2	500 30 5,120 -5.4 5.5 27 1.7 30 5.120 -1.1 -1.1 20 4.8 30 5.121 18.9 4.1 2.2 3n 0.552 2.3 5.1 0.9 4.2	450 30 5,647 -5.4 5.5 27 1.7 30 5.647 -1.1 -1.1 20 4.8 30 5.650 18.9 4.1 2.2 3n 0.552 2.3 4.1 0.9 4.2	400 30 6,195 -3.4 -9.8 26 4.5 30 5.279 17.4 -2.6 18 1.6 29 5.272 7.8 -8.2 26 5.7 30 5.257 12.6 -1.2 2.2 3n 0.552 2.3 3.1 0.9 4.2	350 30 6,730 -3.4 -9.8 26 4.5 30 5.709 -6.3 -2.6 18 1.6 29 5.704 -2.6 -2.6 20 4.7 30 5.684 -1.2 2.2 3n 0.552 2.3 2.1 0.9 4.2	300 30 7,265 -3.4 -9.8 26 4.5 30 6.240 -2.6 -2.6 18 1.6 29 6.235 -2.6 -2.6 20 4.7 30 6.225 -1.2 2.2 3n 0.552 2.3 1.1 0.9 4.2	250 30 7,800 -3.4 -9.8 26 4.5 30 7.240 -2.6 -2.6 18 1.6 29 7.235 -2.6 -2.6 20 4.7 30 7.215 -1.2 2.2 3n 0.552 2.3 1.1 0.9 4.2	200 30 8,335 -3.4 -9.8 26 4.5 30 7.740 -2.6 -2.6 18 1.6 29 7.735 -2.6 -2.6 20 4.7 30 7.715 -1.2 2.2 3n 0.552 2.3 1.1 0.9 4.2	150 30 8,870 -3.4 -9.8 26 4.5 30 8.240 -2.6 -2.6 18 1.6 29 8.230 -2.6 -2.6 20 4.7 30 8.210 -1.2 2.2 3n 0.552 2.3 1.1 0.9 4.2	100 30 9,414 -3.4 -9.8 26 4.5 30 8.740 -2.6 -2.6 18 1.6 29 8.725 -2.6 -2.6 20 4.7 30 8.700 -1.2 2.2 3n 0.552 2.3 1.1 0.9 4.2	50 30 9,948 -4.8 2.2 26 4.5 30 9.240 -2.6 -2.6 18 1.6 29 9.225 -2.6 -2.6 20 4.7 30 9.200 -1.2 2.2 3n 0.552 2.3 1.1 0.9 4.2	50 30 10,482 -4.8 2.2 26 4.5 30 9.740 -2.6 -2.6 18 1.6 29 9.725 -2.6 -2.6 20 4.7 30 9.700 -1.2 2.2 3n 0.552 2.3 1.1 0.9 4.																																										

RAWINSONDE DATA

Average monthly values

APRIL 1979

NASHVILLE, TN 906 MB				HOMEWOOD 1011 MB				NORTH PLATTE, NE 915 MB				DAPLAR, CA 1017 MB				OMAHA, NE 947 MB							
Standard pressure surface m.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind Dew Point °C	Direction tens of deg	Speed m.p.s	No. of observations	Resultant Wind Dew Point °C	Direction tens of deg	Speed m.p.s	No. of observations	Resultant Wind Dew Point °C	Direction tens of deg	Speed m.p.s	No. of observations	Resultant Wind Dew Point °C	Direction tens of deg	Speed m.p.s	No. of observations	Resultant Wind Dew Point °C	Direction tens of deg	Speed m.p.s	
5FC 3C	180	10.3	7.7	2.9	*2	2.9	5	14.7	-5.6	1.9	30	2.8	9.9	1.7	18	10.3	7.9	7.4	2.7	1.9	1.1	.9	
1000 6	201	9.2	2.8	1.5	29	5.9	5	14.3	-5.3	5.7	11	2.9	3.4	5.7	30	2.7	2.8	10	1.6	9.8	4.5	2.6	
950 30	574	10.4	1.8	1.6	29	5.9	5	14.3	-5.3	5.7	11	2.9	3.4	5.7	30	2.4	2.8	10	1.7	5.2	3.7	3.3	
900 30	1,023	8.8	1.9	2.3	3.6	2.9	5	16.4	-12.6	1.6	6	2.8	9.6	1.7	18	12.3	7.8	7.4	2.7	1.9	1.1	.9	
850 30	1,459	7.0	-1.1	2.6	5.2	2.9	5	17.6	-8.1	1.5	18	6.4	3.0	1.4	1	1.8	3.0	1.4	1	1.6	1.0	1.1	
800 30	1,992	4.5	-2.8	2.7	7.5	2.9	5	18.0	-10.2	-17.9	18	5.8	3.0	1.9	4.5	5.3	3.0	1.9	4.5	6.1	1.1	1.0	
750 30	2,515	1.6	-6.8	2.8	8.6	2.9	5	2.326	-12.6	-21.4	18	6.3	3.0	2.4	4.7	1.0	3.0	9.4	2.9	6.0	2.5	1.1	1.4
700 30	3,049	-1.0	-9.6	2.9	10.6	2.9	5	2,650	-15.3	-25.8	18	6.9	3.0	3.0	11.8	-12.0	2.9	6.7	3.0	3,058	-21.1	-15.7	
650 30	3,657	-3.9	-14.1	2.7	17.2	0.9	5	3,407	-18.1	-27.6	19	7.8	3.0	3.6	6.2	-6.7	1.5	2.8	7.7	3.0	3,483	-21.1	
600 30	4,285	-7.4	-17.6	2.7	13.5	2.9	5	4,001	-21.6	-30.0	19	8.6	3.0	4.2	22.2	-11.0	-19.9	28	9.4	3.0	4,268	-24.9	
550 30	4,958	-11.5	-23.0	2.6	15.5	2.9	5	4,637	-25.4	-34.7	20	9.5	3.0	4,488	-15.1	-25.0	28	10.7	3.0	4,938	-13.6		
500 30	5,682	-16.2	-28.7	2.6	17.5	2.9	5	5,323	-29.8	-37.7	20	10.3	30	5,595	-20.7	-32.3	28	11.7	30	5,657	-18.6		
450 30	6,468	-21.3	-33.4	2.4	20.2	2.9	6,066	-34.6	-41.7	21	11.9	30	6,370	-25.6	-36.0	28	12.4	30	6,494	-23.8			
400 30	7,326	-27.6	-36.4	2.6	21.7	2.9	6,880	-40.2	-45.5	21	13.9	30	7,212	-32.0	-42.1	28	14.3	30	7,922	-30.0			
350 29	8,185	-3.6	-4.3	4.3	24.5	2.9	7,782	-46.1	-51.4	21	14.5	30	8,143	-39.6	-47.9	27	16.2	30	8,770	-37.0			
300 29	9,331	-2.8	-4.6	4.6	27.4	2.9	8,058	-51.4	-56.7	22	15.6	30	9,216	-43.6	-52.5	27	17.2	29	9,845	-45.2			
250 29	10,536	-2.8	-4.6	4.6	27.4	2.9	8,556	-51.4	-56.7	22	15.6	30	10,267	-43.6	-52.5	27	17.2	29	10,845	-45.2			
200 29	11,951	-6.0	-6.6	24	35.9	28	11,403	-50.3	-52.7	27	13.3	30	11,774	-59.0	-60.3	27	18.7	27	11,444	-60.3			
175 29	12,777	-6.2	-6.9	24	36.2	27	12,770	-49.7	-52.7	22	10.1	30	12,111	-58.7	-59.7	27	18.7	27	12,499	-60.4			
150 29	13,727	-6.1	-6.6	26	32.0	25	13,285	-50.1	-52.7	23	8.1	30	13,585	-57.1	-57.4	27	18.1	27	13,647	-58.9			
125 29	14,860	-6.1	-6.7	27	26.2	24	14,972	-50.6	-52.7	22	8.3	30	14,733	-57.9	-59.7	27	15.7	27	14,806	-59.3			
100 29	16,238	-6.3	-6.2	24	20.9	24	15,924	-51.6	-52.7	22	6.5	30	16,140	-58.8	-59.7	27	14.1	27	16,198	-60.8			
80 29	17,611	-6.2	-6.7	27	16.1	23	17,162	-52.7	-52.7	22	4.6	30	17,559	-59.5	-59.5	27	12.4	27	17,588	-60.4			
70 29	18,437	-6.1	-6.6	27	11.7	23	18,224	-52.8	-52.8	21	3.7	30	18,376	-58.7	-58.7	27	11.1	27	18,419	-60.2			
60 29	19,394	-6.1	-6.0	27	8.6	22	19,214	-53.7	-53.7	21	2.8	30	19,192	-58.6	-58.6	27	10.7	27	19,032	-59.4			
50 29	20,534	-5.8	-5.1	28	6.9	22	20,384	-54.4	-54.4	21	2.3	29	20,400	-57.7	-57.7	27	9.7	29	20,529	-59.0			
40 28	21,950	-5.5	-5.6	28	5.6	22	21,811	-56.0	-56.0	18	1.9	29	21,987	-56.6	-56.6	27	9.2	29	21,938	-57.5			
30 27	23,806	-5.1	-5.0	27	7.1	21	23,651	-55.3	-55.3	14	1.9	29	23,779	-53.6	-53.6	27	10.1	25	21,767	-54.5			
25 27	24,998	-4.8	-8.8	27	5.6	21	24,814	-55.7	-55.7	10	2.0	29	24,917	-51.5	-51.5	27	10.3	25	24,934	-52.9			
20 25	26,469	-4.6	-1.1	27	7.8	20	24,738	-56.0	-56.0	08	2.7	29	26,375	-48.7	-48.7	27	13.4	29	26,378	-49.6			
15 22	28,392	-4.3	-3.3	26	11.8	17	28,781	-55.1	-55.1	06	3.1	29	28,223	-44.7	-44.7	26	15.9	29	28,247	-46.0			
10 14	31,155	-3.6	-8.0	27	17.0	-	-	-	-	-	22	31,075	-3.6	-40.0	26	17.1	29	31,015	-39.8				

PACO PAGO, AMERICAN SAMOA				PEORIA, IL				PTTTSRUPGH, PA				PONAPÉ, CAROLINE IS.				PORTLAND, ME															
*	1011 MB			*	993 MB			*	974 MB			*	1005 MB			*	1014 MB														
SFC	30	5	29.3	24.1	13	1.9	30	200	5.6	2.8	10	.5	30	349	6.0	1.2	23	.4	30	39	27.4	24.3	0.7	3.3	30	20	3.0	-.9	32	1.2	
1000	30	99	27.4	22.9	13	1.8	8	215	4.5	-1.0			30	567	6.0	.2	25	1.3	30	84	26.4	23.6	0.7	3.9	28	142	4.1	-.3	34	1.8	
950	30	552	23.6	20.9	11	1.2	30	561	6.0	1.0	22	1.6	30	1,079	4.8	-1.2	26	4.4	30	537	23.0	21.5	0.5	8.5	30	547	3.2	-.7	24	2.7	
900	30	1,074	26.0	17.3	06	.6	30	1,003	4.5	-2.4	26	3.8	30	1,009	4.8	-1.2	26	4.4	30	1,008	20.2	18.5	0.8	9.3	30	985	1.5	-.4	31	2.9	
850	30	1,517	17.8	13.2	36	1.0	30	1,468	3.5	-4.9	27	5.8	30	1,473	2.4	-4.7	27	6.4	30	1,501	17.7	15.0	0.8	9.1	30	1,444	-.1	-.7	10	1.0	
800	30	7,035	15.3	9.9	34	1.9	30	1,059	2.0	-7	27	7.2	30	1,062	.6	-7	27	8.0	30	2,020	16.0	11.2	0.9	6.7	30	1,928	-.1	-.5	10	3.0	
750	30	7,580	12.8	4.3	32	2.7	30	2,478	-.7	-10	4.6	26	8.6	30	2,478	-1.9	-10.1	27	9.7	30	2,567	13.4	7.1	2.0	5.6	30	2,440	-.0	13.6	29	6.1
700	30	3,157	9.8	.0	32	3.1	30	3,026	-3.6	-1.4	28	10.8	30	3,075	-4.5	-11.4	27	10.7	30	3,145	10.1	4.1	10	5.6	30	2,982	-.6	16.6	29	7.7	
650	30	3,770	6.5	-4.1	37	3.1	30	3,608	-6.9	-18.6	27	12.2	30	3,606	-7.6	-16.1	27	12.2	30	3,760	7.1	-1.0	10	5.7	30	3,554	-.5	19.7	29	9.6	
600	30	4,423	2.7	-6.9	37	3.1	30	4,278	-10.9	-22.8	27	13.7	30	4,276	-11.5	-19.9	28	14.0	30	4,414	3.4	-6.6	10	4.9	30	4,173	-.2	17.7	28	11.2	
550	30	5,123	-.9	-17.0	30	2.7	30	4,891	-15.1	-27.7	27	15.5	30	4,892	-14.2	-25.0	27	15.5	30	5,117	-.2	-7	9.1	3.8	30	4,831	-16.6	27.7	29	13.0	
500	30	5,877	-5.5	-16.3	30	2.4	30	5,605	-19.9	-31.2	27	17.6	30	5,609	-18.8	-31.2	27	17.1	30	5,875	-.3	-11.1	2.2	4.0	30	5,541	-.1	21.3	32.5	14.7	
450	30	6,697	-10.3	-21.4	29	2.4	30	6,379	-25.3	-37.6	27	19.3	30	6,386	-24.6	-36.0	27	19.4	30	6,499	-.8	-7	19.6	1.3	30	6,310	-24.8	-36.0	28	15.7	
400	30	7,595	-16.0	-28.5	28	3.5	30	7,722	-31.8	-42.1	27	19.6	30	7,725	-30.2	-40.4	27	20.0	30	7,603	1.4	-25.3	1.1	3.6	30	7,149	-.2	41.9	29	18.6	
350	30	8,591	-22.6	-34.5	29	3.6	30	8,155	-38.9	-44.8	26	21.9	30	8,175	-37.7	-44.2	27	23.4	30	8,607	20.8	-32.2	0.9	1.3	30	8,079	-.0	45.1	29	21.2	
300	30	9,703	-31.1	-42.8	26	5.3	30	9,198	-46.2		26	24.1	30	9,270	-44.9		27	26.1	30	9,722	-29.0	-40.4	1.1	1.2	30	9,115	-46.6		22.0	2.0	
250	30	10,440	-40.5	-52.5	25	8.5	29	11,382	-52.9		26	27.2	30	10,441	-52.9		27	29.2	30	11,382	-52.9	-58.0	0.6	1.9	30	10,250	-29.5		21.0	2.0	
200	29	12,461	-53.5		25	10.2	29	12,382	-58.2		26	27.7	30	12,461	-58.2		27	33.1	30	12,382	-58.2	-61.9	1.0	19	30	11,720	-57.0		25.0	2.0	
175	29	12,467	-60.0		25	12.9	29	12,600	-62.6		26	27.8	30	12,649	-59.4		27	37.7	29	12,649	-59.4	-64.0	2.1	19	30	12,563	-57.5		28.0	2.7	
150	29	14,236	-66.0		26	8.4	29	13,611	-57.9		27	23.9	30	13,615	-58.9		27	25.7	29	14,291	-66.5	25.5	1.4	20	30	13,540	-54.7		28.4	16.3	
125	29	15,374	-72.4		27	7.4	26	14,762	-58.2		27	20.3	30	15,780	-58.0		27	22.1	29	15,775	-57.1	24.1	1.7	20	30	14,497	-57.7		28.7	14.9	
100	29	16,614	-74.4		29	2.5	28	16,164	-59.4		27	16.7	30	16,175	-59.8		27	19.7	29	16,453	-60.5	0.6	2.4	30	25,110	-57.0		28	11.3		
80	29	17,892	-76.2		06	2.2	27	17,558	-59.3		27	12.0	30	17,570	-59.8		28	14.9	29	17,917	-79.2	15	1.8	29	17,523	-56.7		27	10.9		
70	29	18,668	-73.3		07	3.6	27	18,396	-58.6		27	11.7	30	18,476	-59.0		28	17.3	29	16,670	-74.7	28	1.8	29	18,170	-56.3		28	8.4		
60	29	19,580	-69.1		09	5.2	27	19,366	-58.4		27	10.5	30	19,377	-57.6		28	11.2	29	19,584	-68.9	27	6.8	29	19,350	-54.6		28	7.4		
50	29	20,684	-63.8		09	7.3	27	20,515	-57.0		28	8.2	30	20,531	-56.5		28	8.7	29	20,693	-63.3	27	5.9	29	20,510	-54.5		26	6.7		
40	29	22,667	-59.5		09	10.3	27	21,931	-55.8		27	9.4	30	21,952	-54.7		27	7.6	29	22,077	-59.9	11	1.1	26	21,944	-52.9		27	6.2		
30	29	23,891	-54.0		09	14.6	27	23,780	-51.9		27	9.6	29	23,815	-51.7		27	7.8	29	21,900	-54.7	0.9	16.1	24	21,820	-50.5		25	7.2		
25	29	25,072	-50.1		09	18.3	25	24,959	-50.2		26	12.2	26	25,077	-49.1		26	8.6	29	25,073	-52.4	0.9	21.9	24	25,012	-49.3		26	9.2		
20	27	26,546	-46.3		09	23.2	23	26,426	-47.3		26	13.7	22	26,478	-47.5		27	11.1	28	26,533	-47.9	0.9	27.0	21	26,487	-48.4		26	10.5		
15	19	28,476	-42.4		09	27.4	19	28,328	-44.9		27	17.5	29	28,393	-44.7		27	12.8	25	28,457	-43.1	0.9	31.1	21	28,791	-46.0		27	14.4		
10	10	31,254	-36.6								27	8	31	11,172	-40.9		27	3.1	23	31,236	-36.7		11	11	31,094	-47.0					

WILLIAMS, WA 1010 MB										RAPID CITY, SD 902 MB										ST CLOUD, MN 079 MB										ST PAUL ISLAND, AK 1005 MB										SALEM, OR 096 MB									
SFC	10	58	5.6	4.4	11	+3	30	966	1.6	-2.7	35	1+2	30	316	+3	-2.3	06	+8	30	1.0	1.5	-7	18	2.9	70	174	7.7	5.1	11	+3																			
1000	29	140	5.6	4.4	08	+3													19	1.11	.45	-7	17	1.5	70	201	6.9	.8																					
950	30	557	4.7	2.7	2.5	14													30	5.68	1.45	-3	13	8.0	70	44.0	1.5	.16																					
900	30	997	2.7	-2.1	24	2.5	21	1	0.016	1.45	-2.8	35	1+1	30	992	-7	-5.0	21	1.4	70	8.89	-4.2	-6.4	19	7.3	30	1.000	6.9	-4.2	25	4.4																		
850	30	1457	-5.7	-5.4	27	3.1	30	1.450	3.6	-3.2	29	4.1		30	1.450	-1.0	-8.4	26	7.1	30	1.338	-6.4	-9.5	20	8.0	20	1.476	6.0	-2.8	26	5.8																		
800	30	1,940	-2.8	-7.4	29	3.5	30	1.941	1.6	-6.4	29	6.1		30	1.932	-2.7	-1.4	24	6.4	30	1.811	-8.5	-14.7	20	8.5	20	1.971	3.7	-4.0	27	7.9																		
750	30	2,449	-5.8	-10.7	26	4.1	30	2,459	.46	-11.6	29	8.0		30	2,442	-5.0	-13.3	27	6.7	30	2,310	-10.6	-17.5	20	8.5	20	2,493	.7	-5.8	27	9.3																		
700	30	2,987	-9.0	-15.4	27	4.8	30	3,000	-4.4	-14.4	29	9.1		30	2,982	-7.6	-16.2	27	6.9	30	2,887	-11.5	-20.9	20	9.0	20	3,044	-2.8	-9.9	27	10.5																		
650	30	3,558	-12.2	-21.7	27	5.7	30	3,586	-0.4	-18.7	29	10.0		30	3,556	-10.6	-19.7	27	8.2	30	3,349	-13.6	-16.4	20	10.5	20	3,628	-5.8	-15.4	27	11.2																		
600	30	4,165	-16.1	-20.2	26	6.8	30	4,207	-12.6	-21.4	29	10.5		30	4,167	-14.5	-21.8	28	9.5	30	4,099	-20.1	-28.5	20	11.7	20	4,252	-9.1	-20.5	27	13.7																		
550	30	4,816	-19.9	-30.4	27	7.8	30	4,861	-17.6	-26.2	29	11.2		30	4,821	-18.7	-28.7	27	10.7	30	4,636	-23.6	-32.3	20	12.7	20	4,920	-13.6	-26.8	27	14.5																		
500	30	5,517	-24.4	-35.4	26	10.0	30	5,549	-22.1	-31.9	29	12.5		30	5,525	-23.3	-34.6	27	11.8	30	5,327	-27.7	-37.1	20	13.1	20	5,634	-14.3	-33.4	27	16.4																		
450	30	6,276	-29.9	-39.6	28	10.6	30	6,333	-27.6	-34.6	28	14.6		30	6,288	-28.7	-37.9	27	12.5	30	6,076	-37.2	-41.4	20	14.3	20	6,418	-23.3	-36.1	27	19.4																		
400	30	7,105	-35.5	-43.4	28	12.9	30	7,172	-34.0	-41.5	27	15.9		30	7,171	-35.1	-40.9	27	13.2	30	6,809	-38.7	-47.4	20	16.0	20	7,284	-29.8	-49.2	27	21.9																		
350	30	8,023	-42.4	-46.9	29	13.6	30	8,092	-41.2	-47.7	27	17.3		30	8,091	-42.1	-46.5	27	15.7	30	7,811	-41.6	-49.5	20	17.1	20	8,210	-36.7	-46.5	26	23.4																		
300	30	9,066	-49.6	79	14.3	30	9,122	-49.2	-27	19.2	27	19.2		30	9,096	-49.0	-27	18.7	27	18.7	30	8,831	-49.5	-51.5	20	17.6	20	9,455	-42.9	-52.0	25	24.5																	
250	30	10,224	-54.9	79	13.2	30	10,299	-54.9	-27	19.7	27	19.7		30	10,299	-53.9	-27	21.1	30	17,074	-54.4	-56.4	20	18.0	20	10,455	-50.4	-52.0	25	25.9																			
200	30	11,640	-59.6	28	8.9	30	11,707	-58.6	-27	19.4	27	19.4		30	11,707	-57.7	-27	19.2	27	19.2	30	11,466	-60.4	-62.4	20	11.8	20	11,870	-53.4	-55.4	25	21.0																	
175	30	12,891	-60.5	28	8.5	30	12,958	-59.7	-27	14.1	27	12,520	5.4		26	12,446	-29	12,733	-60.1	27	12.0	30	12,704	-60.6	-62.6	20	12.4	20	12,846	-53.4	-55.4	25	24.6																
150	30	13,468	-60.6	28	8.6	30	13,522	-60.8	-27	16.9	27	13,500	-55.8		26	13,628	-11	14,741	-50.1	27	12.0	30	13,466	-50.1	-52.1	20	12.6	20	13,646	-50.1	-52.1	25	24.1																
125	30	14,627	-56.4	28	9.0	30	14,677	-56.0	-27	15.3	27	14,661	-56.1		27	14,521	26	14,533	-50.7	22	9.8	28	14,049	-49.0	-50.0	20	13.0	20	14,700	-49.0	-50.0	25	23.0																
100	29	16,082	-51.3	28	7.6	30	16,087	-58.0	-27	13.4	27	16,075	-57.4		27	12.1	25	15,987	-52.5	-52.5	22	8.9	28	16,209	-60.2	-60.2	20	17.5	20	16,755	-52.5	-52.5	25	21.3															
80	29	17,450	-58.0	28	7.1	29	17,501	-58.7	-27	11.2	27	17,492	-57.9		27	11.2	23	17,492	-53.5	-53.5	22	6.6	28	17,595	-50.0	-50.0	20	17.7	20	18,040	-50.0	-50.0	25	21.7															
70	28	18,296	-57.7	28	7.4	29	18,340	-58.4	-27	9.9	30	18,124	-58.1		27	11.4	24	18,124	-58.1	-58.1	22	5.7	28	18,470	-59.6	-59.6	20	11.9	20	18,820	-59.6	-59.6	25	21.9															
60	28	19,270	-57.5	28	7.8	29	19,312	-58.2	-27	9.3	30	19,296	-57.6		27	10.4	24	19,296	-56.4	-56.4	23	4.5	28	19,195	-59.1	-59.1	20	11.7	20	19,940	-59.1	-59.1	25	21.9															
50	28	20,422	-57.6	28	6.9	28	20,461	-57.9	-27	9.3	30	20,450	-57.0		27	9.4	20	20,450	-55.4	-55.4	23	3.8	28	20,544	-57.3	-57.3	20	11.8	20	20,840	-57.3	-57.3	25	21.8															
40	28	21,830	-57.6	29	6.7	28	21,871	-58.6	-27	8.5	30	21,866	-55.7		27	10.4	21	21,866	-55.7	-55.7	25	2.5	28	21,912	-55.4	-55.4	20	12.7	20	21,870	-55.4	-55.4	25	21.7															
30	27	23,650	-56.7	28	6.5	28	23,707	-54.3	-27	9.8	28	23,775	-54.2		27	8.7	21	23,775	-56.2	-56.2	20	2.1	27	23,870	-51.6	-51.6	20	12.7	20	23,650	-51.6	-51.6	25	21.7															
25	27	24,808	-55.9	28	7.2	27	24,877	-57.4	-27	10.0	27	24,874	-51.9		26	9.9	23	24,874	-55.9	-55.9	21	2.1	27	25,011	-48.9	-48.9	20	12.5	20	24,808	-48.9	-48.9	25	21.5															
20	25	26,247	-53.7	27	8.0	26	26,328	-49.2	-27	12.5	26	26,711	-50.2		26	12.2	26	26,711	-57.1	-57.1	21	1.1	26	26,494	-48.5	-48.5	20	11.0	20	26,247	-48.5	-48.5	25	21.0															
15	27	28,132	-56.3	27	8.9	25	28,223	-45.8	-27	14.5	27	28,213	-46.8		26	13.8	21	28,213	-54.4	-54.4	21	3.7	27	28,427	-45.4	-45.4	20	12.4	20	28,132	-45.4	-45.4	25	21.4															
10	16	30,906	-43.7	22	30	30,955	-40.4	-27	16.6	13	30,974	-42.7		26	17.6	17	30,974	-50.3	-50.3	21	4.0	16	31,189	-37.5	-37.5	20	11.5	20	30,906	-37.5	-37.5	25	21.5																

RAWINSONDE DATA

Average monthly values

APRIL 1979

SALEM, OR 1011 MB												SALT LAKE CITY, UT 869 MB												SAN DIEGO, CA 1000 MB												SAN JUAN, P.R. 1016 MB												SAULT STE MARIE, MI 991 MB											
SFC	No. of observations	Temperature °C			Dew Point °C			Resultant Wind			Temperature °C			Dew Point °C			Resultant Wind			Temperature °C			Dew Point °C			Resultant Wind			Temperature °C			Dew Point °C			Resultant Wind			Temperature °C			Dew Point °C			Resultant Wind															
		Standard pressure surface mb.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.																						
1000	30	6.1	6.6	5.6	2.0	+.9	29	1,288	6.9	5.9	-1.3	1.6	2.5	30	12.1	9.7	1.2	+3	30	6	22.8	20.1	10	+4.4	29	29	22.1	+0.2	-4.1	0.6	1.0																												
950	30	14.7	8.1	5.8	22	+1.2	29	1,288	12.1	11.9	-0.4	1.4	2.5	30	12.1	9.8	1.0	+4.4	30	14.6	18.8	10	+5.7	29	55.8	1.4	-4.9	0.8	1.3																														
900	30	5.70	6.5	3.6	24	1.7	29	1,288	11.9	11.4	-1.3	1.4	2.5	30	12.1	9.9	1.0	+4.4	30	6.2	29	1,449	-5.9	-2.5	-5.9	2.1																																	
850	30	1.312	3.9	1.4	25	2.4	29	1,288	11.7	11.1	-1.4	1.3	2.7	30	1.052	17.0	13.1	1.1	+1.1	30	5.8	29	1,449	-1.6	-9.3	2.8																																	
800	30	1.475	1.0	-2.2	26	3.6	29	1,470	7.6	-4.1	17	3.1	30	1,486	10.6	-7.6	30	4.4	30	1,538	14.0	9.3	1.1	5.2	29	1,449	-1.6	-9.3	2.8																														
750	30	1.961	-1.4	-5.9	27	3.9	29	1,497	4.7	-6.7	20	3.4	30	1,989	8.7	-11.1	29	4.9	30	2,048	12.4	9.2	-0.9	1.2	29	1,449	-3.1	-12.7	2.8																														
700	30	3.014	-4.1	-10.5	27	4.5	29	2,490	-8	-9.4	24	3.6	30	2,519	6.2	-14.3	29	5.8	30	2,588	10.4	-6.0	12	3.6	29	2,440	-4.9	-15.3	2.7																														
650	30	3.588	-7.3	-14.7	27	5.8	29	3,040	-1.6	-12.4	26	5.2	30	3,082	3.5	-16.3	29	7.1	30	3,160	8.3	-9.4	-0.4	1.2	29	2,440	-6.9	-15.3	2.7																														
600	30	4.2	-13.9	-24.8	28	8.5	29	4,238	-12.2	-20.7	26	7.9	30	4,316	-3.8	-27.1	29	10.3	30	4,417	10.1	-18.0	0.1	1.1	29	2,418	-13.3	-22.2	2.6																														
550	30	4.856	-16.2	-28.5	28	9.6	29	4,897	-16.7	-26.9	26	9.3	30	4,997	-2.2	-26.5	29	11.7	30	5,113	-2.2	-24.2	-0.1	1.1	29	2,425	-17.6	-27.0	2.7																														
500	30	5.561	-23.0	-33.5	28	10.7	29	5,606	-21.5	-33.6	26	10.4	30	5,636	-1.6	-33.6	29	15.6	30	5,680	-1.6	-30.4	-0.1	1.1	29	2,425	-31.0	-34.0	2.3																														
450	30	6.325	-28.2	-36.2	28	12.9	29	6,175	-26.8	-37.4	26	13.5	30	6,521	-1.9	-35.6	29	15.2	30	6,600	-1.9	-32.7	-0.1	1.1	29	2,425	-35.9	-36.5	2.1																														
400	30	7.160	-34.4	-43.4	29	13.3	29	7,144	-30.1	-46.9	28	14.8	30	8,377	-34.5	-47.6	29	13.3	30	8,558	-25.0	-40.2	0.8	0.9	29	4,056	-41.1	-43.6	2.6																														
350	30	8.033	-41.6	-47.6	29	13.8	29	8,144	-30.1	-46.9	28	17.8	30	8,377	-34.5	-47.6	29	13.3	30	8,558	-25.0	-40.2	0.8	0.9	29	4,056	-41.1	-43.6	2.6																														
300	30	9.110	-49.0	-52.0	28	11.6	29	9,182	-47.2	-52.0	27	17.8	30	9,395	-42.3	-52.0	29	13.0	30	9,657	-33.3	-47.5	0.7	0.8	29	9,085	-48.0	-51.0	2.5																														
250	30	10.289	-54.6	-57.7	27	12.6	29	10,367	-55.0	-57.7	27	18.9	30	10,601	-51.3	-57.7	29	12.3	30	10,913	-42.8	-54.1	0.8	0.9	29	10,270	-54.1	-57.7	2.6																														
200	30	11.705	-57.6	-57.6	27	11.6	29	11,774	-58.8	-57.6	27	19.9	28	12,076	-60.5	-57.6	29	12.2	30	12,382	-57.0	-57.0	0.8	0.9	29	11,690	-57.0	-57.0	2.1																														
150	30	12.550	-57.0	-57.0	27	10.8	29	12,616	-58.7	-57.0	27	19.8	28	12,857	-62.0	-57.0	29	13.4	30	12,955	-56.6	-56.6	0.8	0.9	29	12,455	-56.6	-56.6	2.1																														
100	30	13.527	-56.7	-56.7	28	10.2	29	13,587	-57.7	-56.7	27	18.2	28	13,811	-61.4	-56.7	29	13.4	30	14,175	-66.1	-56.7	0.8	0.9	29	13,516	-55.6	-55.6	2.1																														
125	30	14.684	-56.8	-56.8	27	10.1	29	14,738	-58.0	-56.8	27	17.4	28	14,991	-61.8	-56.8	29	18.1	30	15,265	-72.1	-56.2	0.8	0.9	29	14,676	-56.2	-56.2	2.1																														
100	30	16.096	-57.7	-57.7	28	9.9	29	16,142	-58.5	-57.7	27	14.2	28	16,318	-63.6	-57.7	29	21.6	30	16,459	-77.0	-57.0	0.8	0.9	29	16,085	-57.0	-57.0	2.1																														
80	30	17.502	-58.3	-58.3	28	9.0	29	17,582	-59.2	-58.3	27	11.6	25	17,685	-64.2	-58.3	29	16.3	30	17,841	-77.2	-57.2	0.8	0.9	29	17,497	-57.2	-57.2	2.1																														
70	30	18.346	-57.8	-57.8	28	9.0	29	18,378	-59.7	-57.8	27	10.6	24	18,502	-62.9	-57.8	29	12.6	30	18,610	-75.2	-56.9	0.8	0.9	29	18,343	-56.9	-56.9	2.1																														
60	30	19.317	-57.7	-57.7	28	8.5	29	19,344	-59.1	-57.7	27	10.0	24	19,454	-61.8	-57.7	29	8.8	30	19,516	-69.5	-57.0	0.8	0.9	29	19,343	-56.9	-56.9	2.1																														
50	30	20.467	-57.9	-57.9	28	7.3	29	20,492	-59.3	-57.9	27	8.6	24	20,583	-59.8	-57.9	29	6.6	30	20,623	-62.5	-56.6	0.8	0.9	29	20,482	-55.6	-57.6	2.1																														
40	30	21.871	-57.7	-57.7	29	6.0	29	21,900	-57.1	-57.7	27	8.2	24	21,986	-56.9	-57.7	29	7.3	30	21,988	-56.5	-57.7	0.8	0.9	29	21,985	-56.5	-57.7	2.1																														
30	30	23.695	-56.2	-56.2	28	7.6	29	23,735	-55.0	-56.2	27	8.8	24	23,821	-53.7	-56.2	29	7.0	30	23,866	-53.1	-56.2	0.8	0.9	29	23,756	-53.1	-56.2	2.1																														
25	26	24,845	-55.4	-55.4	28	8.6	29	24,095	-53.1	-55.4	27	10.0	22	25,004	-50.7	-55.4	29	10.9	30	24,058	-49.7	-51.5	0.8	0.9	29	24,930	-51.5	-57.7	2.1																														
20	27	26,284	-52.9	-52.9	28	10.3	29	26,351	-50.4	-52.9	27	11.6	28	26,477	-46.5	-52.9	29	12.3	30	26,536	-39.7	-49.3	0.8	0.9	29	26,397	-49.3	-52.9	2.1																														
15	21	28,166	-49.0	-49.0	28	12.6	29	28,242	-45.8	-49.0	27	15.6	28	28,400	-42.0	-49.0	29	13.1	30	28,455	-43.2	-46.1	0.8	0.9	29	28,299	-46.1	-52.9	2.1																														
10	10	30,871	-43.5	-43.5	28	17.0	29	30,900	-40.5	-43.5	27	19.5	28	31,183	-38.0	-43.5	29	12.7	30	31,220	-37.4	-41.6	0.8	0.9	29	31,183	-41.6	-43.5	2.1																														
SPOKANE, WA 970 MB												TAMPA BAY, FL 1015 MB												TOPKA, KS 983 MB												TRUK, CAROLINE IS. 1011 MB												TUCCSON, AZ 923 MB											
1000	30	720	2.9	-3	17	1.2	30	13	17.7	16.3	12	1.4	30	6.9	5.0	03	.5	30	2	28.3	24.1	06	4.4	30	789	11.2	-1.5	15	2.3																														
950	30	986	4.8	-1.5	22	2.4	30	1,049	18.4	12.0	13	3.0	30	551	8.2	1.2	23	.7	30	97	27.3	28.5	06	5.7	29	1,449	-1.5	-5.9	2.1																														
900	30	1,451	2.9	-5.5	25	2.0	30	1,533	13.1	3.1	18	3.6	30	1,449	6.7	-2.2	26	5.6	30	1,023	20.4	17.4	08	8.8	29	1,449	-1.5	-5.9	2.1																														
850	30	1,939	-7	-7.8	25	2.9	30	2,041	11.3	-2.5	21	3.2	30	1,966	4.1	-5.4	26	7.2	30	2,035	15.9	14.6	06	8.6	29	1,449	-1.5	-5.9	2.1																														
750	30	2,451	-4.6	-10.8	26	3.0	30	2,579	9.2	-7.0	23	4.3	30	2,489	1.1	-8.4	27	8.2	30	2,582	13.8	12.4	06	8.6	29	1,449	-1.5	-5.9	2.1																														
700	30</																																																										

RAWINSONDE DATA

Average monthly values

APRIL 1979

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

APRIL 1979

Date	Sun's zenith distance								Date	Sun's zenith distance										
	A.M.				•	P.M.				A.M.				•	P.M.					
	78° ^T	75° ^T	70° ^T	60° ^O		60° ^O	70° ^T	75° ^T		78° ^T	75° ^T	70° ^T	60° ^O		60° ^O	70° ^T	75° ^T	78° ^T		
MAUNA LOA OBSERVATORY, HI																				
Air mass																				
	3.34	2.67	2.01	1.34	*	1.34	2.01	2.67	3.34		4.64	3.71	2.78	1.86	*	1.86	2.78	3.71	4.64	
8-----	1.17	1.27	1.38	1.49	1.65	1.48	1.40	1.32	1.26	1-----	.93	1.02	1.14	1.30	1.42	1.26	1.14	1.02	.94	
9-----	-----	-----	-----	-----	1.65	1.48	1.33	1.26	1.16	2-----	.76	.86	1.01	1.19	1.27	1.01	.88	.78		
11-----	1.13	1.22	1.33	1.48	1.59	-----	-----	-----	-----	3-----	.75	.86	.96	-----	1.46	1.42	1.23	1.01	.91	
12-----	1.07	1.13	1.25	1.38	1.53	1.38	1.24	1.13	1.03	4-----	.86	.97	1.09	1.24	1.25	1.48	1.27	.95	.84	
19-----	1.04	1.15	1.26	1.36	-----	-----	-----	-----	-----	5-----	.86	.96	1.09	1.25	1.28	1.42	1.29	1.09	-----	
23-----	-----	-----	-----	1.59	1.42	1.30	1.19	1.12	6-----	.87	.93	1.10	1.28	1.42	1.29	1.13	1.01	.91		
24-----	1.12	1.23	1.34	1.46	-----	-----	-----	-----	7-----	.87	.98	1.11	1.26	1.46	1.25	1.09	.98	.89		
25-----	1.19	1.27	1.36	1.47	-----	-----	-----	-----	8-----	.79	-----	-----	1.15	1.37	-----	1.05	.93	.82		
28-----	1.16	1.24	1.32	1.43	1.60	-----	-----	-----	9-----	.80	.89	1.00	1.16	1.42	1.22	-----	.89	.75		
Average	1.13	1.22	1.32	1.44	1.60	1.44	1.32	1.23	1.14	11-----	.73	.87	1.05	1.22	1.45	-----	-----	-----	-----	
										12-----	-----	-----	1.42	-----	-----	1.01	.89	.78		
										13-----	.86	.97	1.10	1.26	1.48	1.29	1.07	.96	.88	
										14-----	.84	.96	1.10	1.27	1.47	1.24	1.09	.92	.84	
										16-----	-----	-----	1.44	1.21	1.03	.91	.82	-----		
										17-----	.79	.91	1.04	1.22	1.45	1.19	1.03	.85	.74	
										18-----	.80	.93	1.05	1.22	1.43	1.16	.98	.85	.73	
										19-----	.60	.70	-----	.95	1.38	1.15	.92	.77	.64	
										20-----	-----	-----	1.03	1.41	1.14	.84	.67	.55		
										21-----	.57	.67	.83	.99	1.32	1.01	.82	.65	.53	
										22-----	.56	.69	.87	1.07	1.30	1.05	.86	.71	.60	
										23-----	.62	.75	.89	1.07	1.36	1.12	.94	.81	.70	
										24-----	.77	.88	-----	1.19	1.38	1.21	1.01	.89	.77	
										25-----	.85	.95	1.08	1.25	1.44	1.24	-----	-----	-----	
										26-----	.84	.93	1.05	1.23	1.41	1.19	.97	.84	.72	
										27-----	.73	.83	.99	1.19	1.42	1.15	.93	-----	-----	
										28-----	.79	.91	1.03	1.21	1.44	1.17	1.00	.87	.73	
										29-----	.80	.92	1.06	1.24	1.42	1.20	1.03	.89	.78	
										30-----	.81	.92	1.06	1.20	1.44	-----	-----	-----	-----	
										Average	.78	.89	1.03	1.19	1.42	1.19	1.01	.88	.77	

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

Date . . .	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys . . .	45	107	54	7	49	34	10	82	153	113	63	112	114	111	120	129	90	89	37	116	77	34	33	122	139	36	153	123	134	105	86	

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES: Data in the table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

- + And also on an earlier date or dates.
- D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch of water equivalent to every 10 inches of snow-fall.

CLIMATOLOGICAL DATA - METRIC UNITS: Data from airport unless otherwise specified.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

- B Number of days maximum 21.1°C. or above for Alaskan Stations.
- Y Peak Gust.
- + And also on an earlier date or dates.
- U Indicates Urban site.
- R Indicates Rural site.
- Ø Station pressures apply to elevations shown in the "Elevations" table of the annual issue of this publication.

Conversion formulae to English Units are as follows:

$$\begin{aligned} 1 \text{ foot} &= 0.3048 \text{ meters} \\ {}^{\circ}\text{F.} &= \frac{9}{5} \times {}^{\circ}\text{C} + 32 \\ 1 \text{ inch} &= 25.4 \text{ millimeters} \\ 1 \text{ mile per hour} &= 0.447 \text{ meters per second} \end{aligned}$$

HEATING DEGREE DAYS: Data from airport unless otherwise specified.

- U Indicates Urban site.
- R Indicates Rural site.

COOLING DEGREE DAYS: Data from airport unless otherwise specified.

- U Indicates Urban site.
- R Indicates Rural site.

STORM SUMMARY:

- o Includes crop damage.
- C Crop damage.
- * No occurrence of storms or unusual weather phenomena reported.
- @ Includes heavy sleet storm.
- ø Freezing drizzle and freezing rain, commonly known as glaze.
- Ø For breakdown of "All Others," and for detailed listing of other storms, see the Environmental Data and Information Service, NOAA, monthly publication STORM DATA.
- † No Storm Data Report received for this State.
- ◇ Report Incomplete.
- † Storm damages are placed in categories varying from 1 to 9 as follows:
 - 1 Less than \$50
 - 2 \$50 to \$500
 - 3 \$500 to \$5,000
 - 4 \$5,000 to \$50,000
 - 5 \$50,000 to \$500,000
 - 6 \$500,000 to \$5 Million
 - 7 \$5 Million to \$50 Million
 - 8 \$50 Million to \$500 Million
 - 9 \$500 Million to \$5 Billion

RAWINSONDE DATA (Average Monthly Values):

All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 60° above the horizon, or any obstruction above the horizon. The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygrometers. These average values for standard pressure surfaces were obtained by rawinsonde; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

- * Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.
- + Observations for these stations are scheduled at 0000 G.C.T.
- Ø Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

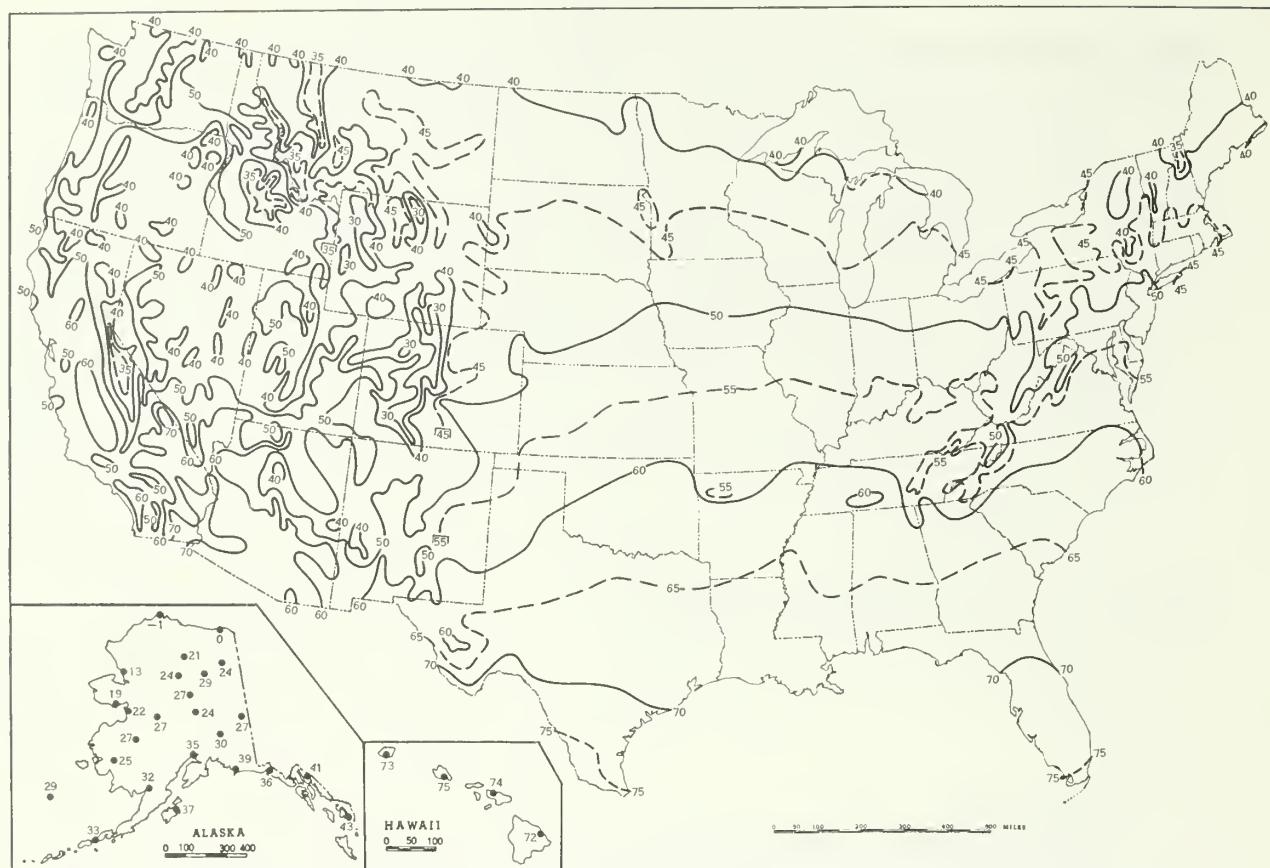
SOLAR RADIATION INTENSITIES: Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

()	Clouds Present	DM	Moderate Dust	HM	Moderate Haze	KS	Slight Smoke
*	Values corresponding to true solar noon	DS	Light Dust	HS	Slight Haze	M	Moderate Haze-indeterminate
BD	Blowing Dust	F	Fog	I	Intense Haze-indeterminable	N	Sand
BN	Blowing Sand	GF	Ground Fog	K	Smoke	S	Slight Haze-indeterminable
D	Dust	H	Haze	KI	Intense Smoke		
DI	Intense Dust	HI	Intense Haze	KM	Moderate Smoke		

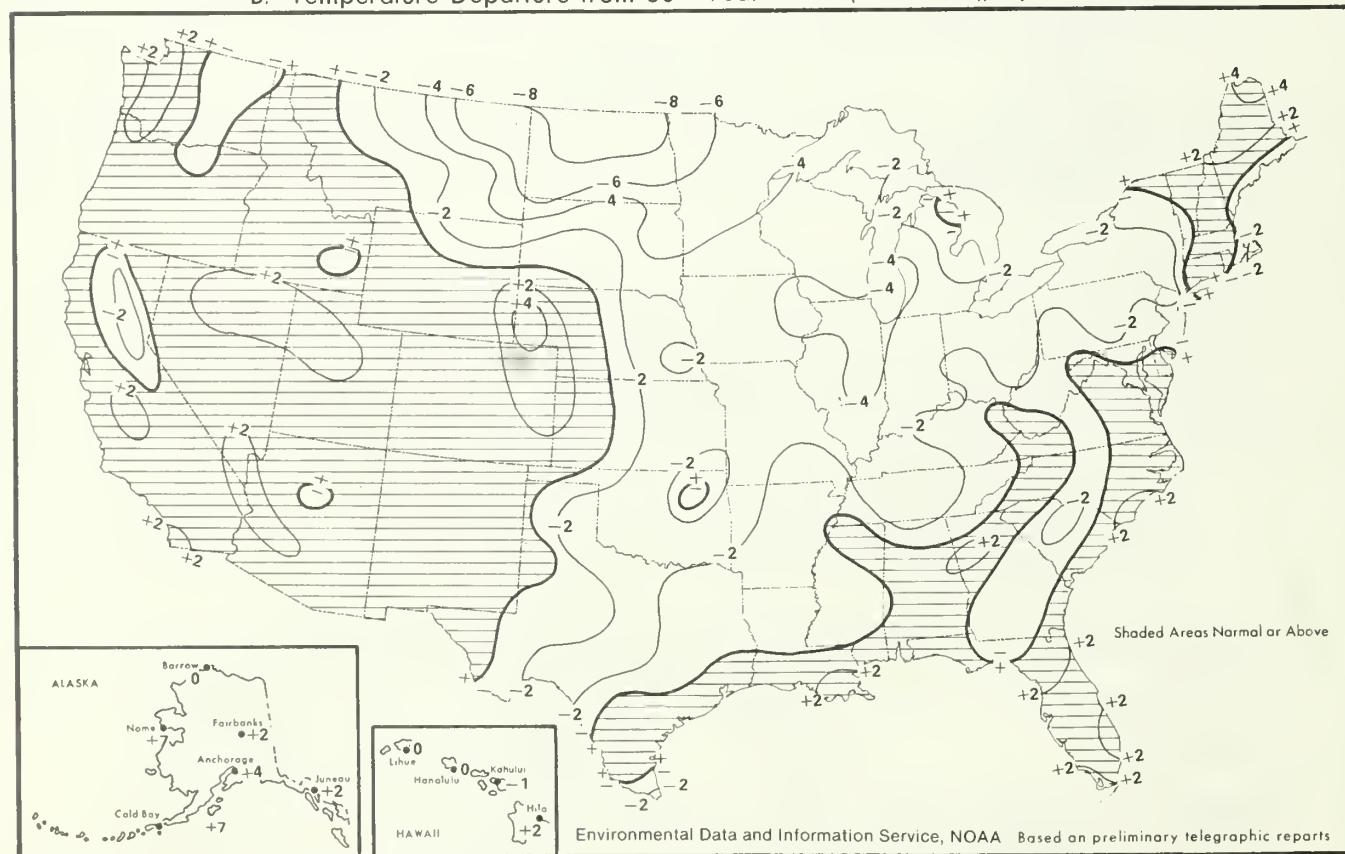
NET RADIATION: The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

Chart 1. A. Normal Daily Average Temperature (°F. 1941-70), April.

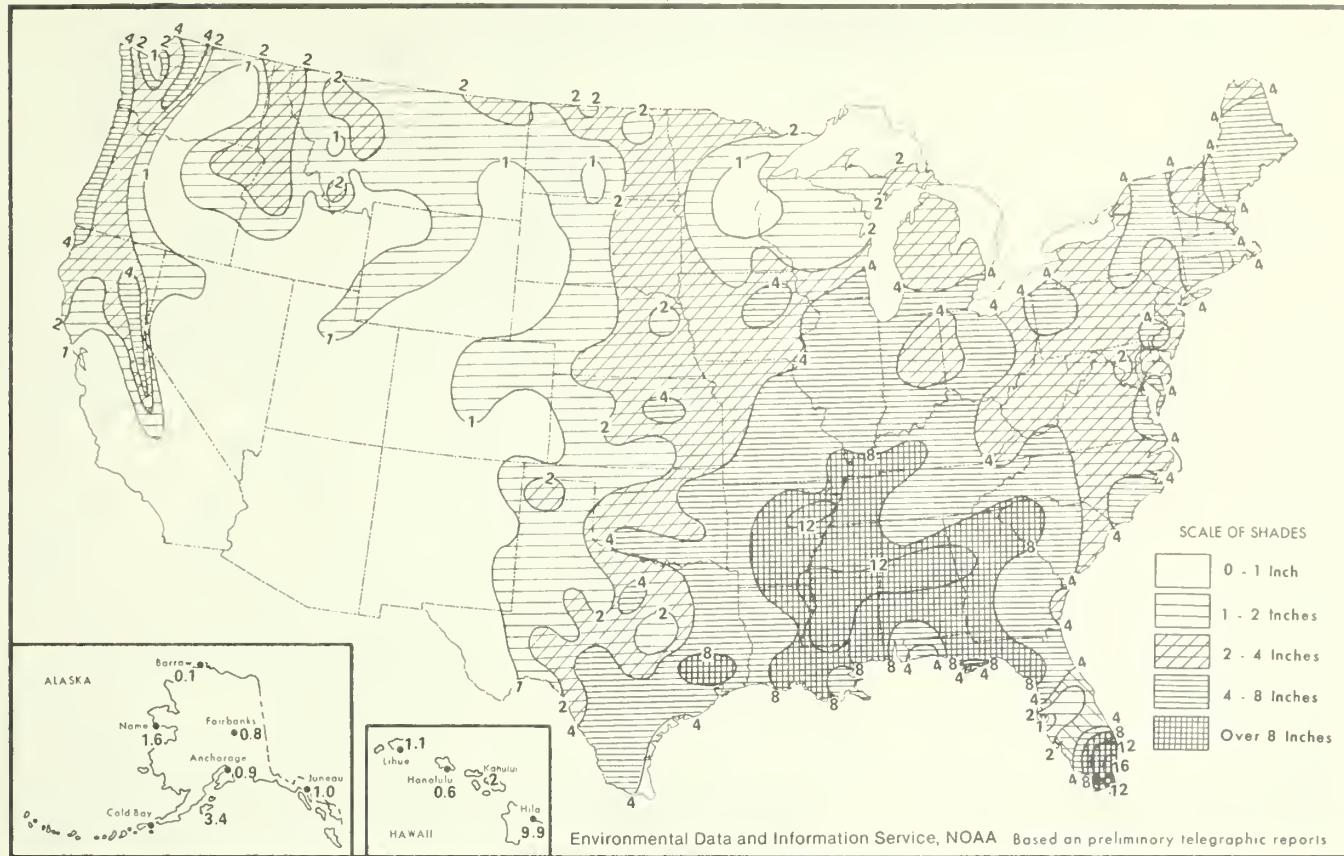


B. Temperature Departure from 30 - Year Mean (°F 1941-70), April 1979



Environmental Data and Information Service, NOAA Based on preliminary telegraphic reports

Chart II. A. Total Precipitation (Inches), April 1979



B. Percentage of Normal Precipitation, April 1979

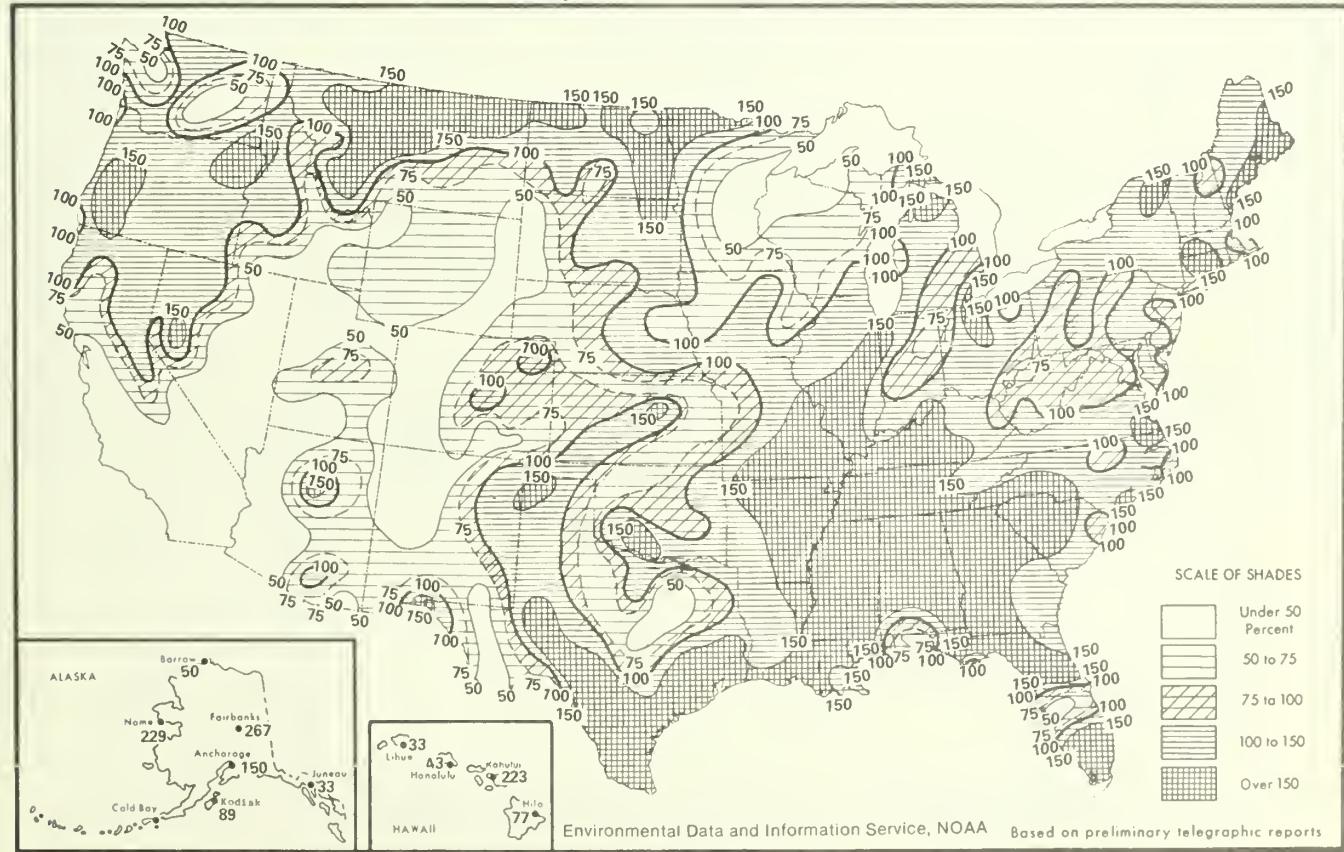
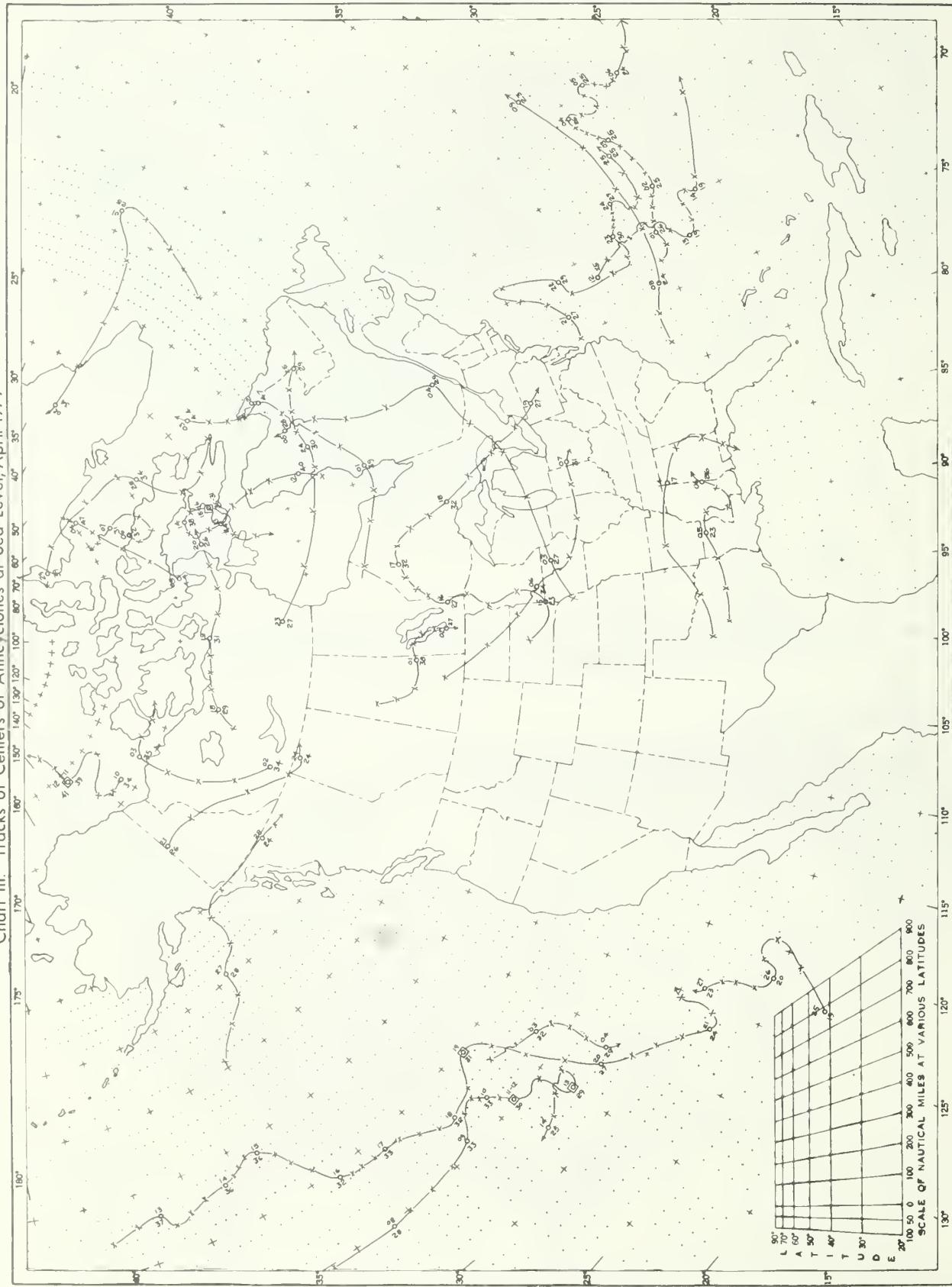
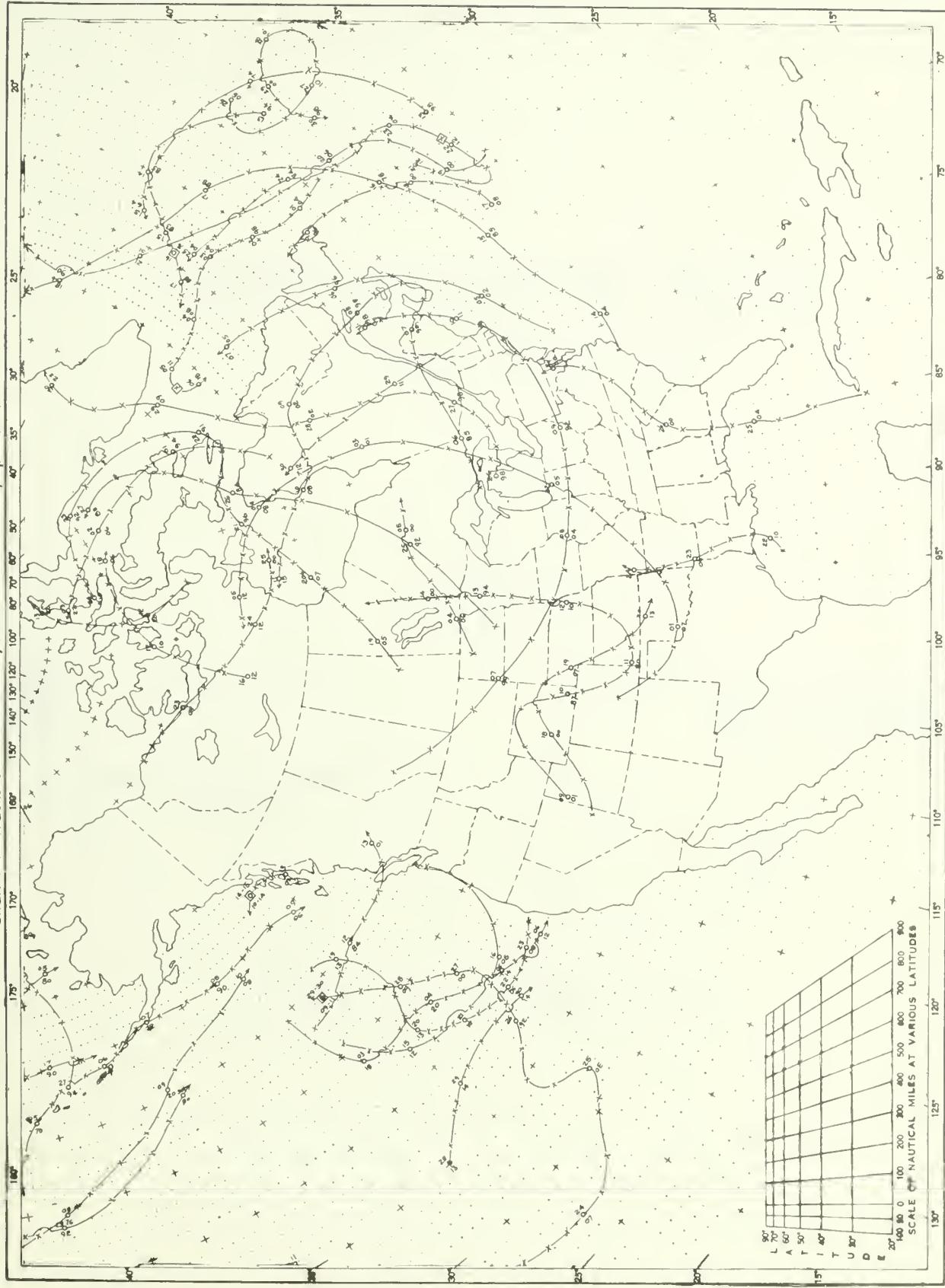


Chart III Tracks of Centers of Anticyclones at Sea Level, April 1979



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar.
 'X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IV. Tracks of Centers of Cyclones at Sea Level, April 1979



USCOMM-NOAA-ASHEVILLE, N.C., 1979-2070

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MAY 1979

VOLUME 30

NUMBER 5

CLIMATOLOGICAL DATA

NATIONAL SUMMARY



"I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF
THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRA-
TION AND IS COMPILED FROM INFORMATION RECEIVED AT
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CAROLINA 28801."

Daniel B. Mitchell
DIRECTOR
NATIONAL CLIMATIC CENTER

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

MAY 1979

GENERAL SUMMARY OF WEATHER CONDITIONS

Lyle Denny, Climatologist
Environmental Data and Information Service, NOAA

HIGHLIGHTS: Temperatures averaged close to normal in most of the Nation, but extremes, both hot and cold, were common. The West, from the Plateau to the Coast, averaged 4 to 5° warmer than normal. Freezing temperatures reached as far south as Kansas, and many record high temperatures were marked in the East.

Nearly all of the Nation received some rain, and numerous thunderstorms formed. Record amounts of rain accumulated in many areas. Rainfall was frequent in most of the agricultural areas where farmers were trying to plant spring crops.

Three distinct rain patterns moved from the Rockies eastward during the first week of May. The first storm system moved from the central Plains through the Great Lakes. Moderate showers and thunderstorms accompanied the path of the storm with lesser amounts to the south. The succeeding storms brought the heaviest activity further to the south. Nearly all areas east of the Rockies had rain on at least 3 of the 6 days. At the end of the week, a storm moved into the Pacific Northwest and brought moderate rain to the coastal areas and snow to the mountains. Freezing temperatures dipped into the mountains and moved to the northern Plains.

In the week of the 7th-13th, a mass of much cooler air pushed into the Plateau and Rockies and moved slowly eastward during the week. Warm, moist air edged into the Nation from the south ahead of the cooler air. Rain or snow showers accompanied the influx of cool air in the West, while heavier showers,

thunderstorms, and tornadoes were plentiful east of the Rockies. The most severe weather hit the Nation's Southeast where some rains exceeded 10 inches. Freezing temperatures dipped into the Plains as far south as Kansas, while record high temperatures were being recorded east of the cold air.

A new weather system originated in Alberta, Canada, and moved eastward through the Canadian Provinces in the third week of May (14th-20th). A line of showers and thunderstorms extended southwestward from the center. Heavy amounts of rain soaked parts of the Texas-Oklahoma border, northern Arkansas, and southern Missouri. Late in the week, an upper air system caused moderate showers in the Southwest. Temperatures ranged warmer than normal through most of the Nation. Only the northern Plains, the South, and the Southeast recorded slightly cooler than normal readings.

The slow-moving system extending from the low pressure in southern Canada moved through the United States early in the week of the 21st-27th, and the upper air disturbance moved from the Southwest causing a surface low pressure to form in Texas. Heavy rains accompanied the storm, and it became more intense as it moved northeastward. More than 5 inches of rain soaked Texas and Arkansas, and 2- to 4-inch amounts extended from the southern Appalachians through the New England coastal areas. The severe storm lingered in the New England area, and the rain persisted until the end of the month.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

MAY 1979

STATE	Temperature						Precipitation					
	Monthly extremes						Monthly extremes					
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least		
Alabama	Brewton 3 SSE	92	20	Valley Head	33	26	Vernon 2 N	8.69	Wetumpka	.124		
Alaska	2 Stations	78	28+	Allakaket	- 4	9	Little Port Walter	14.77	3 Stations	T		
Arizona	2 Stations	107	14+	Hawley Lake	7	10	Hawley Lake	4.90	Stephens Ranch	.10		
Arkansas	Monticello 3 SW	95	21	Mountain Home C of Eng	33		Madison 1 NW	14.64	Texarkana FAA AP	.401		
California	Death Valley	110	26	White Mountain 2	0	8	Fort Dick	7.69	55 Stations	.00		
Colorado	2 Stations	94	30+	Wolf Creek Pass 1 E	1	11	Wolf Creek Pass 1 E	7.21	Creede	.38		
Connecticut	Hartford WSO AP	97	9	Coventry	29	2	Norwich Pub-Util Plant	6.91	Hartford WSO AP	3.48		
Delaware	5 Stations	88	11+	Georgetown 5 SW	35	2	Lewes 1 SW	5.75	Middletown 1 WSW	3.03		
Florida	Myakka River State Park	98	30	4 Stations	40	26	Tampa WSMO AP	17.64	Venice	1.43		
Georgia	Lumpkin 2 SE	99	22	3 Stations	32	26	Clayton 1 SSW	12.17	West Point	.67		
Hawaii	Puukohola Heiau 98.1	98	5	Mauna Kea Obs 111.2	12	17	Kalaaoa 69.22	17.88	12 Stations	.00		
Idaho	Swan Falls Power House	96	26	Swan Valley	13	6	Pierce	5.75	Aberdeen Exp Station	.09		
Illinois	Golden 1 NW	92	8	2 Stations	28	2+	Brookport Dam 52	6.18	Jacksonville 2 E	.90		
Indiana	2 Stations	91	11	2 Stations	25	5+	Elliston	6.59	Warsaw	.99		
Iowa	Algona 3 W	94	29	Winterset 2 NNE	26	1	Ocheyedan	7.42	Blockton 2 S	1.02		
Kansas	2 Stations	95	17+	Elkhart 6 NNE	21		Webster Dam	8.43	Ionia	.82		
Kentucky	2 Stations	92	10+	Owenton	30	5	Murray	9.86	Shelbyville 6 NW	2.30		
Louisiana	Franklinton 3 SW	94	10	2 Stations	43	26	Oberlin Fire Tower	11.30	Belah Fire Tower	2.16		
Maine	Lewiston	96	9	2 Stations	21	7+	Machias	10.61	Van Buren 2	3.36		
Maryland	Cumberland 2	95	9	Oakland 1 SE	26	2	Patuxent River	6.38	Upper Marlboro 3 NNW	2.49		
Massachusetts	Chester 2	100	10	Great Barrington AP	28		Chester 2	8.80	Nantucket FAA AP	.265		
Michigan	Monroe	92	12	Champion Van Riper Park	16	1	Vanderbilt 11 ENE	4.95	2 Stations	.88		
Minnesota	Olivia	93	29	4 Stations	21	19+	Two Harbors	7.37	2 Stations	1.04		
Mississippi	Wiggins 3 SSE	95	11+	Tupelo 2 WNW	37	25	Hernando	11.78	Richton 3 SSE	2.21		
Missouri	2 Stations	94	9	Waynesville 2 W	29	5	Oldfield	10.06	St Charles 7 SSW	.66		
Montana	Poplar	95	27	Wisdom	11	7	Bozeman 12 NE	3.82	Choteau Airport	.09		
Nebraska	Ellsmere 9 ENE	96	6	2 Stations	19	11	Meadow Grove	7.38	Mitchell 5 E	1.07		
Nevada	2 Stations	103	22	2 Stations	16	9+	Lund	2.01	2 Stations	.00		
New Hampshire	North Conway	95	10	Mount Washington	12	6	Pinkham Notch	8.33	Monroe 5 NNE	3.25		
New Jersey	2 Stations	93	11+	Newton St Pauls Abbey	30	2	Long Branch Oakhurst	9.43	Atlantic City WSO AP	2.80		
New Mexico	Bitter Lakes Wildlife Refuge	98	7	2 Stations	16	11	Springer 2 NW	7.14	Hachita	.00		
New York	New York Laurel Hill	96	10	2 Stations	21	2	Fishie Eddy	8.29	Massena FAA AP	1.61		
North Carolina	Dunn 4 NW	93	30	Grandfather Mountain	26	26	North Fork 2	11.77	Monroe 4 SE	2.55		
North Dakota	Oakes 2 S	93	29	Kemnare 1 WSW	11	4	Pembina	3.33	Wilton	.55		
Ohio	Toledo Blade	92	12+	Mansfield 5 W	23	1	Bolivar Dam	7.76	Eaton	2.66		
Oklahoma	Hollis	103	19	Boise City 2 E	20	4	Fanshawe	14.67	Hulah Dam	2.15		
Oregon	5 Stations	94	25+	Fremont	15	29	Port Orford 5 E	7.50	Pine Grove	.09		
Pennsylvania	Laurelton St Village	95	9	Clermont 4 NW	18	2	Washington	8.96	Austin 4 NNW	.76		
Puerto Rico	Magueyes Island	96	18	2 Stations	52	25+	Paraiso	38.32	Ponce City	1.80		
Rhode Island	Providence WSO AP	92	10	Kingston	36	3	Providence WSO AP	7.62	Block Island WSO AP	4.74		
South Carolina	McColl	92	12	2 Stations	33	26	Hogback Mountain	12.73	Chester	1.50		
South Dakota	Midland	98	28	Ralph	15	11	Vermillion 2 SE	5.49	Dupree 15 SSE	.50		
Tennessee	Athens	92	12	Crossville Exp Station	30	26	Franklin Sewage Plant	12.60	Kingsport	3.12		
Texas	Falcon Dam	107	31	Dalhart FAA AP	27	4	Marlin 3 NE	18.38	Duncan Wilson Ranch	.08		
Utah	2 Stations	96	23+	Silver Lake Brighton	6	9	Hanksville	3.11	La Verkin	.02		
Vermont	Vernon	95	10	Mount Mansfield	20	5	Ball Mountain Lake	8.48	Bristol 5 NNW	2.98		
Virginia	Lincoln	93	9	Mt Lake Biological Station	29	26+	Norfolk WSO AP	10.12	Columbia	1.97		
Virgin Islands	Estate Pearl	97	9	2 Stations	66	26+	Estate Rust Op Twist	17.93	Be'ah Upper New Works	7.50		
Washington	2 Stations	95	23+	Satus Pass 2 SSW	22	29	Clearwater	6.02	Watapo	T		
West Virginia	Spencer	96	12	2 Stations	21	17+	Middlebourne 2 ESE	7.45	East Rainelle 3 NNE	2.88		
Wisconsin	2 Stations	90	10+	Newald 4 N	17	1	Fairchild Ranger Station	8.35	Brodhead	.92		
Wyoming	Colony	92	16	Pinedale	9	7	Anchor Dam	4.94	Farson	.08		

CLIMATOLOGICAL DATA

METRIC UNITS

MAY 1979

CLIMATOLOGICAL DATA

METRIC UNITS

Navy 1970

State and Station		Elevation (ground)		Pressure		Temperature		Precipitation		Wind		Cloudiness		Sky cover, tenths (sunrise to sunset)		Possible sunshinе %						
ALABAMA	CULLMAN	2297	1010.2	mb	mb	°C	°C	mb	mm	mm/s	mm	%	%	%	%	%	%					
ALABAMA	CULLMAN SPRINGS	1873	1010.2	mb	mb	1.4	16.4	-0.1	23.9	29+	24	1.1	12	1.4	6.7	5.4	5.4					
ALABAMA	DAVIERA	1610	1010.7	mb	mb	5.6	12.2	-0.8	27.8	27	0.3	2.2	5.7	1.2	7.1	6.3	6.3					
ALABAMA	GRAND JUNCTION	1476	1010.4	mb	mb	6.2	12.7	-1.2	27.2	10	0.4	2.8	5.7	0.2	6.8	7.1	6.1					
ALABAMA	HARVEY	1428	1010.6	mb	mb	9.0	15.7	-1.1	30.6	23	0.1	3.9	5.1	0.6	6.6	7.0	7.7					
CONNECTICUT	BRIDGEPUR	52	1010.9	mb	mb	1.9	16.5	1.9	30.0	10	0	10.6	73	1.2	11.6	15.7	5.4					
DELAWARE	WILMINGTON	23	1013.2	mb	mb	1.4	17.8	3.2	36.1	9	2	0	8.9	61	1.2	1.1	17.7	5.4				
DIST. OF COLUMBIA	WASHINGTON DILLES	88	1004.4	mb	mb	1.1	17.4	0.4	31.1	10	1.1	2	0	12.8	75	1.2	1.1	17.7	5.4			
DIST. OF COLUMBIA	WASHINGTON NATIONAL	3	1013.9	mb	mb	1.0	15.0	1.9	31.1	10	0.3	1.0	0	13.9	73	1.1	0.9	19.9	5.9			
FLORIDA	APALACHICOLA	6	1015.6	mb	mb	17.7	22.7	-1.2	30.0	19+	0	18.9	61	10.8	3.8	4.6	1.3	23 *				
FLORIDA	OAYON REACH	9	1014.9	mb	mb	19.5	24.8	0.3	32.0	28	2.2	12.2	27	2	15.6	79	1.1	10	5.1	4.2		
FORT MYERS	5	1015.2	mb	mb	11.5	31.4	2.8	34.4	29	0.7	15.0	22	1.3	18.9	70	1.3	1.3	25.5	5.1			
JACKSVILLE	8	1015.5	mb	mb	10.5	17.2	2.8	27.5	22	0.7	8.3	2.3	0	22.8	77	1.0	0.7	15.1	7.4			
KEY WEST	KEY WEST	2	1014.0	mb	mb	10.5	10.5	2.5	32.2	30	0.3	32.2	30	2.0	20.0	1	0.8	14.3	8.2			
MILANI	MIAMI	29	1015.0	mb	mb	10.8	1015.1	29.9	24.1	27.0	1.4	33.3	25	2.0	20.0	67	2.1	11	6.5	4.2		
OKLAHOMA/CITY AFB	OKLAHOMA CITY	29	1015.2	mb	mb	1015.8	29.9	24.1	31.7	27	0.4	33.3	30	1.7	18.3	77	1.3	11	30	3.7		
PENNSAULT	34	1011.5	mb	mb	1015.7	27.7	18.5	23.1	0.9	31.1	16	6.9	5.0	0	17.6	75	1.2	1.3	36.4	9.1		
TALLAHASSE	17	1013.5	mb	mb	1015.8	28.7	18.5	23.1	0.9	31.1	16	5.0	5.0	0	17.6	75	1.2	1.3	36.4	9.1		
TAMPA	6	1015.9	mb	mb	1016.1	28.7	24.4	-0.7	31.7	31	1.3	13.0	19	0	20.0	79	1.1	1.2	5.4	7.7		
WEST PALM BEACH	5	1015.0	mb	mb	1016.2	28.3	20.6	24.4	-0.6	31.1	25	1.3	1.3	0	20.6	79	1.2	1.2	5.4	7.7		
GEORGIA	ATHENS	244	988.6	mb	mb	15.3	21.1	-0.1	31.1	12	5.0	2.4	0	15.6	75	9.3	-9	30	6.4			
GEORGIA	ATLANTA	308	979.7	mb	mb	15.7	15.7	-0.6	31.1	10	6.1	2.2	0	14.4	69	62	-33	22	6.6			
GEORGIA	AUGUSTA	41	1010.5	mb	mb	1015.8	27.6	21.4	-0.6	31.1	7	6.7	2.2	0	15.6	75	24	17	22	6.6		
GEORGIA	COLUMBUS	136	1002.0	mb	mb	1015.8	28.3	16.6	22.4	-0.2	32.2	11	8.3	2.5	0	16.7	74	1.4	1.3	6.0	7.4	
GEORGIA	MACON	108	1003.1	mb	mb	1015.8	27.5	15.6	21.2	-0.2	31.7	22	5.4	2.0	0	16.7	77	1.5	1.2	6.2	7.4	
GEORGIA	RUMBLE	194	1015.9	mb	mb	1016.1	26.5	14.4	20.6	-0.1	32.2	10	5.0	2.4	0	16.7	77	1.5	0.5	21	8.7	
GEORGIA	SAVANNAH	14	1014.9	mb	mb	1016.8	28.6	17.9	23.3	0.3	34.4	22	9.4	2.6	0	16.7	72	1.0	0.6	18	5.9	
HAWAII	HIL	8	1016.6	mb	mb	1017.8	27.4	18.9	23.2	0.2	29.4	9	16.1	2	0	18.3	77	104	-157	14	7.6	4.8
HAWAII	HONOLULU	2	1016.9	mb	mb	1016.9	30.4	20.7	25.6	0.5	32.7	24	15.6	2.3	0	18.3	67	5	-159	2	5.0	7.0
HAWAII	KAHULUT	15	1016.4	mb	mb	1016.9	29.6	19.2	24.4	0.3	31.7	11	15.6	1.3	0	18.3	67	1.5	-159	2	4.8	7.3
HAWAII	LIEUE	31	1012.5	mb	mb	1017.8	27.7	20.2	23.9	-0.2	29.4	26	16.3	2.4	0	19.4	78	41	-21	15	0	13.9
IDAHO	BORO	865	914.0	mb	mb	1013.3	22.2	6.4	14.3	0.2	32.2	22	0.6	3.0	1	1.7	45	33	-1	2.1	31	13.9
IDAHO	LEWISTON	431	1010.4	mb	mb	21.6	6.6	15.1	0.6	31.1	22	2.8	1.2	0	15.6	66	114	-21	34	1.7	15.6	
IDAHO	POCATELLO	1358	1012.6	mb	mb	20.2	4.7	12.4	0.0	28.9	23	-2.2	0.0	6	40	-24	8	6	0	0	1.1	12.1
ILLINOIS	CAIRO	96	990.2	mb	mb	23.9	15.0	19.4	-1.3	30.6	19+	8.3	5	0	1.2	1	45	154	23	66	114	5.5
ILLINOIS	CHICAGO	185	992.6	mb	mb	21.7	8.6	15.3	-0.5	32.2	10+	1.0	1.1	0.1	7.8	63	63	-21	34	1.7	15.6	
ILLINOIS	CHICAGO O HARE	177	992.0	mb	mb	23.5	9.7	16.0	-0.2	30.0	30+	1.5	1.1	0.1	7.8	59	73	-21	34	1.7	15.6	
ILLINOIS	MOLINE	199	990.9	mb	mb	22.6	9.0	15.8	-0.6	30.6	8	1.1	1.1	0.1	8.3	65	50	-21	34	1.7	15.6	
ILLINOIS	PEORIA	221	988.0	mb	mb	21.9	8.0	15.6	-0.1	30.6	10+	1.1	1.0	0	7.2	62	37	-61	14	7.4	10.6	
ILLINOIS	ROCKFORD	179	972.6	mb	mb	24.7	10.8	17.8	-0.3	31.1	30	3.9	5	0	8.9	60	34	-56	20	7	11.1	5.6
INDIANA	EVANSVILLE	116	1010.4	mb	mb	24.2	10.8	17.5	-1.2	31.1	10	2.6	5	0	11.7	68	94	-17	30	12	5	0
INDIANA	SPRINGFIELD	116	1015.1	mb	mb	24.2	10.8	17.5	-1.2	31.1	10	2.6	5	0	11.7	68	94	-17	30	12	5	0

State and Station		Temperature												Precipitation																				
		Pressure						Elevation (ground)						Average maximum						Depature from normal						Depature from normal								
Station	Alt.	mb	°C	°C	°C	mb	°C	°C	°C	mb	°C	mb	°C	mb	°C	mb	°C	mb	°C	mb	°C	mb	°C	mb	°C	mb	°C	mb	°C					
MISSISSIPPI MERIDIAN	88	1004.7	1015.8	27.1	14.8	20.9	-1.5	31.1	10	5.6	26	0	0	15.6	77	139	41	5.0	8	7	0	0	0	0.7	19	8.9	19	30+	6	8	17	6.7		
MISSOURI COLUMBIA REGIONAL	270	982.4	1016.6	23.9	11.9	17.8	-0.2	32.2	8	3.9	5	1	0	11.7	70	84	-35	27	12	0	0	0	0.8	16	18.3	NW	10	5	16	6.3	60			
KANSAS CITY MUN AP	109	977.3	1013.6	23.4	11.6	17.5	-0.3	30.0	29	5.0	12	0	0	10.0	65	76	-33	32	10	0	0	0	1.7	18	12.5	NW	11	5	13	6.1	63			
KANSAS CITY MUN AP	226	948.0	1013.6	24.8	12.2	19.0	-1.4	31.1	17	4.4	25	0	0	11.7	64	69	-37	14	0	0	0	0	0.9	17	12.5	NW	10	5	13	7.1	62			
ST. JOSEPH	247	979.5	1016.9	25.1	12.9	16.0	-0.2	2.6	29+	2.8	17	12	0	0	11.7	62	64	-54	31	6	0	0	0	1.0	16	14.3	NW	11	5	13	7.1	62		
ST. LOUIS	163	994.6	1016.8	23.2	10.4	16.8	-0.1	31.7	8	3.3	5	0	0	11.7	67	61	-57	16	12	0	0	0	0	1.3	17	13.4	NW	11	6	13	5.9	55		
SPRINGFIELD	386	979.2	1016.3	23.2	10.4	16.8	-0.1	30.6	8	0.6	5	0	0	11.7	75	188	-31	12	9	0	0	0	1.3	17	13.4	NW	10	8	8	15	55			
MONTANA	1087	889.9	1013.5	18.6	5.6	12.0	+0.4	31.7	27	-1.7	2	0	0	1.7	54	23	-29	8	6	2	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	52		
BILLINGS	996	932.5	1016.6	16.3	4.1	10.2	-2.1	28.3	24	-3.9	2	0	0	5	67	62	-29	42	13	5	13	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	52	
GLASSVILLE	1116	887.6	1016.8	17.8	3.8	10.8	-1.4	30.0	26	-1.7	4	0	0	6.6	49	18	-43	3	6	1	0	0	0	1.3	35	18.8	NW	10	5	13	7.1	52		
GREAT FALLS	788	922.1	1016.8	17.9	4.6	11.5	-1.4	30.6	26	-2.2	10	0	0	5	44	22	-15	9	5	1	0	0	0	1.3	35	18.8	NW	10	5	13	7.1	52		
HAVIE	1167	979.4	1016.1	19.4	6.4	11.8	0.0	29.4	26+	-3.3	10	0	0	4	49	27	-37	3	7	3	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53		
HELENA	1064	910.9	1015.2	18.7	3.2	10.9	-0.4	29.4	23	-2.2	6	0	0	5	55	47	-4	23	9	2	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53		
KALISPELL	1004	910.6	1016.6	18.9	3.2	10.9	-0.4	29.4	23	-2.2	6	0	0	5	55	55	-18	23	11	3	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53		
MILES CITY	903.5	903.5	1015.2	18.8	3.6	11.2	0.0	29.4	23	-1.1	30+	0	0	5	56	19	-24	5	11	3	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53		
MISSOURIA	972	947.9	1015.2	18.8	3.6	11.2	0.0	29.4	23	-1.1	30+	0	0	5	56	19	-24	5	11	3	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53		
NEBRASKA	561	947.9	1013.7	21.2	7.2	14.2	+1.8	31.7	28	-1.1	11	0	0	6.7	64	101	-23	45	9	6	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53	
GRAND ISLAND	359	970.9	1013.2	22.7	8.1	15.6	-1.3	32.8	28	-0.6	4	1	1	7.8	62	75	-31	72	6	3	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53	
LINCOLN	471	958.2	1013.6	21.6	7.7	14.9	-1.1	33.9	28	-0.6	2	1	1	6.1	63	131	-37	42	10	7	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53	
NORFOLK	466	916.4	1013.4	21.8	6.4	14.1	-0.5	32.8	28	-3.3	11	1	1	3.9	54	75	-32	47	10	7	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53	
NORTH PLATTE	298	923.7	1013.4	23.3	7.9	15.0	-0.5	32.8	28	-2.2	4	2	2	7.4	58	74	-32	47	10	7	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53	
OMAHA (REPPLEY)	399	921.7	1013.1	20.1	6.5	15.4	-0.6	31.1	29	-0.6	1	0	0	6.8	51	76	-25	62	6	0	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53	
OMAHA (NORTH)	1206	878.1	1013.1	20.1	6.5	15.4	-0.6	31.1	29	-0.6	1	0	0	6.8	51	76	-25	62	6	0	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53	
SCOTTSBLUFF	789	922.1	1013.1	20.1	6.5	15.4	-0.6	31.1	29	-0.6	1	0	0	6.8	51	76	-25	62	6	0	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53	
VALENTINE	1004.1	1016.9	19.7	7.2	13.5	0.7	34.4	9	-2.8	7	1	4	6.7	69	123	-47	60	16	2	0	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53	
NEVADA	1539	n43.6	1011.5	22.8	4.4	13.6	-0.6	32.2	22	-0.6	17	1	0	6.6	44	11	-15	37	7	5	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53	
ELKO	1906	107.3	1011.2	20.0	2.0	11.0	-0.1	27.8	21	-3.3	20+	0	0	2.8	23	37	-20	0	0	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53		
EL PASO	659	934.3	1009.5	32.1	16.1	24.0	-1.1	39.4	22	-2.8	10	2	0	0.6	23	9	-16	1	1	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53		
LAS VEGAS	1311	967.0	1013.1	24.2	3.7	13.9	-0.2	30.2	26+	-2.8	10	3	0	0	4	4	-13	4	6	1	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53		
WINNEMUCCA	1004	1004.1	1016.9	19.5	6.0	11.5	0.7	34.4	9	-2.8	7	1	4	6.7	69	123	-47	60	16	2	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53	
NEW HAMPSHIRE	20	1013.5	1016.1	22.4	11.9	17.2	-0.2	31.7	10+	2.8	2	0	0	12.2	75	71	-19	13	3	0	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53	
ATLANTIC CITY	3	1015.2	1016.3	22.6	17.6	12.7	-0.1	32.3	30	9.4	2	0	0	10.6	65	198	-107	15	24	7	0	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53
NEWARK	17	1009.1	27.3	12.1	17.3	0.6	30.6	9	6.1	2	0	0	0	4	32	6	16	0	0	0	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53	
TRENTON II	1619	936.1	1009.8	25.8	9.3	17.6	-0.9	31.7	6	-1.1	4	0	0	2.2	42	63	-50	22	11	5	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53	
NEW MEXICO	1515	20.4	1009.1	27.3	12.1	19.7	-0.6	31.7	10+	2.8	4	0	0	4	5.0	45	-32	6	16	0	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53	
ALBUQUERQUE	1112	986.9	1009.1	27.3	12.1	19.7	-0.6	31.7	10+	2.8	4	0	0	4	5.0	45	-32	6	16	0	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53	
CLAYTON	1112	986.9	1009.1	27.3	12.1	19.7	-0.6	31.7	10+	2.8	4	0	0	4	5.0	45	-32	6	16	0	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53	
RUSSELL	1112	986.9	1009.1	27.3	12.1	19.7	-0.6	31.7	10+	2.8	4	0	0	4	5.0	45	-32	6	16	0	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53	
NEW YORK	84	1005.8	1016.5	21.4	9.7	15.0	-0.1	29.4	9	-3.9	6+	0	0	9.4	76	105	-22	45	15	3	0	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53
BINGHAMTON	485	937.7	1016.6	17.9	8.6	12.8	-0.1	29.4	9	-3.9	6+	0	0	9.4	76	108	-22	45	15	3	0	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53
BUFFALO	215	990.2	1015.7	19.2	8.4	13.8	-0.1	29.4	11	-3.9	10+	0	0	9.4	76	108	-34	45	15	3	0	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53
NEW YORK U	40	1012.9	1016.4	20.0	12.2	18.5	-0.1	31.7	11	-3.9	10+	0	0	11.1	60	153	-34	45	15	3	0	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53
NEW YORK KENNEDY	4	1015.0	1016.4	20.0	12.2	18.5	-0.1	31.7	11	-3.9	10+	0	0	11.1	60	153	-34	45	15	3	0	0	0	0	0	1.3	35	18.8	NW	10	5	13	6.7	53
NEW YORK LA GUARDIA	3	1015.6	1016.7	21.6	12.4	17.6	-0.1	31.7	11	-3.9	10+	0	0	11.1	60	153	-34	45	15	3	0	0	0</td											

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State and Station		Elevation (ground) Δ		Station \varnothing		Pressure mb		Temperature $^{\circ}\text{C}$		Relative humidity %		Precipitation mm		Wind Föhn miles (1.6 kilometers)		No. of days (sunrise to sunset)		Possible sunshine %																				
RHODE ISLAND PROVIDENCE	16	1014.6	1017.0	20.1	11.4	15.7	20.1	1.9	33.3	10	4.4	2	0	5.4	72	194	105	A3	18	3	0	0	0.6	22	10.7	30	5	6	8	17	7.2	4.9						
SOUTH CAROLINA CHARLESTON U	12	1015.2	1017.0	27.7	17.2	22.4	0.2	31.7	19	10.0	24	0	0	16.7	75	205	109	72	13	10	0	0	1.1	18	10.7	28	21	7	7	17	6.6	75						
COLUMBIA	65	1008.1	1016.1	27.1	17.5	21.3	-1.7	28.9	29+	10.4	26	0	0	14.4	73	155	71	42	13	10	0	0	0.6	16	9.4	32	13	9	4	18	6.3	77						
GRINNELL-SPARTMENT	292	991.4	1015.7	26.2	15.6	20.9	0.3	30.6	30	10.4	26	0	0	15.0	73	145	70	55	19	4	0	0	0.5	20	11.6	W17	8	6	17	6.4	57							
SOUTH DAKOTA	395	966.8	1013.7	17.8	18.0	19.2	4.8	11.7	12	1.7	2.2	1	4	5.6	69	49	-16	23	12	2	2	0	0.8	34	14.8	SE	4	11	16	7.2	71							
ABERDEEN	390	967.0	1014.6	19.2	10.2	10.4	0.9	12.0	16	3.4	2.8	1	3	2.8	53	40	-24	24	11	5	7	0	0.6	25	17.9	NW	3	12	15	13	6.7	47						
HURON	564	964.2	1014.2	19.3	19.2	12.9	-1.4	12.0	28	3.3	11	1	4	2.8	53	30	-42	17	11	5	7	0	0.6	36	14.3	W17	8	12	11	6.4	57							
RADIO CITY	10	1014.2	1014.2	19.2	19.3	19.2	0.4	12.0	28	0.6	4+	0	2	5.5	63	124	30	57	14	7	0	0	0.6	36	14.3	W17	8	12	11	6.4	57							
SIOUX FALLS	432	962.8	1015.3	24.8	11.2	18.0	-1.3	11.1	11	1.7	2.4	0	0	13.3	74	237	147	70	14	0	0	0	0	0	13.0	25	0	11	11	6.4	49							
TENNESSEE	403	961.4	1016.2	23.9	11.3	19.7	-0.7	28.9	11	3.2	1	0	0	11.7	71	85	11.7	71	22	13	4	0	0	0.5	26	13.0	28	10	13	8	10	13	6.4	46				
BRISTOL	203	961.2	1015.1	25.2	13.9	19.4	-0.8	30.0	11	4.3	2.6	1	3	1.1	77	234	147	86	12	10	0	0	0.4	23	13.0	19.4	8	10	13	6.4	46							
CHATTAUGA	299	980.4	1015.1	15.1	13.7	19.4	-0.8	30.0	11	3.2	2.6	0	0	13.9	75	183	100	55	10	8	0	0	0.8	28	10.3	29	4	8	7	18	6.5	44						
KNOXVILLE	10	1015.1	1015.3	24.7	13.4	19.4	-0.5	30.6	20	4.0	2.6	1	2	1.1	72	198	193	84	13	8	0	0	0.7	15	17.9	34	3	10	13	6.4	47							
MEMPHIS	180	993.9	1015.3	24.8	11.2	18.0	-1.3	11.1	11	1.7	2.4	0	0	13.3	74	237	147	70	14	0	0	0	0.5	21	9.8	32	25	0	11	11	6.4	49						
NASHVILLE	276	962.8	1015.3	24.8	11.2	18.0	-1.3	11.1	11	1.7	2.4	0	0	13.3	74	237	147	70	14	0	0	0	0	13.0	25	0	11	11	6.4	49								
OAK RIDGE	9	1015.3	1015.3	24.8	11.2	18.0	-1.3	11.1	11	1.7	2.4	0	0	13.3	74	237	147	70	14	0	0	0	0	13.0	25	0	11	11	6.4	49								
TEXAS	544	949.9	1011.8	27.5	14.4	21.0	-1.4	36.1	29	2.2	1.2	7	0	12.2	63	47	51	27	6	7	0	0	0	3.0	1.6	15.2	N1	8	9	14	5.3	66						
ABILENE	1098	889.9	1010.9	23.9	9.6	16.8	-1.9	33.9	19	0.6	4	1.9	0	15.0	77	200	100	67	11	11	0	0	1.4	18	9	18	0	10	14	6.5	61							
AMARILLO	182	991.2	1012.9	27.2	16.6	21.9	-1.2	32.2	20	1.2	1.2	1	0	16.1	73	185	114	84	14	7	0	0	2.3	14	14.3	NW	11	8	17	16	6.4	44						
BROWNSVILLE	6	1011.5	1012.0	29.4	20.6	21.0	-1.3	32.8	20	1.3	1.3	3	0	20.0	76	15	49	7	4	4	0	0	2.3	14	14.3	NW	11	8	15	10	6.5	67						
CORPUS CHRISTI	12	1010.8	1012.0	29.4	20.6	21.0	-1.3	32.8	20	1.3	1.3	3	0	20.0	76	109	28	61	7	3	0	0	0	1.6	15.0	30	30	5	13	13	6.4	69						
DALLAS-FORT WORTH	168	992.0	1013.0	26.8	15.1	20.9	-0.9	34.4	20	1.6	1.6	4	0	15.0	70	150	36	51	10	7	0	0	0	1.6	15.0	19.8	19	8	10	13	6.4	60						
EL PASO	313	975.3	1010.8	31.2	24.3	29.2	-1.3	41.1	30	6.3	1.2	12	0	14.4	66	45	10	8	6	0	0	0	0	1.4	12.0	11	6	11	12	5.3	89							
GALVESTON	1194	879.4	1008.9	29.8	12.4	21.2	-1.2	36.1	31	2.6	1.3	12	0	13.3	36	6	-2	3	5	5	0	0	0	1.4	15.6	25	16	17	10	4.4	3.1							
HOUSTON-INTERCON	29	1009.8	1013.5	26.9	16.7	22.8	-1.5	33.3	31	10.6	5	1	0	17.8	77	88	34	33	7	5	0	0	0	1.6	16.5	30	22	8	10	13	6.4	68						
LUBBOCK	992	901.5	1010.5	27.5	13.8	20.7	-0.5	35.0	18	0.4	3.9	10	0	7.2	51	102	21	79	6	7	0	0	0	1.9	14.9	32	9	11	12	5.5	72							
MIDLAND-ODD	869	913.5	1010.0	29.2	13.8	20.7	-0.9	35.0	18	0.4	3.9	10	0	8.3	50	29	26	72	5	7	0	0	0	2.2	14.9	24	7	10	11	5.4	61							
PONTIAC	5	1013.5	1013.5	27.8	17.6	22.7	-1.2	31.1	31	1.2	1.2	1.2	0	11.7	78	112	54	52	15	11	0	0	0	1.7	15.6	22	2	0	11	14	6.2	61						
SAN ANGELO	580	984.8	1012.5	28.3	18.2	23.3	-1.3	37.2	29	1.2	1.2	8	0	11.1	72	50	28	20	10	6	0	0	0	2.4	15.6	11.2	2	11	12	5.4	51							
SAN ANTONIO	240	984.8	1013.5	27.9	18.1	23.1	-1.7	32.8	30	8.9	2.5	2.0	1.7	8	78	169	71	77	0	0	0	0	2.2	13.0	24	7	12	13	6.4	51								
VICTORIA	153	995.2	1013.3	26.2	15.4	20.8	-1.2	31.1	30	7.8	1.2	0	0	16.1	76	246	130	103	18	9	0	0	0	2.1	13.0	29	17	8	12	6.6	51							
WACO	301	976.3	1012.6	28.1	21.1	21.1	-1.3	38.9	19	2.2	1.2	8	0	13.3	67	119	3	107	6	3	0	0	0	2.1	13.0	18	17	10	4	17	5.3	51						
WICHITA FALLS	UTAH	1533	946.2	1012.2	22.4	3.9	13.2	-0.4	30.0	22	2.2	1.1*	1.1*	0	8	49	24	9	7	7	3	1	0	0	0	0	0	20.1	5	14	8	9	4.6	72				
SALT LAKE CITY	1287	969.3	1011.4	23.4	7.9	15.7	1.1	31.7	23	1.1	1.1*	0	0	3.3	49	21	-17	8	7	7	1	0	0	0	0	0	0	16.1	5	12	2	12	17	4.7				
VERMONT	101	103.7	1016.2	20.2	9.2	14.7	2.1	33.3	9	-1.1	6	1	2	8.3	68	79	3	23	14	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
BURLINGTON	101	103.7	1016.2	20.2	9.2	14.7	2.1	33.3	9	-1.1	6	1	2	8.3	68	79	3	23	14	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
VIRGINIA	LYNCHBURG	279	982.7	1016.9	23.4	11.9	17.7	-0.7	28.3	11	5.0	26	0	0	13.9	73	79	24	11	15	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NORFOLK	7	1015.9	1016.9	23.4	14.7	19.3	0.0	29.4	9	5.0	26	0	0	13.9	73	257	147	52	15	15	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
RICHMOND	50	1016.9	1016.2	25.4	13.6	19.5	0.3	20.6	9	6.7	5*	0	0	15.6	73	81	97	172	54	15	15	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ROANOKE	350	974.3	1015.9	23.8	11.5	17.7	-0.3	29.4	10	3.3	2.0	0	0	12.2	73	67	21	30	14	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
WALLOPS ISLAND	3	1015.9	20.1	14.4	17.3	-0.1	27.2	4	7.8	6	0	0	0	0	13.3	67	205	119	70	13	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASHINGTON	59	1010.5	1017.9	20.0	5.2	12.6	0.5	27.2	25	3.9	1.1*	1.																										

CLIMATOLOGICAL DATA
METRIC UNITS

MAY 1979

State and Station	Elevation (ground)	Station Q	Sea level	Pressure		Temperature		Precipitation		Wind		Fog		No. of days (sunrise to sunset)		Possible sunshine		
				mb	°C	°C	°C	mm	mm	m/s	km/h	km/h	km/h	%				
WASHINGTON	SEATTLE - ACURA	1001.7	1018.0	19.3	8.7	16.0	1.3	27.2	25	6.1	24+	0	0	26	4	13	14	
	SPOKANE	930.9	1014.3	19.3	5.9	12.6	0.0	28.3	22	1.1	29	0	0	27	4	15	12	
	STANPEE PASS R	1205.8	980.1	11.2	2.8	7.0	0.8	21.7	25+	-1.7	28	72	34	2.6	21	14.3	6.5	
	WALLA WALLA U	289.2	321	10.5	16.8	1.4	33.9	22	6.1	28	1.0	0	0	25	13.21	9	14	
	YAKIMA	976.6	1014.8	23.6	6.9	15.3	0.9	30.6	22	1.1	a	0	0	26	3.1	10	13	
WEST INNIFS	SAN JUAN P.R.	4	1012.5	1015.0	30.6	24.2	27.4	1.2	34.4	4+	22.2	20	3	0	22.8	80	142	9
WEST VIRGINIA	BECKLEY	763	928.2	1015.4	21.8	9.4	15.6	0.9	28.3	11+	2.8	17+	0	0	9.4	71	127	3
	CHARLESTON	286	981.4	1015.8	24.9	10.3	17.2	0.5	32.2	12	2.8	12	0	0	16	5.3	28	12.5
	ELINS	594	965.8	1015.4	21.9	6.9	14.4	-0.1	31.7	9	-3.9	2	1.0	0	17	5	0	12
	HUNTINGTN	252	985.4	1015.4	24.2	11.0	17.6	-0.4	31.7	8	3.3	6	1.0	0	18	5	0	12
	PARKERBLK R. U	187			23.2	10.3	16.8	-0.9	31.7	9	2.8	5	0	0	18	5	0	12
WISCONSIN	GREEN BAY	208	988.9	1014.6	17.5	5.2	11.3	-1.2	28.9	10	-1.1	5+	0	2	6.1	72	76	4
	LA CROSSE	198	990.2	1014.4	21.2	7.7	14.4	-0.6	31.1	17	1.1	2+	0	0	7.2	69	50	4
	MADISON	262	982.7	1014.2	21.2	6.2	13.7	0.4	30.0	10+	-2.2	1	0	0	18	36	10	7
	MILWAUKEE	205	989.8	1015.0	18.3	7.2	12.7	0.4	30.0	8	0.6	5+	0	0	19	27	23	7
WYOMING	CASPER	1627	936.4	1013.5	17.1	2.1	9.6	-1.9	29.4	27	-2.8	31+	0	14	1.1	60	57	5
	CHEYENNE	1867	910.2	1012.9	15.9	3.9	9.9	-1.4	25.6	28+	-4.4	10	0	7	0.6	58	74	7
	LANOE	1696	928.0	1013.0	17.8	3.7	10.8	3.7	28.3	27	-2.8	7	0	9	0.6	54	70	6
	SHERIDAN	1208	977.8	1014.7	17.2	3.3	10.2	-1.5	28.9	27	-2.2	3	0	7	3.3	65	13	5

HEATING DEGREE DAYS

(Base 65°F.)

MAY 1979

State and Station	Current season			State and Station	Current season			State and Station	Current season			State and Station	Current season		
	This month	Period July through this month	Normals		This month	Period July through this month	Normals		This month	Period July through this month	Normals		This month	Period July through this month	Normals
ALABAMA BIRMINGHAM U	25	2800	2844	IDAHO BOISE	241	6346	5736	NEBRASKA GNAO ISLAND	258	7615	6385	TENNESSEE BRISTOL	88	4332	4298
BIRMINGHAM	33	3269	3302	LEWISTON	190	6069	5380	LINCOLN	197	7339	6196	CHATTANOOGA	42	3399	3505
HUNTSVILLE	48	1606	1684	POCATELLO	320	7702	6925	NORFOLK	248	7980	6944	KNOXVILLE	46	3561	3478
MOBILE	4	2000	2269	ILLINOIS CAIRO U	61	4394	3833	NORTH PLATTE	259	7933	6678	MEMPHIS	23	3261	3227
MONTGOMERY	9	1132	12801	CHICAGO O HARE	233	7080	6452	OMAHA (EPPELY)	156	6789	6029	NASHVILLE	57	3958	3696
ALASKA ANCHORAGE	454	9135	10599	CHICAGO MIWAY	216	7040	6101	OMAHA (NORTH)	199	7471	6568	OAK RIDGE	86	4101	3944
ANNETTE	532	6854	6795	MOLINE	172	7393	6375	SCOTTSBLUFF	288	7079	6683	TENNESSEE AMARILLO	55	2920	2610
BARROW	1395	18997	19305	PEORIA	194	6983	6081	NEVAOA	265	6729	7293	AMARILLO AUSTIN	144	4753	4173
BARTER ISLANDO	1242	18407	19067	ROCKFORD	245	7833	6810	ELY	400	7939	7573	BROWNSVILLE	10	2071	1737
BETHEL	634	11332	12801	SPRINGFIELD	119	6286	5546	LAS VEGAS	18	2552	2601	CORPUS CHRISTI	0	736	650
BETTLES	521	14712	15655	INDIANA EVANSVILLE	106	5147	4624	RENO	247	6112	5877	DALLAS FT WORTH	29	2766	2382
BIG DELTA	420	12807	13441	FORT WAYNE	198	6566	6184	WINNEMUCCA	205	6343	6480	DEL RIO	0	1717	1523
COLO BAY	661	7991	9277	EVANSTON	170	5959	5566	NEW HAMPSHIRE CONCORD	280	7517	7302	EL PASO	26	2754	2678
FAIRBANKS	463	13582	14134	INDIANAPOLIS	170	5959	5566	MT WASHINGTON 085	841	13217	13269	GALVESTON	12	1375	1224
GULKA	528	8789	8653	SOUTH BEND	241	6621	6427	NEW JERSEY ATLANTIC CITY	110	5209	4937	HOUSTON INTERCON	2	1708	1434
HOMER	651	8892	9875	IOWA BURLINGTON	162	6990	6133	ATLANTIC CITY U	173	4943	4678	LUBBOCK	45	3645	3545
JUNEAU	528	8789	8653	065 MOINES	163	7321	6684	NEWARK	68	4809	5034	MIDLAND	34	3113	2621
KING SALMON	544	9227	11153	OUOBUEQUE	247	8213	7228	TRENTON U	98	4973	4947	PORT ARTHUR	0	1463	1518
KODIAK	586	7273	8401	SIOUX CITY	255	8293	6920	NEW YORK KENNEDY	88	4754	5175	SAN ANGELO	34	2754	2240
KOTZEBUE	969	13668	15394	WATERLOO	230	8200	7374	NEW YORK LA GUARDIA	94	5074	4909	SAN ANTONIO	4	1723	1570
MC GRATH	507	13058	14202	KANSAS CONCORIDA	164	6384	5601	ROCHESTER	310	6881	6673	VICTORIA	6	1514	1227
NAME	715	11801	13740	OODGE CITY	175	5687	5025	SYRACUSE	242	6863	6632	WACO	30	2608	2058
ST. PAUL ISLANDO	747	8777	10396	GOODLAND	269	6370	6064	NEW MEXICO ALBUQUERQUE	100	4156	4292	WICHITA FALLS	47	3525	2904
UNALAKLEET	553	10603	11402	TOPEKA	129	6229	5230	CLAYTON	252	5565	5169	UTAH MILFORD	284	6828	6330
VALDEZ	575	9277	10131	WICHITA	104	5473	4680	ROSWELL	51	3729	3697	SALT LAKE CITY	196	5837	5895
YAKUTAT	624	8929	9074	KANSAS COVINGTON	179	5576	5061	NEW YORK U	285	6940	6869	VERMONT BURLINGTON	224	7870	7813
ARIZONA FLAGSTAFF	524	7606	7103	KENTUCKY COVINGTON	110	5001	4721	NEW YORK KENNEDY	55	4750	4848	WYOMING OLYMPIA	309	5600	5333
PHOENIX	0	1436	1552	LEXINGTON	94	4689	4640	NEW YORK LA GUARDIA	94	5074	4909	GUILLAYUTE	383	5743	5657
TUCSON	20	1876	1752	LOUISVILLE	240	5001	4458	ROCHESTER	288	6405	6191	CHARLESTON	215	4678	4594
WINSLW	156	4941	4719	NEW ORLEANS SHREVEPORT	11	2409	2167	SYRACUSE	138	5343	4837	ELKINS	235	4743	5018
YUMA	0	1168	1005	LOUISIANA BATON ROUGE	5	1870	1670	NEW YORK U	290	6130	6114	HUNTINGTON	110	4762	4613
ARKANSAS FORT SMITH	54	3969	3336	LAKE CHARLES	0	1713	1498	NEW YORK KENNEDY	185	5899	5669	PARKERSBURG U	152	5271	4809
LITTLE ROCK	13	3358	3354	NEW ORLEANS SHREVEPORT	2	1450	1468	NEW YORK LA GUARDIA	290	6637	5794	WALLA WALLA U	119	5407	4786
NO. LITTLE ROCK	35	3653	3088	LOUISIANA BATON ROUGE	75	4592	4729	NEW YORK U	130	5343	4837	WALLA WALLA U	178	6568	5915
CALIFORNIA BAKERFIELD	8	1891	2185	MAINE HASSACHUSETTS	207	6434	6281	NEW YORK U	290	6130	6114	WASHINGTON OLYMPIA	309	5600	5333
BISHOP	97	4382	4275	CARIBOU	326	9020	9462	NEW YORK U	185	5899	5669	GUILLAYUTE	383	5743	5657
BLUE CANYON	303	5661	5567	PORTLAND	311	7412	7392	NEW YORK U	166	5892	5628	SEATTLE	215	4678	4594
EUREKA U	374	4481	4385	WORCESTER	243	6941	6787	NEW YORK U	290	6637	5794	SEATTLE-TACOMA	235	4743	5018
FRESNO	34	2385	2641	MARYLAND BALTIMORE	75	4592	4729	NEW YORK U	130	5343	4837	SPokane	313	7796	6691
LONG BEACH	30	1441	1583	MAINE MASSACHUSETTS	207	6434	6281	NEW YORK U	290	6130	6114	STAMPEDE PASS R	624	9223	8926
LOS ANGELES	74	1570	1748	ALASKA BURLINGTON	75	4592	4729	NEW YORK U	130	5343	4837	WALLA WALLA U	119	5407	4786
LOS ANGELES U	46	1557	1220	MAINE MASSACHUSETTS	207	6434	6281	NEW YORK U	130	5343	4837	WASHINGTON YAKIMA	178	6568	5915
MT SHASTA R	333	6259	5712	ALASKA BURLINGTON	75	4592	4729	NEW YORK U	130	5343	4837	WYOMING CASPER	479	8461	7408
117	2662	2795	MAINE MASSACHUSETTS	207	6434	6281	NEW YORK U	130	5343	4837	CHEYENNE	459	7472	7099	
OAKLAND	41	2480	2660	ALASKA BURLINGTON	75	4592	4729	NEW YORK U	130	5343	4837	LANDER	415	9095	7719
RIO BLUFF	57	2884	2823	ALASKA BURLINGTON	75	4592	4729	NEW YORK U	130	5343	4837	SHERIDAN	447	9175	7540
SACRAMENTO	57	1080	1455	ALASKA BURLINGTON	75	4592	4729	NEW YORK U	130	5343	4837	WYOMING	479	8461	7408
SAN OIEGO	148	2959	2922	ALASKA BURLINGTON	75	4592	4729	NEW YORK U	130	5343	4837	CHEYENNE	459	7472	7099
SAN FRANCISCO U	185	2732	2866	ALASKA BURLINGTON	75	4592	4729	NEW YORK U	130	5343	4837	LANDER	415	9095	7719
SAN FRANCISCO U	185	3107	2866	ALASKA BURLINGTON	75	4592	4729	NEW YORK U	130	5343	4837	SHERIDAN	447	9175	7540
SANTA MARIA	189	2866	2866	ALASKA BURLINGTON	75	4592	4729	NEW YORK U	130	5343	4837	WYOMING	479	8461	7408
STOCKTON	27	2551	2791	ALASKA BURLINGTON	75	4592	4729	NEW YORK U	130	5343	4837	CHEYENNE	459	7472	7099
COLORADO COLORADO SPRINGS	438	9353	8438	ALASKA BURLINGTON	75	4592	4729	NEW YORK U	130	5343	4837	LANDER	415	9095	7719
COLORADO PUEBLO	336	6788	6370	ALASKA BURLINGTON	75	4592	4729	NEW YORK U	130	5343	4837	SHERIDAN	447	9175	7540
DENVER	313	6379	5936	ALASKA BURLINGTON	75	4592	4729	NEW YORK U	130	5343	4837	WYOMING	479	8461	7408
GRAND JUNCTION	192	6609	5585	ALASKA BURLINGTON	477	9466	8993	OKLAHOMA CITY TULSA	81	4279	3695	CHEYENNE	459	7472	7099
PUEBLO	247	6124	5366	ALASKA BURLINGTON	477	9466	8993	OKLAHOMA CITY TULSA	47	4228	3680	LANDER	415	9095	7719
CONNECTICUT BRIDGEPORT	114	5236	5437	MINNESOTA DULUTH	349	10335	9562	OKLAHOMA CITY TULSA	81	4279	3695	SHERIDAN	447	9175	7540
MARTFORD	81	6392	6326	INTERNATIONAL FALLS	500	11524	10379	OKLAHOMA CITY TULSA	47	4228	3680	WYOMING	479	8461	7408
DELAWARE WILMINGTON	89	5151	4940	MINNEAPOLIS ST JOSEPH	307	8564	8004	OKLAHOMA CITY TULSA	81	4279	3695	CHEYENNE	459	7472	7099
WILMINGTON	89	5151	4940	ROCHESTER ST CLOUD	319	9347	8149	OKLAHOMA CITY TULSA	47	4228	3680	LANDER	415	9095	7719
OIST OF COLUMBIA	115	5049	5005	MISSISSIPPI JACKSON	20	2484	2300	OKLAHOMA CITY TULSA	81	4279	3695	SHERIDAN	447	9175	7540
WASHINGTON DULLES	115	3915	4211	MISSISSIPPI MERIDIAN	15	2546	2388	OKLAHOMA CITY TULSA	47	4228	3680	WYOMING	479	8461	7408
WASHINGTON NATIONAL	30	3915	4211	MISSOURI COLUMBIA REGIONAL	94	5573	5067	OKLAHOMA CITY TULSA	81	4279	3695	CHEYENNE	459	7472	7099
FLORIDA APPALACHICOLA U	4	1491	1361	KANSAS CITY	115	6028	5342	OKLAHOMA CITY TULSA	47	4228	3680	LANDER	415	9095	7719
DAYTONA BEACH	0	682	897	ST LOUIS	170	6552	5429	OKLAHOMA CITY TULSA	81	4279	3695	SHERIDAN	447	9175	7540
FORT MYERS	0	259	437	SPRINGFIELD	80	5518	4740	OKLAHOMA CITY TULSA	47	4228	3680	WYOMING	479	8461	7408
JACKSONVILLE	3	1510	1327	GREAT FALLS	132	5531	4560	OKLAHOMA CITY TULSA	81	4279	3695	CHEYENNE	459	7472	7099
KEY WEST	0	39	64	HAVRE	392	9767	8541	OKLAHOMA CITY TULSA	47	4228	3680	LANDER	415	9095	7719
MIAMI	0	180	204	HELENA	359	8886	7996	OKLAHOMA CITY TULSA	81	4279	3695	SHERIDAN	447	9175	7540
ORLANDO	0	571	733	KALISPELL	404	9170	8305	OKLAHOMA CITY TULSA	47	4228	3680	WYOMING	479	8461	7408
PENSACOLA	4	1522	1578	MILES CITY	365	9347	7772	OKLAHOMA CITY TULSA	81	4279	3695	CHEYENNE	459	7472	7099
TALLAHASSEE	13	1744	1563	MISSOULA	389	8592	7730	OKLAHOMA CITY TULSA	47	4228	3680	LANDER	415	9095	7719
TAMPA	0	565	718	MISSOURI COLUMBIA REGIONAL	94	5573	5067	OKLAHOMA CITY TULSA	81	4279	3695	SHERIDAN	447	9175	7540
WEST PALM BEACH	0	267	299	OKLAHOMA CITY TULSA	47	4228	3680	OKLAHOMA CITY TULSA	81	4279	3695	WYOMING	479	8461	7408
GEORGIA ATHENS	22	2774	2975	OKLAHOMA CITY TULSA	47	4228	3680	OKLAHOMA CITY TULSA	81	4279	3695	CHEYENNE	459	7472	7099
ATLANTA	16	2777	3005	OKLAHOMA CITY TULSA	47	4228	3680	OKLAHOMA CITY TULSA	81	4279	3695	LANDER	415	9095	7719
AUGUSTA	15	2482	2547	OKLAHOMA CITY TULSA	47	4228	3680	OKLAHOMA CITY TULSA	81	4279	3695	SHERIDAN	447	9175	7540
COLUMBUS	7	2109	2378	OKLAHOMA CITY TULSA	47	4228	3680	OKLAHOMA CITY TULSA	81	4279	3695	WYOMING	479	8461	7408
MACON	7	2178	2240	OKLAHOMA CITY TULSA	47	4228	3680	OKLAHOMA CITY TULSA	81	4279	3695	CHEYENNE	459	7472	7099
ROME	31	3142	3342	OKLAHOMA CITY TULSA	47	42									

COOLING DEGREE DAYS

(Base 65°F.)

MAY 1979

State and station	Current season			Current season			Current season			Current season			Current season		
	This month	Period January through this month	Normals January through this month	This month	Period January through this month	Normals January through this month	This month	Period January through this month	Normals January through this month	This month	Period January through this month	Normals January through this month	This month	Period January through this month	Normals January through this month
ALABAMA BIRMINGHAM U	176	227	371	MILO	278	1074	1033	GRAND ISLAND	36	36	59	SOUTH CAROLINA CHARLESTON	241	323	343
BIRMINGHAM	188	240	297	HONOLULU	412	1329	1341	LINCOLN	42	49	81	ABERDEEN	11	11	15
HUNTSVILLE	113	138	247	KAHULUI	346	1201	1204	NORFOLK	39	41	48	CHARTERSTON U	178	255	407
MOBILE	207	645	530	LIMU	320	1236	1158	NORTH PLATTE	27	27	30	COLUMBIA	157	206	319
MONTGOMERY	214	308	384					OMAHA (EROPLEY)	64	72	96	GRANVILLE SPRNGTNRG	104	200	193
ALASKA ANCHORAGE	0	0	0	BOISE	27	27	17	SCOTTSDALE	19	27	16	SOUTH DAKOTA HURON	13	13	28
ANNECY FF	0	0	0	LEXINGTON	15	15	18	VALENTINE	20	24	22	RAPID CITY	15	19	15
BARROW	0	0	0	POCATELLO	0	0	0	NEVADA	9	9	0	SIOUX FALLS	25	28	32
BARTER ISLAND	0	0	0					ELKO	0	0	0				
BETHEL	0	0	0	CAIRO U	131	145	222	ELY	0	0	0	TENNESSEE BRISTOL	39	60	105
BETLES	0	0	0	CHICAGO O HARE	61	63	35	LAS VEGAS	346	450	372	CHATTANOOGA	119	131	207
BIG DELTA	0	0	0	CHICAGO MIDWAY	51	52	53	RENO	9	9	6	KNOXVILLE	111	146	208
COLD BAY	0	0	0	DOANE	83	83	61	WINNEMUCKA	29	29	11	MEMPHIS	184	271	284
FAIRBANKS	0	0	0	PEDRA	62	62	74				NASHVILLE	103	119	201	
GULKAHA	0	0	0	ROCKFORD	56	56	41	NEW HAMPSHIRE	15	16	8	OAK RIDGE	74	81	163
WOMER	0	0	0	SPRINGFIELD	93	95	88	CONCORD	0	0	0				
JUNEAU	0	0	0					MT WASHINGTON OBS	0	0	0	TEXAS ABILENE	209	305	379
KINYA SALMON	0	0	0	INDIANA	65	78	142	NEW JERSEY	50	95	25	AMARILLO	64	76	119
KODIAK	0	0	0	EVANSVILLE	58	62	48	ATLANTIC CITY	5	5	13	AUSTIN	216	356	544
KOTZEBUE	0	0	0	FORT WAYNE	57	64	74	ATLANTIC CITY U	59	61	47	BROWNSVILLE	380	992	1098
MC CRATH	0	0	0	INDIANAPOLIS	48	50	47	NEWARK	44	45	45	CORPUS CHRISTI	366	860	837
NOME	0	0	0	SOUTH BEND				TRENTON U				DALLAS FT WORTH	179	256	355
ST. PAUL ISLAND	0	0	0	IOWA	65	65	74	NEW MEXICO	67	72	73	DEL RIO	340	387	753
TALKEETNA	0	0	0	RURLINGTON	48	48	59	ALBUQUERQUE	6	7	17	EL PASO	190	274	285
UNALASKALET	0	0	0	DES MOINES	36	36	30	CLAYTON	133	168	154	GALVESTON	271	421	594
VALDEZ	0	0	0	DUBUQUE	33	36	68	ROSWELL				HOUSTON INTERCON	261	485	587
YAKUTAT	0	0	0	SIOUX CITY	76	87	125				LUBBOCK	183	227	187	
ARIZONA FLAGSTAFF	0	0	0	WATERLOO	35	35	37	NEW YORK				MIDLAND	216	284	324
PHOENIX	411	613	531	KANSAS	39	45	96	ALBANY	39	39	27	PORT ARTHUR	250	481	553
TUCSON	249	351	397	CONCORDIA	46	71	94	BINGHAMTON	23	23	19	SAN ANGELO	263	359	480
MINSLOW	30	32	61	DODGE CITY	29	32	27	BUFFALO	40	66	14	SAN ANTONIO	285	532	598
YUMA	436	728	744	GOODLAND	76	87	125	NEW YORK U	71	75	54	VICTORIA	277	570	666
AKANSAS FORT SMITH	113	153	238	TOREKA	81	100	155	NEW YORK KENNEDY	26	26	27	WACO	177	200	464
LITTLE ROCK	178	250	223	WICHITA				NEW YORK LA GUARDIA	41	41	46	WICHITA FALLS	208	277	352
ND. LITTLE ROCK	131	177	249	KENTUCKY	38	48	97	ROCHESTER	52	53	22	UTAH MILFORD	4	4	10
CALIFORNIA BAKERSFIELD	321	373	248	LEXINGTON	57	67	11R	SYRACUSE	50	52	18	SALT LAKE CITY	54	56	30
BISHOP	70	70	77	LOUISVLLUE	73	88	122	NORTH CAROLINA	55	56	66				
BLUE CANYON	12	12	0	RAVON ROUGE	233	425	524	CAPE HATTERAS R	121	146	126	VERMONT BURLINGTON	29	31	15
EUREKA U	0	0	0	LAKE CHARLES	248	428	563	CHARLOTTE	122	154	186				
FRESNO	229	268	164	NEW ORLEANS	307	582	588	GREENSBORO	95	127	146	VIRGINIA RICHMOND	54	77	99
LONG BEACH	61	96	65	SHREVEPORT	178	311	420	RALEIGH	105	139	150	ROANOKE	112	136	124
LOS ANGELES	35	44	38	MAINE	8	8	0	WILMINGTON	210	305	276	WALLOPS ISLAND	117	162	129
LOS ANGELES U	67	98	110	CARIBOU	15	15	0	NORTH DAKOTA	6	6	11		26	27	57
MT SHASTA R	2	6	8	PORTLAND				BISMARCK	12	12	11				
OAKLAND	13	19	0					FARGO	12	12	11				
REO BLUFF	246	252	192					WILLISTON	12	12	7				
SACRAMENTO	117	117	124	MARYLAND	72	91	70	OHIO	36	41	36	WASHINGTON OLYMPIA	31	32	24
SAN DIEGO	46	62	51	BALTIMORE	10	10	6	CINCINNATI ABBE DB	64	77	117	QUILLAYUTE	0	0	0
SAN FRANCISCO	11	11	0	DETROIT	46	46	33	CLEVELAND	42	48	37	SEATTLE	1	1	6
SAN FRANCISCO U	11	11	0	DETROIT METRN	32	32	20	COLUMBUS	54	61	55	SEATTLE-TACOMA	2	2	0
SANTA MARIA	8	8	0	GRAND RAPIDS	43	43	21	DAYTON	63	76	66	SPokane	1	1	8
STOCKTON	192	196	95	HOUGHTON LAKE	46	46	29	MANSFIELD	38	42	52	STAMFORD RASS R	0	0	0
COLORADO ALAMOSA	0	0	0	LANSING	18	18	11	TOLEDO	46	46	37	WAHLA WALLA U	44	47	39
COLORADO SPRINGS	1	1	6	MUSKEGON	68	68	26	YOUNGSTOWN	38	45	29	YAKIMA	12	12	19
DENVER	2	2	2	SAULT STE MARIE	29	29	0								
GRANDE JUNCTION	52	58	47												
PUEBLO	25	26	33	MINNESOTA	0	0	0								
CONNECTICUT BRIDGEPORT	16	16	17	OKLAHOMA	6	6	0								
HARTFORD	60	60	18	INTERNATIONAL FALLS	17	17	0								
DELAWARE WILMINGTON	57	62	4R	MINNEAPOLIS	17	17	24								
DIST. OF COLUMBIA WASHINGTON DULLES	69	83	57	ROCHESTER	21	21	19	OKLAHOMA CITY	112	140	191	WEST INDIES SAN JUAN P.R.	512	2171	1775
WASHINGTON NATIONAL	120	143	116	ST. CLOUD	14	14	14	TULSA	167	224	205	WEST VIRGINIA BECKLEY	31	92	24
FLORIDA APPALACHICOLA U	252	491	924	MISSISSIPPI	190	296	404	OREON	0	0	0	CHARLESTON	69	100	118
DAYTONA BEACH	372	695	650	JACKSON	168	238	395	ASTORIA	0	0	0	ELKINS	21	23	25
FORT MYERS	444	1044	1000	MERIDIAN				RURTLAND	18	18	7	HUNTINGTON	76	106	120
JACKSONVILLE	259	440	526					SALEM	0	0	0	PARKERSBURG U	70	90	94
KEY WEST	516	1486	1592	MISSOURI	73	83	120	SEXTON SUMMIT R	5	5	0				
MAMI	492	1203	1181	COLUMBIA REGIONAL	77	81	111	RADICAT	480	2041	1985	WISCONSIN GREEN BAY	6	6	12
ORLANDO	370	712	915	KANSAS CITY	48	48	11A	KOROR R	442	1845	1857	LA CROSSE	30	30	38
PENSACOLA	276	640	563	ST. JOSEPH	102	113	154	KHAIJALEIN	547	2314	2475	MADISON	93	33	18
TALLAWASSEE	241	356	527	ST. LOUIS	56	66	127	HAJURO	544	2578	2504	MILWAUKEE	16	16	13
TAMPA	344	144	865	SPRINGFIELD				PAGO PAGO	501	2428	2434				
WEST PALM BEACH	349	905	1052					PONAPE R	520	2511	2372	WYOMING CASPER	0	0	6
GEORGIA ATLHENS	180	220	224	MONTANA	12	12	8	RHODE ISLAND	442	43	38	CHEYENNE	1	1	0
ATLANTA	181	237	193	GLASGOW	8	8	0	BLACK ISLAND	29	32	13	LANDER	2	2	0
AUGUSTA	197	235	303	GREAT FALLS	2	2	8	PROVIDENCE	43	48	69	SHERIDAN	1	1	7
COLUMBUS	243	352	360	WAVER	5	5	8		44	48	64				
MACON	210	286	418	HELENA	1	1	0		45	50	46				
ROME	158	191	183	KALISPELL	0	0	0		32	94	30				
SAVANNAH	282	420	424	MILES CITY	26	30	19		48	51	43				
				MISSOULA	0	0	0								

STORM SUMMARY

MAY 1979

STATE	TORNADOES				HAILSTORMS				WINDSTORMS				LIGHTNING				@HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				φ ALL OTHER						
	NUMBER	DAYS	DEATHS	INJURIES	† DAMAGE	DEATHS	INJURIES	† DAMAGE	CROPS	DEATHS	INJURIES	† DAMAGE	CROPS	DEATHS	INJURIES	† DAMAGE	CROPS	DEATHS	INJURIES	† DAMAGE	CROPS	DEATHS	INJURIES	† DAMAGE	CROPS	DEATHS	INJURIES	† DAMAGE	CROPS		
Alabama	5	2		1	5																										
Alaska	6	2		2	6																										
Arizona																															
Arkansas	*																														
California	*																														
Colorado	*	3	2																												
Connecticut	*																														
Delaware																															
Florida	27	5	1	112	7																										
Georgia																															
Hawaii	*																														
Idaho																															
Illinois																															
Indiana																															
Iowa	3	2		7	5																										
Kansas	2	2																													
Kentucky	1	1																													
Louisiana																															
Maine	*																														
Maryland & DC	1	1																													
Massachusetts																															
Michigan	3	3																													
Minnesota																															
Mississippi																															
Missouri																															
Montana																															
Nebraska																															
Nevada																															
New Hampshire	*																														
New Jersey																															
New Mexico	2	2																													
New York	1	1																													
North Carolina	1	1																													
North Dakota																															
Ohio																															
Oklahoma	7	2	1	26	6																										
Oregon																															
Pacific	*																														
Pennsylvania																															
Puerto Rico	1	1																													
Rhode Island																															
South Carolina	3	3		?	?																										
South Dakota	3	1		5	5																										
Tennessee																															
Texas	39	12																													
Utah																															
Vermont	*																														
Virginia																															
Virgin Islands	*																														
Washington	1	1																													
West Virginia	2	2																													
Wisconsin	1	1																													
Wyoming																															

RAWINSONDE DATA

Average monthly values

MAY 1970

ALBANY, NY 1007 MB		ALBUQUERQUE, NM 836 MB		AMARILLO, TX 889 MB		ANCHORAGE, AK 1006 MB		ANNETTE, AK 1012 MB																
Standard pressure surface mb	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind Direction tens of deg.	Speed m.p.s.				
SFC	31	86	11.7	9.1	26	1.9	30	1,619	10.8	.5	31	1,095	11.4	6	4	31	45	7.7	3.5	1				
1000	29	153	11.9	7.2	26	1.3	30	1,619	10.8	.5	31	1,472	13.4	4	1	23	116	7.9	2.1	15				
950	31	575	10.7	6.0	26	1.5					31	1,988	11.5	4	23	1,200	5.5	-5.0	-0.1	1,452				
900	31	1,025	8.9	3.9	27	2.6					31	3,090	4.0	5	26	633	1,895	-4.2	-6.9	1,934				
850	31	1,497	6.6	1.7	26	3.7					31	3,688	-4.8	5	27	4,088	2,401	-2.9	-7.7	10,612				
800	31	1,992	4.2	-4.4	26	5.7					31	4,323	-4.8	6	27	4,812	2,935	-3.2	-10.6	12,016				
750	31	2,516	2.0	-7.8	25	7.9	30	2,524	8.2	.2	27	2,520	9.1	6	27	6,49	3,120	-2.9	-7.7	2,442				
700	31	3,070	-1.0	-13.5	25	9.2	30	3,090	4.0	.5	27	4,81	5.2	6	26	6,49	3,120	-6.3	-15.2	13,213				
650	31	3,658	-4.2	-16.6	25	10.1	30	3,688	-4.8	.8	27	5.4	3,690	1.3	-10.5	26	6,84	3,1500	-14.5	-20.5	12,303			
600	31	4,285	-7.7	-21.1	25	11.8	30	4,323	-4.8	.8	27	6.8	4,329	-3.3	-13.4	24	7.3	3,151	4,102	-18.4	-24.3	13,133		
550	31	4,957	-11.7	-24.6	25	14.1	30	5,002	-9.8	.4	26	7.2	5,011	-7.8	-18.3	25	8.6	3,1474	-22.6	-28.5	12,285			
500	31	5,682	-16.0	-29.2	25	16.2	30	5,732	-14.2	.2	24	9.0	5,744	-12.7	-23.8	24	9.9	3,151	5,439	-27.4	-35.6	12,126		
450	6	6,467	-21.3	-34.5	24	15.9	30	6,524	-19.4	.1	21	10.3	6,542	-18.1	-20.6	20	11.1	3,161	6,542	-18.1	-20.6	14,433		
400	31	7,352	-26.4	-40.5	24	17.6	30	7,388	-25.5	.3	21	11.2	7,388	-24.5	-36.6	20	12.4	3,170	7,388	-24.8	-36.0	14,440		
350	31	8,374	-30.9	-44.5	24	19.2	30	8,385	-31.0	.3	21	11.5	8,371	-30.2	-42.9	19	12.5	3,171	8,385	-30.5	-42.9	14,441		
300	31	9,322	-34.1	-46.3	3	21.8	30	9,406	-31.0	.3	21	12.0	9,322	-30.4	-40.7	19	12.5	3,171	9,322	-30.5	-40.7	14,442		
250	10	10,528	-80.9		25	21.9	30	10,622	-50.3	.3	25	15.3	10,655	-49.6		25	18.3	3,110	10,101	-53.6		14,443		
200	31	11,962	-56.1		25	20.5	30	12,053	-57.4		26	18.1	12,086	-58.3		25	20.2	3,111	11,549	-49.4		14,444		
175	31	12,809	-56.9		25	18.9	30	12,993	-59.4		26	18.8	12,923	-60.2		25	21.4	3,112	12,426	-48.9		14,445		
150	31	13,787	-56.3		25	15.4	30	13,857	-59.8		26	18.3	13,881	-61.0		26	20.4	3,113	13,488	-48.8		14,446		
125	29	14,947	-57.4		25	12.5	29	14,998	-60.8		26	15.6	15,014	-61.6		26	18.0	3,114	14,638	-48.6		14,447		
100	29	16,354	-58.3		26	9.5	29	16,377	-63.2		26	11.7	16,396	-52.5		26	12.5	3,116	16,100	-49.2		14,448		
80	29	17,759	-57.8		25	5.2	29	17,751	-62.0		27	6.2	17,771	-62.2		26	6.7	3,117	17,567	-49.4		14,449		
70	29	18,603	-57.1		27	2.1	29	18,579	-61.2		26	3.5	18,599	-60.5		25	4.3	3,118	18,443	-49.4		14,450		
60	29	19,579	-56.5		33	.6	29	19,540	-59.5		23	1.0	19,563	-59.3		26	2.5	3,119	19,453	-49.5		14,451		
50	29	20,740	-55.4		07	1.0	28	20,684	-57.4		14	.3	20,711	-56.9		14	.4	3,120	20,674	-49.7		14,452		
40	28	22,167	-53.8		03	1.0	28	22,108	-54.7		06	1.8	22,132	-54.5		08	2.3	3,122	21,106	-50.1		14,453		
30	28	24,026	-51.6		33	.9	24	23,958	-51.0		06	2.0	23,989	-50.8		09	2.3	3,123	23,985	-50.2		14,454		
25	25	25,214	-49.7		34	.9	24	25,150	-48.8		09	2.3	25,182	-48.7		09	1.3	3,125	25,181	-49.3		14,455		
20	22	26,684	-47.2		35	1.3	23	26,623	-45.8		15	1.7	26,659	-45.8		05	.6	3,126	26,649	-47.9		14,456		
15	20	28,615	-43.2		14	.5	23	28,549	-43.3		10	1.6	28,585	-42.7		05	.4	3,128	28,581	-45.0		14,457		
10	10	31,373	-39.2			19	31,299	-40.1		29	1.5	31,350	-39.1		32	2.3	3,131	31,301	-40.0		14,458			
7						6		33,765	-36.1			6				07	4.1	3,125	31,254	-39.2		14,459		
ATHENS, GA 987 MB		BARROW, AK 1017 MB		BARTER ISLAND, AK 1015 MB		BETHEL, AK 1004 MB		BISMARCK, ND 955 MB																
SFC	31	246	16.1	14.7	09	.5	29	8	-7.6	-7.9	07	2.9	28	15	-4.9	-6.0	08	3.2	31	39	5.7	1.8	04	
1000	29	573	17.0	11.7	23	1.7	29	540	-5.0	-9.9	08	3.3	28	128	-5.4	-5.9	08	4.0	22	94	6.2	2.1	07	
950	31	1,034	15.3	5.3	25	3.4	29	966	-3.1	-12.0	10	1.7	29	959	-2.4	-9.1	11	3.6	31	928	5.1	-1.6	10	3.5
900	31	1,516	12.2	5.9	25	4.3	29	1,418	-4.3	-14.8	11	1.1	28	1,412	-3.6	-10.6	15	1.4	31	1,387	-1.4	-7.2	12	4.5
850	31	2,042	8.6	2.9	26	4.9	29	1,882	-6.5	-12.2	19	1.5	28	1,878	-5.4	-13.1	24	1.7	31	1,872	-4.9	-10.2	12	4.5
800	31	2,553	5.1	-2.5	26	5.4	29	2,397	-1.9	-11.7	24	1.5	28	2,395	-1.6	-13.6	26	2.1	31	2,371	-8.4	-12.7	12	4.5
750	31	3,113	-1.5	-2.6	26	6.1	29	2,929	-11.7	-17.7	23	1.1	28	2,920	-11.0	-18.5	26	2.7	31	2,903	-17.1	-20.0	12	4.5
700	31	3,712	-1.1	-11.8	26	7.6	29	3,493	-14.9	-27.0	25	3.2	28	3,493	-14.5	-24.5	26	3.7	31	3,467	-24.3	-31.1	11	3.0
650	31	4,346	-3.9	-16.5	27	8.1	29	4,094	-18.8	-31.6	25	4.1	28	4,096	-18.5	-28.2	27	4.5	31	4,064	-18.9	-28.6	10	3.0
550	31	5,029	-6.2	-20.0	27	9.0	29	4,737	-22.9	-35.9	24	5.2	28	4,739	-23.1	-32.5	27	4.9	31	4,710	-23.0	-32.4	10	3.0
500	31	5,762	-13.1	-26.2	27	10.4	29	5,429	-27.8	-39.9	25	5.9	28	5,430	-28.1	-38.3	27	5.7	31	5,402	-27.6	-36.6	10	3.0
450	31	6,558	-17.9	-31.8	27	11.7	29	6,178	-33.1	-44.2	25	6.9	28	6,178	-33.5	-42.8	28	6.1	31	6,152	-33.1	-41.9	9	3.0
400	31	7,428	-24.3	-37.7	28	14.1	29	6,996	-39.1	-46.9	25	7.5	28	6,994	-39.6	-46.6	27	7.2	31	6,969	-39.5	-44.8	9	3.0
350	31	8,390	-31.4	-43.1	28	16.2	29	7,902	-45.5		25	7.6	28	7,897	-46.0		27	8.4	31	7,873	-45.8		9	3.0
300	31	9,461	-39.7	-49.4	27	17.4	29	8,913	-51.2		25	7.6	28	8,907	-51.8		27	8.3	31	8,883	-51.9		9	3.0
250	31	10,683	-49.1		27	18.6	29	10,093	-52.7		25	6.1	28	10,083	-53.0		27	7.2	31	10,059	-52.7		9	3.0
200	31	12,118	-57.4		28	19.8	29	11,545	-49.3		25	4.3	28	11,538	-48.6		27	4.3	31	11,511	-49.7		10	2.0
175	31	12,958	-59.2		28	19.7	29	12,422	-48.7		24	3.5	28	12,417	-47.8		28	2.8	31	12,388	-48.6		12	2.0
150	31	13,919	-63.0		28	18.3	29	13,437	-48.3		23	3.1	28	13,435	-47.7		26	2.5	31	13,402	-48.7		12	2.0
125	31	15,051	-61.9		27	16.1	28	14,633	-48.3		23	2.2	28	14,639	-47.6		25	2.4	29	14,605	-48.7		13	2.0
100	31	16,427	-63.8		28	12.1	29	16,102	-48.4		20	2.1	28	15,111	-47.7		24	1.9	27	16,072	-49.1		14	2.0
80	31	17,627	-62.7		28	7.1	25	17,581	-48.1		18	1.7	28	17,582	-47.4		21	1.5	29	17,555	-49.6		16	2.0
70	31	18,294	-62.2		28	5.2	25	18,294	-47.9		18	2.0	28	18,294	-47.2		20	1.9	29	18,264	-49.7		16	2.0
60	31	18,584	-60.0		36	1.7	24	18,579	-47.6		18	1.7	28	18,578	-47.1		19	1.5	29	18,552	-49.6		20	2.0
50	31	20,729	-57.5		6	1.7	23	20,684	-47.7		16	2.2	28	20,694	-47.4		12	2.3	29	20,612	-49.5		14	2.0
40	31	22,119	-54.2		07	3.7	23	22,158	-47.7		13	2.1	28	22,177	-46.9		10	2.1	28	22,				

8015E, 10 914 MB										800THVILLE, LA 1015 MB										# BROWNSVILLE, TX 1011 MB										BUFFALO, NY 990 MB										CAPE HATTERAS, NC 1017 MB									
5FC	31	871	8.6	1.6	17	.5	31	1	21.2	18.6	11	1.7	31	7	21.6	19.9	15	1.8	31	218	9.9	7.3	18	1.0	31	4	17.6	15.6	21	1.4																			
1000									31	128	21.8	13.7	2.7		31	101	20.2	19.4	3.2							31	146	18.9	15.0	22	2.6																		
950									31	573	19.4	14.0	5.5		31	57	20.3	16.8	16.7	7.2	31	565	11.0	4.8	24	2.8	31	586	16.7	10.9	23	4.8																	
900	31	998	11.1	1.8	30	.7	31	1,037	16.9	9.2	17	3.6		31	1,014	18.6	12.1	17	7.5	31	1,015	8.8	2.4	26	3.6	31	1,045	13.9	8.7	24	5.0																		
850	31	1,476	14.0	-1.8	31	3.0	31	1,522	14.3	5.5	19	2.9	31	1,504	17.7	3.5	18	5.3	31	1,486	6.6	-7	27	5.0	31	1,525	11.1	5.1	24	5.3																			
800	31	1,979	7.7	-4.4	32	4.2	31	2,033	11.9	.5	21	3.0		31	2,021	16.1	-.6	19	4.1		1,982	4.1	-4.7	26	6.1	31	2,030	8.5	.3	24	6.0																		
750	31	2,507	4.0	-7.1	30	4.6	31	2,571	9.4	-4.2	24	3.0		31	2,567	13.1	-3.9	20	2.7	31	2,504	1.3	-7.7	26	6.5	31	2,561	5.8	-3.0	24	6.7																		
700	31	3,064	2.2	-11.0	30	5.0	31	3,140	6.3	-6.0	26	3.5		31	3,144	9.9	-6.5	24	3.3		3,057	-1.9	-11.7	25	7.4	31	3,123	2.8	-7.9	23	7.8																		
650	31	3,654	-4.0	-13.9	28	6.3	31	3,748	3.0	-11.4	25	6.5		31	3,755	5.6	-9.5	25	5.1	31	3,644	-4.6	-16.6	25	8.3	31	3,720	-3.	-10.9	24	8.5																		
600	31	4,281	-8.1	-18.4	28	7.8	31	4,387	-8.	-16.7	28	6.0		31	4,403	-7.	-13.7	27	7.1	31	4,269	-8.	-20.2	25	9.8	31	4,356	-4.1	-14.7	24	9.7																		
550	31	4,951	-12.4	-24.2	28	8.6	31	5,076	-5.5	-21.5	28	7.5		31	5,095	-4.5	-18.2	27	9.3	31	4,939	-12.7	-24.0	26	10.5	31	5,037	-8.0	-21.4	24	10.8																		
500	31	5,672	-17.5	-29.1	28	9.9	31	5,817	-10.7	-26.2	28	9.7		31	5,858	-10.1	-22.8	27	10.7	31	5,660	-17.4	-29.1	26	11.8	31	5,771	-12.8	-25.1	25	11.8																		
450	31	6,424	-22.4	-34.4	28	10.6	31	6,606	-16.1	-28	28	10.6		31	6,640	-15.1	-24.9	27	11.4	31	6,425	-22.5	-34.4	26	12.6	31	6,531	-18.0	-25.1	25	12.3																		
400	31	7,305	-20.5	-39.5	29	11.8	30	8,489	-24.9	-36.6	29	11.9		31	8,511	-20.5	-34.8	27	12.0	31	7,296	-24.9	-39.0	26	13.8	31	7,437	-24.2	-36.1	24	15.2																		
350	31	8,246	-36.8	-43.4	29	12.9	30	8,507	-31.0	-36.6	29	12.9		31	8,507	-28.1	-40.4	27	12.7	31	8,240	-35.6	-43.9	26	14.7	31	8,400	-31.1	-33.4	25	15.4																		
300	31	9,293	-44.6	-51.7	29	14.3	30	9,533	-18.2	-50.0	28	16.9		31	9,582	-36.5	-47.2	27	22.0	31	9,294	-43.2	-47.9	25	18.9	31	9,470	-39.9	-46.6	25	17.4																		
250	31	10,494	-51.7					29	17.6	30	10,764	-47.0		28	22.3	31	10,622	-45.5			27	29.2	31	10,500	-50.7		25	19.1	31	10,692	-48.5		25	19.0															
200	31	11,921	-57.6					29	18.6	30	12,211	-56.0		28	27.1	31	12,277	-55.6			27	35.1	31	11,938	-55.0		25	17.7	31	12,129	-57.5		26	20.1															
175	31	12,762	-58.4					29	17.3	30	13,055	-59.6		28	29.1	30	13,117	-60.8			27	33.5	31	12,789	-56.1		26	15.8	31	12,967	-60.2		26	18.0															
150	31	13,735	-56.7					29	16.1	30	14,011	-62.3		28	26.0	30	14,066	-64.6			27	31.2	31	13,768	-56.3		25	13.3	31	13,926	-60.8		26	15.6															
125	31	14,891	-56.9					29	13.1	30	15,130	-65.2		28	21.1	30	15,171	-68.0			27	26.4	31	14,927	-56.6		25	11.1	31	15,058	-61.9		26	14.6															
100	31	16,300	-58.4					28	9.0	30	16,483	-67.0		28	13.2	29	16,503	-70.9			26	15.9	31	16,339	-57.5		25	8.2	31	16,437	-62.7		27	9.8															
80	31	17,705	-57.6					29	6.0	30	17,822	-67.7		28	6.7	29	17,820	-71.0			27	5.7	31	17,750	-56.9		26	4.3	31	17,815	-61.9		29	5.1															
70	31	18,549	-57.4					29	3.6	30	18,636	-64.2		31	2.0	29	18,617	-67.7			14	.8	31	18,597	-56.7		26	2.0	31	18,694	-60.7		29	3.0															
60	30	19,528	-56.5					29	3.0	29	19,588	-61.9		06	2.4	28	19,552	-59.4			09	4.7	31	19,576	-56.0		22	4.1	31	19,606	-59.3		35	1.8															
50	30	20,688	-55.5					30	2.4	29	20,721	-58.9		08	4.9	25	20,665	-59.2			09	7.4	30	20,742	-54.9		29	5.1	30	20,755	-59.9		35	2.8															
40	29	22,152	-54.3					32	2.1	29	22,135	-54.1		09	5.2	22	22,120	-54.3			09	8.5	20	22,177	-53.7		35	2.2	30	22,197	-53.7		33	0.7															
30	29	26,962	-52.4					31	1.3	29	26,962	-50.7		09	5.7	22	23,953	-50.1			09	10.4	20	26,962	-49.1		03	1.2	30	26,940	-50.2		07	2.8															
25	29	25,150	-50.3					32	1.2	27	25,202	-47.6		09	9.2	22	25,150	-48.1			09	11.6	20	25,223	-49.4		03	1.2	30	25,219	-48.5		07	2.8															
20	28	26,617	-47.5					31	1.7	26	26,684	-46.4		08	8.0	21	26,628	-45.0			08	12.1	20	26,695	-46.5		31	1.5	29	26,718	-45.5		06	1.5															
15	28	28,531	-44.3					29	1.8	24	28,632	-40.7		08	9.5	18	28,561	-41.6			08	13.1	24	28,608	-43.6		29	2.4	21	28,610	-42.3		32	1.1															
10	21	31,281	-38.2					28	1.9	9	31,407	-37.2			9	31	293	-36.0				12	31	31,394	-36.8			10	31,411	-37.9																			

RAWINSONDE DATA

Average monthly values

MAY 1979

CARIBOU, ME 993 MB												CENTREVILLE, AL 999 MB												CHARLESTON, SC 1015 MB												CHATHAM, MA 1015 MB												COLD BAY, AK 999 MB											
Standard pressure surface mb.	No. of observations	Dynamic height meters		Temperature °C		Dew Point °C		Direction tens of deg.		Speed m.p.s.		Resultant Wind	No. of observations	Dynamic height meters		Temperature °C		Dew Point °C		Direction tens of deg.		Speed m.p.s.		Resultant Wind	No. of observations	Dynamic height meters		Temperature °C		Dew Point °C		Direction tens of deg.		Speed m.p.s.		Resultant Wind	No. of observations	Dynamic height meters		Temperature °C		Dew Point °C		Direction tens of deg.		Speed m.p.s.		Resultant Wind											
SFC	31	191	9.0	5.2	30	+ .6	31	14.0	16.5	14.7	28	+ .6	31	14.4	16.1	16.6	19	+ .5	31	16	11.6	9.4	9.2	16	+ .8	31	30	4.5	1.4	1.2	1.1	15	9.6	4.6	2.8	1.6	2.2																						
1000	31	1,005	7.8	2.8	23	+ 1.5	31	10.1	14.8	10.3	25	+ 3.2	31	14.4	18.1	16.5	21	+ 1.4	31	14.3	13.4	7.7	7.5	+ 3.2	31	876	4.6	2.2	1.2	1.2	8.6	6.3	4.6	2.9	1.2	4.8																							
950	31	1,005	6.6	2.3	25	+ 2.3	31	1,036	15.5	9.9	23	+ 4.5	31	10.4	14.7	15.4	8.9	+ 2.5	31	13.9	11.3	1,032	11.8	+ 4.5	31	876	4.6	2.2	1.2	1.2	8.6	6.3	4.6	2.9	1.2	4.8																							
850	31	1,472	4.6	- 8	27	+ 3.3	31	1,518	12.3	6.3	24	+ 4.0	31	1,530	12.5	5.0	23	+ 3.5	31	1,508	8.9	4.5	4.5	6.2	31	1,331	3.1	2.2	1.2	1.2	4.5	3.1	2.2	1.2	1.2	4.5																							
800	31	1,965	2.7	- 3.3	26	+ 4.1	31	2,025	9.4	1.7	25	+ 4.2	31	2,037	9.5	1.0	25	+ 4.6	31	2,008	6.0	5.5	5.5	7.7	31	1,809	5.9	10.8	12.2	1.2	4.7	31	1,809	5.9	10.8	12.2	1.2	4.7																					
750	31	2,486	- 4.6	- 6	27	+ 6.0	31	2,558	6.5	- 24	26	+ 4.9	31	2,570	6.6	- 1.6	24	+ 5.7	31	2,535	3.1	- 2.9	2.5	9.5	31	2,311	9.0	14.3	11	4.0	31	2,311	9.0	14.3	11	4.0																							
700	31	3,037	- 2.4	- 10.8	25	+ 6.1	31	3,121	3.9	- 8.7	26	+ 5.7	31	3,133	3.6	- 7.1	25	+ 7.0	31	3,092	.6	- 8.5	2.5	12.1	25	11.4	11.9	4.0	0.0	2.7	31	2,842	12.2	- 19.3	10	4.1																							
650	31	3,622	- 5.3	- 15.3	25	+ 8.5	31	3,720	- 6.1	- 11.6	27	+ 6.9	31	3,732	- 5.8	- 11.2	25	+ 7.9	31	3,684	- 2.5	- 17.5	2.1	12.5	25	13.2	14.0	4.7	4.0	0.0	31	4,004	- 27.0	27.0	11	5.3																							
600	31	4,247	- 9.0	- 20.4	25	+ 10.1	31	4,359	- 3.3	- 15.6	27	+ 8.4	31	4,370	- 3.4	- 14.3	25	+ 8.6	31	4,316	- 5.9	- 17.5	2.1	12.5	25	13.2	14.0	4.7	4.0	0.0	31	4,645	- 23.9	- 32.0	10	4.4																							
550	31	4,915	- 12.9	- 23.3	25	+ 11.4	31	5,042	- 7.3	- 20.8	27	+ 10.0	31	5,053	- 7.6	- 19.4	25	+ 9.9	31	4,992	- 10.1	- 21.1	2.1	12.5	25	13.2	14.0	4.7	4.0	0.0	31	5,334	- 28.7	- 37.1	10	2.8																							
500	31	5,636	- 17.4	- 26.5	24	+ 11.5	31	5,778	- 12.4	- 23.3	27	+ 11.4	31	5,788	- 12.0	- 23.3	26	+ 10.8	31	5,720	- 14.8	- 26.6	2.1	12.5	25	13.2	14.0	4.7	4.0	0.0	31	6,085	- 33.5	- 39.6	10	2.9																							
450	31	6,417	- 22.6	- 32.5	24	+ 12.2	31	6,574	- 17.9	- 31.0	27	+ 12.9	31	6,585	- 17.4	- 28.7	26	+ 12.1	31	6,510	- 20.0	- 30.5	2.1	12.5	25	13.2	14.0	4.7	4.0	0.0	31	6,903	- 39.1	- 42.9	9	3.6																							
400	31	7,272	- 28.4	- 39.0	24	+ 13.8	31	7,445	- 24.0	- 37.5	27	+ 13.7	31	7,458	- 23.4	- 36.0	27	+ 12.8	31	7,373	- 26.1	- 36.9	2.1	12.5	25	13.2	14.0	4.7	4.0	0.0	31	7,810	- 44.3	- 46.0	10	2.4																							
350	31	8,218	- 35.3	- 44.1	24	+ 16.3	31	8,409	- 31.0	- 43.9	28	+ 15.2	31	8,423	- 30.7	- 43.2	26	+ 14.4	31	8,328	- 33.5	- 43.9	2.1	12.5	25	13.2	14.0	4.7	4.0	0.0	31	8,831	- 48.4	14	0.9																								
300	31	9,272	- 3.2	- 47.6	24	+ 17.5	31	9,480	- 39.6	- 48.5	28	+ 15.4	31	9,496	- 39.2	- 48.0	26	+ 15.6	31	9,386	- 41.8	- 49.2	2.1	12.5	25	13.2	14.0	4.7	4.0	0.0	31	10,030	- 48.6	23	1.2																								
250	31	10,478	- 51.3	- 51.3	25	+ 18.6	31	10,703	- 48.8	-	28	+ 17.3	31	10,720	- 48.7	-	26	+ 17.1	31	10,593	- 50.9	-	2.1	12.5	25	13.2	14.0	4.7	4.0	0.0	31	11,503	- 47.2	24	2.1																								
200	31	11,910	- 56.1	-	25	+ 18.0	31	12,139	- 57.3	-	28	+ 19.9	31	12,151	- 57.7	-	27	+ 19.4	31	12,024	- 58.3	-	2.1	12.5	25	13.2	14.0	4.7	4.0	0.0	31	13,194	- 50.9	23	1.2																								
175	31	12,759	- 56.1	-	26	+ 16.7	30	13,940	- 56.0	-	28	+ 18.3	31	13,958	- 56.0	-	26	+ 18.1	31	13,856	- 56.0	-	2.1	12.5	25	13.2	14.0	4.7	4.0	0.0	31	14,614	- 48.0	23	1.2																								
150	31	17,736	- 56.7	-	26	+ 4.3	30	17,806	- 64.1	-	28	+ 7.3	31	17,813	- 63.1	-	29	+ 11.2	31	16,372	- 59.7	-	2.1	12.5	25	13.2	14.0	4.7	4.0	0.0	31	17,550	- 49.1	19	3.2																								
125	31	18,584	- 56.1	-	27	+ 3.1	30	18,627	- 62.5	-	29	+ 3.6	31	18,637	- 62.1	-	31	+ 3.2	29	18,603	- 58.2	-	2.1	12.5	25	13.2	14.0	4.7	4.0	0.0	31	19,425	- 49.6	19	2.7																								
100	31	19,566	- 55.6	-	29	+ 1.7	30	19,583	- 60.6	-	32	+ 1.5	31	19,594	- 59.0	-	36	+ 1.9	29	19,576	- 57.2	-	2.1	12.5	25	13.2	14.0	4.7	4.0	0.0	31	20,455	- 49.5	19	2.7																								
80	31	22,244	- 53.3	-	30	+ 1.2	30	22,248	- 53.3	-	32	+ 1.0	31	22,252	- 53.6	-	38	+ 1.2	29	22,252	- 54.0	-	2.1	12.5	25	13.2	14.0	4.7	4.0	0.0	31	22,252	- 54.0	1.6	0.1																								
70	31	24,017	- 51.1	-	32	+ 0.2	29	24,006	- 49.9	-	34	+ 0.8	30	24,028	- 49.8	-	40	+ 0.7	29	24,020	- 51.1	-	2.1	12.5	25	13.2	14.0	4.7	4.0	0.0	31	25,170	- 49.4	13	1.2																								
50	21	26,687	- 47.1	-	33	+ 6.6	29	26,683	- 45.5	-	34	+ 4.5	30	26,704	- 44.7	-	42	+ 4.6	29	26,679	- 46.6	-	2.1	12.5	25	13.2	14.0	4.7	4.0	0.0	31	26,638	- 47.9	9	0.9																								
40	14	28,631	- 42.7	-	27	+ 1.4	29	28,616	- 42.6	-	37	+ 0.9	30	28,619	- 41.9	-	44	+ 0.8	29	28,598	- 43.3	-	2.1	12.5	25	13.2	14.0	4.7	4.0	0.0	31	29,598	- 40.2	0.5	0.5																								
7	7	31,361	- 38.7	-	27	+ 1.4	31	31,361	- 38.7	-	37	+ 0.9	30	33,750	- 37.0	-	43	+ 0.8	31	31,315	- 37.8	-	2.1	12.5	25	13.2	14.0	4.7	4.0	0.0	31	33,720	- 36.9	5.5	1.4																								
DAYTON, OH 981 MB												DEL RIO, TX 976 MB												DENVER, CO 836 MB												DESERT ROCK, NV 897 MB												DOOGE CITY, KS 923 MB											
SFC	31	299	11.4	8.3	10	+ .4	31	314	18.7	15.6	11	+ 2.6	31	1,611	7.9	3.1	19	+ .9	26	1,007	16.2	- 6	0.5	+ .7	31	791	10.8	7.2	12	+ 3																													
1000	31	563	12.8	7.3	24	+ 1.8	31	542	18.8	14.7	14	+ 5.5	31	1,002	19.7	13.2	19	+ 6.2	26	1,981	13.8	- 1.1	21	+ 2.2	31	1,983	9.3	1.1	2.8	2.6																													
900	31	1,017	10.9	4.2	27	+ 4.3	31	1,006	17.5	11.9	16	+ 7.4	31	1,002	19.7	13.2	19	+ 6.2	26	1,971	13.2	- 3.9	22	+ 1.7	31	2,517	7.3	- 4.3	4.0	4.0																													
850	31	1,492	8.7	- 9.2	27	+ 5.0	31	1,494	15.8	7.7	18	+ 6.1	31	1,494	16.7	- 4.6	16	+ 6.2	26	1,971	12.5	- 3.2	21	+ 1.7	31	2,517	7.3	- 4.3	4.0	4.0																													
800	31	1,992	6.4	- 3.1	27	+ 5.4	31	2,008	14.7	1.7	21	+ 4.9	31	1,977	8.3	- 6	25	+ 1.7	26	1,981	13.8	- 1.1	21	+ 2.2	31	1,983	9.3	1.1	2.8	2.6																													
750	31	2,519	3.3	- 5.4	27	+ 6.3	31	2,551	12.2	- 4.3	24	+ 3.6	31	2,508	5.8	- 3.2	29	+ 2.6	26	2,521	9.9	- 3.9	22</																																				

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Standard pressure surface mb	GLASGOW, MT 933 MB						GRAND JUNCTION, CO 850 MB						GREAT FALLS, MT 888 MB						GREEN BAY, WI 989 MB						GREENSBORO, NC 985 MB							
	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.		
SFC	31	696	5.5	2+7	07	1+3	31	1,472	10+8	3+4	12	2+5	31	1,118	5+9	-1+7	26	1+2	31	210	7+4	4+6	35	+7	31	275	14+4	12+0	20	*4		
1000	950	992	7.9	-6	30	-5	5	1,512	12.5	2+7	13	3+1	31	1,473	7.3	-1.5	27	2+9	31	541	8.8	3+3	34	+5	31	579	15.5	9+7	25	*9		
850	1,463	6.3	-1.8	29	3+5	17	5	54	51	1,979	10.5	+4	14	2+3	31	1,970	4.3	-4+1	28	3+7	31	1,457	5.3	-7+7	27	4+2	31	1,517	10.6	5+3	26	*5.5
800	1,1957	2.8	-3.4	29	3+5	17	5	64	31	2,513	7.0	-2+2	21	1+3	31	2,492	7	-6+3	28	4+5	31	2,470	2.5	-3+9	29	5.5	31	2,020	7.8	2+3	27	5.4
750	2,447	-7.4	-6.3	30	8+3	31	5	83	31	3,047	3.4	-4+6	25	3+2	31	3,042	-3.3	-9+9	28	6+0	31	3,020	-2+8	-13+2	27	7.3	31	2,550	5.0	-2+2	27	6.1
600	3,025	-7.2	-9.9	29	9+4	31	5	67	1,267	-1.2	2+7	23	3+8	31	3,031	3.6	-12.9	28	7+7	31	3,020	4.0	-6+7	27	8.3	31	3,110	2.0	-8+7	27	6.9	
600	3,427	-10.9	-14.3	30	9+4	31	5	106	-1.6	-12.0	24	3+6	31	3,046	-1.0	-20+2	28	10+3	31	3,020	-4.2	-9+8	27	10.0	31	3,030	-1.2	-12+4	27	7.9		
550	11,480	-10.9	-19.4	30	10+4	31	5	106	-1.6	-12.0	24	3+6	31	4,984	-10.9	-17.0	26	1+3	31	4,903	-14.0	-20+1	27	11.4	31	4,339	-5.5	-15+9	27	7.7		
500	5,160	-10.2	-21.7	29	10+3	31	5	708	-15.5	-25+3	26	2+4	31	5,160	-20.3	-23.4	28	10+3	31	5,110	-18.7	-29+2	27	11.9	31	5,018	-0.5	-20+3	27	7.9		
500	1,721	-21.9	-31.5	-4+1	0+0	29	15+6	7.3	7,356	-27.2	-38+1	28	8+4	31	7,372	-31.6	-42+0	29	15+7	31	7,238	-30.0	-40+6	27	16.8	31	7,049	-25.4	-37+3	28	12.3	
350	8,154	-38.4	-44+8	29	17.4	31	9+3	31	3,016	-34.7	-43+8	27	9+4	31	8,171	-38.6	-46+6	29	18+4	31	9,224	-44.5	-46+3	27	20.8	31	8,367	-32.4	-42+8	28	14.6	
300	9,193	-46.3	29	18+3	31	9+3	31	4+3	-43+0	-49+7	28	11.1	31	9,209	-46.7	29	18+4	31	9,224	-44.5	-46+3	27	20.8	31	9,433	-40.8	-47+9	28	16.4			
250	10,387	-52.3	28	19.8	30	10+6	51.1	28	12.8	31	10,511	53.6	29	16+1	31	10,426	-51.3	27	22+6	31	10,650	-49.4	-52+7	27	17.9	31	10,426	-51.3	-52+7	27	14.6	
200	11,820	-54.8	28	18.9	30	11,994	-57.8	27	12+1	31	11,820	-56.6	29	19+9	30	11,858	-55.9	27	21+2	31	12,084	-57.0	-50+1	28	19.1	31	12,084	-57.0	-50+1	28	19.1	
175	11,267	-54.3	28	16.4	30	12,834	-58.7	27	13+3	31	12,669	-55.4	28	16+5	30	12,707	-56.0	27	18+6	31	12,927	-53.6	-57+7	28	16.6	31	12,927	-53.6	-57+7	28	16.6	
150	13,666	-52.8	28	14+0	29	13,085	-57.8	27	12+3	31	13,653	-54.5	28	13+9	30	13,689	-55.2	27	14+3	31	13,894	-59.4	-57+5	27	15.9	31	13,894	-59.4	-57+5	27	15.9	
125	14,844	-52.9	28	11.4	29	14,950	-59.0	27	11.0	31	14,822	-54.3	28	10+9	30	14,853	-55.5	27	11+2	31	15,033	-60.7	-52+7	27	13.7	31	15,033	-60.7	-52+7	27	13.7	
100	16,282	-53.3	28	7.6	28	16,346	-59.5	27	10+1	31	16,249	-55.2	28	8+8	29	16,277	-56.5	27	8+6	31	16,418	-61.2	-52+7	28	10.7	31	16,418	-61.2	-52+7	28	10.7	
80	17,717	-54.3	28	5.0	28	17,741	-59.7	27	6+7	31	17,673	-55.4	28	5+1	29	17,695	-56.0	27	6+4	31	17,803	-60.7	-52+7	28	6.0	31	17,803	-60.7	-52+7	28	6.0	
70	18,573	-54.2	29	3.8	28	18,579	-58.0	27	5+0	31	18,525	-55.4	29	3+6	29	18,545	-55.5	27	4+3	31	18,636	-59.6	-54+6	30	4.6	31	18,636	-59.6	-54+6	30	4.6	
60	19,562	-54.2	29	2.5	28	19,551	-57.3	27	3+3	31	19,510	-54.9	31	2+0	28	19,530	-55.1	27	2+7	31	19,602	-58.7	-54+6	32	2.0	31	19,602	-58.7	-54+6	32	2.0	
50	20,207	-53.6	31	1.1	28	20,176	-55.9	28	1+7	31	20,176	-57.4	31	1+8	28	20,196	-54.7	28	1+5	31	20,754	-56.1	-50+1	03	2.0	31	20,754	-56.1	-50+1	03	2.0	
30	32,169	-51.0	1.2	-5.2	28	32,168	-52.2	30	1+4	31	32,168	-51.8	30	1+4	28	32,128	-50.6	34	1+8	31	32,181	-53.6	-57+6	07	2.4	31	32,181	-53.6	-57+6	07	2.4	
30	24,032	-51.0	-5.4	0.8	28	24,004	-50.6	30	6+3	31	24,029	-53.7	30	6+3	28	24,016	-50.6	30	6+3	31	24,048	-49.8	-50+1	07	0.8	31	24,048	-49.8	-50+1	07	0.8	
25	20,239	-45.5	0.9	1.1	24	20,198	-48.0	28	2+5	31	20,239	-45.5	28	2+5	26	20,251	-45.5	30	2+5	31	20,251	-45.5	-52+5	07	1.5	31	20,251	-45.5	-52+5	07	1.5	
20	26,667	-47.5	0.7	0.9	23	26,669	-45.8	28	2+6	31	26,623	-47.3	28	0.7	26	26,642	-47.4	30	0.7	29	26,731	-44.6	-50+1	08	1.2	31	26,731	-44.6	-50+1	08	1.2	
15	26,601	-44.3	0.4	0.9	22	26,589	-42.9	28	5+5	23	26,532	-43.7	28	5+5	24	26,580	-43.9	34	5+5	27	28,675	-31.5	-41+5	02	3.3	31	28,675	-31.5	-41+5	02	3.3	
10	19	31,355	-39.1	0.3	0.5	17	31,357	-38.6	28	4+8	31	31,306	-36.5	35	4+2	12	31,306	-39.1	34	4+2	17	31,444	-37.3	-3	32	4.9	31	31,444	-37.3	-3	32	4.9

Standard pressure surface mb	GUADALUPE IS., MEXICO 1012 MB						GUAM, MARIANA IS. 999 MB						HILO, HI 1017 MB						HUNTINGTON, WV 987 MB						INTERNATIONAL FALLS, MN 971 MB					
	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.
SFC	30	23	15.7	11.1	33	6.8	31	111	25.4	22.7	09	3+4	31	10	20.5	18.0	23	1+3	31	246	12.3	7.7	18	+2	31	359	3.8	-7	23	*4
1000	30	122	15.0	10.2	33	7.1	31	117	25.5	22.8	09	3+1	31	155	21.0	17.7	23	1+0	31	566	14.7	6.9	22	2+8	31	536	5.2	-4	23	1.0
900	30	555	13.0	5.6	32	5.3	31	557	22.7	20.4	10	7+2	31	598	18.0	15.8	10.0	8+3	31	1,022	12.5	4.7	25	2+4	31	916	3.4	-2	24	2.1
800	30	1,030	13.8	-3.2	32	4.3	31	1,031	1,041	1,040	10	6+3	31	1,061	19.0	17.9	9+9	0+2	31	1,050	19.9	1.2	25	1+3	31	1,050	19.9	1.2	25	1.0
800	30	1,021	13.8	-3.2	32	4.3	31	1,031	1,041	1,040	10	6+3	31	1,061	19.0	17.9	9+9	0+2	31	1,050	19.9	1.2	25	1+3	31	1,050	19.9	1.2	25	1.0
750	30	2,537	-9.4	-11.8	30	4.1	31	2,540	-13.5	-1.5	11	3+1	31	2,546	-9.4	-7.0	0+6	1+9	31	2,531	-4.5	-4+3	27							

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KING SALMON, AK 1005 MB										KODOR, CAROLINE IS. 1007 MB										KOTZEBUE, AK 1012 MB										LAKE CHARLES, LA 1014 MB										LANDER, WY 828 MB									
Standard pressure surface mb.	No. of observations	Resultant Wind					Resultant Wind					Resultant Wind					Resultant Wind					Resultant Wind					Resultant Wind					Resultant Wind																	
		Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.													
5FC 30	15	4.6	0.9	2.4	31	30	28.3	24.9	0.8	1.6	25	5	-4.4	-2.3	30	1.9	36	18.6	17.5	0.8	0.7	31	1,697	5.3	4.3	2.2	1.1	1.6	30	1.1	6.6	-1.6	30	1.1															
1000 24	7.8	5.9	1.2	11	2.5	31	9.1	27.2	4.7	0.8	1.9	24	102	2.5	3.4	32	1.5	38	124	20.3	16.6	1.3	1.7	31	2,506	4.5	4.7	30	2.0	1.7	5.7	30	3.0	4.8	2.8														
950 30	4.77	4.2	1.8	10	5.4	31	5.5	23.9	22.6	0.9	3.5	25	514	3.7	4.8	0.4	0.6	39	3.9	31	3.065	3.7	5.7	30	3.0	3.0	4.8	3.0	3.0	4.8	3.0	3.0	4.8																
900 30	9.15	1.5	-2.9	10	5.6	31	1.018	2.035	21.2	19.1	0.9	3.7	25	951	1.1	-6.7	24	0.3	30	1.029	16.2	8.8	18	4.3	31	1,519	14.1	3.1	19	4.1	2.1	12.1	2.1	1.7	2.8	1.7													
850 30	1,372	-1.8	-5.6	11	5.6	31	1,513	18.4	14.9	0.9	3.3	25	1,409	-1.8	-8.0	22.4	1.7	30	1.3	30	2,024	12.1	-2.1	21	1.1	31	1,978	6.6	-1.6	30	1.1	1.1	1.1	1.1	1.1	1.1													
800 30	1,855	-5.2	-8.8	12	6.5	31	1,018	2.035	11.5	14.5	0.9	2.7	25	1,890	-1.1	-12.9	22	1.7	30	2,024	12.1	-2.1	21	1.1	31	1,978	6.6	-1.6	30	1.1	1.1	1.1	1.1	1.1	1.1														
750 30	2,356	-8.6	-13.6	12	7.7	31	2,581	13.6	8.6	0.9	2.0	25	2,399	-7.4	-15.5	23	2.4	30	2,563	10.0	-6.0	24	4.1	31	2,506	4.5	-4.7	30	2.0	2.0	2.0	2.0	2.0	2.0															
700 30	2,888	-11.9	-17.8	12	7.2	31	3,160	10.7	3.6	1.0	1.9	24	3,012	-10.7	-18.3	22	2.7	30	3,137	3.0	-12.6	27	5.0	31	3,065	3.7	-5.7	30	3.0	3.0	4.8	3.0	3.0	4.8															
650 30	3,455	-15.5	-20.7	12	8.6	31	3,176	7.4	3.6	1.0	2.0	25	3,409	-11.1	-23.4	21	2.7	30	3,777	-3.0	-22.1	27	5.0	31	3,156	-5.7	-10.4	30	3.0	3.0	4.8	3.0	3.0	4.8															
600 30	4,001	-19.6	-23.9	11	9.1	31	4,431	3.6	-3.6	0.9	2.6	25	4,009	-17.9	-27.4	21	3.1	30	3,380	-6.1	-21.5	27	5.1	31	4,250	-5.7	-7.8	30	3.0	3.0	4.8	3.0	3.0	4.8															
550 30	5,530	-23.6	-31.6	11	9.1	31	5,133	-2.2	-7.8	0.8	3.0	25	5,745	-22.4	-32.4	21	3.4	30	5,068	-6.1	-22.1	27	5.0	31	4,955	-12.5	-19.5	28	6.3	6.3	6.3	6.3	6.3	6.3															
500 30	5,382	-35.9	-51.2	11	9.8	31	5,861	-4.6	-13.4	0.9	4.0	25	5,861	-26.6	-36.8	21	3.4	30	5,807	-11.1	-21.8	28	9.4	31	5,767	-12.3	-21.7	28	1.1	1.1	1.1	1.1	1.1	1.1															
450 30	5,130	-33.6	-41.3	12	10.2	31	6,714	-9.0	-18.5	0.9	4.2	25	6,192	-31.9	-40.6	23	3.4	30	6,067	-16.6	-32.9	27	11.0	31	6,457	-22.9	-31.6	28	12.0	12.0	12.0	12.0	12.0	12.0															
400 30	6,946	-39.7	-43.6	12	10.7	31	7,617	-14.8	-24.5	1.0	4.3	25	7,014	-30.8	-44.4	23	4.0	30	7,481	-22.8	-37.3	27	13.1	31	7,310	-29.4	-38.1	28	13.2	13.2	13.2	13.2	13.2	13.2															
350 30	7,850	-45.9	-53.0	11	10.5	31	8,619	-21.1	-32.5	1.0	4.2	25	7,924	-44.5	-21.2	21	5.1	30	8,450	-29.9	-42.3	27	14.2	31	8,252	-36.8	-41.9	28	15.2	15.2	15.2	15.2	15.2	15.2															
300 30	8,862	-50.3	-59.3	11	9.1	31	9,736	-29.4	-41.4	1.0	5.3	25	8,937	-51.8	-22.4	22	5.4	30	9,527	-38.3	-49.4	27	16.1	31	9,298	-44.9	-52.0	28	16.2	16.2	16.2	16.2	16.2	16.2															
250 30	10,049	-50.8	-62.8	12	6.8	31	11,011	-39.5	-50.0	0.9	5.5	25	10,105	-56.1	-23.4	23	4.7	30	10,755	-47.6	-57.7	28	21.6	31	10,496	-52.4	-60.7	28	18.6	18.6	18.6	18.6	18.6	18.6															
200 30	11,510	-48.3	-57.0	14	3.9	31	12,497	-57.0	-52.1	0.9	5.9	25	11,518	-51.3	-22.5	20	2.5	30	12,201	-55.9	-59.0	28	26.4	31	11,918	-58.1	-65.1	28	17.7	17.7	17.7	17.7	17.7	17.7															
175 30	12,390	-47.9	-57.9	16	4.0	31	13,349	-58.9	-50.8	0.7	4.7	25	12,409	-49.8	-19.3	19	1.9	30	13,139	-59.4	-59.4	27	26.7	31	12,758	-58.0	-60.7	28	17.7	17.7	17.7	17.7	17.7	17.7															
150 30	13,407	-47.9	-57.9	17	2.8	31	14,298	-66.7	-66.7	0.5	5.1	25	13,419	-49.6	-13.1	20	1.4	30	14,002	-62.1	-25.2	27	25.2	31	13,732	-56.7	-67.0	28	15.0	15.0	15.0	15.0	15.0	15.0															
125 30	14,610	-48.3	-57.9	17	2.5	31	15,382	-73.7	-73.7	0.5	5.1	25	14,613	-49.5	-12.5	17	1.6	30	15,125	-64.1	-21.5	27	21.0	30	14,884	-56.8	-68.0	28	11.4	11.4	11.4	11.4	11.4	11.4															
100 30	16,079	-48.5	-57.9	18	2.9	31	16,655	-79.0	-79.0	0.5	4.6	25	16,077	-49.2	-16.2	16	1.9	30	16,481	-66.4	-27	27	18.0	30	16,294	-58.0	-60.0	28	10.0	10.0	10.0	10.0	10.0	10.0															
80 30	17,544	-49.5	-57.9	19	2.3	31	17,936	-76.6	-76.6	0.5	2.4	25	17,541	-48.9	-15.1	15	2.0	30	17,831	-66.6	-27	27	7.4	30	17,700	-57.7	-67.7	28	5.5	5.5	5.5	5.5	5.5	5.5															
70 30	18,418	-49.8	-57.9	18	2.2	31	18,713	-72.5	-72.5	0.3	1.0	25	18,420	-48.4	-16.4	16	2.0	29	18,642	-64.5	-27	27	3.0	29	18,542	-56.9	-64.5	28	4.5	4.5	4.5	4.5	4.5	4.5															
60 30	19,427	-49.9	-57.9	18	2.3	31	19,631	-67.6	-67.6	0.5	1.2	25	19,630	-49.3	-15.1	15	2.2	29	19,477	-56.0	-20.7	27	18.6	31	19,349	-56.7	-64.5	28	2.7	2.7	2.7	2.7	2.7	2.7															
50 30	20,620	-49.6	-57.9	16	2.1	31	20,744	-62.2	-62.2	0.5	1.4	25	20,743	-49.1	-14.6	14	2.4	29	20,674	-56.5	-20.4	27	18.6	31	20,560	-57.7	-64.5	28	2.7	2.7	2.7	2.7	2.7	2.7															
40 30	22,082	-57.4	-62.8	20	1.7	31	23,704	-71.2	-71.2	0.9	2.7	25	23,705	-58.4	-14.6	14	2.7	29	23,495	-52.3	-20.4	27	18.6	31	23,050	-59.4	-64.5	28	2.7	2.7	2.7	2.7	2.7	2.7															
30 30	23,920	-52.7	-61.7	09	1.1	31	20,711	-57.6	-57.6	0.6	1.3	25	20,710	-56.1	-14.1	14	0.9	29	20,659	-59.4	-20.4	27	18.6	31	20,390	-59.4	-64.5	28	2.7	2.7	2.7	2.7	2.7	2.7															
20 30	25,105	-50.3	-57.4	09	1.1	31	23,900	-50.5	-50.5	0.6	1.3	25	23,901	-50.7	-14.7	14	0.9	29	23,645	-59.4	-20.4	27	18.6	31	23,290	-59.4	-64.5	28	2.7	2.7	2.7	2.7	2.7	2.7															
10 30	26,572	-47.2	-57.4	09	1.1	31	25,190	-48.5	-48.5	0.5	1.3	25	25,191	-48.7	-14.7	14	0.9	29	25,040	-48.7	-20.4	27	18.6	31	24,729	-59.4	-64.5	28	2.7	2.7	2.7	2.7	2.7	2.7															
7 30	26,572	-47.2	-57.4	09	1.1	31	25,190	-48.5	-48.5	0.5	1.3	25	25,191	-48.7	-14.7	14	0.9	29	25,040	-48.7	-20.4	27	18.6	31	24,729	-59.4	-64.5	28	2.7	2.7	2.7	2.7	2.7	2.7															
6 30	26,572	-47.2	-57.4	09	1.1	31	25,190	-48.5	-48.5	0.5	1.3	25	25,191	-48.7	-14.7	14	0.9	29	25,040	-48.7	-20.4	27	18.6	31	24,729	-59.4	-64.5	28	2.7	2.7	2.7	2.7	2.7	2.7															
5 30	26,572	-47.2	-57.4	09	1.1	31	25,190	-48.5	-48.5	0.5	1.3	25	25,191	-48.7	-14.7	14	0.9	29	25,040	-48.7	-20.4	27	18.6	31	24,729	-59.4	-64.5	28	2.7	2.7	2.7	2.7	2.7	2.7															
4 30	26,572	-47.2	-57.4	09	1.1	31	25,190	-48.5	-48.5	0.5	1.3	25	2																																				

RAWINSONDE DATA

Average monthly values

N48-1030

NASHVILLE, TN 995 MB				NOME, AK 1010 MB				NORTH PLATTE, NE 916 MB				OAKLAND, CA 1014 MB				OMAHA, NE 966 MB						
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind		
SFC	31	180	14.3	12.6	21	* 4	31	5	3.3	-1.9	0.3	2.1	31	847	8.4	2.9	0.5	9	31	120	12.3	
1000	1000	568	15.6	10.3	21	3.5	31	500	5.7	-2.9	0.8	2.5	31	30	1,001	9.1	4.3	0.1	31	551	12.8	
950	31	1,026	13.0	7.9	23	5.0	31	938	1.7	-5.6	12	2.4	30	1,001	9.1	4.3	0.1	31	551	14.1		
900	31	1,505	10.7	4.1	25	6.4	31	1,396	-9.7	-7.4	13	2.4	31	1,470	9.2	1.8	3.0	1.5	31	1,000	-1.8	
850	31	2,008	7.8	-0.7	25	6.6	31	1,878	-3.9	-10.8	14	2.8	31	1,972	7.7	-0.9	3.2	2.0	31	1,488	13.1	
800	31	2,538	4.8	-3.8	26	6.9	31	2,384	-7.1	-14.1	14	3.6	31	2,502	4.9	-3.4	3.0	3.5	31	1,994	9.9	
750	31	3,098	1.8	-9.0	26	7.7	31	2,919	-10.3	-18.2	14	4.0	31	3,062	1.5	-0.7	2.9	5.5	31	2,527	-7.7	
700	31	3,692	-1.5	-13.2	26	7.6	31	3,487	-13.7	-22.5	14	4.1	31	3,655	-2.1	-10.0	2.9	6.4	31	3,091	-15.6	
650	31	4,326	-4.9	-18.7	26	8.7	31	4,090	-17.5	-25.9	14	4.1	31	4,287	-6.1	-15.3	2.7	8.4	31	3,689	-21.2	
600	31	5,005	-9.0	-23.6	26	10.1	31	4,736	-21.4	-30.3	13	4.3	31	4,962	-10.7	-20.3	2.7	9.1	31	4,326	-23.0	
550	31	5,656	-14.0	-28.1	26	12.2	31	5,331	-26.5	-35.7	13	4.7	31	5,649	-15.5	-27.4	2.7	10.1	31	5,741	-29.9	
500	31	6,326	-18.5	-32.2	27	13.0	31	6,145	-32.4	-41.0	13	4.6	31	6,464	-21.5	-33.4	2.7	11.1	31	6,515	-35.2	
450	31	7,392	-25.1	-39.0	13	14.2	31	7,134	-38.4	-46.9	13	4.5	31	7,336	-27.0	-39.6	2.7	12.1	31	7,436	-41.0	
400	31	8,349	-32.9	-45.1	27	14.2	31	7,913	-44.9	-52.7	13	4.1	31	8,288	-34.1	-45.0	2.7	14.8	31	8,360	-45.9	
350	31	9,413	-41.0	-50.6	27	16.6	30	8,928	-51.6	-59.1	13	6.6	31	9,345	-41.1	-50.3	2.7	15.0	31	9,424	-51.1	
300	31	10,628	-48.9	-57.7	27	19.1	30	10,099	-54.8	-62.5	12	4.7	31	10,552	-51.7	-60.3	2.7	16.5	31	10,638	-50.3	
250	300	12,059	-57.9	-65.7	27	22.1	30	11,538	-51.3	-59.7	12	2.5	29	11,975	-58.7	-67.0	2.7	16.0	31	12,066	-58.6	
200	31	12,898	-59.3	-72.8	28	20.6	29	12,402	-49.5	-57.3	13	2.5	29	12,810	-60.5	-68.7	2.7	17.2	30	12,909	-60.1	
150	31	13,862	-59.9	-78.7	27	18.7	29	13,412	-49.6	-57.8	14	2.3	29	13,770	-57.8	-67.0	2.7	15.2	30	13,870	-60.5	
125	31	15,000	-60.4	-87.6	27	16.4	29	14,607	-49.5	-57.8	14	2.2	29	14,928	-58.0	-67.7	2.7	13.0	29	15,010	-61.7	
100	31	16,386	-61.6	-106.0	27	12.5	29	16,070	-49.3	-57.4	15	2.3	29	16,333	-58.4	-67.7	2.7	8.6	29	16,389	-62.7	
80	31	17,766	-61.9	-107.6	27	8.1	29	17,532	-49.5	-57.4	15	2.3	28	17,733	-58.4	-67.7	2.7	6.1	29	17,762	-62.3	
70	31	18,596	-59.7	-104.8	28	4.8	29	18,408	-49.0	-57.0	15	2.4	28	18,576	-57.6	-67.7	2.7	5.6	29	18,595	-60.5	
60	31	19,560	-59.4	-102.0	30	2.0	29	19,429	-49.0	-56.3	15	2.3	29	19,555	-56.3	-67.8	2.7	4.5	29	19,559	-59.2	
50	31	20,524	-59.1	-100.2	0.5	1.8	28	20,617	-49.0	-54.9	14	2.3	29	20,730	-56.3	-67.8	2.7	2.8	29	20,730	-57.0	
40	31	22,288	-58.4	-96.2	0.7	2.2	27	22,885	-49.2	-54.9	12	2.7	29	22,149	-53.3	-67.8	2.7	0.6	29	22,149	-52.5	
30	29	23,991	-50.7	-97.2	27	21.2	27	23,974	-49.0	-52.1	11	2.2	27	24,011	-51.2	-67.8	2.7	3.3	27	23,971	-50.6	
25	28	25,182	-48.9	-95.9	0.7	21	25	25,171	-48.8	-50.2	09	2.6	27	25,202	-49.2	-67.8	2.7	0.3	29	25,171	-49.4	
20	28	26,659	-45.8	-93.0	1.2	26	26,650	-46.9	-49.5	09	3.1	27	26,676	-46.7	-67.6	2.7	1.1	28	26,621	-47.6		
15	24	28,585	-43.3	-91.2	29	2.1	28	28,554	-44.7	-47.5	09	4.6	25	28,597	-43.5	-67.8	2.7	3.0	24	28,536	-43.9	
10	9	31,347	-39.4	-87.0	27	21	25	31,171	-48.8	-52.9	09	2.6	27	25,202	-49.2	-67.8	2.7	0.3	29	25,155	-49.3	
								15	31,363	-38.4	-80.5	26	3.5	16	31,283	-39.1	-67.8	2.7	2.4	19	31,312	-39.7

PAGO PAGO, AMERICAN SAMOA				PEORIA, IL				PITTSTURGH, PA				PONAPE, CAROLINE IS.				PORTLAND, ME																
*	1001 MB			*	991 MB			*	974 MB			*	1005 MB			*	1015 MB															
5FC	31	5	29.3	24.9	09	3.7	31	200	10.1	7.1	18	* 8	31	359	10.8	7.0	16	* 7	31	39	28.4	24.7	08	* 2.9	31	20	10.5	6.6	34	* 4		
1000	31	105	27.0	23.4	09	3.8														31	86	27.3	23.8	08	* 3.4	31	143	10.6	5.0	34	* 6	
950	31	558	23.7	21.4	09	3.9	31	557	13.2	5.1	23	* 2.7	31	567	12.0	6.2	22	* 1.6	31	540	23.7	21.5	08	* 7.5	31	571	10.6	4.4	26	* 4		
900	31	1,030	20.7	17.9	07	3.8	31	1,011	11.1	2.6	26	* 4.4	31	1,019	10.3	3.9	25	* 3.6	31	1,012	20.9	18.4	09	* 8.6	31	1,021	9.3	2.8	24	* 2.5		
850	31	1,152	18.0	14.2	07	3.5	31	1,087	9.0	-9	27	* 4.9	31	1,493	8.0	-7	26	* 4.9	31	1,506	18.4	14.9	09	* 8.6	31	1,494	6.8	1.6	25	* 4.6		
800	31	2,042	16.2	7.9	07	3.7	26	31	1,987	6.5	-5	29	* 5.7	31	1,992	5.3	-2	21	* 2.7	5.5	31	2,025	16.4	11.2	09	* 6.9	31	1,990	4.5	-1.5	25	* 6.2
750	31	2,590	13.6	2.9	04	2.0	31	2,514	3.7	-9	27	* 6.3	31	2,517	2.6	-5	27	* 6.7	31	2,573	13.7	7.8	10	* 6.0	31	2,514	1.7	-6.1	25	* 7.7		
700	31	3,168	10.4	-1	03	1.8	31	3,071	-5	-11	8.7	* 7.2	31	3,073	-2	-14	4.4	* 26	7.8	31	3,152	10.5	4.2	10	* 5.6	31	3,067	-1.2	-10.2	25	* 9.0	
650	31	3,781	6.8	-4	4.3	02	1.8	3,663	-3	-14	4.7	* 8.4	31	3,663	-3	-13	3.6	* 26	8.8	31	3,767	7.3	1.9	10	* 5.4	31	3,656	-4.0	-15.1	25	* 10.3	
600	31	4,435	3.0	-6	8.3	03	1.8	4,292	-6.9	-19	4.7	* 9.7	31	4,291	-7.3	-18.3	2.6	* 26	9.8	31	4,422	3.5	-24	09	* 4.9	31	4,283	-7.8	-18.4	25	* 12.0	
550	31	5,135	-7	-13.5	0.5	1.5	31	4,966	-11.1	-23.3	2.7	* 10.0	31	4,964	-11.3	-24.6	2.4	* 27	11.0	31	5,125	-0	-7.4	10	* 4.8	31	4,955	-11.6	-24.7	25	* 13.8	
500	31	5,890	-5.4	-18.4	0.02	1.8	31	5,691	-15.9	-28.9	2.7	* 11.6	31	5,689	-16.2	-28.7	2.7	* 27	12.0	31	5,883	-3.9	-13.9	08	* 3.8	31	5,679	-16.4	-29.9	25	* 15.4	
450	31	6,709	-10.3	-22.3	3.4	1.8	31	6,477	-20.9	-34.7	2.7	* 14.1	31	6,473	-21.5	-33.5	2.4	* 27	12.7	31	6,708	-8.6	-19.2	09	* 2.9	31	6,463	-21.6	-34.9	25	* 16.8	
400	31	7,607	-16.3	-28.1	3.2	2.8	31	7,337	-27.2	-41.0	2.8	* 15.4	30	7,327	-27.7	-39.3	2.7	* 15	14.3	30	7,612	-14.2	-25.9	12	* 2.4	31	7,320	-27.9	-39.8	25	* 18.1	
350	31	8,602	-23.0	-34.7	3.2	4.3	31	8,287	-34.4	-54.2	2.7	* 17.9	30	8,277	-34.9	-44.6	2.7	* 18.8	30	8,615	-20.8	-33.3	13	* 2.5	31	8,269	-34.9	-44.5	25	* 18.7		
300	31	9,711	-30.9	-40.3	4.2	6.0	31	9,345	-42.3	-48.2	2.7	* 20.1	29	9,332	-42.9	-48.3	2.7	* 17.4	30	9,733	-29.2	-40.9	16	* 2.1	31	9,325	-29.5	-48.3	25	* 21.4		
250	31	10,978	-40.8	-52.5	5.1	6.4	31	10,555	-50.9	-59.9	27	* 22.0	29	10,539	-50.7	-59.7	27	* 20.3	31	10,010	-39.4	-50.8	19	* 3.2	31	10,534	-50.6	-56.0	26	* 21.4		
200	31	12,456	-52.9		27	7.6	31	11,982	-57.9	-59.7	27	* 23.2	29	11,973	-56.2	-59.2	27	* 21.6	30	12,490	-52.1	-59.1	21	* 4.8	31	11,967	-56.5	-56.5	26	* 19.1		
175	31	13,305	-59.6		27	8.3	31	12,822	-58.8	-59.8	27	* 22.4	29	12,820	-57.3	-59.3	27	* 18.5	30	13,347	-59.0	-59.0	22	* 5.0	31	12,812	-57.1	-59.0	26	* 16.7		
150	31	14,253	-66.7		27	7.7	31	13,792	-58.0	-59.0	27	* 19.5	29	13,793	-57.1	-57.1	27	* 15.3	29	14,296	-66.7	-66.7	23	* 3.9	31	13,787	-57.4	-57.4	25	* 14.5		
125	31	15,336	-73.4		28	6.4	31	14,943	-57.8	-57.8	27	* 14.9	29	14,948	-57.7	-57.7	26	* 13.4	29	15,379	-73.9	-73.9	27	* 4.0	31	14,942	-57.3	-57.3	25	* 11.6		
100	31	16,361	-81.2		28	4.6	31	16,346	-58.7	-58.7	27	* 11.5	29	16,355	-58.4	-58.4	27	* 9.4	29	16,663	-81.2	-81.2	29	* 4.5	31	16,348	-58.1	-58.1	26	* 8.3		
80	31	17,906	-76.2		32	2.2	30	17,884	-58.4	-58.4	27	* 6.5	29	17,884	-58.4	-58.4	27	* 6.2	29	17,938	-76.5	-76.5	31	* 2.0	31	17,755	-57.0	-57.0	26	* 6.2		
70	31	18,681	-73.1		30	1.6	31	18,596	-56.7	-56.7	27	* 4.0	29	18,592	-57.4	-57.4	27	* 3.8	29	18,628	-73.1	-73.1	27	* 2.0	31	18,599	-56.9	-56.9	26	* 2.2		
60	28	19,592	-69.0		09	1.1	29	19,574	-55.1	-55.1	27	* 2.6	29	19,577	-55.6	-55.6	29	* 1.9	28	19,436	-66.7	-66.7	26	* 3.0	29	19,577	-55.6	-55.6	31	* 2.5		
50	28	20,700	-62.7		08	3.4	29	20,736	-55.2	-55.2	32	* 18	29	20,736	-55.1	-55.1	32	* 1.0	28	20,749	-63.0	-63.0	12	* 1.4	30	20,737	-55.5	-55.5	31	* 8.8		
40	28	22,093	-57.4		08	6.1	29	22,164	-53.6	-53.6	06	* 1.8	29	22,166	-53.5	-53.5	03	* 1.2	27	22,138	-59.4	-59.4	09	* 1.1	30	22,165	-53.8	-53.8	03	* 5.5		
30	25	23,931	-53.1		09	9.2	25	24,025	-50.9	-50.9	05	* 2.5	29	24,070	-50.7	-50.7	03	* 1.4	27	23,964	-53.6	-53.6	09	* 2.4	29	24,023	-51.3	-51.3	32	* 8.8		
25	25	23,55	-51.4	-50.1	09	13.2	22	25,220	-49.6	-49.6	32	* 1.3	25	25,225	-48.8	-48.8	33	* 1.2	27	25,146	-50.3	-50.3	09	* 2.0	29	25,213	-49.4	-49.4	29	* 1.1		
20	17	26,588	-47.5		09	17.8	21	26,688	-47.0	-47.0	28	* 1.0	22	26,700	-46.2	-46.2	32	* 1.1	26,616	-46.4	-46.4	09	* 0.0	29	26,685	-46.7	-46.7	29	* 1.3			
15	13	28,510	-42.4		09	22.0	19	28,615	-43.5	-43.5	29	* 2.8	18	28,670	-43.4	-43.4	28	* 1.5	21	28,544	-42.3	-42.3	09	* 33.4	26	28,604	-43.8	-43.8	30	* 1.3		
10	10	31,290	-37.2		11	31.0	35	31.0	-38.3	-38.3	6	31	3531	-39.2	-39.2	12	31	30	-37.6	-37.6	-37.6	17	31	31.381	-37.6	-37.6	24	* 1.1				

QUILLAYUTE, WA 1011 MB												RAPID CITY, SD 904 MB												ST CLOUD, MN 977 MB												ST PAUL ISLAND, AK 1004 MB												SALEM, IL 994 MB											
5FC	31	58	8.0	7.1	15	.5	31	966	6.4	2.0	34	2.2	31	316	5.5	3.3	02	.8	31	10	3.0	1.6	05	3.7	31	174	11.9	9.5	12	.8																													
1000	28	165	8.5	7.5	25	.4													22	79	2.9	1.7	05	5.2	31	558	14.1	5.0	20	1.8																													
950	31	573	7.7	5.3	23	2.2													6.3	31	461	1.3	-1.2	07	5.6	31	1,013	12.4	1.2	25	2.7																												
900	31	1,018	5.5	4.2	23	2.9	23	1,030	7.3	1.7	34	1.8	31	990	5.8	-5.8	28	1.7	31	895	-1.7	-4.4	08	5.6	31	1,013	12.4	1.2	25	2.7																													
850	31	1,484	3.2	-6.4	24	3.8	31	1,475	7.5	-4	31	3.6	31	1,457	4.6	-2.7	29	4.7	31	1,350	-3.2	-8.0	08	6.1	31	1,491	10.3	-1.1	26	3.9																													
800	31	1,974	1.3	-8.6	25	4.7	31	1,973	5.3	-2.3	31	4.7	31	1,949	2.6	-5.8	27	7.2	31	1,827	-5.8	-10.9	08	6.2	31	1,993	7.7	-4.0	26	5.0																													
750	31	2,491	-9.	-11.8	26	5.9	31	2,498	2.7	-5.8	30	5.4	31	2,469	-1	-8.8	28	8.4	31	2,331	-8.8	-14.7	08	6.4	31	2,523	4.8	-8.8	27	5.2																													
700	31	3,039	-3.8	-1.4	26	6.6	31	3,053	-7.	-8.1	30	6.9	31	3,019	-2.9	-12.3	28	9.4	31	2,862	-11.9	-18.9	08	6.6	31	3,082	1.7	-12.6	27	5.8																													
650	31	3,622	7.3	-1.9	21	7.9	31	3,642	-4.5	-0.2	29	8.6	31	3,624	-6.3	-16.8	27	10.4	31	3,426	-15.5	-21.3	08	6.9	31	3,475	1.5	-15.5	26	7.0																													
600	31	4,000	-7.1	-2.2	26	11.0	31	4,037	-13.0	-20.7	26	11.0	31	4,000	-4.0	-22.1	27	12.4	31	3,800	-19.3	-27.7	08	7.0	31	4,000	-5.5	-20.1	26	7.5																													
550	31	9,033	-15.	-1.1	26	13.2	31	5,657	-17.6	-27.8	28	13.8	31	5,658	-19.1	-31.4	27	14.0	31	5,358	-28.2	-36.3	07	6.9	31	4,985	9.9	-23.6	28	8.6																													
500	31	5,618	-19.7	-30.5	26	13.2	31	5,657	-17.6	-27.8	28	13.8	31	5,658	-19.1	-31.4	27	14.0	31	5,358	-28.2	-36.3	07	6.9	31	5,713	-14.8	-28.2	28	9.6																													
450	31	6,139	-25.2	-35.4	27	14.6	31	6,138	-22.9	-33.8	27	13.2	31	6,138	-28.1	-35.3	27	16.5	31	6,106	-33.2	-4.6	07	6.6	31	6,503	-20.1	-33.8	28	11.4																													
400	31	7,237	-31.1	-40.4	27	16.6	31	7,291	-29.2	-38.8	27	15.8	29	7,236	-30.3	-40.1	27	18.2	31	6,924	-39.1	-45.8	07	5.7	31	7,365	-26.4	-38.5	27	12.5																													
350	31	8,174	-37.5	-43.8	28	18.7	31	8,233	-36.6	-44.7	27	16.6	29	8,176	-37.1	-42.6	28	19.3	31	7,831	-45.1	-49.4	08	5.7	31	8,320	-33.3	-43.8	27	13.8																													
300	31	9,218	-45.2		28	20.4	31	9,279	-44.8		27	17.9	29	9,222	-44.8		28	20.9	30	8,851	-49.9	06	4.9	31	9,382	-41.3	-48.5	27	16.0																														
250	31	10,415	-52.6		28	23.3	31	10,478	-52.5		27	18.9	29	10,421	-52.3		27	22.7	30	10,039	-50.9	06	4.1	31	10,595	-50.8	06	27	18.3																														
200	31	11,837	-57.3		28	22.3	31	11,901	-57.7		27	19.3	29	11,848	-56.2		27	22.5	31	11,502	-49.3	04	4.5	31	12,022	-57.9	07	27	21.3																														
175	31	12,683	-56.3		28	19.8	31	12,743	-57.6		27	17.6	28	12,698	-55.6		28	19.8	29	12,381	-48.3	06	4.3	31	12,861	-59.3	06	27	21.7																														
150	30	13,671	-55.1		27	17.1	31	13,718	-56.5		27	17.2	28	13,685	-54.6		28	15.4	29	13,397	-47.9	12	3.3	31	13,828	-58.5	27	21.7																															
125	30	14,855	-55.4		27	14.7	31	14,877	-55.8		28	13.7	28	14,854	-54.6		28	11.6	29	14,596	-48.5	15	5.5	31	14,975	-50.7	09	27	15.6																														
100	30	16,259	-56.8		28	9.4	31	16,281	-56.7		28	8.8	28	16,259	-55.5		28	4.6	29	16,050	-50.0	27	1.7	31	16,500	-50.0	27	21.7																															
80	30	17,569	-55.9		28	6.6	31	17,599	-56.0		28	5.9	28	17,563	-55.5		27	5.9	29	17,520	-49.5	16	2.9	31	17,746	-59.4	27	21.7																															
70	30	18,526	-55.7		28	4.9	31	18,556	-56.4		28	3.9	28	18,515	-55.0		27	2.9	29	18,043	-49.4	17	2.2	31	18,603	-57.8	27	21.6																															
60	30	19,509	-55.6		29	3.5	31	19,536	-56.0		27	2.8	28	19,540	-55.9		28	2.3	29	19,413	-49.5	16	1.9	31	19,577	-57.0	27	21.8																															
50	29	20,674	-55.3		30	2.5	31	20,699	-54.7		27	1.8	28	20,708	-54.0		29	1.2	29	20,606	-49.4	15	2.3	31	20,734	-56.1	34	.5																															
40	29	22,100	-55.6		32	2.0	31	22,131	-53.6		28	1.0	28	22,112	-53.5		35	.7	28	22,069	-49.6	15	2.0	31	22,162	-53.5	08	1.3																															
30	24	23,964	-53.2		02	1.0	31	23,990	-51.3		22	.4	28	24,003	-51.3		08	1.5	28	23,952	-49.5	12	1.5	31	24,022	-50.7	04	1.1																															
25	24	25,142	-51.9		01	1.1	30	25,180	-49.5		28	.9	28	25,191	-49.8		06	1.0	28	25,148	-49.1	11	1.4	30	25,222	-48.7	03	1.0																															
20	23	26,595	-49.2		01	2.1	30	26,650	-47.1		32	.6	28	26,663	-47.6		11	.5	25	26,197	-48.0	10	2.0	29	26,698	-45.6	31	1.1																															
15	21	28,506	-45.3		05	2.5	30	28,570	-43.6		26	.6	28	28,591	-43.3		02	1.0	22	28,525	-45.7	08	2.1	27	28,626	-42.7	28	2.5																															
10	13	31,287	-38.6		03	2.5	19	31,345	-37.9		04	.4	31	330	-39.0		19	.9	21	31,255	-40.5	07	1.1	21	31,386	-37.7	30	2.9																															

RAWINSONDE DATA

Average monthly values

MAY 1979

RAWINSONDE DATA

Average monthly values

MAY 1979

ACROSS, GA 1011 MB		WEST PALM BEACH, FL 1015 MB		WINNEMUCCA, NV 868 MB		WINSLOW, AZ 850 MB		YAKUTAT, AK 1011 MB												
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind	Speed m.p.s.	
SFC	31	4	17.1	16.1	22	3	31	7	21.8	19.5	14	1.2	31	1,484	11.5	-1.0	0.2	1.9	1,517	
1000	31	136	18.0	16.3	23	8	31	138	23.5	19.6	14	2.5	31	1,989	9.4	-3.5	3.6	2.3	1,994	
950	31	581	18.6	12.0	23	2.8	31	585	20.1	17.9	14	2.4	31	2,531	5.5	-6.2	33	3.4	2,531	
900	31	4,043	16.1	9.1	23	3.6	31	1,051	17.5	12.9	15	3.3	31	3,080	1.2	-8.9	30	4.1	3,097	
850	31	1,527	13.2	4.6	23	4.0	31	1,538	14.9	8.7	16	2.1	31	1,484	11.5	-1.0	0.2	1.9	1,517	
800	31	2,035	10.0	2.3	24	3.9	31	2,049	12.5	3.8	19	1.7	31	1,989	9.4	-3.5	3.6	2.3	1,994	
750	31	2,570	7.2	-2.3	24	4.8	31	2,589	9.6	-1.0	22	1.6	31	2,521	5.5	-6.2	33	3.4	2,531	
700	31	3,135	4.4	-6.5	25	6.0	31	3,158	6.3	-4.4	25	2.3	31	3,080	1.2	-8.9	30	4.1	3,097	
650	31	3,735	1.0	-11.2	26	6.6	31	3,762	2.9	-9.8	25	3.0	31	3,673	-2.4	-14.2	27	4.7	3,696	
600	31	3,797	-2.7	-15.4	27	7.5	31	3,815	-15.4	26	3.9	31	4,304	-6.1	-18.3	27	5.5	3,311		
550	31	5,059	-6.6	-20.7	27	8.9	31	5,098	-4.6	-18.7	27	5.0	31	4,979	-10.7	-23.4	28	6.5	5,012	
500	31	5,797	-11.5	-23.4	27	10.1	31	5,841	-23.4	28	5.8	31	5,705	-15.8	-28.7	29	7.7	5,743		
450	31	6,597	-16.9	-31.0	27	10.8	31	6,647	-14.9	-29.5	28	6.6	31	6,491	-21.5	-34.6	29	8.8	6,535	
400	31	7,470	-23.1	-37.4	27	12.4	31	7,528	-21.1	-34.8	29	8.5	31	7,348	-27.9	-39.3	29	10.4	7,400	
350	31	8,437	-30.5	-43.3	27	13.4	31	8,504	-27.9	-40.8	28	11.1	31	8,296	-35.3	-44.1	29	12.1	8,355	
300	31	9,511	-39.0	-49.7	27	15.6	31	9,589	-36.4	-48.0	28	13.2	31	9,349	-43.0	-48.9	29	13.9	9,311	
250	31	10,366	-40.5	-50.0	27	16.2	31	10,487	-46.6	-56.2	28	14.8	31	10,216	-50.7	-56.2	29	15.6	10,187	
200	31	12,172	-57.9	-61.0	27	19.0	31	12,278	-56.6	-62	29	22.0	31	11,986	-57.8	-62	29	23.8	12,059	
175	31	12,007	-61.0	-61.0	28	21.3	31	13,131	-60.2	-62	29	24.1	31	12,826	-58.5	-62	29	27.0	12,901	
150	31	13,941	-62.3	-62.3	28	19.8	31	14,073	-63.4	-64.4	28	23.8	31	13,796	-63.4	-64.4	29	25.0	13,871	
125	31	15,080	-64.4	-64.4	28	17.3	31	15,186	-65.9	-65.9	29	18.5	31	14,945	-58.8	-62	29	13.1	15,013	
100	31	16,438	-66.3	-66.3	28	12.2	31	16,530	-68.8	-68.8	29	12.7	31	16,344	-59.4	-62	28	6.7	16,395	
80	31	17,790	-65.6	-65.6	29	7.0	31	17,867	-68.0	-68.0	31	6.6	31	17,741	-59.6	-62	28	5.2	17,771	
70	30	18,600	-53.8	-53.8	32	2.9	31	18,673	-65.5	-65.5	36	3.2	31	18,579	-58.0	-61.0	29	3.8	18,598	
50	30	19,556	-51.9	-51.9	04	2.0	30	19,618	-62.7	-62.7	06	3.6	30	19,551	-57.1	-60.7	30	2.3	19,560	
50	30	20,693	-58.6	-58.6	07	4.3	30	20,758	-58.1	-58.1	07	6.3	30	20,708	-55.8	-61.0	31	1.3	20,705	
40	30	22,722	-54.8	-54.8	09	4.8	30	22,173	-54.4	-54.4	09	7.8	29	22,132	-54.4	-54.4	33	1.8	22,122	
30	30	23,568	-50.3	-50.3	09	6.3	30	24,036	-50.3	-50.3	09	9.0	28	23,982	-52.2	-51.0	33	1.9	23,976	
25	30	25,163	-48.5	-48.5	09	6.9	30	25,233	-47.8	-47.8	09	9.7	28	25,168	-50.1	-48.4	29	2.2	25,169	
20	28	26,600	-45.6	-45.6	09	6.1	30	26,717	-44.9	-44.9	09	10.7	28	26,635	-47.1	-45.9	29	3.7	26,650	
15	25	28,566	-42.7	-42.7	07	5.8	27	28,651	-41.6	-41.6	09	11.8	26	28,552	-43.2	-43.1	27	3.4	28,579	
10	19	31,333	-38.2	-38.2	10	7.4	14	31,428	-36.8	-36.8	10	13.7	8	31,322	-38.5	-38.1	18	31,284	-39.9	
														6	33,741	-37.3	-37.3	27	2.6	31,285

YAP, CAROLINE IS. 1009 MB		YUCCA FLAT, NV 882 MB	
SFC	31	14	28.6
1000	31	93	27.0
950	31	546	23.3
900	31	1,018	20.8
850	31	1,511	18.3
800	31	2,030	15.9
750	31	2,577	13.3
700	31	3,115	10.4
650	31	3,769	7.3
600	31	4,424	3.9
550	31	5,127	0
500	31	5,884	-4.7
450	31	6,708	-9.0
400	31	7,609	-14.7
350	31	8,610	-21.1
300	31	9,726	-29.9
250	31	11,001	-39.8
200	31	12,485	-52.3
175	31	13,336	-59.2
150	31	14,284	-67.1
125	31	15,365	-74.2
100	31	16,645	-79.3
80	31	17,915	-77.1
70	31	18,689	-73.2
60	31	19,644	-68.0
50	31	20,715	-62.5
40	31	22,100	-59.9
30	29	23,926	-59.3
25	28	25,111	-50.7
20	26	26,580	-46.7
15	24	28,503	-42.7
10	9	31,254	-37.6

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

MAY 1979

Date	Sun's zenith distance								Date	Sun's zenith distance									
	A.M.				*	P.M.					A.M.				*	P.M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°	
MAUNA LOA OBSERVATORY, HI																			
Air mass										Air mass									
	3.34	2.67	2.01	1.34	*	1.34	2.01	2.67	3.34		4.64	3.71	2.78	1.86	*	1.86	2.78	3.71	4.64
2-----	1.09	1.17	1.27	1.41	----	----	----	----	----	2-----	.72	.84	1.00	1.16	1.44	1.14	----	----	----
4-----	1.09	1.17	1.26	1.40	1.55	1.40	1.27	1.17	1.08	3-----	.74	.83	.96	1.11	1.38	1.14	.98	.84	.72
5-----	1.10	1.18	1.29	1.43	1.58	1.43	1.32	1.21	1.13	6-----	.72	.84	1.01	1.22	1.44	1.16	.98	.85	.74
6-----	1.12	1.22	1.32	1.43	1.55	1.36	1.24	1.13	1.06	5-----	.86	.96	1.08	1.26	1.42	1.25	1.10	.98	.89
8-----	1.33	1.36	1.41	1.46	----	----	----	----	----	6-----	.84	.95	1.09	1.27	1.46	1.23	1.00	.84	.74
11-----	1.13	1.22	1.31	1.40	----	----	----	----	----	7-----	.89	.99	1.12	1.26	1.46	1.24	1.06	----	----
13-----	1.12	1.15	1.27	1.39	1.52	----	----	----	----	8-----	----	.99	1.09	----	1.43	----	----	----	----
14-----	1.06	1.15	1.25	1.36	----	----	----	----	----	9-----	----	----	----	----	----	----	----	----	.84
15-----	1.08	1.16	1.27	1.40	1.54	----	----	----	----	10-----	.88	.99	1.12	1.29	1.47	1.26	1.11	.98	.86
16-----	1.13	1.21	1.32	1.42	----	----	----	----	----	11-----	.95	1.07	1.18	1.32	1.48	1.24	1.01	.91	.83
30-----	1.14	1.21	1.31	1.42	----	----	----	----	----	12-----	.83	.94	1.08	1.26	1.47	1.24	1.06	.93	.81
Averages	1.12	1.20	1.30	1.41	1.55	1.39	1.28	1.17	1.09	13-----	.83	.93	1.06	1.24	1.44	1.15	.94	.82	.69
										14-----	.75	.86	.98	1.15	1.37	1.15	----	----	----
										15-----	.84	.94	1.06	1.23	1.39	1.05	.86	.77	.66
										16-----	----	----	----	----	----	1.10	.85	----	----
										17-----	.72	.84	.98	1.17	1.37	1.12	.92	.83	.73
										18-----	.78	----	----	1.20	1.37	1.12	----	----	----
										19-----	----	----	.93	1.12	1.33	1.10	----	----	----
										20-----	----	----	----	----	----	1.02	----	----	----
										21-----	----	.84	----	----	1.38	1.13	1.01	.88	.78
										22-----	.79	.87	1.02	1.15	1.36	1.07	----	----	----
										23-----	.64	.76	.89	1.07	1.28	1.04	----	----	----
										24-----	----	----	----	----	1.45	1.22	1.04	----	----
										25-----	----	.93	----	----	1.45	1.22	1.04	----	----
										26-----	----	----	1.01	1.17	1.36	1.14	1.02	----	----
										27-----	----	----	----	1.10	1.36	1.14	1.02	----	----
										28-----	.63	.76	.91	1.12	1.36	1.14	1.02	----	----
										29-----	----	----	----	1.38	1.16	1.00	.85	.76	----
										30-----	.68	.80	.92	1.11	1.40	1.16	.99	.88	.73
										31-----	.74	.87	1.02	1.21	1.39	1.20	1.03	.93	.84
										Averages	.78	.90	1.02	1.19	1.41	1.17	1.00	.88	.77

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys	113	161	199	124	178	89	52	114	121	201	132	165	158	175	106	124	198	205	142	M	M	M	106	135	169	178	201	196	202	136	125	150

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES: Data in the table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

- + And also on an earlier date or dates.
- o Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch of water equivalent to every 10 inches of snow-fall.

CLIMATOLOGICAL DATA - METRIC UNITS: Data from airport unless otherwise specified.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

- B Number of days maximum 21.1°C. or above for Alaskan Stations.
- Y Peak Gust.
- + And also on an earlier date or dates.
- U Indicates Urban site.
- R Indicates Rural site.
- Ø Station pressures apply to elevations shown in the "Elevations" table of the annual issue of this publication.

Conversion formulae to English Units are as follows:

$$\begin{aligned} 1 \text{ foot} &= 0.3048 \text{ meters} \\ \text{OF.} &= \frac{9}{5} \times ^\circ\text{C} + 32 \\ 1 \text{ inch} &= 25.4 \text{ millimeters} \\ 1 \text{ mile per hour} &= 0.447 \text{ meters per second} \end{aligned}$$

HEATING DEGREE DAYS: Data from airport unless otherwise specified.

- U Indicates Urban site.
- R Indicates Rural site.

COOLING DEGREE DAYS: Data from airport unless otherwise specified.

- U Indicates Urban site.
- R Indicates Rural site.

STORM SUMMARY:

- o Includes crop damage.
- c Crop damage.
- * No occurrence of storms or unusual weather phenomena reported.
- @ Includes heavy sleet storm.
- # Freezing drizzle and freezing rain, commonly known as glaze.
- Ø For breakdown of "All Others," and for detailed listing of other storms, see the Environmental Data and Information Service, NOAA, monthly publication **STORM DATA**.
- ‡ No Storm Data Report received for this State.
- ◇ Report Incomplete.
- + Storm damages are placed in categories varying from 1 to 9 as follows:
 - 1 Less than \$50
 - 2 \$50 to \$500
 - 3 \$500 to \$5,000
 - 4 \$5,000 to \$50,000
 - 5 \$50,000 to \$500,000
 - 6 \$500,000 to \$5 Million
 - 7 \$5 Million to \$50 Million
 - 8 \$50 Million to \$500 Million
 - 9 \$500 Million to \$5 Billion

RAWINSONDE DATA (Average Monthly Values):

All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 60° above the horizon, or any obstruction above the horizon. The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygrometers. These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

- * Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.
- + Observations for these stations are scheduled at 0000 G.C.T.
- + Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

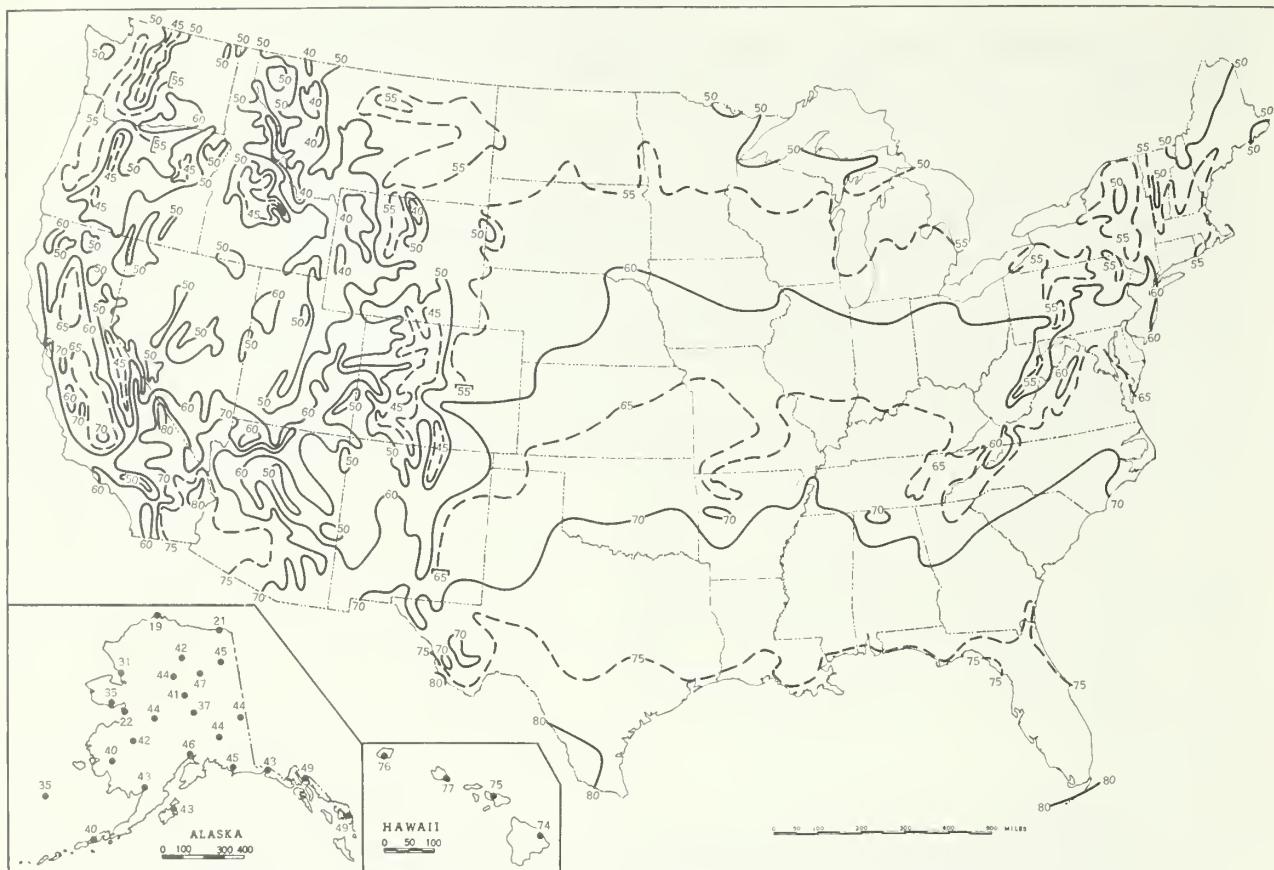
SOLAR RADIATION INTENSITIES: Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

()	Clouds Present	DM	Moderate Oust	HM	Moderate Haze	KS	Slight Smoke
*	Values corresponding to true solar noon	DS	Slight Dust	HS	Slight Haze	M	Moderate Haze-indeterminable
BD	Blowing Oust	F	Fog	I	Intense Haze-indeterminable	N	Sand
BN	Blowing Sand	GF	Ground Fog	K	Smoke	S	Slight Haze-indeterminable
D	Dust	H	Haze	KI	Intense Smoke		
OI	Intense Oust	HI	Intense Haze	KM	Moderate Smoke		

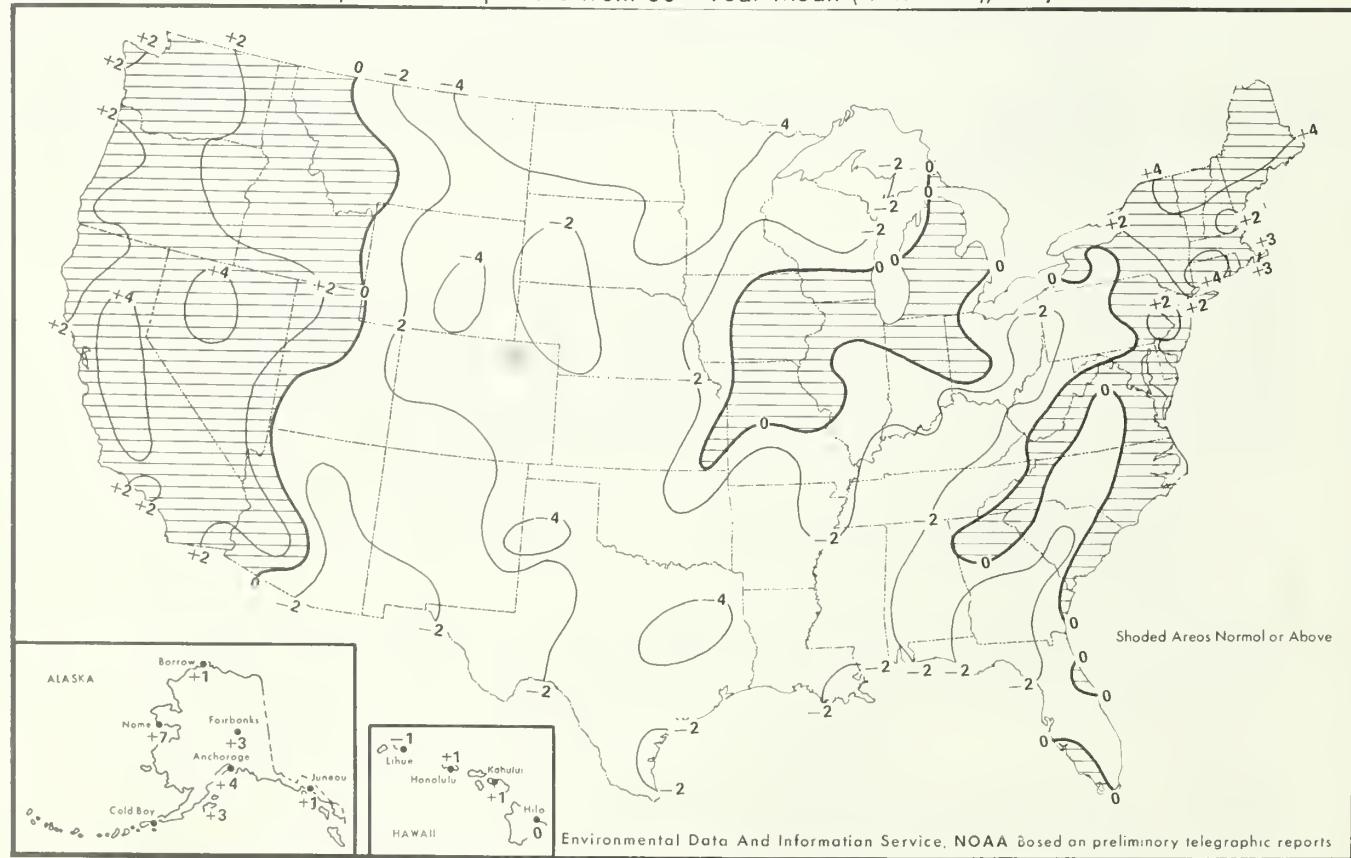
NET RADIATION: The measurement is made with a CSIRO FUNKE net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

Chart 1. A. Normal Daily Average Temperature (°F. 1941-70), May.

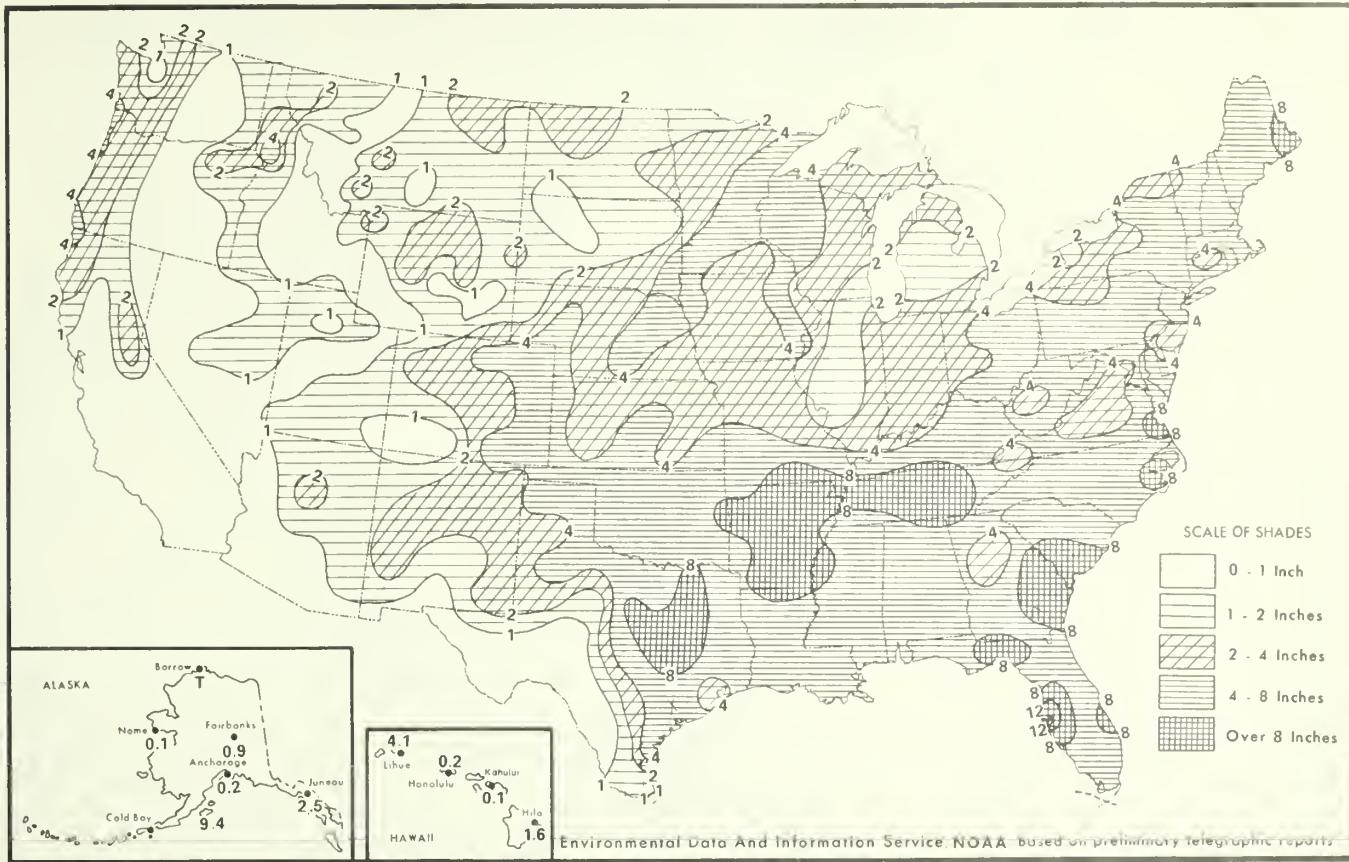


B. Temperature Departure from 30 - Year Mean (°F 1941-70), May 1979



Environmental Data And Information Service, NOAA Based on preliminary telegraphic reports

Chart II. A. Total Precipitation (Inches), May 1979



B. Percentage of Normal Precipitation, May 1979

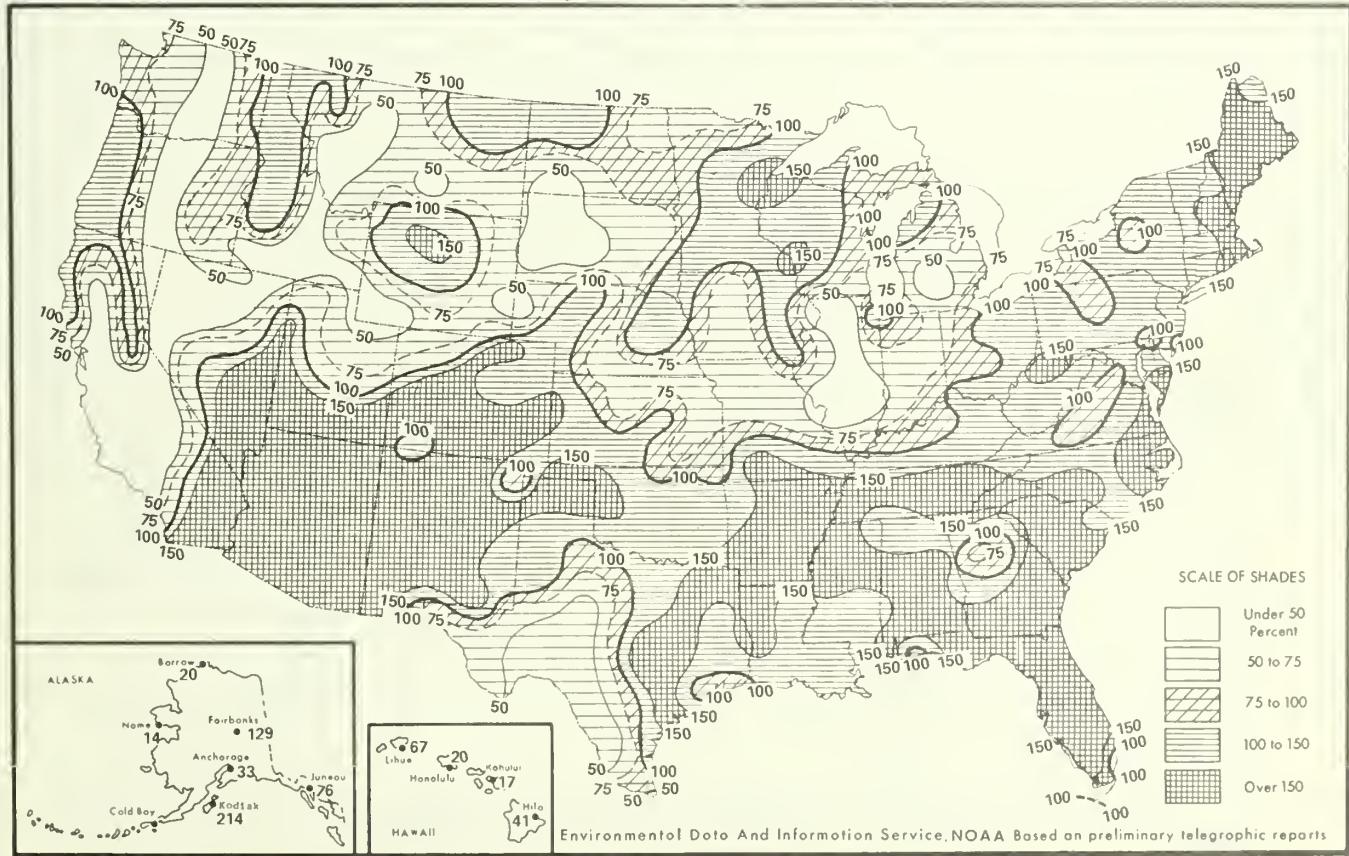
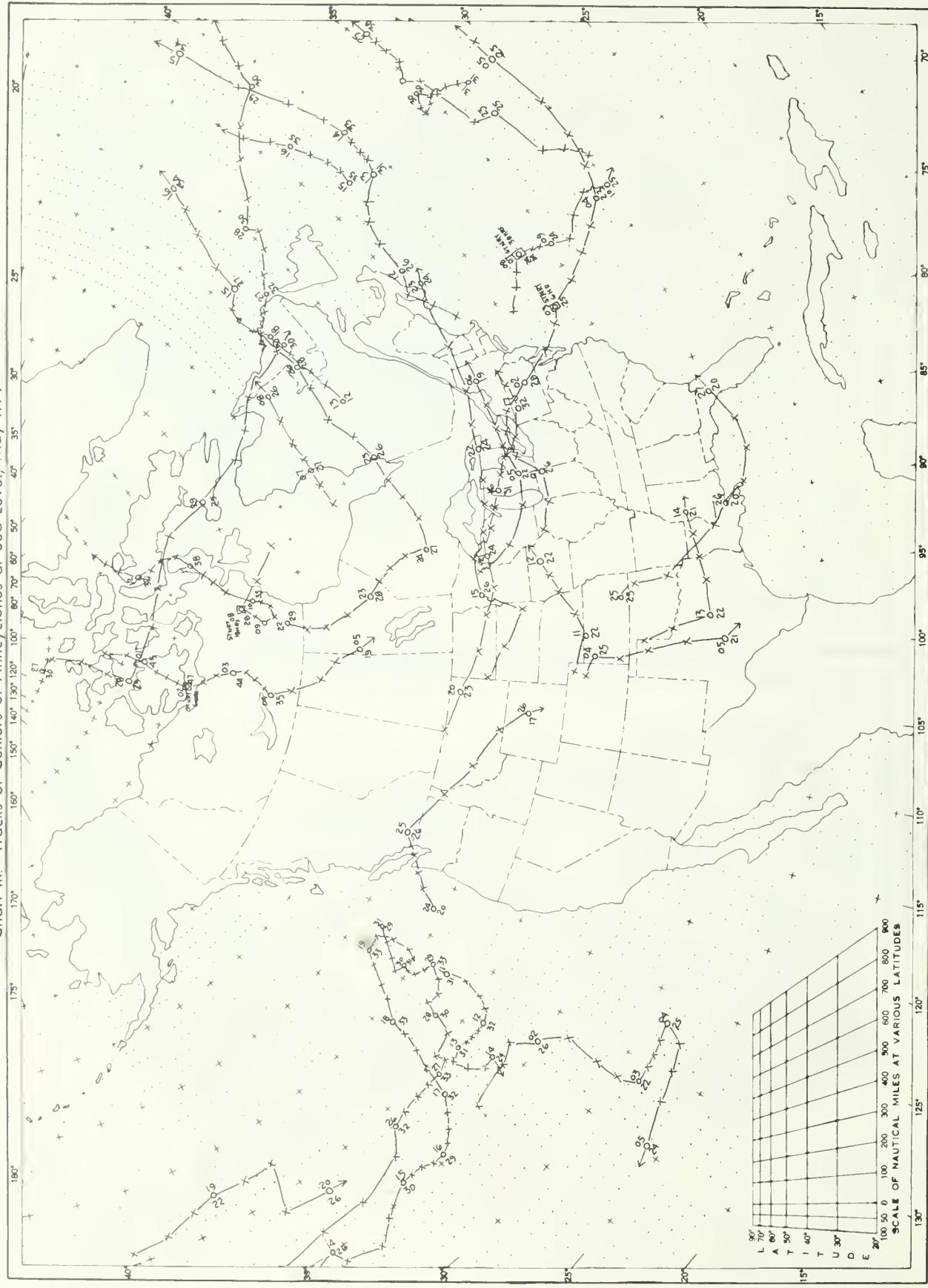
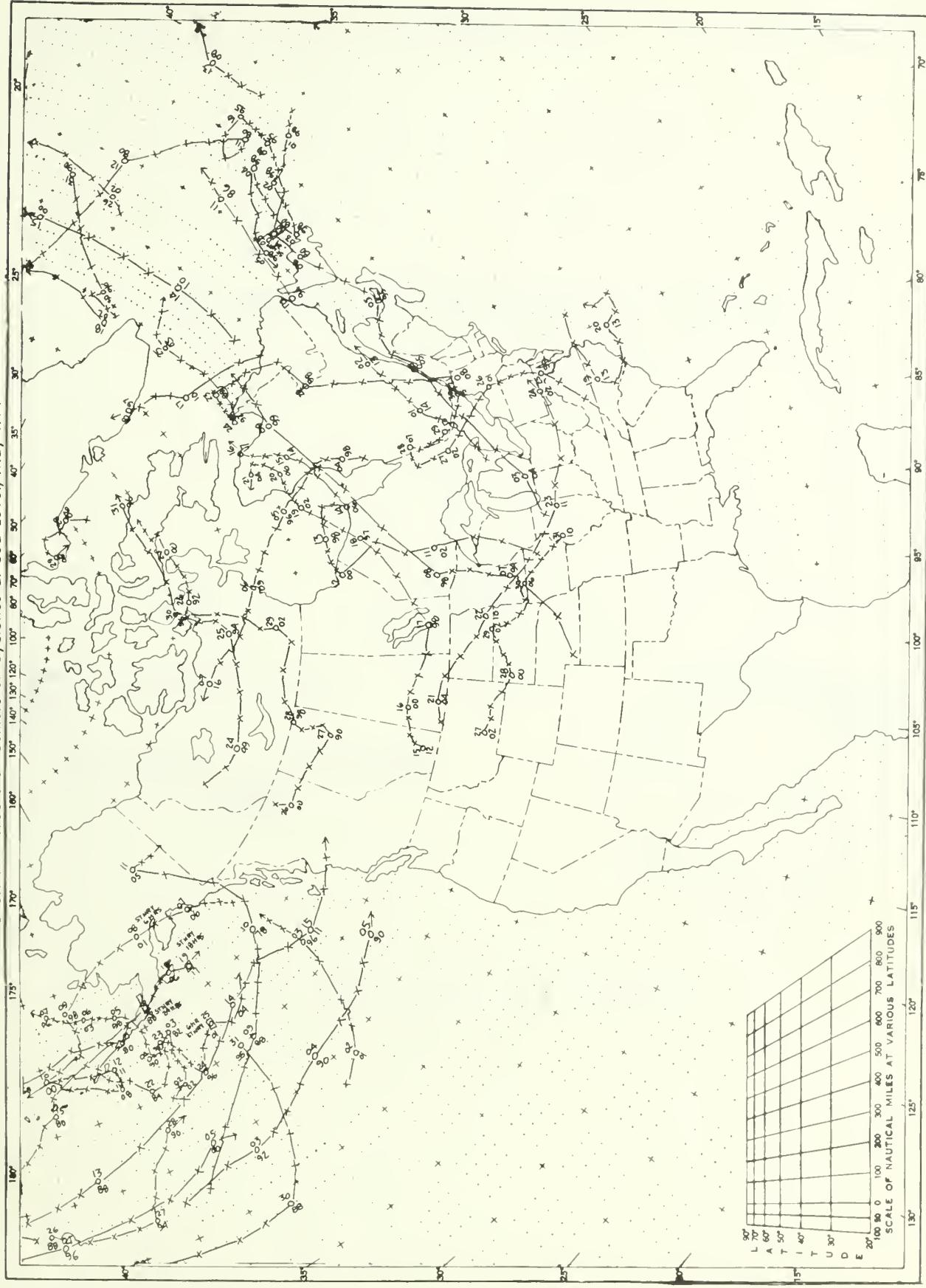


Chart III. Tracks of Centers of Anticyclones at Sea Level, May 1979



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IV. Tracks of Centers of Cyclones at Sea Level, May 1979



USCOMM-NOAA-ASHEVILLE, N.C. 1979-2070

Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track
 indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
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JUNE 1979

VOLUME 30

NUMBER 6

CLIMATOLOGICAL DATA

NATIONAL SUMMARY



"I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF
THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINIS-
TRATION AND IS COMPILED FROM INFORMATION RECEIVED AT
THE NATIONAL CLIMATIC CENTER, ASHEVILLE, NORTH
CAROLINA 28801."

Daniel B. Mitchell
DIRECTOR
NATIONAL CLIMATIC CENTER

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

JUNE 1979

GENERAL SUMMARY OF WEATHER CONDITIONS

Lyle Denny, Climatologist
Environmental Data and Information Service, NOAA

HIGHLIGHTS: A typical June provided thunderstorms east of the Rockies and relatively light rain west of that mountain range. However, the West became much drier than normal this year. East of the Rockies, the thunderstorms produced deluges of rain in some areas, but the very spotty rain left many portions of the Nation far below their normal June rainfall. An area from central Illinois to northern Arkansas had less than half the normal rainfall for the month. The southern coastal area, New England, North Dakota, and Montana were also much drier than normal. Temperatures ranged cooler than normal from New England down the Appalachians and across the South to New Mexico. Warm weather prevailed in the Southwest and the Plateau Region.

A low pressure system in Ohio, with a cold front extending southward, moved rapidly eastward during the first three days of June. Some heavy rain fell in the mid-Atlantic States and in the Southeast.

In the period of the 4th-10th, another upper air disturbance began moving out of the Southwest, and low-level winds carried moisture northward from the Gulf of Mexico. Thunderstorms and rain, heavy in places, fell from the middle Rio Grande Valley in Texas through the Great Lakes area. Severe weather, including tornadoes, covered this area. Rain totals for the week exceeded 5 inches in some places. Cool weather prevailed in the Rockies and western Plains, but warm temperatures were noted elsewhere.

The second week in June brought relief from severe weather and rain in most of the South. The exception took the form of a low pressure system that moved northward along the East Coast and spread rain from Florida to New England. Elsewhere, a series of storms moved across southern Canada and caused rain in that area and the northern half of the United

States. The weather was warm through most of the West, the Rockies, central and northern Plains, and through the Great Lakes. Maximum temperatures exceeded 100° in parts of the northern Plains.

Rain dampened nearly all of the Nation east of the Rockies during the week of the 18th-24th. The exception was central Texas and southward, where no rain fell. A storm system formed in the central Rockies trailing a cold front southwestward. The center of the storm moved to the central Plains and then northeastward through the western Great Lakes. The most rain occurred in the northern Plains, as the storm center pushed through and into the central Plains, where a wave formed on the front. Later in the week, thunderstorms with heavy rain headed through the Ohio Valley, northern Mississippi, and central Alabama. Cooler than normal readings blanketed most of the Rockies and Plateau, the northern Plains, Great Lakes, and eastern portion of the country. Other areas averaged up to 3° warmer than normal.

The last week in June saw precipitation in all but the southwestern quadrant of the Nation. As the week began, a high pressure center over the Great Lakes kept the weather cool and dry over the Midwest. When the high pressure moved eastward, warm, moist air rushed northward behind it and rekindled the showers and thunderstorms from Texas to the Great Lakes. A low pressure center trekked out of the northern Plains to the eastern Great Lakes by the end of June. The heaviest rain fell in central Texas and the central Mississippi Valley. However, as the month ended, heavy showers soaked southern Michigan, northern Indiana, and Ohio. Average temperatures for the week ranged warmer than normal west of a line from central Texas to central Wisconsin and cooler than normal in the East.

TROPICAL STORM ANA

June 19 - 24, 1979

National Hurricane Center, NOAA
Miami, Florida

Ana was the first June storm to develop east of the Lesser Antilles since 1933 and only the second such in 100 years of record. Ana was the earlier but the 1933 storm developed farther to the east.

The disturbance which was to become Ana left the African west coast on the 14th. First evidence that a tropical depression was forming came on the morning of the 19th when satellite pictures indicated a circulation was developing near 10°N 45°W. The depression moved towards the westnorthwest about 12 kts until late on the 20th when it slowed and turned to the northwest in response to a weak trough approaching in the higher latitude westerlies. Some slight strengthening occurred at this time. Air Force reconnaissance reports indicated the depression was nearing tropical storm strength late on the 21st, and this was confirmed on the morning of the 22d by another reconnaissance flight.

Ana was named at noon AST on the 22d, and gale warn-

ings were issued for the islands from Martinique to Guadeloupe because of the proximity of the storm. However, strong westerlies at high levels began shearing the convection from the circulation center, and Ana reached the islands as a minimal tropical storm late that day. Continued weakening took place as the depression turned more to the west and Ana was downgraded to a tropical depression on the morning of the 23d and to a tropical wave in the central Caribbean early on the 24th.

The maximum sustained winds in Ana were estimated to be 50 kts on the morning of the 22d with the minimum central pressure of 1005 mbs also occurring at that time.

There was no heavy rainfall in the islands and no reports of gale force winds. No deaths or significant damage have been reported.

TROPICAL STORM ANA

Preliminary Report

<u>DATE</u>	<u>TIME (GMT)</u>	<u>POSITION</u>		<u>WIND MAX. (KT)</u>	<u>PRESSURE (MIN) (MB.)</u>	<u>STAGE</u>
19	1200	10.0	45.0	25	1011	DEPRESSION
	1800	10.2	46.0	25		
20	0000	10.5	47.0	25		
	0600	10.9	48.1	25		
	1200	11.3	49.2	25		
	1800	11.8	50.2	25		
21	0000	12.3	51.1	30	1009	
	0600	12.9	51.9	30		
	1200	13.5	52.7	30		
	1800	13.9	53.5	30		
22	0000	14.2	54.7	35	1007	STORM
	0600	14.2	55.8	40	1005	
	1200	14.2	56.9	50	1006	
	1800	14.1	58.3	40	1008	
23	0000	14.1	59.8	35	1010	
	0600	14.0	61.3	30	1012	DEPRESSION
	1200	14.0	62.8	25		
	1800	14.0	64.5	25		
24	0000	14.0	66.2	25		

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

JUNE 1979

STATE	Temperature							Precipitation						
	Monthly extremes							Monthly extremes						
	Station	High °F	Date	Station	Lowest °F	Date	Station	Greatest	Station	Least				
Alabama	2 Stations	100	20	Valley Head	46	12	Gauphin Island 2	6.85	Montgomery WSO AP	.33				
Alaska	Cakona 1 N	81	22	Barrow WSO AP	22	27	Yakutat WSO AP	13.84	Barrow WSO AP	.10				
Arizona	Willow Beach	120	29	Sunrise Mountain	16	17	Black River Pumps	3.76	20 Stations	.00				
Arkansas	Stamps	100	30	3 Stations	46	12+	Dermott 3 NE	B.77	Saint Francis	.88				
California	Palm Springs	120	27	Whit Mountain 2	6	19	Jess Valley	.90	266 Stations	.00				
Colorado	2 Stations	104	30+	Berthoud Pass	11	1	Julesburg	4.49	Browns Park Refuge	.09				
Connecticut	Hartford WSO AP	95	16	Falls Village	32	26	Bridgeport WSO AP	3.29	Barkhamsted	.62				
Delaware	Bridgeville 1 NW	89	7	Georgetown 5 SW	45	27+	Georgetown 5 SW	6.25	Newark University Farm	1.06				
Florida	5 Stations	100	21+	Smit Creek	49	13+	Avon Park 2 W	10.17	Plant City	.56				
Georgia	Marshallville	102	23	Blairsville Exp Station	41	12	Folkston 3 SW	9.13	Newman	.50				
Hawaii	2 Stations	91	28+	Mauna Kea Obs 111.2	24	21+	Mount Waialeale 1047	45.21	12 Stations	.00				
Idaho	Brownlee Dam	105	29	3 Stations	20	8+	Warren	2.23	2 Stations	T				
Illinois	Hillsboro	100	16	Marengo	39	25	Elgin	8.59	Virginia	.49				
Indiana	Evansville WSO AP	96	19	Angola	33	25	Spurgeon 2 N	12.10	Rockville	.89				
Iowa	4 Stations	100	15+	3 Stations	36	1	Blackton 2 S	8.76	Wapello	1.43				
Kansas	2 Stations	106	27+	Atwood	36	10	Cassoday	13.96	Dodge City WSO AP	.89				
Kentucky	3 Stations	96	22+	2 Stations	41	26+	Boston 6 SW	10.02	Hickman 1 E	1.31				
Louisiana	5 Stations	98	30+	Ashland 2 S	50	12	Cotton Valley	8.08	Lafayette FAA AP	.04				
Maine	2 Stations	94	16	5 Stations	31	26+	2 Stations	4.24	Newcastle	.20				
Maryland	2 Stations	90	10+	Oakland 1 SE	36	26+	Laurel 3 W	6.87	Hancock Fruit Lab	1.62				
Massachusetts	Boston WSO AP	95	16	Chester 2	24	26	Bedford	3.72	Rockport 1 ESE	.32				
Michigan	Lapeer	94	10	Champion Van Riper Park	27	24	Gull Lake Biol Station	9.28	Hesperia 4 NW	1.54				
Minnesota	Lamberton SW Exp Station	106	15	Hibbing Power Substation	25	1	Stillwater 1 SE	8.58	Hallock	1.02				
Mississippi	Wiggins 3 SSE	102	30	University	48	12	Baldwyn	11.12	Wiggins 3 SSE	.25				
Missouri	5 Stations	98	22+	2 Stations	41	25+	Lockwood	9.81	Farm	.20				
Montana	Wolf Point	105	13	Wisdom	19	8	2 Stations	5.44	Potomac	.02				
Nebraska	Osmond	106	14	2 Stations	29	2+	Pawnee City	9.34	Stratton	1.38				
Nevada	Sunrise Manr Las Vegas	115	29+	Rand Ranch Palisade	18	8	Lund	1.26	25 Stations	.00				
New Hampshire	North Conway	94	17	Mount Washington	24	13	First Conn Lake	4.26	Blackwater Dam	.42				
New Jersey	2 Stations	90	1B+	Cranford	32	12	Bridgeton 3 NE	7.55	Bound Brook 2 W	1.68				
New Mexico	Orogrande	105	29	Luna Ranger Station	26	20	Canton	7.03	Fruitland 2 E	.04				
New York	4 Stations	93	17+	Old Forge	28	26+	Manorkill	4.03	Chazy	.46				
North Carolina	Hamlet	95	27	Grandfather Mountain	37	12	Lake Lure	10.36	Franklin	1.29				
North Dakota	3 Stations	105	14+	Carson	31	8	Napoleon	5.47	Powers Lake 1 N	.53				
Ohio	Chillicothe-Mound CI	97	11	Carpenter 4 NW	35	25	Chile Meldahl Dam	9.55	Painesville 4 NW	1.10				
Oklahoma	Mangum Research Station	107	30	Boise City 2 E	42	1	Marlow 1 WSW	13.29	Cherokee Power Plant	1.08				
Oregon	6 Stations	100	29+	Unity	20	8	Tillamook 1 W	3.07	2 Stations	.00				
Pennsylvania	Phoenixville 1 E	92	7	Clemont 4 NW	28	26+	Shippensburg	4.97	Austin 4 NW	1.01				
Puerto Rico	Manati 2 E	97	14	Yarucca 1 NNE	23	28	San Lorenzo 3 S	23.58	Moreovis	3.97				
Rhode Island	Providence WSO AP	90	16	Kingston	37	13	Kingston	1.95	Woonsocket	1.13				
South Carolina	3 Stations	98	19+	3 Stations	46	12	Cheraw	11.01	Clark Hill Dam	.80				
South Dakota	Midland	110	13	Deerfield 4 NW	22	10	Cedar Butte	7.86	Camp Crook	1.27				
Tennessee	4 Stations	95	23+	Tazewell	42	12	Moscow	6.82	Pikeville	.92				
Texas	Candelaria	109	22	2 Stations	41	12+	Uvalde	14.90	EI Paso WSO AP	.03				
Utah	Saint George	108	29	2 Stations	20	9+	Pine View Dam	2.12	39 Stations	.00				
Vermont	Vernon	93	17	West Burke	29	26	Mount Mansfield	3.89	Union Village Dam	.82				
Virginia	4 Stations	92	19+	Monterey	35	25	Rockfish	11.02	Hopewell	2.33				
Virgin Islands	Truman Field FAA AP	98	25+	Alex Hamilton Field FAA	66	28	Estate Rust OP Twist	12.29	Wiltberg	2.66				
Washington	4 Stations	101	29+	3 Stations	25	7	Neah Bay 1 E	2.94	2 Stations	.00				
West Virginia	Wayne 2	92	7	2 Stations	32	25	Man	9.88	Brandonville	1.18				
Wisconsin	Port Washington	93	15	Newald 4 N	29	24	Amery	9.74	Dodgeville 1 NE	1.54				
Wyoming	Colony	105	13	Burgess Junction	14	8	Gillette 18 SW	4.05	Farson	.00				

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground) m	Pressure		Temperature						Precipitation						No. of days (sunrise to sunset)			
		Sea level mb		Date	Lowest °C	Highest °C	Average minimum °C	Average maximum °C	Departure from normo- l	No. of days	With thunderstorms	No. of days	Snow, ice pellets	Total mm	Resolution speed m/s	Resultant direction	Date	Cloudy, 8-10 Partly cloudy, 4-7 Clear, 0-3	No. of days (sunrise to sunset)
		mb	mb	Date	Min. 0°C or lower Max 32.2°C or above	Max 32.2°C or above Min. 0°C or lower	Average dew point °C	Departure from normo- l	25 mm or more in 24 hours	With thunderstorms	No. of days	Maximum depth on ground	m	m/s	Fastest mile (1.6 kilometers)	Direction	Cloudy, 8-10 Partly cloudy, 4-7 Clear, 0-3	Possible sunshine hours to sunset	
ALABAMA	101.2	101.4	101.6	101.8	102.0	102.2	102.4	102.6	102.8	103.0	103.2	103.4	103.6	103.8	104.0	104.2	104.4	104.6	104.8
BIRMINGHAM	207	209	211	213	215	217	219	221	223	225	227	229	231	233	235	237	239	241	243
LUTTRELL	180	182	184	186	188	190	192	194	196	198	200	202	204	206	208	210	212	214	216
OAKVILLE	195	197	199	201	203	205	207	209	211	213	215	217	219	221	223	225	227	229	231
WHITEHOUSE	164	166	168	170	172	174	176	178	180	182	184	186	188	190	192	194	196	198	200
LUTGHERY	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86
ALASKA	101.2	101.4	101.6	101.8	102.0	102.2	102.4	102.6	102.8	103.0	103.2	103.4	103.6	103.8	104.0	104.2	104.4	104.6	104.8
ANCHORAGE	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
ANCHORAGE	101.2	101.4	101.6	101.8	102.0	102.2	102.4	102.6	102.8	103.0	103.2	103.4	103.6	103.8	104.0	104.2	104.4	104.6	104.8
MARIN	171	173	175	177	179	181	183	185	187	189	191	193	195	197	199	201	203	205	207
WATER ISLAND	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190
WETHEL	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188
ETTLIES	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212
CHILDELT	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202
CLOUD BAY	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
FATHOMS	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
COLKATA	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115
HUERKA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
JUHEAU	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
KIG-SALMON	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
KIULANG	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
KUTZBERG	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
C. GARTH	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123
ST. PAUL ISLAND	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
TALKEETNA	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122
LAURELLETT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
VALLEY	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119
YUKAT	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
FLUGSTAFF	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153
SHINGLE	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
TUSKIN	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
YU A	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187
ARKANSAS	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152
FLAT SMITH	23.9	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7
LITTLE ROCK	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	8.10	8.11	8.12	8.13	8.14	8.15	8.16
U. LITTLE ROCK	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	2.11	2.12	2.13	2.14	2.15	2.16
CALIFORNIA	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183
ELKHORN FIELD	1252	1253	1254	1255	1256	1257	1258	1259	1260	1261	1262	1263	1264	1265	1266	1267	1268	1269	1270
LE CAVAN	1.10	1.11	1.12	1.13	1.14	1.15	1.16	1.17	1.18	1.19	1.20	1.21	1.22	1.23	1.24	1.25	1.26	1.27	1.28
FRISCO	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118
LOG BEACH	1.10	1.11	1.12	1.13	1.14	1.15	1.16	1.17	1.18	1.19	1.20	1.21	1.22	1.23	1.24	1.25	1.26	1.27	1.28
LOS ANGELES U.	1.20	1.21	1.22	1.23	1.24	1.25	1.26	1.27	1.28	1.29	1.30	1.31	1.32	1.33	1.34	1.35	1.36	1.37	1.38
PT. SHASTA R.	1.77	1.78	1.79	1.80	1.81	1.82	1.83	1.84	1.85	1.86	1.87	1.88	1.89	1.90	1.91	1.92	1.93	1.94	1.95
LAKE TAHOE	1.72	1.73	1.74	1.75	1.76	1.77	1.78	1.79	1.80	1.81	1.82	1.83	1.84	1.85	1.86	1.87	1.88	1.89	1.90
SACRAMENTO	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122
SAN DIEGO	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
SAN FRANCISCO	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SAN FRANCISCO B.	1.6	1.7	1.8	1.9	1.10	1.11	1.12	1.13	1.14	1.15	1.16	1.17	1.18	1.19	1.20	1.21	1.22	1.23	1.24
SANTA BARBARA	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	7.10	7.11	7.12	7.13	7.14	7.15	7.16	7.17	7.18	7.19	7.20
STICKNEY	7.7	7.8	7.9	7.10	7.11	7.12	7.13	7.14	7.15	7.16	7.17	7.18	7.19	7.20	7.21	7.22	7.23	7.24	7.25

CLIMATOLOGICAL DATA
METRIC UNITS

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State and Station	Elevation (ground)	Pressure				Temperature				Precipitation				Wind				Clouds			
		Slope		Sea level		Average minimum		Average maximum		Departure from normal		No. of days		Snow, ice pellets		Farthest mile (1.6 kilometers)		No. of days (sunset to sunrise)		Sky cover, tenth's (sunset to sunrise)	
		m	mb	m	mb	°C	°C	°C	°C	°C	°C	°C	°C	°C	mm	mm	mm	mm	mm	%	
COLORADO	2297	24.8	1014.4	25.3	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	-0.9	30.6	28.8	-2.2	10	5	3.7
ALAMOJA SPRINGS	1673	24.8	1014.4	25.3	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	-0.2	32.2	13	0	1.0	10	3.9
DEER	1610	24.8	1014.4	25.3	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	-0.1	35.0	26	5.6	1.0	10	4.0
GARNO JUNCTION	1476	24.8	1014.4	25.3	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	-0.2	3.8	29	17.8	0.6	10	4.0
PURBO	1428	24.8	1014.4	25.3	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	1013.8	-1.2	36.1	29	14.4	1.0	10	4.0
CONNECTICUT	52	20.8	1018.8	23.2	1018.0	1018.0	1018.0	1018.0	1018.0	1018.0	1018.0	1018.0	1018.0	1018.0	-0.7	27.8	16	10.0	0	19	15.6
HADGPORT	52	20.8	1018.8	23.2	1018.0	1018.0	1018.0	1018.0	1018.0	1018.0	1018.0	1018.0	1018.0	1018.0	-0.7	35.0	16	6.7	0	23	15.6
DELAWARE	23	1015.9	1019.0	25.3	1016.6	1016.6	1016.6	1016.6	1016.6	1016.6	1016.6	1016.6	1016.6	1016.6	-1.9	29.4	23	8.3	12	0	17.9
WILMINGON	23	1015.9	1019.0	25.3	1016.6	1016.6	1016.6	1016.6	1016.6	1016.6	1016.6	1016.6	1016.6	1016.6	-1.9	10.0	1.9	0	0	20	11
DIST OF COLUMBIA	88	1006.8	1018.6	26.8	13.4	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1	-1.6	31.0	9	5.0	14	0	1.9
WASHINGTON DULLERS	88	1016.3	1018.8	27.4	17.5	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	-1.2	12.8	25	4.0	0	0	1.9
WASHINGTON NATIONAL	3	1016.3	1018.8	27.4	17.5	31.7	10	31.7	10	31.7	10	31.7	10	31.7	-1.2	15.7	71	7.6	-12	10	14
FLORIDA	6	1017.3	1017.8	31.3	20.8	26.1	26.1	26.1	26.1	26.1	26.1	26.1	26.1	26.1	-0.6	35.6	20	17.2	13	0	1.4
APALACHICOLA	9	1015.9	1017.5	29.9	21.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	-0.6	36.4	4	18.9	11	0	1.4
CAYTONA BEACH	9	1015.9	1017.5	29.9	21.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	-0.6	36.1	19	21.1	13	0	1.4
FORT MYERS	9	1015.9	1017.5	30.3	19.8	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	-1.2	35.0	19	13.5	13	0	1.4
JACKSONVILLE	1	1015.8	1015.8	31.8	26.3	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	-0.5	36.3	28	24.4	29	0	1.4
KEY WEST	1	1015.9	1016.3	30.9	26.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	-0.5	36.4	4	21.1	12	0	1.4
MAMI	29	1015.9	1017.2	32.4	21.7	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	-0.3	32.4	28	25.9	18.9	0	1.4
FLORIDOM/COD AFB	34	1013.5	1017.5	31.9	21.8	26.9	26.9	26.9	26.9	26.9	26.9	26.9	26.9	26.9	-0.3	36.1	30	16.7	11	0	1.4
PENSACOLA	17	1015.2	1017.4	31.8	18.6	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	-1.4	33.9	26	10.6	13	0	1.4
TALLASSEE	17	1016.9	1017.4	31.4	22.7	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	-0.4	33.9	26	19.4	11	0	1.4
PAWPA	5	1015.9	1016.7	31.2	22.3	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	-0.4	33.3	15	19.4	12	0	1.4
*EST PALM REACH	5	1015.9	1016.7	31.2	22.3	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	-0.4	33.3	15	19.4	12	0	1.4
GEORGIA	244	989.5	1018.0	28.8	18.2	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	-1.4	33.9	19	12.0	12	0	1.4
ATLANTA	305	982.1	1018.6	29.8	19.4	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	-0.1	33.9	19	13.5	13	0	1.4
AUGUSTA	41	1012.5	1017.9	30.1	20.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	-0.4	35.0	28	19.1	13	0	1.4
COLUMBUS	136	1004.1	1018.0	31.1	20.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	-0.4	35.0	19	14.4	13	0	1.4
MACON	108	1005.1	1018.0	31.0	19.3	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	-0.3	33.9	28	19.3	13	0	1.4
ROWE	194	1016.6	1018.5	30.1	19.7	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	-1.3	36.1	19	15.6	17	0	1.4
SAVANNAH	14	1016.6	1018.5	30.1	19.7	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	-1.3	36.1	19	15.6	17	0	1.4
HAWAII	110	1016.9	1018.1	27.4	19.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	-0.2	29.4	8	16.7	6	0	1.4
OKOLULU	2	1017.3	1017.6	31.2	22.2	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	-0.6	32.2	22	18.3	7	0	1.4
KAHULU	15	1016.5	1017.1	30.4	21.2	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	-0.8	32.2	16	16.7	6	0	1.4
LIHUE	31	1013.2	1019.4	28.3	21.2	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	-0.2	30.0	1	20.0	75	0	1.4
104HD	46	915.0	1013.7	27.3	11.7	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	-0.2	37.9	28	3.3	8	0	1.4
LEIISTON	43	915.0	1013.7	25.4	7.6	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	-0.2	36.7	28	6.1	8	0	1.4
POATELLO	1358	30.9	20.3	25.7	0.3	35.6	21	13.9	11	0	12.8	6.7	3	0	1.4	11.0	12	7	0	1.4	
ILLINOIS	96	991.5	1015.6	26.8	14.5	20.7	0.6	33.9	6	0	12.8	6.7	2.1	0	1.4	13.0	12	7	0	1.4	
CAIRO U	201	993.9	1016.2	26.1	15.4	20.8	0.6	33.2	8	0	12.8	6.7	2.1	0	1.4	11.0	12	7	0	1.4	
CHICAGO O MARE	185	993.9	1016.2	28.3	15.3	21.8	0.2	33.3	12	0	12.8	6.7	2.1	0	1.4	11.0	12	7	0	1.4	
CHICAGO MIDWAY	177	993.9	1016.2	26.3	15.3	21.8	0.2	33.3	12	0	12.8	6.7	2.1	0	1.4	11.0	12	7	0	1.4	
DOLINE	199	992.6	1016.1	28.3	15.3	21.8	0.2	33.3	20	0	12.8	6.7	2.1	0	1.4	11.0	12	7	0	1.4	
PEORIA	199	992.6	1016.1	28.3	15.3	21.8	0.2	33.3	20	0	12.8	6.7	2.1	0	1.4	11.0	12	7	0	1.4	
ROCKFORD	221	994.2	1016.0	30.9	16.7	23.8	1.1	36.1	19	0	12.8	6.7	2.1	0	1.4	11.0	12	7	0	1.4	
SPRINGFIELD	178	994.2	1016.0	30.9	16.7	23.8	1.1	36.1	19	0	12.8	6.7	2.1	0	1.4	11.0	12	7	0	1.4	
INDIANA	116	1003.1	1017.0	30.9	16.9	23.9	0.2	35.6	19	0	12.8	6.7	2.1	0	1.4	11.0	12	7	0	1.4	
EVANSVILLE	116	1003.1	1017.0	30.9	16.9	23.9	0.2	35.6	19	0	12.8	6.7	2.1	0	1.4	11.0	12	7	0	1.4	

Possible sunshine

%/o

Sky cover, tenths

(sunset to sunrise)

Portly cloudy, 47

%/o

Cloudy, 8-10

%/o

No. of days

(sunset to sunrise)

2.5 mm. or more

in 24 hours

With thunderstorms

in 24 hours

Depature from normal

in 24 hours

Average relative humidity

at ground

Min. 0°C or lower

Max. 32.2°C or above

Average dew point at

ground

Departure from normal

in 24 hours

Average minimum

at ground

Average maximum

at ground

Date

of low

Date

of sea level

mb

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State and Station	Elevation (ground)	Pressure				Temperature				Precipitation				Wind				No. of days (sunrise to sunset)			
		Station		mb	mb	°C	°C	°C	°C	mm	mm	mm	mm	m/s	m/s	m/s	m/s	11	8	11	5.4
		Average	Maximum	mb	mb	°C	°C	°C	°C	mm	mm	mm	mm	mi/h	mi/h	mi/h	mi/h	No. of days	Snow, ice pellets	No. of days	Possible sunshine (%)
RHODE ISLAND PROVIDENCE	16 1016.3	1018.7	23.7	13.0	18.4	-0.7	32.2	16	8.3	27+	1	0	12.2	71	37	*31	14	7	1	0	5.4
SOUTH CAROLINA CHARLESTON J	12 1016.6	1018.6	29.4	19.3	24.4	-1.1	30.1	19	13.9	13+	5	0	18.9	75	57	-103	23	7	10	13	6.2
COLUMBIA	65 1010.2	1018.3	27.9	20.2	24.1	-2.1	35.6	19	1.4	12	3	0	16.7	72	56	*40	1.1	0	0	0	7.6
GRINNELL SPATNBG	292 984.1	1018.3	27.3	17.1	22.2	-2.2	34.4	19	9.4	12	3	0	16.7	73	13.9	42	61	6	11.6	5	1.4
SOUTH DAKOTA ABERDEEN	195 967.2	1013.2	24.8	12.2	18.5	-0.1	35.6	14	6.1	2	1	0	13.3	66	35	-35	87	9	17.0	NW	10
BURDIN	399 967.5	1014.7	27.6	13.4	20.5	1.0	41.1	14	5.6	2	4	0	18.3	59	29	9	1.2	1	18.3	NW	9.3
DAPIO CITY	964 963.9	1014.7	25.6	11.5	18.6	0.7	39.4	13	2.2	1	3	0	18.3	59	2.2	1.2	1.2	1	12.5	12	
SIOUX FALLS	432 963.9	1014.5	23.9	13.8	19.6	0.1	36.1	14	6.1	2	1	0	13.3	67	3.5	20	12	9	15.6	6.6	
TENNESSEE BRISTOL	459 965.5	1019.2	26.1	14.1	20.1	-2.3	30.0	8	8.9	12	0	0	15.0	75	90	35	1.1	0	0	0	5.4
CHATTANOOGA	203 993.9	1018.2	29.2	17.6	23.4	-1.1	33.9	23	12.2	12	5	0	17.2	71	59	*35	37	8	5	0	5.5
KNOXVILLE	299 983.4	1018.0	27.9	17.4	22.7	-1.5	31.7	20	12.2	12	0	0	16.7	73	9.7	34	8	7	0	5.9	
MEMPHIS	79 1017.8	1017.8	30.5	20.5	25.5	-0.5	34.6	20	15.0	11	9	0	16.7	60	12.5	32	1.0	0	0	6.0	
NASHVILLE	180 996.3	1017.8	29.1	17.2	23.2	-1.6	33.3	19	11.1	12	5	0	17.8	73	7.1	-15	24	8	6	0	5.9
OAK RIDGE R	276 -	28.7	15.2	21.9	-1.5	32.8	18	8.9	12	4	0	16.9	95	-5	55	9	0	0	0	5.2	
TEXAS ABILENE	544 952.9	1014.5	32.5	19.7	26.1	-0.7	37.2	20+	11.7	12	19	0	16.1	59	73	2	38	8	4	0	4.6
AMARILLO	179A 892.3	1013.6	28.8	14.6	21.6	-2.1	36.7	30+	7.8	10	13	0	18.9	61	8.1	-7	26	5	9	0	4.3
AUSTIN	182 993.9	1015.8	31.6	21.5	26.6	-1.0	36.1	30+	15.6	13	20	0	18.9	66	2.1	*58	13	0	0	6.2	
HORNISWELL	6 1014.6	1015.1	32.5	23.1	27.8	-0.4	36.1	30	16.1	13	20	0	22.2	74	3.9	-32	26	7	3	4.6	
CORPUS CHRISTI	12 1013.6	1015.7	32.7	22.5	27.7	-2.2	30.1	30	16.1	13	20	0	22.2	74	82	14	3.1	14	10.7	8.5	
DALLAS - FORT WORTH	168 994.9	1015.9	33.8	20.7	27.2	-0.2	39.4	30+	12.8	11	23	0	17.8	61	3.8	-43	16	4	2.2	4.9	
EL RIO	311 978.7	1014.0	32.2	20.7	26.4	-2.6	36.7	29	14.6	12	18	0	18.9	60	11.0	2.1	2.1	1.4	2.0	7.6	
FL PSCO	1194 882.5	1011.1	35.2	16.4	25.6	-1.1	41.7	28	8.9	11	22	0	6.1	34	1.1	*14	1	0	0	3.0	
GALVESTON	29 1012.5	1016.2	29.3	16.1	27.2	-0.2	30.1	30	20.6	12	16	0	21.7	78	2.0	-83	7	8	0	8.7	
HOUSTON INTERCON	29 1016.2	1016.2	32.2	20.9	26.6	-0.7	38.1	30	12.8	10	16	0	21.7	79	4.8	-67	29	6	1.7	6.7	
LUBBOCK	492 904.8	1013.5	31.3	18.1	25.1	-1.7	28.1	21	12.8	10	16	0	21.7	79	4.8	-2.5	19	8	0	6.7	
MIDLAND	469 916.7	1013.1	31.3	18.1	25.2	-1.4	38.3	30	12.2	11	19	0	13.9	56	7.6	38	55	6	4.8	8.2	
PORT ARTHUR	501 916.3	1013.1	31.3	22.3	26.8	-0.4	33.9	28	16.1	13	19	0	16.1	80	10.1	-22	51	8	4	4.8	
SAN ANGELO	580 94.9	1014.5	31.9	19.3	25.6	-2.0	37.2	30	9.4	12	19	0	16.1	59	5.5	-77	13	4	0	4.3	
SAN ANTONIO	240 988.2	1015.6	31.3	20.0	27.2	-0.7	34.6	30+	15.0	13	14	0	20.6	71	1.2	-2.7	14	1.2	3.0	7.0	
VICTORIA	32 1016.2	1016.2	31.8	22.0	27.0	-0.2	34.4	30+	15.0	13	15	0	21.6	75	2.3	-3.0	1.0	1.0	0	5.9	
ACO	153 998.0	1015.7	31.5	20.6	26.1	-1.7	35.6	30	12.8	12	19	0	16.9	68	5.0	-70	6	7	1.0	5.9	
KICHLITA FALLS	303 979.0	1014.7	33.3	19.5	26.4	-1.0	42.2	30	12.8	10	19	0	18.3	66	154	66	128	8	4	4.4	
UTAH	1533 846.6	1013.2	29.7	6.2	18.0	-0.4	36.7	28	-1.1	9	13	3	0	14	7	0	0	0	0	5.4	
SALT LAKE CITY	1287 871.3	1012.4	30.2	12.1	21.2	-2.2	40.0	29	3.9	8	10	0	2.2	33	9	-24	7	4	3	3.7	
VERMONT	101 1004.4	1016.8	24.5	12.5	18.5	0.1	31.7	17+	3.9	25	0	0	12.2	70	35	-53	22	9	0	6.7	
PURLING	101 1004.4	1016.8	24.5	12.5	18.5	0.1	31.7	17+	3.9	25	0	0	12.2	70	3.0	0	0	0	0	5.3	
VIRGINIA	278 985.4	1019.1	26.6	14.7	20.7	-1.9	32.2	18	7.8	12	1	0	14.4	67	13.4	-47	51	13	22.5	5.4	
LYNCBURG	1018.0	1019.1	26.3	16.3	21.3	-2.3	32.3	18	1.1	12	1	0	14.4	67	75	-17	37	2	0.6	6.4	
RICHMOND	520 1012.2	1018.7	27.9	15.5	21.6	-1.9	33.3	18	6.9	15	4	0	17.2	77	61	-26	35	9	1.0	5.6	
ROANOKE	350 977.3	1018.7	26.5	14.9	20.7	-1.3	31.7	10	7.8	26	0	0	15.6	74	147	-58	45	12	3.4	7.4	
ALLIOPPS ISLAND	3 1014.7	24.1	16.0	20.3	-1.6	30.0	18	11.1	12	0	0	0	15.6	74	94	6	71	11	13.9	11	
WASHINGTON	59 1011.9	1019.1	23.1	7.0	12.7	-0.2	33.3	2	1.7	12+	1	0	7.2	63	28	-12	8	1	0	5.4	
OLYMPIA	59 1012.9	21.1	11.4	16.3	-0.1	22.9	1	2.2	17	0	0	0	6.6	61	27	-23	24	3	0	3.7	
QUILLAYUTE	6 1012.9	21.1	11.4	16.3	-0.1	27.8	2+	8.9	7	0	0	0	1.4	28	1	0	0	0	0	3.7	
SEATTLE U	6 1012.9	21.1	11.4	16.3	-0.1	27.8	2+	8.9	7	0	0	0	1.4	28	1	0	0	0	0	3.7	

CLIMATOLOGICAL DATA
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JUNE # 1979

State and Station	Elevation (ground)	Station Q	Sea level	Pressure				Temperature				Precipitation				Wind				No. of days (sunrise to sunset)			
				Average minimum	Average maximum	No. of days	Date	Highest	Lowest	No. of days	Date	With thunderstorms	2.5 mm. or more	Greatest in 24 hours	Total	Resultant speed	Resultant direction	Sky cover, 0-10	Pretty cloudy, 4-7	Foggy, 0-3	Possibly sunshiny		
WASHINGTON	1003.1	1019.2	22.9	10.9	16.9	1.5	31.1	2	7.2	0	0	7.2	57	12	-27	4	0	0	26	8.9	30+	7	
SEATTLE-TACOMA	718	931.9	26.4	9.7	17.1	0.7	33.3	28	1.7	7	0	3.9	44	20	-15	16	0	0	0	3.3	21	10	
SPokane	1206	981.8	27.4	4.9	9.7	0.1	23.9	2	-0.6	6	0	2	0	6	-34	21	10	41	0	0	16.5	5	
STANDEE PASS R	281	1015.1	27.0	13.3	20.5	0.9	37.8	9	-7.8	7	0	2.1	9	0	-21	9	0	0	5	17	15		
MALLA MALLA U	921	977.0	27.9	9.2	18.6	0.5	35.0	28+	4.4	20+	8	0	3.7	40	14	-14	1	0	0	2.3	30	13+	
YAKIMA	5	1013.9	31.9	25.6	28.8	1.8	34.4	12	23.9	10+	12	0	24+	80	146	3	27	17	10	0	3.1	9	
WEST POINTS	4	1013.9	31.9	25.6	28.8	1.8	34.4	12	23.9	10+	12	0	24+	80	146	3	27	17	10	0	3.1	9	
SAN JUAN P.Q.	5	1013.9	31.9	25.6	28.8	1.8	34.4	12	23.9	10+	12	0	24+	80	146	3	27	17	10	0	3.1	9	
WEST VIRGINIA	763	931.6	1018.6	23.1	12.5	17.8	-1.8	27.8	10	3.3	25	0	0	13.9	82	163	55	55	14	7	22	11.2	
DECALY	284	986.1	1018.9	26.5	14.3	20.4	-1.8	32.2	10	7.8	25	1	0	14.4	72	90	6	24	13	10	0	7	4
CHARLESBURG	994	949.2	1015.2	26.3	10.6	17.5	-1.2	3.3	26	0	0	3.3	26	0	124	5	52	14	0	0	0	8	
ELKTON	252	988.5	1018.1	26.8	15.5	21.2	-1.3	28.9	9+	0	0	0	0	15.6	73	194	108	67	15	8	0	2.1	
HUNTINGTON	187	988.5	1018.1	25.9	14.4	20.2	-2.1	30.0	15+	7.8	25	0	0	15.6	73	194	108	67	15	8	0	2.1	
DARKESBURG U	5	988.5	1015.2	24.0	12.2	18.1	0.1	31.1	15	7.2	24+	0	0	11.1	67	56	30	14	8	0	0	16.8	
WISCONSIN	208	989.8	1015.2	22.6	13.6	19.6	-0.7	32.2	15	6.7	1	0	13.9	73	40	-73	11	0	0	0	0	16.8	
GREEN BAY	198	991.2	1015.2	25.7	12.0	18.9	0.1	31.7	15	2.2	25	0	0	13.3	71	64	46	32	10	0	0	16.8	
LA CROSSE	262	984.2	1015.4	25.7	13.3	18.2	0.1	31.1	15	6.7	25	0	0	12.2	71	72	19	21	13	6	0	16.8	
MADISON	204	990.9	1016.0	23.9	12.4	18.2	0.1	31.1	15	6.7	25	0	0	12.2	71	72	19	21	13	6	0	16.8	
WISCONSIN	1427	938.8	1014.1	26.1	7.0	16.6	-0.1	35.0	30+	0.0	1	5	1	3.9	49	33	-3	23	9	7	0	16.8	
LA CROSSE	1467	916.7	1014.1	22.6	9.2	16.4	0.1	30.6	26+	1.7	9	0	0	4.4	49	84	23	30	12	0	1.6	7.5	
CHEYENNE	1494	930.7	1013.9	25.9	8.4	1.2	0.9	33.3	30+	-0.6	9	4	2	2.2	42	21	-28	20	2	3	0	16.8	
LAWRENCE	1205	970.1	1014.5	25.1	7.1	16.1	-0.1	36.1	30+	0.0	8	4	1	7.4	61	24	-47	15	7	14	7	5.1	
MERIDIAN	5	1014.5	25.1	7.1	16.1	-0.1	36.1	30+	0.0	8	4	1	7.4	61	24	0	0	0	0	0	5.1		

MONTHLY AND SEASONAL HEATING DEGREE DAYS

(Base 65°F)

1978-1979

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
ALABAMA BIRMINGHAM U	0	0	0	154	220	570	855	597	300	92	25	0		2844
HUNTSVILLE	0	0	0	191	223	602	974	691	385	155	33	0	3269	3302
MOBILE	0	0	0	20	53	355	613	401	152	8	4	0	1606	1684
MONTGOMERY	0	0	0	72	109	431	681	465	194	39	9	0	2000	2269
ALASKA ANCHORAGE	186	160	400	792	1153	1344	1321	1515	1029	781	454	268	9403	10911
ANNEETTE	213	196	333	519	780	947	1055	930	728	621	532	373	7227	7053
BARROW	777	874	936	1793	1786	2448	2091	2390	2534	1978	1395	970	19967	23265
BARTER ISLAND	743	867	867	1742	1726	2268	2009	2402	2646	1897	1242	925	19334	19994
BETHEL	334	293	605	1151	1223	1338	1347	1962	1447	998	634	508	11840	13203
BETLES	94	257	374	1521	1696	2144	2173	2574	1878	1280	521	271	14983	15925
BIG DELTA	83	216	555	1222	1579	1914	1991	2375	1520	929	420	244	13048	13698
COLO BAY	471	325	481	766	799	917	921	1020	910	720	661	425	8416	9865
FAIRBANKS	65	176	542	1286	1689	1912	2260	2533	1638	1018	463	220	13802	14345
GULKA	559	995	1624	2009	2140	2324	1362	1362	378					
HOMER	366	310	522	761	984	1088	1056	1375	987	792	651	481	9373	10364
JUNEAU	298	262	427	612	1037	1134	1370	1505	904	712	528	378	9167	9007
KING SALMON	326	237	514	876	1042	1141	1076	1648	1069	754	544	380	9607	11582
KODIAK	383	239	417	640	765	902	829	1055	837	620	586	344	7617	8860
KOTZEBUE	199	264	550	1379	1470	1953	1639	2093	1772	1380	969	485	14153	16039
MC GRATH	176	224	585	1291	1520	1720	2038	2383	1574	1040	507	367	13245	14487
NAME	321	323	543	1171	1225	1567	1387	1847	1526	1176	715	522	12323	14325
ST. PAUL ISLAND	564	496	518	792	802	1011	946	976	1065	800	747	548	9325	11119
TALKEETNA	238	226	515	952	1328	1564	1530	1649	1148	894	553	319	10922	11708
UNALAKLEET	236	237												
VALDEZ	374	294	491	820	1059	1244	1229	1379	1020	792	575	402	9679	10545
YAKUTAT	356	306	487	657	986	1100	1294	1350	935	834	624	458	9387	9533
ARIZONA FLAGSTAFF	33	73	227	465	907	1254	1307	1089	1005	722	524	219	7825	7322
PHOENIX	0	0	0	1	148	405	455	254	143	30	0	0	1436	1552
TUCSON	0	0	0	15	213	470	511	311	260	76	20	0	1876	1752
WINSLOW	0	0	37	180	573	1176	1102	757	646	314	156	27	4968	4733
YUMA	0	0	0	0	136	374	399	174	84	1	0	0	1168	1005
ARKANSAS FORT SMITH	0	0	0	133	359	771	1215	869	393	175	54	0	3969	3336
LITTLE ROCK	0	0	0	118	321	667	1083	732	314	110	13	0	3358	3354
NO. LITTLE ROCK	0	0	0	126	316	707	1158	794	368	149	35	0	3088	
CALIFORNIA BAKERSFIELD	0	0	0	9	236	578	610	352	211	87	8	0	1891	2185
BISMARCK	0	1	93	165	653	906	931	731	514	291	97	18	4400	4313
BLUE CANYON	55	107	247	198	701	872	954	833	720	671	303			
EUREKA U	274	241	215	307	503	667	562	467	499	412	374	323	4804	4679
FRESNO	0	0	6	30	382	682	549	372	234	96	34	0	2385	2650
LONG BEACH	0	0	0	4	201	376	344	268	177	41	30	1	1442	1606
LOS ANGELES	0	0	0	5	179	326	316	295	237	74	1	1	1371	1819
LOS ANGELES U	0	0	0	7	209	361	354	274	226	80	46	5	1563	1245
MT. SHASTA R	48	115	298	348	840	1067	1051	842	694	623	333	144	6403	5890
DAKLAND	49	21	12	104	349	594	491	387	294	244	117	104	2766	2909
REO BLUFF	0	0	1	17	353	615	541	418	248	172	41	0	2406	2688
SACRAMENTO	0	0	11	51	449	715	606	446	313	236	57	2	2886	2843
SANDOBERG R	20	23	141	108	598			717	657	487				
SAN DIEGO	0	0	0	0	102	297	246	219	153	45	20	6	1086	1507
SAN FRANCISCO	111	65	32	142	371	581	530	406	319	277	148	132	3121	3042
SAN FRANCISCO U	196	137	43	138	268	471	431	332	281	250	185	197	2929	3080
SANTA MARIA	112	45	54	139	379	544	503	442	372	326	189	130	3237	3053
STOCKTON	0	0	3	33	398	713	603	384	262	126	27	0	2551	2806
COLORADO ALAMOSA	18	141	278	632	966	1762	1827	1518	1069	704	438	203	9556	8609
COLORADO SPRINGS	3	44	119	400	848	1329	1484	906	825	494	336	97	6885	6473
DENVER	0	20	96	366	811	1245	1450	854	751	473	313	81	6460	6016
GRAND JUNCTION	0	6	95	313	737	1510	1493	1154	732	377	192	37	6646	5605
PUEBLO	0	6	59	347	778	1264	1509	849	674	391	247	48	6172	5394
CONNECTICUT BRIDGEPORT	4	0	92	290	524	889	1062	1126	675	460	114	23	5259	5461
HARFORD	9	15	209	489	790	1102	1184	1310	730	473	81	29	6418	6350
DELAWARE WILMINGTON	6	0	60	337	542	854	1037	1197	605	424	89	28	5179	4940
O15% OF COLUMBIA WASHINGTON DULLES	0	0	58	349	539	824	1040	1163	578	383	115	43	5092	5010
WASHINGTON NATIONAL	0	0	9	192	378	671	918	1019	425	273	30	0	3915	4211
FLORIDA APPALACHICOLA U	0	0	0	24	35	292	525	394	204	13	4	0	1491	1361
OATYONA BEACH	0	0	0	4	71	279	244	79	5	0	0	0	682	897
FORT MYERS	0	0	0	0	19	127	100	13	0	0	0	0	259	457
JACKSONVILLE	0	0	0	46	68	324	525	371	160	13	3	0	1510	1327
KEY WEST	0	0	0	0	0	0	0	17	22	0	0	0	39	64
LAKELOAN U	0	0	0	0	0	0	0	1	84	82	13	0	0	180
MIAAMI	0	0	0	0	0	0	0	1	84	82	13	0	0	206
ORLANDO	0	0	0	0	0	56	230	214	71	0	0	0	571	733
PENSACOLA	0	0	0	17	23	322	592	390	168	6	4	0	1522	1578
TALLAHASSEE	0	0	0	41	76	364	581	424	217	28	13	0	1744	1563
TAMPA	0	0	0	0	2	75	245	190	53	0	0	0	565	718
WEST PALM BEACH	0	0	0	0	0	2	124	118	23	0	0	0	267	299
GEORGIA ATHENS	0	0	1	132	218	581	804	635	289	92	22	0	2774	2975
ATLANTA	0	0	0	112	194	580	853	646	279	97	16	0	2777	3095
AUGUSTA	0	0	0	103	184	531	723	582	265	79	15	2	2484	2547
COLUMBUS	0	0	0	57	104	468	693	527	219	34	7	0	2109	2378
MACON	0	0	0	70	130	467	675	541	226	62	7	0	2178	2240
ROME	0	0	0	154	259	638	897	676	360	127	31	0	3142	3342
SAVANNAH	0	0	0	45	53	378	602	448	181	17	1	0	1725	1952

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IDAHO POISE	5	38	173	370	841	1171	1505	855	668	481	241	72	6418	5855
LEWISTON	6	22	139	390	890	1109	1485	808	582	448	190	61	6150	5464
POCATELLO	10	59	241	473	990	1587	1678	1054	887	623	520	155	7857	7065
ILLINOIS CAIRNS U	7	0	0	193	387	801	1247	965	515	225	61	0	4594	5835
CHICAGO O HARE	1	4	59	418	718	1206	1560	879	580	233	30	7110	6497	
CHICAGO MIDWAY	4	1	50	410	671	1199	1628	1545	910	606	216	28	7068	6127
MOLINE	1	4	59	415	767	1305	1820	1445	884	521	172	12	7405	6595
PEORIA	0	4	49	590	704	1174	1722	1403	855	510	194	10	6995	6098
ROCKFORD	2	7	66	461	806	1355	1771	1458	1026	658	245	27	7860	6845
SPRINGFIELD	0	0	36	349	591	1055	1627	1336	758	455	119	0	6286	5558
INDIANA EVANSVILLE	0	0	10	523	475	865	1360	1125	559	326	106	0	5147	4624
FORT WAYNE	1	55	451	686	1050	1466	1401	751	542	198	26	6592	6209	
INDIANAPOLIS	0	0	36	377	571	944	1453	1288	665	455	170	5	5964	5577
SOUTH BEND	5	4	57	599	656	1095	1455	1356	795	560	241	22	6645	6462
IOWA BURLINGTON	0	5	55	391	751	1210	1692	1377	854	515	162	5	6995	6149
OES MOINES	0	0	48	385	776	1293	1779	1435	912	552	165	13	7534	6710
QUOBUQUE	3	12	90	505	869	1414	1877	1511	1055	652	247	23	8258	7277
SIOUX CITY	1	8	65	448	948	1531	1995	1560	1058	546	255	31	8324	6955
HATERDLO	2	9	78	466	914	1404	1905	1547	1024	615	238	20	8220	7415
KANSAS CONCORDIA	0	0	41	288	719	1152	1615	1294	720	411	164	19	6405	5625
ODDE CITY	0	2	41	228	667	1054	1549	1015	615	543	175	25	5712	5046
GOODLAND	0	18	63	375	876	1229	1470	936	710	424	269	58	6428	6119
TOPEKA	0	0	34	319	655	1078	1603	1277	695	401	129	9	6238	5243
KICHITA	0	0	18	210	598	1016	1491	1145	560	533	104	3	5476	4687
KENTUCKY COVINGTON	0	0	21	581	552	891	1348	1216	563	425	179	15	5591	5070
LEXINGTON	0	0	20	348	492	854	1277	1061	522	557	110	15	5016	4729
LOUISVILLE	0	0	4	293	442	765	1246	1090	514	301	94	5	4694	4640
LOUISIANA BATUN ROUGE	0	0	0	52	104	427	667	418	178	19	5	0	1870	1870
LKE CHARLES	0	0	0	26	98	377	636	406	151	19	0	0	1713	1498
NEW ORLEANS	0	0	0	16	39	324	586	547	128	8	2	0	1450	1465
SHREVEPORT	0	0	0	57	181	328	849	517	216	50	11	0	2409	2167
MAINE CARIBOU	53	86	434	717	1114	1505	1534	1527	1018	708	526	104	9124	9632
PORTLAND	39	32	250	513	852	1201	1272	1280	905	677	311	97	7509	7498
MARYLAND BALTIMORE	0	0	55	280	485	765	984	1100	520	354	75	6	4598	4729
MASSACHUSETTS BLUE HILL LBS R	19	19	196	447	717	1036	1154	1296	790	573	207	66	6500	6535
BOSTON	11	11	150	381	635	916	1002	1169	691	481	149	19	5615	5621
WORCESTER	53	98	229	511	767	1116	1225	1554	824	601	245	80	7021	6848
MICHIGAN ALRENA	63	48	212	577	862	1270	1580	1576	1038	712	445	164	8545	8518
DETROIT	6	0	57	413	688	1056	1390	1340	841	621	275	46	6711	6228
DETROIT METRO	17	0	73	452	728	1112	1492	1355	845	604	291	55	6962	6419
FLINT	17	8	89	449	725	1187	1516	1458	829	606	291	64	7259	7041
GRAND RAPIDS	15	22	124	545	816	1182	1477	1393	865	607	264	42	7550	6801
HOUGHTON LAKE	79	46	220	636	869	1553	1655	1530	1055	742	396	135	8694	8547
LANSING	24	13	105	507	751	1181	1509	1452	854	608	289	58	7351	6904
MARQUETTE U	64	57	220	554	918	1585	1790	1675	1171	835	477	237	7683	6890
MUSKEGON	29	15	125	519	815	1190	1481	1408	969	708	540	84	9705	9195
SAULT STE MARIE	112	96	282	645	989	1453	1753	1675	1171	835	477	87	9984	8868
MINNESOTA DULUTH	71	99	262	615	1159	1699	1999	1679	1295	910	549	172	10507	9756
INTERNATIONAL FALLS	95	119	299	661	1329	1992	2287	1857	1402	925	580	177	11701	10547
MINNEAPOLIS	5	7	89	464	968	1538	1914	1557	1112	625	507	58	8602	8139
KOCHESTER	11	20	142	577	1059	1624	2064	1658	1183	680	519	31	9378	8227
ST CLOUD	51	26	175	579	1115	1736	2095	1677	1260	767	458	87	9984	8868
MISSISSIPPI JACKSON	0	0	0	98	164	519	821	551	262	69	20	3	2484	2300
MERICIAN	0	0	0	110	178	547	850	556	261	69	15	0	2546	2388
MISSOURI COLUMBIA REGIONAL	0	0	21	280	552	949	1515	1169	635	560	94	0	5575	5078
KANSAS CITY	0	0	272	618	1050	1624	1230	698	400	115	8	6040	5557	
ST JOSEPH	0	2	55	318	665	1090	1680	1554	758	482	170	9	6561	5440
ST LOUIS	0	0	24	292	528	923	1496	1167	644	564	80	5	5518	4750
SPRINGFIELD	0	0	19	268	555	933	1463	1085	606	542	132	14	5365	4570
MONTANA BILLINGS	41	45	204	487	1208	1509	1771	1286	887	636	550	71	8495	7265
GLASGOW	42	70	253	601	1506	1725	2145	1780	1285	855	455	86	10579	8969
GREAT FALLS	54	97	256	496	1228	1475	1804	1492	951	722	417	111	8825	7652
MAKRE	40	48	218	544	1317	1625	2094	1728	1024	733	592	72	9859	8867
HELENA	52	60	244	564	1265	1540	1979	1250	930	665	359	128	9014	8190
KALISPELL	60	139	351	685	1167	1567	2025	1168	964	662	404	152	9522	8554
MILES CITY	14	24	167	502	1265	1614	2010	1594	1086	705	368	62	9409	7889
MISSOULA	67	110	564	1141	1515	1841	1999	895	625	589	125	8718	7951	
NEBRASKA GRANO ISLAND	0	3	64	400	886	1438	1777	1451	866	492	258	38	7655	6420
LINCOLN	0	5	62	392	848	1515	1787	1454	816	469	197	16	7355	6218
NORFOLK	1	9	49	454	900	1476	1856	1506	988	553	248	53	8015	6981
NORTH RLATTE	5	24	99	488	982	1560	1829	1335	862	491	259	55	7989	6745
OMAHA (ERPLEY)	0	0	59	350	754	1255	1676	1333	775	451	156	12	6801	6049
OMAHA (NORTH)	0	3	52	385	837	1358	1767	1435	921	514	199	24	7495	6601
SCOTTSBLUFF	2	20	99	412	930	1425	1695	1029	737	447	288	50	7129	6774
VALENTINE	4	32	109	515	1055	1622	1888	1446	986	574	526	67	8622	7500

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State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
NEVADA														
ELKU	23	47	267	439	888	1277	1306	889	775	553	265	85	6815	7483
ELY	49	103	336	490	1047	1361	1472	1072	933	675	400	179	8118	7814
LAS VEGAS	0	0	1	2	324	676	737	458	270	66	18	0	2352	2601
RENU	21	62	234	347	826	1236	1113	781	709	936	247	91	6203	6022
WINNEMUCCA	21	53	241	442	907	1202	1221	809	710	532	205	63	6406	6629
NEW HAMPSHIRE														
CONCORDO	45	34	275	563	882	1304	1284	1392	841	617	280	99	7616	7360
MT WASHINGTON OBS	497	493	811	1128	1355	1791	1782	1849	1440	1229	841	593	13809	13878
NEW JERSEY														
ATLANTIC CITY	6	0	116	365	512	831	1032	1208	623	406	110	39	5248	4946
ATLANTIC CITY U	6	0	62	297	497	791	979	1045	666	427	173	22	4965	4693
NEWARK	6	0	66	239	481	830	1001	1155	577	386	68	11	4820	5034
TRENTON U	7	0	79	300	521	824	1013	1155	568	408	98	19	4992	4947
NEW MEXICO														
ALBUQUERQUE	0	0	20	167	521	945	988	665	509	241	100	12	4168	4292
CLAYTON	0	8	68	291	678	1100	1286	806	660	416	292	62	5627	5207
ROSHELL	0	0	55	174	468	856	829	591	444	161	51	2	3731	3697
NEW YORK														
ALBANY	43	19	256	303	784	1119	1324	1414	803	579	188	63	7095	6888
BINGHAMTON	53	7	208	533	765	1143	1351	1437	832	667	325	127	7448	7285
BUFFALO	14	3	154	472	732	1067	1371	1400	823	619	285	65	7005	6927
NEW YORK U	5	0	75	311	510	802	969	1100	554	369	55	14	4764	4848
NEW YORK KENNEOY	2	0	62	237	481	791	978	1115	603	397	88	19	4773	5184
NEW YORK LA GUARIA	5	0	72	287	498	831	1031	1173	637	446	94	15	5089	4909
ROCHESTER	5	1	136	428	711	1077	1342	1432	813	626	310	79	6960	6719
SYRACUSE	10	1	184	470	735	1062	1315	1457	796	591	242	74	6937	6678
NORTH CAROLINA														
ASHEVILLE	0	0	12	283	390	741	951	810	457	268	71	18	4001	4237
CAPE HATTERAS R	0	0	90	123	426	601	663	439	198	32	5	2572	2731	
CHARLOTTE	0	0	7	155	255	620	873	750	350	163	30	4	3207	3218
GREENSBORO	0	0	16	238	381	700	921	896	440	198	52	8	3850	3825
RALEIGH	0	0	7	184	292	627	793	792	398	183	43	8	3327	3314
WILMINGTTON	0	0	0	91	154	489	633	606	346	60	5	0	2404	2433
NORTH DAKOTA														
BISMARCK	18	35	217	585	1263	1679	2084	1837	1320	891	463	81	10473	9044
FARGO	15	59	179	571	1262	1788	2147	1863	1377	861	457	64	10523	9271
WILLISTON	21	39	213	569	1322	1756	2085	1774	1294	906	495	75	10550	9161
OHIO														
AKRON	9	0	58	456	670	997	1397	1348	712	550	288	62	6547	6224
CINCINNATI A88E 08	0	0	21	356	526	841	1303	1157	594	402	138	10	5348	4844
CLEVELAND	7	2	43	362	620	965	1328	1281	680	552	290	60	6190	6124
COLUMBUS	0	0	38	411	610	943	1346	1270	637	449	185	18	5907	5702
OAYTON	1	11	47	396	597	942	1372	1281	634	445	166	15	5907	5641
MANSFIELD	12	6	63	449	686	1044	1433	1353	744	557	290	56	6691	5818
TOLEDO	11	11	74	468	732	1076	1461	1390	808	577	259	42	6907	6981
YOUNGSTOWN	21	2	82	456	680	1004	1963	1332	781	568	310	74	6683	6426
OKLAHOMA														
OKLAHOMA CITY	0	0	2	89	437	866	1221	932	434	217	81	5	4279	3695
TULSA	0	0	0	121	406	834	1293	972	391	164	47	0	4228	3680
OREGON														
ASTURIA	125	110	202	324	693	843	910	641	543	467	338	243	5439	5295
BURNS U	34	122	310	442	961	1335	1517	941	792	618	350	150	7573	7212
EUGENE	52	48	165	366	763	919	1029	614	496	432	288	159	5331	4739
MEFORDO	4	15	180	244	768	973	905	639	483	410	223	58	4902	4930
PENDLETON	7	41	146	403	936	1094	1533	757	582	432	184	62	6177	5240
PORTLAND	29	26	134	312	772	915	1058	615	434	351	162	57	4865	4792
SALM	17	20	129	328	763	928	1038	619	486	430	249	121	5128	4852
SEXTON SUMMIT R	135	189	377	283	784	1012	908	849	643	657	416	240	6493	6430
PENNSYLVANIA														
ALLENTOWN	9	0	94	368	614	971	1142	1241	623	460	125	29	5586	5827
ERIE	15	2	125	481	723	1046	1406	1424	874	678	369	106	7249	6851
MARRISBURG	14	0	48	321	544	876	1106	1182	611	635	123	26	5286	5224
PHILADELPHIA	5	0	41	296	507	811	999	1170	556	378	38	17	4818	4865
PITTSBURGH	4	3	80	485	656	993	1346	1311	671	458	219	38	6264	5930
PITTSBURGH U	10	1	49	387	577	903	1258	1214	626	438	190	23	5676	5278
SCRANTON	38	2	153	436	728	1103	1257	1370	747	552	221	66	6673	6277
WILLIAMSPORT	9	0	76	381	633	998	1179	1264	696	497	167	40	5940	5981
RHODE ISLAND														
BLOCK ISLAND	16	5	125	331	550	827	985	1196	769	583	235	68	5690	5771
PROVIOENCE	8	8	180	412	673	970	1075	1261	755	540	162	52	6096	5972
SOUTH CAROLINA														
CHARLESTON	0	0	0	57	83	399	602	505	241	70	2	0	1959	2146
CHARLESTON U	0	0	0	28	53	320	627	527	259	38	6	0	1858	1904
COLUMBIA	0	0	0	89	162	492	664	613	294	107	27	2	2450	2598
GRNLVLE-SPRTNBRG	0	0	6	152	276	658	851	715	336	129	15	3	3141	3163
SOUTH DAKOTA														
ABERDEEN	13	23	142	540	1221	1678	2051	1750	1245	727	389	68	9847	8617
MURON	12	27	132	539	1070	1560	2006	1647	1130	668	374	35	9200	8055
RAPID CITY	17	40	111	443	1068	1480	1781	1348	910	614	362	82	8256	7324
SIOUX FALLS	11	18	104	525	1004	1554	1960	1607	1134	622	321	40	8900	7838
TENNESSEE														
BRISTOL	0	0	0	268	411	786	1065	920	511	283	88	11	4343	4306
CHATTANOOGA	0	0	0	192	299	637	962	725	390	192	42	0	3399	3505
KNOXVILLE	0	0	0	210	310	681	985	786	376	167	46	3	3561	3478
MEMPHIS	0	0	0	116	230	663	1049	734	345	121	23	3	3261	3227
NASHVILLE	0	0	1	240	338	695	1088	877	449	213	57	3	3958	3696
OAK RIDGE	0	0	0	281	393	780	1043	826	462	230	86	2	4103	3944

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TEXAS														
ABILENE	0	0	5	55	308	667	906	567	272	84	55	0	2920	2610
AMARILLO	0	0	33	197	576	992	1256	697	561	519	144	30	4783	4183
AUSTIN	0	0	0	5	186	675	754	660	146	37	10	0	2071	1737
BROWNSVILLE	0	0	0	0	35	152	303	203	41	0	0	0	736	650
CORPUS CHRISTI	0	0	0	1	57	236	445	236	58	1	0	0	1034	950
DALLAS FT WORTH	0	0	0	27	247	578	911	635	261	78	29	0	2766	2362
DEL RIO	0	0	1	8	147	426	639	363	125	8	0	0	1717	1525
EL PASO	0	0	16	106	272	625	733	496	862	118	26	1	2755	2678
GALVESTON	0	0	0	0	72	258	550	561	120	12	2	0	1875	1224
HOUSTON INTERCON	0	0	0	22	111	393	666	376	135	25	2	0	1708	1434
LUBBUCK	0	0	31	129	647	827	1023	660	369	136	45	9	3654	3545
MIDLAND	0	0	36	138	376	689	993	546	297	106	56	5	3116	2621
PORT ARTHUR	0	0	0	6	75	296	591	360	125	12	0	0	1463	1318
SAN ANGELO	0	0	3	74	294	642	886	510	251	60	34	0	2754	2240
SAN ANTONIO	0	0	0	12	152	613	657	456	109	20	6	0	1723	1570
VICTORIA	0	0	0	3	121	349	591	352	79	15	6	0	1514	1227
WACO	0	0	0	23	256	573	880	570	217	59	30	0	2008	2058
WICHITA FALLS	0	0	1	76	364	758	1056	750	343	130	47	0	3525	2904
UTAH														
MILFORD	1	21	206	375	920	1288	1409	993	800	551	284	101	6929	6612
SALT LAKE CITY	0	12	164	284	714	1178	1527	902	666	814	196	57	5894	5985
VERMONT														
BURLINGTON	49	38	295	571	897	1227	1452	1610	866	641	224	90	7960	7876
VIRGINIA														
LYNCHBURG	0	0	25	289	639	777	1018	1033	489	265	83	11	6629	6253
NORFOLK	0	0	3	162	268	614	787	879	499	215	52	5	3482	3488
RICHMOND	0	0	16	214	366	694	870	1011	439	218	46	4	3882	3959
ROANOKE	0	0	29	325	661	786	1057	992	512	279	88	15	4532	4307
WALLOPS ISLAND	0	0	21	230	373	720	889	1004	621	347	77	7	4289	4240
WASHINGTON														
OLYMPIA	55	78	240	462	805	952	1065	683	536	454	309	188	5788	5530
QUILLAYUTE	170	134	266	406	782	892	913	703	600	526	283	294	6037	5951
SEATTLE	63	45	170	310	688	823	880	630	479	611	215	118	4816	4727
SEATTLE-TACOMA	44	42	180	324	706	846	937	630	479	420	235	96	4859	5169
SPOKANE	37	97	252	562	1083	1424	1686	1011	756	877	513	154	7950	6835
STAMPEDE PASS R	282	343	563	633	1101	1386	1494	1080	928	846	624	462	9687	9400
WALLA WALLA U	5	17	83	322	863	1007	1436	693	917	845	119	41	5448	4835
YAKIMA	6	55	184	470	975	1155	1549	901	641	456	178	72	6640	6009
WEST VIRGINIA														
BECKLEY	14	5	58	611	521	864	1215	1070	597	589	175	69	5384	5615
CHARLESTON	0	0	18	364	662	797	1137	1021	456	308	125	19	4697	4590
ELKINS	15	6	75	534	617	961	1212	1187	680	467	231	83	6067	5973
HUNTINGTON	0	0	15	334	504	815	1194	1016	484	292	110	12	4774	4624
PARKERSBURG U	0	0	25	366	552	863	1226	1128	579	380	192	21	5292	4817
WISCONSIN														
GREEN BAY	35	18	152	549	953	1442	1850	1566	1117	691	389	70	8810	8098
LA CROSSE	6	0	78	427	871	1388	1828	1466	992	569	239	29	7893	7417
MAISISON	19	22	150	543	940	1548	1800	1489	1013	671	283	52	8310	7750
MILWAUKEE	21	5	76	473	796	1273	1654	1591	980	681	322	91	7763	7464
WYOMING														
CASPER	17	60	212	522	1157	1602	1798	1153	910	651	479	151	8612	7555
CHEYENNE	28	73	200	523	937	1358	1671	933	893	597	459	159	7611	7235
LANDER	28	56	226	519	1321	1730	1974	1248	962	620	415	137	9232	7869
SHERIDAN	45	75	232	525	1235	1623	1911	1376	979	727	447	154	9329	7708

COOLING DEGREE DAYS

(Base 65° F.)

JUNE 1979

State and station	Current season			State and station	Current season			State and station	Current season			State and station	Current season		
	This month	Period January through this month	Normals January through this month		This month	Period January through this month	Normals January through this month		This month	Period January through this month	Normals January through this month		This month	Period January through this month	Normals January through this month
ALABAMA				HAWAII				NEBRASKA				SOUTH CAROLINA			
BIRMINGHAM U	317	544	785	HILO	280	1354	1321	GRAND ISLAND	211	247	265	CHARLESTON	335	658	730
BIRMINGHAM	308	546	669	HONOLULU	458	1787	1754	LINCOLN	235	284	313	CHARLESTON U	316	571	833
HUNTSVILLE	240	416	644	KAHULUI	410	1011	1467	NURFOLK	212	253	232	COLUMBIA	253	459	733
MOBILE	448	893	989	LIHUE	374	1630	1533	NORTH PLATTE	156	183	191	GRNLAND-SPRNTNBG	215	415	520
MONTGOMERY	346	652	801	IDAHO				OMAHA (EPPLEY)	249	321	332	SOUTH DAKOTA			
ALASKA				ROISEN	129	156	104	OMAHA (NORTH)	206	254	254	ABERDEEN	83	94	120
ANCHORAGE	0	c	c	LEXINGTON	131	146	102	SCOTTSDALE	163	190	134	AURON	162	175	160
ANNEVILLE	c	c	c	POCATELLO	64	64	49	VALLETTINE	136	160	152	RAPID CITY	99	118	125
BARKWELL	0	c	c	ILLINOIS				NEVADA				SIOUX FALLS	131	159	175
BARBER ISLAND	0	c	c	CAIRNS II	402	547	603	ELKO	120	129	28	SOUTH CAROLINA			
BETHEL	0	c	c	CHICAGO N HAKE	164	227	173	FLY	35	35	22	CHARLESTON	335	658	730
BETLES	0	c	c	CHICAGO M HOWAY	165	217	246	LAS VEGAS	675	1075	891	CHARLESTON U	316	571	833
BIG DELTA	0	c	c	MOLINE	206	289	257	RENO	63	72	46	COLUMBIA	253	459	733
COLD BAY	0	c	c	PEORIA	206	268	282	WINNEMUCKA	114	143	61	GRNLAND-SPRNTNBG	215	415	520
FAIRBANKS	0	c	c	ROCKFORD	134	190	190	NEW HAMPSHIRE				SOUTH DAKOTA			
GULKA	0	c	c	SPRINGFIELD	305	400	337	CONCORD	69	85	57	ABERDEEN	83	94	120
HOMER	0	c	c	INDIANA				MT WASHINGTON OBS	0	0	0	AURON	162	175	160
JUNEAU	0	c	c	EVANSVILLE	310	388	438	NEW JERSEY				RAPID CITY	99	118	125
KING SALMON	0	c	c	FORT WAYNE	156	218	206	ATLANTIC CITY	103	148	193	SIOUX FALLS	131	159	175
KODIAK	0	c	c	INDIANAPOLIS	197	261	297	ATLANTIC CITY U	74	79	148	SOUTH CAROLINA			
KOTZEBIE	0	c	c	SOUTH BEND	181	231	183	NEWARK	147	208	244	CHARLESTON	335	658	730
MC GRATH	0	c	c	INWA				TKENTON U	131	176	239	CHARLESTON U	316	571	833
NAME	0	c	c	BURLINGTON	212	277	284	NEW MEXICO				COLUMBIA	253	459	733
ST. PAUL ISLAND	0	c	c	DES MOINES	194	242	250	ALBUQUERQUE	269	341	364	GRNLAND-SPRNTNBG	215	415	520
TALKEETNA	0	c	c	DUBUQUE	106	142	154	CLAYTON	145	152	181	ABERDEEN	83	94	120
VALDEZ	0	c	c	SIOUX CITY	186	222	200	ROSWELL	311	479	514	AURON	162	175	160
YAKUTAT	0	c	c	WATERLOO	153	188	181	NEW YORK				RAPID CITY	99	118	125
ARIZONA				KANSAS				ALBANY	99	138	141	SIOUX FALLS	131	159	175
FLAGSTAFF	10	16	15	CONCORDIA	201	306	344	RINGHAMONT	47	70	82	SOUTH CAROLINA			
PHOENIX	74	134	119	DOUGIE CITY	292	363	380	RUFFALO	118	164	93	CHARLESTON	335	658	730
TUCSON	551	902	905	DOUGLAND	176	208	20%	NEW YORK U	149	224	256	CHARLESTON U	316	571	833
WINSLOW	213	245	279	TUPEKA	231	324	393	NEW YORK KENNEDY	83	109	171	COLUMBIA	253	459	733
YUMA	724	1454	1368	WICHITA	294	394	484	NEW YORK LA GUARDIA	138	179	245	GRNLAND-SPRNTNBG	215	415	520
AKANSAS				KENTUCKY				RUTCHESTER	121	174	125	ABERDEEN	83	94	120
FORT SMITH	307	460	428	COVINGTON	154	202	317	SYRACUSE	109	161	121	AURON	162	175	160
LITTLE ROCK	396	640	614	LEXINGTON	199	266	366	NORTH CAROLINA				RAPID CITY	99	118	125
NO. LITTLE ROCK	329	500	430	LOUISVILLE	279	367	376	ASHEVILLE	141	197	248	SIOUX FALLS	131	159	175
CALIFORNIA				LOUISIANA				CAPE HATTERAS R	203	349	409	SOUTH CAROLINA			
BAKERSFIELD	500	673	610	RATON ROUGE	430	855	983	CHARLOTTE	208	362	513	CHARLESTON	335	658	730
BISHOP	187	257	258	LAKE CHARLES	444	872	1034	GREENSBURG	159	286	428	CHARLESTON U	316	571	833
BLUE CANYON				NEW ORLEANS	491	1073	1030	RALEIGH	159	298	432	COLUMBIA	253	459	733
EUREKA U	0	u	2	SHKEVEPKT	395	706	874	WILMINGTON	298	603	451	GRNLAND-SPRNTNBG	215	415	520
LONG BEACH	220	316	159	MAINE				NORTH DAKOTA				ABERDEEN	83	94	120
LOS ANGELES	133	177	94	CARIBOU	50	58	8	ASTORIA	67	73	97	AURON	162	175	160
LOS ANGELES U	209	307	225	PORTLAND	34	49	22	FAROU	85	97	99	RAPID CITY	99	118	125
MT. SANTA R	19	21	36	HUGHTON	122	157	137	VILLISTON	83	95	73	SIOUX FALLS	131	159	175
OAKLAND	29	42	21	WORCESTER	44	68	74	TYLEROU	127	173	186	CHARLESTON	335	658	730
RED BLUFF	401	653	515	MARYLAND				YOUNGSTOWN	95	140	131	CHARLESTON U	316	571	833
SACRAMENTO	214	331	309	PALTIMORE	183	274	295	OHIO				COLUMBIA	253	459	733
SAN DIEGO	169	231	118	MASSACHUSETTS				AKRON	106	147	168	GRNLAND-SPRNTNBG	215	415	520
SAN FRANCISCO	19	30	18	BLUE HILL JBS R	56	82	79	CINCINNATI ABBE OBS	173	250	367	ABERDEEN	83	94	120
SAN FRANCISCO U	13	24	5	HOSTON	122	157	137	CLEVELAND	122	170	164	AURON	162	175	160
SANTA MARIA	14	22	5	WORCESTER	44	68	74	COLUMBUS	163	224	230	RAPID CITY	99	118	125
STOCKTON	309	501	714	ST CLOUD	52	66	94	DAYTON	179	255	268	SIOUX FALLS	131	159	175
COLORADO				MISSIGIAN	47	57	33	MANSFIELD	109	151	220	CHARLESTON	335	658	730
ALAMOSA	0	u	9	ALPENA	13b	184	187	TYLEROU	127	173	186	CHARLESTON U	316	571	833
COLUMBO SPRINGS	84	95	97	DETROIT	104	141	165	OKLAHOMA CITY	314	446	545	COLUMBIA	253	459	733
DENVER	112	114	110	DETROIT METRO	118	161	170	TULSA	388	612	574	GRNLAND-SPRNTNBG	215	415	520
GRAND JUNCTION	225	283	256	ELINT	129	175	141	OREGON	95	97	84	ABERDEEN	83	94	120
PUEBLA	169	195	232	GRAND RAPIDS	56	76	59	PEORIA	114	135	106	AURON	162	175	160
CONNECTICUT				HOUGHTON LAKE	133	181	137	PORTLAND	65	83	45	RAPID CITY	99	118	125
BRIDGEFORT	79	95	129	LANSING	25	29	14	PURRS U	48	51	30	SIOUX FALLS	131	159	175
HARTFORD	151	211	126	MINNEAPOLIS	18	19	3n	FUGENE	16	16	25	CHARLESTON	335	658	730
DELAWARE				ROCHESTER	113	130	140	SEXTON SUMMIT R	35	40	7	CHARLESTON U	316	571	833
WILMINGTON	123	185	244	ST CLOUD	119	140	127	PENOLETON	114	135	106	COLUMBIA	253	459	733
OIST. OF COLUMBIA				MINNESOTA	224	307	371	PUANE R	506	3017	2837	GRNLAND-SPRNTNBG	215	415	520
WASHINGTON CULLES	147	230	245	JACKSON	357	653	840	KUOR R	459	2304	2313	ABERDEEN	83	94	120
WASHINGTON NATIONAL	231	374	404	HERIDIAN	309	547	R21	KUJALEIN	488	3022	2973	AURON	162	175	160
FLORIDA				KALIFSPFL	55	57	36	MAJURO	526	3149	3011	RAPID CITY	99	118	125
APPALACHICOLA U	426	817	678	MISSISSIPPI				PAGU PAGO	504	2932	2914	SIOUX FALLS	131	159	175
OATUNA BEACH	419	1104	1082	JACKSON				PUNAPE R	487	2941	2726	CHARLESTON	335	658	730
FORT MYERS	535	1579	1483	MERIDIAN				PUANE R	506	3017	2837	CHARLESTON U	316	571	833
JACKSONVILLE	369	609	957	KANSAS CITY	229	310	366	RAKUH	527	3122	2935	COLUMBIA	253	459	733
KEY WEST	588	2072	2147	KANSAS CITY	199	247	394	TAUK MUEN ISLAND	556	3270	2455	GRNLAND-SPRNTNBG	215	415	520
MIAMI	516	1719	1661	KALIFSPFL	183	249	394	YAP R	500	2951	2930	ABERDEEN	83	94	120
ORLANDO	479	1191	1271	MINNEAPOLIS	129	180	181	PUNAPE R	506	3017	2837	AURON	162	175	160
PENSACOLA	467	907	1321	ST JOSEPH	194	247	394	RAKUH	527	3122	2935	RAPID CITY	99	118	125
TALLAHASSEE	378	734	977	ST LOUIS	354	467	461	RAKUH	556	3270	2455	SIOUX FALLS	131	159	175
TAMPA	482	1440	1349	SPRINGFIELD	183	249	394	YAP R	500	2951	2930	CHARLESTON	335	658	730
WEST PALM BEACH	461	1346	1117	MONTANA	126	138	67	PENNNSYLVANIA	126	169	194	CHARLESTON U	316	571	833
GEORGIA				HILLINGS	70	78	70	ALLENTOWN	126	169	194	COLUMBIA	253	459	733
ATLANTA	286	500	578	GREAT FALLS	55	57	36	FRIE	49	101	81	GRNLAND-SPRNTNBG	215	415	520
ATLANTA	327	554	514	HAVERF	43	88	65	HARRISBURG	138	166	283	ABERDEEN	83	94	120
AUGUSTA	371	536	705	HELENA	45	46	20	PHILAELPHIA	146	247	290	AURON	162	175	160
COLUMBUS	393	750	771	KALISPELL	18	18	9	SCRANTON	125	175	180	RAPID CITY	99	118	125
MACON	375	611	454	MILES CITY	130	168	131	WILLIAMSPT	78	112	145	SIOUX FALLS	131	159	175
ROME	245	476	407	FISSJULA	50	50	10	RHUNE ISLAND	22	72	25	CHARLESTON	335	658	730
SAVANNAH	360	780	551	FISSJULA	50	50	10	BLACK ISLAND	22	72	25	CHARLESTON U	316	571	833

STORM SUMMARY

JUNE 1979

STATE	TORNADOES			HAILSTORMS			WINDSTORMS			LIGHTNING			@HEAVY SNOWSTORMS AND BLIZZARDS			# ICE STORMS			♦ ALL OTHER					
	NUMBER	DEATHS	INJURIES	DEATHS	INJURIES	PROP-ERTY	DAMAGE	DEATHS	INJURIES	PROP-ERTY	DAMAGE	DEATHS	INJURIES	PROP-ERTY	DAMAGE	DEATHS	INJURIES	PROP-ERTY	DAMAGE	DEATHS	INJURIES	PROP-ERTY	DAMAGE	
	DEATHS	INJURIES	DEATHS	INJURIES	PROP-ERTY	DAMAGE	DEATHS	INJURIES	PROP-ERTY	DAMAGE	DEATHS	INJURIES	PROP-ERTY	DAMAGE	DEATHS	INJURIES	PROP-ERTY	DAMAGE	DEATHS	INJURIES	PROP-ERTY	DAMAGE		
Alabama	1	1				3																		
Alaska	2	1				6																		
Arizona	*																							
Arkansas	*																							
California	*																							
Colorado	12	6																						
Connecticut	*																							
Delaware																								
Florida																								
Georgia	2	2				4																		
Hawaii	*																							
Idaho																								
Illinois	3	3																						
Indiana	1	1																						
Iowa	18	5	5	70	7																			
Kansas	6	3																						
Kentucky	2	1																						
Louisiana	1	1																						
Maine																								
Maryland & DC																								
Massachusetts																								
Michigan	6	2																						
Minnesota	17	2																						
Mississippi																								
Missouri																								
Montana	4	8	2																					
Nebraska																								
Nevada	*																							
New Hampshire																								
New Jersey																								
New Mexico	*	1	1																					
New York																								
North Carolina	1	1																						
North Dakota	8	6																						
Ohio	2	2																						
Oklahoma	3	3																						
Oregon																								
Pacific	*																							
Pennsylvania	1	1																						
Puerto Rico	1	1																						
Rhode Island																								
South Carolina	15	3	1	2	1	6																		
South Dakota	1	1	2	1	4	5																		
Tennessee																								
Texas	14	7																						
Utah	*																							
Vermont	*																							
Virginia																								
Virgin Islands																								
Washington	*																							
West Virginia	8	4	7		12	6																		
Wisconsin	14																							
Wyoming																								

BAWINSONDE DATA

Average monthly values

JUNE 1979

ALBANY, NY 1009 MB				ALBUQUERQUE, NM 840 MB				AMARILLO, TX 892 MB				ANCHORAGE, AK 1010 MB				ANNETTE, AK 1015 MB					
Standard pressure surface mb.	No. of observations	Resultant Wind	Temperature °C	Dynamic height meters	No. of observations	Resultant Wind	Temperature °C	Dynamic height meters	No. of observations	Resultant Wind	Temperature °C	Dynamic height meters	No. of observations	Resultant Wind	Temperature °C	Dynamic height meters	No. of observations	Resultant Wind	Temperature °C	Dynamic height meters	No. of observations
5 FC	3	8.6	14.4	9	12	4	18	1	6	30	1,619	15.5	4	6	2	1	30	1,095	15.9	11	5
1000	27	16.9	14.5	10	4	14.4	18	1	9	30	1,619	15.5	4	6	2	1	30	1,095	15.9	11	5
950	30	15.9	14.4	9	6	12	23	2	9	30	1,619	15.5	4	6	2	1	30	1,095	15.9	11	5
900	30	1,050	12.8	5	9	28	3	2	3	30	1,619	15.5	4	6	2	1	30	1,095	15.9	11	5
850	30	1,528	9.7	2	7	28	4	6	30	1,619	15.5	4	6	2	1	30	1,095	15.9	11	5	
800	30	2,030	7.5	-1	4	28	4	7	30	2,033	16.9	2	9	20	2	1	30	2,033	17.4	2	9
750	30	2,559	5.0	-6	7	27	5	7	30	2,587	13.6	-1	24	3	5	30	2,581	14.0	-1	25	
700	30	3,120	2.3	-12	0	27	6	7	30	3,160	9.4	-3	1	26	4	6	30	3,158	9.9	-4	25
650	30	3,716	-5	-15	9	27	7	8	30	3,770	5.0	-6	2	26	4	7	30	3,770	5.8	-7	25
600	30	4,351	-4.1	-19	8	28	8	0	30	4,418	-1.0	-10	0	26	5	6	30	4,419	-7	-10	1
550	30	5,032	-8.3	-23	1	28	9	7	30	5,108	-5.0	-15	1	25	7	0	30	5,112	-3.9	-16	6
500	30	5,765	-13.0	-29	28	9	0	30	5,851	-9.9	-20	3	26	8	2	30	5,857	-9.0	-21	3	
450	30	6,561	-18.1	-32	28	9	5	30	6,656	-15.1	-29	4	25	8	9	30	6,665	-14.2	-27	6	
400	30	7,431	-24.4	-37	4	27	11	3	29	7,533	-21.2	-34	4	25	10	9	30	7,549	-20.6	-35	4
350	30	8,3	-41.4	-44.4	28	11	9	29	8,485	-38.5	-41	0	25	12	6	30	8,525	-37.2	-40	9	
300	29	9,462	-49.3	-50	47	7	28	9	9	30	9,590	-49.1	25	11	2	26	30	9,612	-35	-47	4
250	10	10,685	-60.3	-50	26	16	4	29	10,626	-46.7	26	16	3	29	10,630	-45	-46	6			
200	29	11,136	-54.5	-50	26	17	3	29	12,275	-55.5	25	20	1	29	12,309	-55.2	-56	2			
175	29	12,099	-55.4	-50	27	16	7	29	13,120	-58.6	25	20	5	29	13,154	-58.9	-60	5			
150	28	12,977	-55.8	-50	28	13	8	29	14,081	-62.1	25	18	3	29	14,114	-62.3	-63	3			
125	27	15,132	-57.6	-50	27	17	9	29	15,199	-65.4	26	14	2	29	15,232	-65.3	-63	2			
100	27	16,537	-59.7	-50	28	16	5	29	16,551	-67.6	26	6	6	29	16,582	-67.3	-63	6			
80	27	17,941	-57.8	-50	29	17	3	29	17,897	-64.9	24	1	7	29	17,931	-65.3	-63	3			
70	26	18,789	-56.8	-50	31	1	7	29	18,719	-61.9	11	1	5	29	19,075	-61.1	-61	1			
60	26	19,768	-56.0	-50	09	1	8	29	19,678	-59.7	09	3	7	29	19,713	-59.7	-60	3			
50	26	20,934	-54.0	-50	07	3	2	28	20,830	-56.7	09	6	6	29	20,860	-57.1	-61	09			
40	26	22,374	-51.7	-50	09	4	2	28	22,255	-53.8	09	8	0	29	22,284	-53.7	-60	09			
30	24,253	-48.6	-50	06	5	2	27	24,115	-50.3	09	9	1	29	24,147	-50.6	-60	09				
25	26,459	-46.4	-50	09	5	2	27	25,311	-48.4	09	9	1	27	25,349	-48.3	-60	09				
20	26,964	-43.9	-50	09	6	1	24	26,790	-45.4	09	10	9	22	26,862	-45.0	-60	08				
15	27,883	-40.4	-50	09	7	2	22	26,729	-41.7	09	11	7	21	26,769	-41.7	-60	09				
10	7	31,653	-36.3	-50	8	1	21	31,473	-37.6	13	31	520	-37.8	09	13	25	-31,766	-32.4	-37.8	08	

ATHENS, GA 990 MB			BARROW, AK 1015 MB			BARTER ISLAND, AK 1013 MB			BETHEL, AK 1009 MB			BISMARCK, ND 955 MB																	
FSC	30	246	18.7	16.8	03	*9	27	8	-1.7	-2.7	08	2.5	30	15	-1.3	08	3.4	30	39	8.9	4.6	21	2.5	30	503	12.2	9.0	31	
1000	30	599	19.3	13.9	03	1.1	27	134	-1.0	-2.8	09	2.5	29	12	-3.3	-1.9	09	4.2	25	119	8.4	4.7	21	3.5	20	579	13.6	9.2	19
950	30	1,044	17.4	12.1	34	9.7	27	57	3.1	1.4	1.1	2.0	30	52	3.3	-3.1	1.1	4.3	30	539	6.5	1.8	20	5.5	22	1,007	15.1	5.2	29
900	30	851	14.5	14.5	34	8.6	31	1.0	2.7	1.0	10	2.1	30	972	4.3	-6.6	1.7	1.1	10	801	3.6	-5.5	20	5.5	20	1,007	15.1	5.2	29
850	30	2,041	11.4	5.3	20	2.2	2.2	1,932	-1.1	-1.9	21	2.5	30	1,476	-6.3	-6.6	1.9	2.6	20	1,443	-3.1	-3.0	20	2.5	20	1,443	-3.1	-3.0	20
800	30	2,598	8.4	-2.2	28	2.7	2.7	2,443	-4.3	-13.5	2.8	2.9	30	1,925	-1.1	-10.0	27	2.6	30	1,929	-1.1	-6.6	20	5.2	20	1,995	9.6	-3.0	47
750	30	2,598	8.4	-2.2	28	2.7	2.7	2,443	-4.3	-13.5	2.8	2.9	30	1,925	-3.2	-14.1	28	4.5	20	2,442	-3.9	-11.0	21	4.3	20	2,526	5.8	-2.7	29
700	30	3,166	5.9	-5.6	28	4.0	27	2,988	-7.3	-18.3	28	1.9	30	2,981	-6.5	-16.7	28	5.6	30	2,983	-6.8	-15.4	24	4.5	30	3,089	1.9	-5.5	29
650	30	3,770	2.8	-11.1	30	4.9	27	3,558	10.5	-21.2	27	2.9	30	3,556	-10.1	-19.6	27	6.1	30	3,559	-17.4	-19.4	24	4.5	30	3,683	-1.9	-10.1	29
600	30	4,413	-1.1	-13.7	29	5.3	27	4,169	-14.5	-26.3	28	2.7	30	4,168	-14.2	-23.8	27	6.3	30	4,173	-13.2	-24.5	25	4.9	30	4,315	-5.5	-16.8	28
550	30	5,102	-5.0	-18.1	29	5.9	27	4,823	-18.1	-31.6	28	3.8	29	4,822	-18.6	-29.7	27	7.0	30	4,831	-17.1	-29.5	25	5.8	30	4,992	-10.1	-20.6	28
500	30	5,845	-9.4	-23.9	28	7.2	27	5,526	-23.7	-35.3	28	3.8	29	5,525	-23.8	-34.2	28	7.6	30	5,539	-21.6	-33.1	25	6.4	30	5,720	-15.0	-26.7	28
450	30	6,652	-14.4	-28.8	29	8.6	27	6,286	-29.0	-39.2	29	4.2	29	6,286	-29.1	-38.8	27	7.7	29	6,308	-26.7	-37.1	25	7.0	30	6,508	-20.7	-32.3	28
400	30	7,534	-20.4	-33.6	29	9.0	27	7,119	-35.4	-44.5	29	4.5	29	7,117	-35.3	-45.3	27	6.4	29	7,147	-33.1	-42.6	25	7.7	29	7,365	-26.9	-39.7	27
350	30	8,512	-27.4	-38.9	29	10.6	27	8,039	-42.2	-42.2	29	5.0	29	8,027	-42.0	-45.0	28	6.9	29	8,076	-39.9	-45.5	26	6.8	29	8,320	-34.1	-44.8	27
300	30	9,600	-35.8	-47.4	29	12.1	27	9,062	-49.2	-49.2	26	4.8	29	9,051	-49.3	-49.3	27	8.1	28	9,117	-66.4	-6.4	27	10.4	29	9,379	-41.9	-46.2	27
250	30	10,843	-45.2	-54.2	29	15.7	27	10,248	-52.6	-52.6	29	4.2	29	10,244	-53.0	-53.0	28	7.5	28	10,314	-51.3	-51.3	27	12.0	29	10,594	-49.3	-52.6	27
200	30	12,299	-55.0	-55.0	29	17.4	26	11,703	-48.0	-48.0	29	3.8	29	11,695	-48.3	-48.3	29	5.8	28	11,760	-51.6	-51.6	27	10.2	29	12,036	-54.5	-54.5	27
175	30	13,144	-59.0	-59.0	30	17.9	26	12,585	-47.1	-47.1	30	3.3	29	12,578	-47.0	-47.0	29	4.8	28	12,631	-50.0	-50.0	27	7.2	29	12,894	-53.2	-53.2	27
150	30	14,105	-61.5	-61.5	30	15.8	26	13,605	-46.7	-46.7	30	3.3	29	13,599	-46.6	-46.9	31	4.8	28	13,640	-49.8	-49.8	27	5.9	29	13,888	-53.6	-53.6	27
125	30	15,228	-64.3	-64.3	30	10.9	26	14,816	-47.0	-47.0	31	2.7	28	14,810	-46.9	-46.9	31	3.2	28	14,832	-49.6	-49.6	27	4.5	29	15,056	-55.2	-55.2	27
100	30	16,585	-66.4	-66.4	32	5.6	25	16,299	-46.5	-46.5	33	1.9	28	16,290	-46.3	-46.3	33	2.7	28	16,293	-49.8	-49.8	27	2.6	29	16,477	-56.4	-56.4	28
90	30	17,939	-64.6	-64.6	02	3.0	25	17,783	-45.6	-45.6	35	1.5	28	17,776	-45.4	-45.4	35	2.0	28	17,753	-49.6	-49.6	31	.0	29	17,898	-56.3	-56.3	28
70	30	18,761	-62.0	-62.0	06	3.7	23	18,577	-45.0	-45.0	01	1.6	27	18,670	-44.6	-44.6	36	2.1	27	18,628	-49.3	-49.3	32	.2	29	18,744	-55.6	-55.6	28
60	30	19,719	-60.0	-60.0	08	5.7	21	19,708	-44.4	-44.4	04	2.0	27	19,703	-44.3	-44.3	03	2.4	27	19,640	-49.1	-49.1	09	1.0	29	19,728	-54.8	-54.8	27
50	30	20,665	-61.1	-61.1	08	7.2	20	20,927	-44.0	-44.0	05	2.5	20	20,923	-43.6	-43.6	06	3.0	26	20,937	-47.8	-47.8	09	1.3	29	20,896	-53.5	-53.5	27
40	29	22,147	-53.6	-53.6	08	8.9	18	22,426	-43.4	-43.4	07	3.6	27	22,420	-43.1	-43.1	07	3.8	26	22,416	-47.9	-47.9	08	3.4	29	22,533	-53.7	-53.7	27
30	28	24,156	-49.5	-49.5	09	10.0	24	23,583	-42.2	-42.2	07	4.4	26	24,377	-42.1	-42.1	07	5.0	25	24,214	-46.1	-46.1	09	4.6	26	24,474	-48.7	-48.7	08
25	28	25,356	-47.4	-47.4	09	10.1	8	25,581	-41.6	-41.6	08	26	25,514	-40.9	-40.9	08	5.5	25	25,431	-44.5	-44.5	09	4.5	26	25,241	-46.8	-46.8	08	
20	28	26,640	-45.1	-45.1	09	11.4	-	-	-	-	08	26	27,124	-38.7	-38.7	08	6.6	25	26,932	-42.2	-42.2	08	6.5	26	26,910	-44.0	-44.0	09	
15	26	28,777	-42.3	-42.3	09	13.2	-	-	-	-	08	22	29,106	-38.0	-38.0	08	6.6	25	28,891	-39.1	-39.1	09	7.0	27	28,852	-41.0	-41.0	08	
10	22	31,550	-36.9	-36.9	09	15.8	-	-	-	-	08	15	31,971	-30.7	-30.7	08	8.5	-	-	-	-	20	31,639	-35.6	-35.6	09			
7	5	33,955	-34.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	34,145	-30.5	-30.5	10			

BOISE, ID 9115 MB					BOOTHVILLE, LA 1017 MB					BROWNSVILLE, TX 1014 MB					BUFFALO, NY 992 MB					CAPE HATTERAS, NC 1018 MB												
SFC	30	871	13.3	2.5	17	+9	30	1	24.0	21.0	.9	30	7	23.8	21.9	14	1.7	30	218	15.5	11.9	20	2.0	30	4	20.2	17.7	.03	1.5			
1000	30	871	13.3	2.5	17	+9	30	1	24.0	21.0	.9	30	7	23.8	21.9	14	1.7	30	218	15.5	11.9	20	2.0	30	4	20.2	17.7	.03	1.5			
950	30	871	13.3	2.5	17	+9	30	1	24.0	21.0	.9	30	7	23.8	21.9	14	1.7	30	218	15.5	11.9	20	2.0	30	4	20.2	17.7	.03	1.5			
900	30	1,011	16.4	2.2	29	+1	30	1,066	19.1	12.4	2.3	30	1,049	19.6	14.9	16	7,2	230	1,044	13.5	6.8	25	6,1	30	1,064	15.7	9.2	33	1.5			
850	30	1,497	15.8	-8	32	2.1	30	1,555	16.0	8.0	2.4	30	1,546	17.1	9.1	16	6,0	30	1,524	10.6	4.0	26	6,4	30	1,548	13.4	4.6	32	2.2			
800	30	2,009	12.5	-3.1	10	2.5	30	2,069	13.4	3.4	1.2	15	2,056	15.1	3.0	15	4,5	30	2,027	7.9	-0.7	27	6,2	30	2,057	11.5	-1.5	30	2.9			
750	30	2,547	8.3	-6.0	29	3.4	30	2,610	10.6	-6	1.0	9	2,600	12.5	-1.7	14	3,0	30	2,557	5.5	-6	28	6,4	30	2,594	9.0	-5.1	29	3.6			
700	30	3,113	4.5	-9.2	26	4.5	30	3,182	7.9	-6	0.1	9	3,176	9.6	-5.5	12	2,4	30	3,119	3.1	-13	27	7,4	30	3,162	5.8	-8.0	29	4.5			
650	30	3,712	1	-12.6	26	6.2	30	3,790	4.5	-8	0.8	14	3,787	6.3	-8	0.8	2,4	30	3,716	-2	-16	27	7,6	30	3,765	2.6	-12	0	4.8			
600	30	4,348	-4.4	-16.6	25	8.4	30	4,437	.6	-13	3	21	4,479	2.6	-12	0	1,7	30	3,353	-3.7	-19	24	8,4	30	4,409	.7	-14	28	5.6			
550	30	5,027	-9.3	-20.8	25	9.9	30	5,131	-3.6	-18	3	22	5,138	-1.4	-17	7	0	1,6	30	5,035	-8.1	-22	25	9,2	30	5,099	-4.6	-19	21	6.1		
500	30	5,756	-14.5	-26.1	25	11.5	30	5,878	-7.5	-24	2	21	5,891	-6.3	-21	9	0	1,4	30	5,768	-12.9	-25	8	27	10,5	30	5,843	-9.3	-24	24	7.8	
450	30	6,546	-20.1	-32.4	25	12.5	30	6,690	-12.7	-28	2	21	5,5	6,727	-11.3	-27	5	0	8,30	5,653	-18.1	-31	21	27	10,6	30	6,650	-14.4	-28	28	7.6	
400	30	7,409	-26.5	-37.2	25	13.6	30	7,570	-19.0	-34	0	31	6,7	7,600	-17.6	-32	5	36	3,30	7,433	-24.1	-36	5	26	12,4	29	7,530	-20.6	-34	0	27	
350	30	8,362	-33.4	-43.7	25	15.0	30	8,562	-25.8	-41	1	30	8,1	8,588	-25	-30	4	31	2,0	29	8,3%	-31	-42	5	27	13,7	29	8,507	-27.8	-40	8	27
300	30	9,342	-41.5	-54.7	25	15.7	30	9,657	-34	-2	48	9	8,82	9,687	-33	-3	4	56	2,9	3,79	9,467	-49	-49	3	27	15,1	29	9,593	-36	-2	48	1
250	30	10,320	-47.8	-60.7	26	18.1	30	10,970	-35.3	-2	10	6	10,980	-33	-2	0	30	5,5	29	10,692	-47	-8	28	28	17,7	29	10,829	-53	-28	28	27	
200	30	12,075	-55.6	-58	26	19.4	30	12,373	-37	-2	13	4	12,407	-32	-2	0	29	7,9	29	12,077	-51	-1	28	28	18,1	29	12,281	-55	-28	28	26	
175	30	12,925	-55.9	-58	26	18.8	29	13,119	-59.0	-2	10	3	12,530	-21	-6	0.3	28	5,2	29	12,993	-55	-5	28	28	18,2	29	13,117	-59	-9	28	19.8	
150	30	13,907	-55.7	-58	26	16.2	29	14,175	-63.8	-2	30	12.1	14,198	-66	-1	0	28	5,2	29	13,975	-55	-5	28	28	15,3	29	14,076	-61	-1	28	15.0	
125	30	15,066	-56.9	-58	25	11.7	29	15,280	-68.5	-1	8	1	15,289	-71.6	-2	0	27	3,1	29	15,113	-57	-2	27	27	13,5	29	15,205	-62	-6	27	10.4	
100	30	16,474	-58.3	-58	25	8.1	29	16,607	-70.8	-1	6	2.7	16,556	-74.0	-0	0	0	2,7	29	16,540	-58	-3	28	28	10,3	29	16,576	-61	-9	28	5.7	
80	30	17,879	-57.6	-58	24	3.1	26	17,938	-68.0	-0	5.5	29	17,948	-70.2	-0	0	0	6,7	28	17,943	-57	-9	28	28	5,2	28	17,948	-62	-1	28	2.5	
70	30	18,725	-56.3	-58	24	1.5	26	18,747	-64.7	-0	7	1	18,749	-66.5	-0.5	0	0	9,7	28	18,788	-56	-7	29	29	2,6	28	18,778	-60	-3	27	3.3	
60	30	19,706	-55.5	-58	15	*9	24	19,695	-61.7	-0	9	0	19,651	-62.9	-0	0	0	10,5	28	19,768	-55	-6	01	01	*7	28	19,743	-58	-7	00	5.4	
50	30	20,372	-54.1	-58	10	1.3	24	20,833	-58.0	-0	10,6	29	20,786	-58.5	-0	0	0	11,4	28	20,935	-53	-8	78	20	2,0	28	20,895	-56	-0	00	7.0	
40	30	22,311	-52.1	-58	06	2.8	24	22,252	-54.2	-0	12,0	29	22,200	-55.3	-0	0	0	14,3	28	22,376	-51	-6	09	09	3,3	28	22,326	-52	-5	00	9.0	
30	29	24,165	-49.3	-58	08	4.6	23	24,118	-49.7	-0	13,2	29	24,055	-50.8	-0	0	0	16,7	28	24,258	-48.4	-8	79	24	4,8	28	24,203	-48	-4	09	9.8	
25	29	25,345	-47.5	-58	08	4.4	23	25,311	-48.0	-0	13,9	29	25,248	-48.2	-0	0	0	16,7	28	25,463	-46.1	-3	08	08	3,9	28	25,409	-46	-4	09	9.8	
20	29	26,870	-44.2	-58	07	6.0	22	26,792	-45.5	-0	15,6	24	26,730	-45.5	-0	0	0	17,5	28	26,964	-43.2	-3	09	09	5.9	25	26,896	-44	-2	09	10.5	
15	28	28,814	-41.1	-58	08	7.6	20	28,724	-42.2	-0	16,1	26	28,662	-42.4	-0	0	0	19,9	28	28,931	-39	-6	09	09	7.6	22	28,844	-41	-4	09	11.2	
10	19	31,599	-35.9	-58	09	8.7	5	31,498	-37.4	-0	16,1	26	31,498	-38.1	-0	0	0	7	21	31,729	-35.7	-5	12	31,566	-36	5	09	11.5				

RAWINSONDE DATA

Average monthly values

JUNE 1979

EL PASO, TX 683 MB					ELY, NV 811 MB					EMPALME, MEXICO 1009 MB					FAIRBANKS, AK 995 MB					FLINT, MI 989 MB														
SFC	37	1,193	18.5	5.7	31	.4	30	1,908	7.8	-5.9	20	28	28	12	23.5	17.5	02	.8	30	135	11.1	5.9	28	.7	30	236	14.5	11.1	20	1.3				
1000												28	90	25.8	18.3	07	.6	12	14.2	11.2	6.7	27	1.3											
950												28	543	26.6	11.3	15	1.9	30	531	11.4	3.4	26	2.5	30	576	16.3	7.9	24	3.0					
900												28	1,020	25.5	7.1	17	1.4	30	961	8.4	1.1	25	3.0	30	1,035	14.2	5.4	26	3.9					
850	37	1,152	20.0	6.1	14	1.5						28	1,519	22.4	4.7	18	1.1	30	1,450	4.7	-8	25	2.3	30	1,516	11.7	3.1	28	4.9					
800	37	2,471	17.6	3.9	19	2.4	29	2,021	13.1	-3.1	19	2.3	28	2,043	19.0	2.4	17	1.6	30	1,950	1.0	-2.8	23	2.1	30	2,022	8.9	-1.1	28	5.5				
750	37	2,589	14.4	1.1	1.1	2.2	22	2,559	12.3	-5.6	23	2.4	28	2,593	15.5	-1.4	17	1.6	30	1,557	-8.8	-2	23	2.0	30	2,583	6.0	-15.5	28	6.6				
700	37	3,157	10.7	1.1	3	25	3	3,131	8.0	-6.0	26	2.8	28	3,175	11.2	-6.6	16	2.0	30	3,000	2.4	3	23	2.4	30	3,115	-10.0	-12.7	28	12.7				
650	37	7,779	6.0	-6.9	22	3.4	30	3,739	1.2	-11.1	25	4.5	28	1,749	7.1	-6.6	16	2.0	30	3,575	10.1	-15.5	22	2.0	30	3,711	-1.3	-13.1	27	8.6				
600	37	4,432	1.6	-11.8	22	4.2	30	4,342	-1.7	-15.7	25	5.3	28	4,442	2.7	-10.0	16	2.8	30	4,188	-14.0	-21.5	22	3.1	30	4,348	-4.1	-16.8	27	9.3				
550	37	51.2	-3.6	-15.7	23	4.7	30	5,068	-6.9	-20.6	25	6.0	28	5,150	-1.2	-15.7	19	2.0	30	4,844	-18.2	-29.1	22	2.9	30	5,029	-8.3	-21.5	27	9.9				
500	37	5,870	-9.1	-23.7	25	4.9	30	5,808	-11.9	-28.1	25	7.6	28	5,690	-2.1	-21.4	22	2.6	30	5,549	-23.0	-33.6	23	2.9	30	5,762	-12.9	-26.8	28	10.8				
450	37	6,678	-14.1	-30.6	25	5.9	37	6,602	-17.7	-32.7	25	8.9	28	6,703	-12.7	-28.8	24	3.3	30	6,312	-28.5	-38.5	23	3.0	30	6,558	-18.2	-32.2	28	11.5				
400	37	7,561	-20.2	-36.2	25	6.9	33	7,472	-24.4	-38.2	26	10.5	28	7,591	-15.1	-34.5	25	4.0	30	7,145	-35.2	-43.8	23	3.1	30	7,427	-24.4	-37.7	28	13.4				
350	29	8,537	-27.2	-41.9	25	10.2	30	8,453	-31.7	-33.0	26	12.4	28	8,576	-25.6	-39.8	25	7.0	28	8,675	-42.1	-47.4	24	3.2	30	8,389	-31.5	-44.7	28	14.9				
300	29	9,626	-35.5	-48.4	25	14.5	33	9,503	-39.7	-49.9	26	13.8	27	9,672	-33.5	-47.8	25	10.1	28	9,089	-49.4	-54.7	24	4.0	30	9,458	-39.7	-49.4	28	16.3				
250	29	10,870	-44.8					10,727	-48.4			26	15.6	27	10,975	-43.2			25	12.8	28	10,770	-53.6			28	3.9	30	10,685	-48.5			28	18.5
200	29	12,329	-54.7					22,211	30			26	18.5	27	12,395	-46.4			24	15.6	29	12,714	-49.7			28	4.3	30	12,126	-54.7			28	18.8
175	29	13,724	-59.5					21,949	30			26	18.9	27	13,824	-42.8			24	17.4	29	13,284	-54.5			28	5.0	30	13,600	-59.5			28	19.3
150	29	14,184	-61.8					19,630	30			26	11,981	21	25,178	-14.1			24	14.9	29	13,046	-54.5			28	3.4	30	13,959	-55.9			28	19.3
125	29	15,235	-67.2					24,126	30			26	11,119	-6.0	25,177	-31.1			24	7.9	29	14,807	-48.4			28	2.0	30	15,111	-57.6			28	11.4
100	29	15,750	-69.7					24,126	30			26	14,500	-6.7	25,8	-6.7			21	3.9	29	16,275	-48.6			28	2.0	30	16,517	-59.0			28	8.8
90	28	17,973	-77.1					15	3.3	30		27	17,800	-6.0	9	23	2.3	27	17,967	-56.8			09	7.1	29	17,740	-47.9			28	4.9			
70	28	18,717	-63.3					10	1.4	30		18,714	-58.8	18	1.0	27	18,769	-66.7			09	7.1	29	18,628	-47.5			28	2.6					
60	27	19,671	-61.3					10	5.0	30		19,685	-57.8	11	1.9	27	19,719	-61.3			10	9.4	29	19,648	-47.1			28	3.9					
50	27	20,611	-57.6					09	8.3	30		20,840	-56.0	09	3.2	26	20,633	-57.4			09	10.7	28	20,857	-46.5			28	0.5					
40	27	22,229	-54.7					10	1.0	30		22,269	-53.0	09	4.8	23	22,285	-53.5			09	12.7	28	22,340	-45.9			28	0.7					
37	27	24,048	-51.2					09	10.2	30		24,136	-50.3	08	6.0	23	24,149	-50.1			09	14.5	27	24,264	-44.5			28	0.5					
25	27	25,751	-48.7					09	11.4	28		25,333	-47.7	08	6.8	21	25,343	-46.0			09	15.4	26	25,484	-43.4			28	0.8					
20	23	26,752	-46.4					09	12.4	28		26,817	-47.7	09	7.6	16	26,819	-45.1			09	16.2	25	26,989	-41.7			28	0.5					
15	18	26,681	-42.6					09	13.4	25		26,753	-41.2	09	6.2	12	28,731	-41.0			09	17.1	24	28,052	-38.0			28	0.6					
10	16	31,456	-36.7					12	31,455	-37.5			09	5.3	31,405	-43.7					12	31,790	-37.5			09	6.6							

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GUADALUPE IS., MEXICO			GUAM, HARTMAN 15, 999 MB			HILDE, H1 1017 MB			HUNTINGTON, WV 990 MB			INTERNATIONAL FALLS, MN 971 MB																			
1002 1012 MB	1002 1012 MB	1002 1012 MB	1002 1012 MB	1002 1012 MB	1002 1012 MB	1002 1012 MB	1002 1012 MB	1002 1012 MB	1002 1012 MB	1002 1012 MB	1002 1012 MB	1002 1012 MB	1002 1012 MB	1002 1012 MB																	
5FC 30	23	16.7	12.8	33	6.7	30	111	26.0	23.6	09	3+6	30	10	20.6	18.9	25	1+6	28	246	16.4	13.6	23	+3	29	359	10.0	6.7	22	*9		
1000 30	120	16.7	12.5	33	6.9	6	9	113	25.9	23.5			30	157	21.6	18.2	26	.8													
950 30	558	18.4	5+	33	4.0	30	556	23.3	20.9	09	9.1	30	601	18.5	16.3	07	2+3	28	595	18.4	12.1	24	2+1	29	543	13.0	5.5	23	2.0		
900 30	1,024	20.7	-1.1	33	3.5	30	1,028	20.6	17.3	10	8.9	30	1,064	15.4	13.5	08	4+0	28	1,057	16.2	10.0	28	3+9	29	998	11.9	1.7	25	3.9		
850 30	1,516	20.2	-3.2	33	2.9	30	1,521	18.1	13.3	10	7.4	30	1,557	12.5	10.4	08	3+8	28	1,542	13.3	7.0	30	4+2	29	1,474	9.6	-7	27	4.9		
800 30	2,037	17.9	-5.5	32	2.1	30	2,039	15.8	9.1	09	6.4	30	2,054	10.2	4.3	08	3+6	28	2,050	10.4	3.1	29	5+0	29	1,975	6.6	-4	25	6.0		
750 30	2,585	14.5	-7.7	29	1.5	30	2,586	13.1	4.3	09	6.3	30	2,591	9.5	-4.4	08	3+4	28	2,585	7.4	-2.0	29	4+5	29	2,502	3.5	-7	21	7.4		
700 30	3,163	11.0	-10.4	25	1.6	30	3,164	10.6	-2.8	09	6.2	30	3,162	8.0	-11.4	09	2+3	28	3,150	4.1	-5.3	28	4+8	29	3,059	.5	-11.6	28	8.3		
650 30	3,777	6.8	-13.0	24	1.8	30	3,778	7.4	-7.6	08	5.3	30	3,771	5.7	-14.7	11	1+4	27	3,750	1.5	-9.7	28	5+6	29	3,650	-3.1	-15.7	28	9.2		
600 30	4,428	1.9	-16.0	23	2.4	30	4,432	3.4	-10.1	08	4.5	30	4,421	2.0	-18.1	16	.6	27	4,391	-1.8	-15.4	28	6+1	29	4,279	-7.1	-19.6	28	10.2		
550 30	5,123	-2.8	-2.6	23	2.4	30	5,133	-7.3	-13.9	08	3.7	30	5,117	-2.7	-21.3	24	1+9	27	5,076	-5.9	-19.4	27	6+8	29	4,952	-11.5	-23.7	28	11.9		
500 30	5,872	-7.8	-2.5	25	3.6	30	5,889	-4.7	-18.9	09	3.2	30	5,845	-7.8	-25.7	25	3+7	27	5,818	-10.4	-25.7	28	7+1	29	5,677	-15.9	-28.3	28	12.9		
450 29	6,686	-13.2	-3.0	26	4.5	30	6,710	-9.7	-23.7	09	2.8	30	6,676	-13.3	-30.0	25	5+4	27	6,622	-15.6	-30.2	28	8+1	29	6,463	-21.1	-32.8	27	14.4		
400 29	7,571	-20.1	-3.6	25	5.1	30	7,609	-15.7	-29.4	13	1.5	30	7,561	-19.7	-33.7	26	9+6	27	7,500	-21.7	-34.7	28	9+8	29	7,322	-27.4	-39.0	28	16.7		
350 28	8,549	-27.4	-4.3	25	6.0	30	8,606	-22.6	-34.0	19	1.8	30	8,592	-26.8	-40.0	26	13+7	27	8,473	-28.9	-41.3	28	10+5	29	8,273	-34.5	-43.9	27	19.2		
300 27	9,639	-35.9	-5.0	25	7.9	30	9,716	-30.8	-41.3	24	3.9	30	9,634	-34.7	-47.9	26	18+7	27	9,554	-37.5	-47.5	28	12+1	29	9,324	-42.4	-46.4	27	23.4		
250 27	10,600	-49.5	-5.0	25	10.4	30	10,983	-44.9	-49.4	25	5+1.7	30	10,884	-49.4	-52.0	26	23+7	27	10,707	-47.4	-50.0	28	15+1	29	10,400	-50.4	-54.0	27	26.5		
200 27	12,333	-55.5	-5.5	25	11.4	30	12,494	-53.6	-53.6	26	9.4	30	12,200	-55.8	-59.8	27	20+9	27	11,736	-55.2	-59.2	28	17+6	29	11,980	-53.6	-56.3	27	24.7		
175 27	13,176	-60.0	-5.5	25	12.0	30	13,095	-66.6	-66.6	26	10+4	30	13,179	-70.9	-70.9	27	33+2	27	13,085	-72.7	-72.7	28	17+6	27	12,841	-52.1	-52.1	27	22.4		
150 27	14,131	-64.9	-6.0	24	10.6	30	14,247	-68.2	-68.2	26	10+6	30	14,119	-67.6	-67.6	27	29+6	27	14,057	-70.4	-70.4	29	15+9	29	13,040	-51.0	-51.8	28	17.9		
125 25	15,235	-67.6	-6.4	24	8.0	30	15,323	-74.9	-74.9	27	8+3	30	15,204	-71.8	-71.8	26	23+3	27	15,199	-74.0	-74.0	29	12+1	29	14,014	-51.8	-51.8	28	15.5		
100 24	16,568	-69.8	-6.8	23	5.9	30	16,603	-78.4	-78.4	28	1+1.6	30	16,521	-70.7	-70.7	26	11+1	26	16,482	-62.5	-62.5	29	7+5	29	16,443	-55.3	-55.3	28	9.8		
80 23	17,901	-67.2	-6.9	27	10.7	30	17,886	-74.9	-74.9	07	4+3	30	17,851	-68.7	-71.7	25	2+6	26	17,963	-61.4	-71.4	29	3+2	29	16,857	-54.9	-54.9	27	6.2		
70 23	18,713	-64.5	-6.9	29	3.5	30	18,671	-70.0	-70.0	08	6+5	29	18,656	-57.3	-57.3	10	5+0	26	17,994	-59.9	-59.9	01	1+1	29	18,722	-57.4	-57.4	28	4.4		
60 23	19,663	-61.1	-6.9	10	5.8	30	19,594	-67.3	-67.3	08	8+8	29	19,593	-64.4	-64.4	10	8+6	26	19,762	-58.0	-58.0	07	3+0	29	19,711	-53.9	-53.9	27	2.5		
50 22	20,801	-57.6	-6.9	09	7.1	29	20,707	-62.8	-62.8	08	11+9	29	20,717	-60.9	-60.9	09	11+7	26	20,915	-55.4	-55.4	08	4+2	28	20,885	-53.1	-53.1	26	.8		
40 22	22,215	-54.9	-6.8	08	9.1	29	22,297	-58.6	-58.6	09	16.8	29	22,117	-57.3	-57.3	09	15+4	26	22,350	-52.6	-52.6	08	5.9	27	22,324	-51.4	-51.4	07	2.0		
30 18	24,080	-50.1	-6.8	08	9.5	29	23,921	-55.1	-55.1	09	23+4	29	23,953	-51.4	-51.4	09	19+3	25	24,226	-48.9	-48.9	09	6+3	26	24,208	-48.9	-48.9	05	4.0		
25 17	25,280	-47.8	-6.8	08	11.6	29	25,092	-52.3	-52.3	09	26+6	29	25,113	-51.0	-51.0	09	20+2	25	25,430	-46.7	-46.7	09	7+1	25	24,540	-46.9	-46.9	09	4.5		
20 15	26,767	-45.2	-6.8	08	12.9	27	26,550	-48.3	-48.3	09	29+2	29	26,596	-48.1	-48.1	09	22+2	26	26,920	-43.7	-43.7	09	7+7	22	26,888	-44.4	-44.4	09	4.6		
15 9	28,686	-42.5	-6.8	23	28,464	-44.8	09	31+2	29	28,593	-45.6	09	23+6	22	28,868	-40.8	-40.8	09	9+5	16	28,809	-41.4	-41.4	08	4.8						
10 7	31,176	-41.2	-6.8	9	31,176	-41.2	09	22	31,236	-41.1	09	25+6	8	31,623	-37.0	-37.0	09	12	31,624	-35.4	-35.4	10	7.6								

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PAGO PAGO, AMERICAN SAMOA				PEORIA, IL				PITTSBURGH, PA				PONAPE, CAROLINE IS.				PORTLAND, ME														
		1012 MB		993 MB		977 MB				1005 MB				1015 MB																
SFC	30	5	28.8	24.8	10	5.3	30	200	16.3	13.4	19	1.1	30	359	15.1	10.3	21	.8	30	39	28.3	24.9	9	2.9	30	20	14.3	10.5	26	1.4
1000	30	111	26.9	23.6	10	5.7	30	576	18.9	11.5	25	4.6	30	594	16.2	9.6	24	2.5	30	80	27.3	24.1	9	3.4	30	34	14.3	9.4	27	2.1
950	30	564	23.3	21.6	0.9	6.3	30	1,041	17.4	9.1	26	6.4	30	1,053	14.4	7.3	26	3.5	30	534	23.9	21.7	9	6.5	30	582	14.6	9.4	27	2.1
900	30	1,036	20.3	18.2	0.8	6.7	30	1,527	14.4	6.7	26	6.4	30	1,533	11.2	4.4	27	3.8	30	1,071	21.2	16.4	9	8.5	30	1,001	12.5	9.4	30	2.3
850	30	559	17.7	13.8	0.8	7.0	30	2,021	11.4	2.2	26	7.1	30	2,039	8.7	3.5	27	3.8	30	1,502	18.4	15.5	9	8.5	30	1,515	9.7	14	30	2.3
800	30	2,072	16.0	8.0	8.0	6.0	30	2,072	11.4	2.2	26	7.1	30	2,082	8.3	3.5	27	3.8	30	2,022	16.3	12.9	9	8.0	30	2,017	9.7	29	30	2.3
750	30	2,599	13.4	4.3	0.7	4.1	30	2,599	7.3	-2.1	26	6.7	30	2,622	6.6	-4.6	27	6.7	30	2,569	12.6	7.1	9	6.0	30	2,547	5.0	-8.4	29	4.8
700	30	3,172	10.1	-0.1	0.7	3.3	30	3,140	4.9	-7.7	26	7.5	30	3,135	3.8	-8.7	27	7.4	30	3,148	10.6	2.3	9	7.0	30	3,106	2.0	-11.9	29	6.1
650	30	3,745	7.1	-6.0	0.7	1.0	30	3,741	1.4	-10.1	27	7.6	30	3,733	-9.4	-12.6	27	8.2	30	3,763	7.1	-1.9	9	6.3	30	3,701	-1.3	-15.2	29	6.8
600	30	4,440	4.3	-11.0	1.1	2.6	30	4,381	-2.6	-1.6	27	6.5	30	4,371	-3.3	-15.4	27	8.7	30	4,418	3.4	-2.2	9	5.6	30	4,335	-4.8	-20.1	28	7.5
550	30	5,141	-5.5	-16.9	0.6	1.9	30	5,066	-6.7	-19.4	28	9.2	30	5,055	-7.1	-20.9	27	9.1	30	5,120	-1.1	-7.8	9	4.8	30	5,014	-8.8	-23.9	27	7.8
500	30	5,896	-4.9	-22.9	0.9	9.0	30	5,804	-11.4	-25.9	28	10.5	30	5,792	-11.7	-25.8	27	9.5	30	5,878	-4.1	-13.6	9	2.9	30	5,746	-13.7	-28.2	27	8.5
450	30	6,717	-10.1	-26.8	2.1	9.0	30	6,603	-16.9	-32.4	28	11.6	30	6,591	-16.9	-30.7	27	11.4	30	6,703	-8.5	-20.2	9	3.3	30	6,539	-18.9	-32.6	27	8.1
400	30	7,615	-15.6	-33.2	2.2	2.7	30	7,477	-22.8	-36.5	28	12.7	30	7,465	-23.0	-35.2	28	13.6	30	7,607	-14.2	-26.1	9	2.9	30	7,405	-25.2	-38.7	27	10.0
350	30	8,612	-22.4	-37.6	2.3	5.1	30	8,445	-29.9	-43.3	28	14.6	30	8,432	-30.2	-41.8	27	14.1	30	8,611	20.8	-35.8	9	2.1	30	8,353	-32.6	-45.0	27	10.7
300	30	9,721	-31.1	-44.9	2.5	7.8	30	9,522	-38.3	-49.2	28	16.5	30	9,507	-38.8	-48.0	28	15.3	30	9,729	-29.1	-34.4	9	3.0	30	9,428	-41.0	-49.3	27	12.1
250	30	10,987	-41.3	-48.0	2.5	9.7	30	10,751	-47.7	-28	19.9	30	10,734	-48.3	-28	17.8	19.9	30	11,005	-39.4	-52.2	9	2.2	30	10,646	-49.0	-50.0	27	14.2	
200	30	12,464	-53.2	-52.2	2.5	11.2	30	12,306	-19.5	-55.7	29	23.0	30	12,177	-55.7	-57.7	28	19.9	30	12,491	-52.2	-52.2	9	4.7	30	12,091	-54.6	-54.6	27	14.6
175	29	13,310	-6.0	-2.2	2.5	10.4	29	13,047	-57.1	-57.1	29	20.5	30	13,024	-56.6	-56.6	28	17.6	30	13,342	-59.0	-59.0	9	5.7	30	12,745	-55.0	-55.0	27	14.0
150	29	14,255	-6.7	-5.5	2.4	10.6	29	14,021	-58.0	-58.0	28	16.6	30	14,000	-57.3	-57.3	29	14.6	30	14,294	-67.0	-67.0	9	7.0	30	13,929	-55.7	-55.7	27	11.7
125	29	15,336	-7.3	-9.9	2.5	9.1	29	15,166	-59.5	-59.5	28	13.1	30	15,148	-59.5	-59.5	28	11.0	30	15,371	-74.8	-27	8.7	30	15,086	-57.3	-57.3	27	10.4	
100	29	16,620	-7.8	-26.6	2.9	16.5	29	16,555	-61.7	-61.7	27	9.2	30	16,540	-60.7	-60.7	29	7.5	30	16,647	-79.1	-28	6.1	30	16,494	-57.3	-57.3	27	6.7	
70	29	17,899	-75.1	-27	3.4	29	17,939	-60.4	-60.4	29	4.7	30	17,912	-58.5	-58.5	31	2.9	30	17,938	-73.2	-28	4.1	30	17,744	-53.0	-53.0	27	3.0		
70	29	18,183	-70.2	-25	2.5	2.0	30	18,100	-59.0	-59.0	30	1.0	30	18,074	-58.1	-58.1	35	1.9	30	18,075	-65.5	-28	3.0	30	18,749	-56.3	-56.3	27	3.0	
60	29	19,613	-54.4	-52.7	2.7	10.9	29	19,742	-56.4	-56.4	30	1.0	30	19,740	-56.4	-56.4	37	0.7	30	19,655	-65.5	-28	3.0	30	19,729	-55.6	-55.6	27	3.0	
50	29	20,742	-6.2	-5.3	3.6	-7.0	30	20,903	-55.7	-55.7	30	3.4	30	20,906	-54.9	-54.9	38	0.8	30	20,775	-65.5	-28	3.0	30	20,896	-54.0	-54.0	28	2.6	
40	29	22,221	-10.7	-5.3	0.8	3.9	27	22,334	-52.7	-52.7	30	4.2	30	22,341	-52.3	-52.3	39	0.8	29	22,146	-59.5	-28	3.0	29	22,336	-51.8	-51.8	29	3.7	
30	29	23,980	-5.3	-3.3	0.8	10.5	27	24,207	-49.1	-49.1	30	5.6	29	24,214	-48.9	-48.9	30	0.9	29	23,995	-53.8	-28	3.0	29	24,215	-48.9	-48.9	29	4.4	
25	28	25,162	-50.9	-50.9	0.8	12.0	24	25,048	-47.0	-47.0	30	5.9	28	25,422	-46.5	-46.5	30	6.1	27	25,175	-50.3	-28	3.0	27	26,225	-46.7	-46.7	29	5.1	
20	26	26,623	-4.7	-2.2	0.9	13.3	22	26,892	-44.6	-44.6	30	6.2	25	26,920	-43.5	-43.5	30	7.4	25	26,643	-46.4	-28	3.0	25	26,906	-44.5	-44.5	29	6.0	
15	25	28,158	-4.3	-1.1	0.9	13.3	20	28,828	-41.9	-41.9	30	6.9	24	28,885	-39.8	-39.8	30	8.6	20	28,560	-42.9	-28	3.0	20	28,845	-40.8	-40.8	29	7.5	
10	12	31,306	-41.6	-	9	31,589	-36.4	-	31,640	-35.9	-	31,640	-35.9	-	31,640	-35.9	-	31,640	-37.9	-	31,640	-35.8	-	31,640	-35.8	-	31,640	-35.8		

QUILLAYUTE, WA 1013 MB										RAPID CITY, SD 906 MB										ST CLOUD, MN 978 MB										ST PAUL ISLAND, AK 1012 MB										SALEM, IL 996 MB									
SFC	30	58	8.9	7.6	31	+4	30	966	12.9	7.7	33	+1.9	30	316	12.3	9.8	02	+4	29	10	6.7	5.7	20	1.7	30	174	18.0	15.5	21	1.0																			
1000	30	156	9.4	8.6	31	+1.0								30	559	15.5	8.2	15	+4	24	136	5.7	4.5	22	3.4	30	152	14.1	10.9																				
950	30	502	8.7	7.4	29	+2.8								30	1,017	15.5	5.3	21	+4	29	969	-1.3	-1.3	21	3.6	30	583	20.4	12.4	25	5.3																		
900	30	1,019	7.5	5.5	28	+3.4	24		1,038	14.4	7.3	31	+1.2	30	529	15.5	5.0	20	+3.0	21	1,360	1.0	0.9	17.8	9.6	26	5.0																						
850	30	1,508	5.6	-3.8	26	+3.1	30	1,503	15.7	3.6	29	+3.6	30	1,497	11.5	2.5	25	+3.6	29	1,433	-7.4	-7.3	21	3.7	30	1,536	14.6	6.1	26	5.0																			
800	30	2,003	3.1	-7.0	25	+4.1	30	2,015	15.7	-7	29	+4.5	30	2,002	8.7	-2.6	27	+5.7	29	1,923	-1.2	-7.3	22	4.3	30	2,046	11.3	2.2	26	4.7																			
750	30	2,542	-1.2	-11.2	26	+5.3	30	2,554	9.3	-2.3	29	+5.6	30	2,533	5.6	-4.3	28	+6.9	29	2,443	-1.3	-17.2	22	4.8	30	2,583	8.7	-4.1	26	4.8																			
700	30	3,076	-1.9	-16.6	26	+6.0	30	3,122	5.5	-2.5	29	+7.2	30	3,094	2.2	-7.2	29	+8.5	29	2,987	-4.0	-12.6	23	5.3	30	3,150	5.2	-6.2	27	5.3																			
650	30	3,662	-5.1	-20.3	27	7.0	30	3,724	1.2	-8.6	29	8.2	30	3,699	-1.2	-11.6	29	8.8	29	3,569	-6.9	-16.6	23	6.1	30	3,752	1.9	-10.2	28	6.1																			
600	30	4,286	-9.1	-23.7	26	8.7	30	4,363	-3.5	-12.4	28	9.7	30	4,323	-5.2	-16.8	29	9.9	29	4,190	-10.4	-20.5	24	7.5	30	4,393	-1.8	-34.5	28	6.3																			
550	30	4,954	-13.6	-27.8	26	10.2	30	5,045	-8.1	-17.2	28	12.1	30	5,001	-9.5	-21.7	29	11.1	29	4,855	-14.6	-24.6	24	8.3	30	5,081	-6.0	-19.6	28	7.2																			
500	30	5,672	-18.2	-33.0	26	11.8	30	5,778	-13.5	-23.2	28	14.1	30	5,731	-14.1	-26.2	28	12.4	29	5,570	-19.2	-29.4	24	8.5	30	5,820	-10.6	-25.9	29	8.1																			
450	30	6,451	-23.4	-36.4	26	13.0	30	6,571	-19.2	-28.8	27	14.9	30	6,532	-19.7	-30.8	27	14.3	29	6,346	-24.7	-36.6	24	10.0	30	6,622	-16.2	-29.9	28	9.5																			
400	30	7,302	-29.4	-41.2	26	15.1	30	7,437	-25.4	-36.8	27	16.6	30	7,386	-25.9	-36.5	28	15.3	29	7,192	-31.2	-41.7	25	10.9	30	7,499	-22.4	-35.6	29	11.2																			
350	30	8,245	-36.3	-45.6	26	17.3	30	8,395	-32.5	-43.5	27	19.2	30	8,342	-33.1	-43.2	28	16.8	29	8,128	-38.1	-45.6	25	12.6	30	8,469	-29.2	-41.4	29	12.3																			
300	30	9,295	-43.9	-53.9	26	19.8	30	9,450	-41.2	-50.2	26	20.1	30	9,475	-40.8	-49.1	26	19.2	29	9,170	-45.4	-52.5	25	13.2	30	9,549	-37.5	-49.2	29	14.9																			
250	30	10,498	-51.6	-62.6	26	19.3	30	10,675	-49.3	-57.1	27	21.8	30	10,624	-48.6	-57.1	27	24.1	29	10,369	-51.3	-57.4	25	14.1	30	10,782	-46.8	-57.4	29	18.7																			
200	30	11,931	-54.4	-72.7	27	18.9	30	12,116	-55.3	-62.6	26	24.7	30	12,067	-54.9	-62.6	27	25.0	29	11,808	-53.4	-62.6	25	12.6	30	12,229	-56.0	-60.0	30	23.5																			
175	30	12,789	-53.3	-73.3	26	16.0	30	12,965	-55.9	-64.7	27	24.2	30	12,921	-54.7	-64.7	28	23.1	29	12,673	-51.1	-59.5	25	9.5	30	13,075	-57.4	-71.4	29	21.4																			
150	30	13,783	-52.8	-72.8	26	14.0	30	13,949	-55.6	-64.5	27	19.6	30	13,908	-54.5	-64.5	28	19.7	29	13,677	-50.8	-57.4	25	7.0	30	14,047	-56.8	-68.2	29	17.8																			
125	30	14,958	-53.9	-73.9	26	11.6	30	15,105	-57.5	-67.5	27	15.4	30	15,073	-56.0	-67.5	28	14.8	29	14,863	-51.1	-57.5	25	5.5	30	15,186	-61.1	-67.5	29	12.4																			
100	30	16,348	-54.7	-74.7	25	8.2	30	16,509	-58.9	-68.9	27	8.0	30	16,487	-57.7	-68.9	27	9.6	29	16,315	-51.1	-57.5	25	3.1	30	16,655	-63.0	-69.4	29	10.2																			
80	30	17,811	-57.4	-77.4	25	4.5	29	17,950	-58.5	-68.5	26	3.8	29	17,914	-57.7	-68.5	25	5.6	29	17,768	-50.6	-57.4	24	2.4	30	17,911	-61.0	-67.4	30	3.3																			
70	30	18,720	-54.4	-77.4	25	3.2	29	18,750	-56.7	-66.7	26	1.5	29	18,739	-55.6	-66.7	25	1.5	29	18,608	-51.1	-57.4	24	1.5	30	18,773	-60.0	-67.4	02	1.4																			
60	30	19,661	-54.6	-77.6	24	1.3	29	19,730	-57.6	-66.6	05	0.5	29	19,720	-55.6	-66.6	31	1.5	29	19,668	-49.9	-57.4	12	0.5	30	19,739	-59.3	-67.4	07	3.0																			
50	30	20,873	-53.3	-73.3	14	-6.6	29	20,895	-54.1	-64.1	08	1.7	29	20,887	-53.9	-64.1	03	1.5	29	20,840	-49.9	-57.4	09	1.7	29	20,894	-55.6	-67.4	08	4.8																			
40	30	22,276	-51.6	-70.6	09	1.4	28	22,337	-52.2	-62.2	08	3.1	29	22,326	-52.3	-62.3	08	2.8	29	22,303	-48.8	-57.4	09	2.4	29	22,326	-52.8	-67.4	09	5.6																			
30	30	24,198	-49.6	-70.6	G8	3.4	28	24,212	-49.2	-62.2	08	4.5	29	24,200	-49.2	-62.2	08	3.7	29	24,203	-47.0	-57.4	09	4.7	29	24,198	-48.9	-67.4	09	6.5																			
25	30	25,348	-47.8	-70.8	08	3.4	27	25,419	-47.0	-62.0	08	4.7	29	25,401	-47.1	-62.0	07	4.0	27	25,414	-45.8	-57.4	09	5.4	27	25,402	-47.3	-67.4	09	7.7																			
20	26	26,833	-44.8	-70.8	08	4.3	27	26,906	-44.3	-62.0	08	5.7	29	26,886	-43.9	-62.0	08	5.7	27	26,907	-43.8	-62.0	08	6.2	27	26,887	-44.6	-67.4	08	8.3																			
15	24	28,784	-41.3	-70.8	09	6.0	27	28,849	-40.5	-62.0	08	6.8	29	28,837	-40.6	-62.0	09	4.9	24	28,845	-40.9	-62.0	08	7.2	24	28,835	-40.6	-67.4	09	10.3																			
10	17	31,557	-36.1	-70.8	08	7.1	17	31,635	-35.7	-62.0	08	8.2	10	31,634	-35.2	-62.0	14	31,664	-34.6	-62.0	08	7.4	15	31,627	-36.3	-67.4	09	13.4																					

RAWINSONDE DATA

Average monthly values

JUNE 1979

Standard pressure surface m.b.	SALEM, OR 1013 MB										SALT LAKE CITY, UT 871 MB										SAN DIEGO, CA 998 MB										SAN JUAN, P. R. 1015 MB										SAULT STE MARIE, MI 989 MB									
	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m.p.s.								
5FC	30	61	10.4	-7.7	22	.5	30	1,288	14.5	2.5	16	3.1	30	124	16.2	13.5	3.3	.2	30	6	25.5	23.5	11	2.4	30	221	10.7	7.5	13	.2	30	558	13.0	6.1	2.3	5.3														
1000	30	166	13.1	7.6	32	.6	30	1,288	14.5	2.5	16	3.1	30	172	14.7	17.4	3.4	.8	30	130	25.1	22.6	12	7.5	30	1,013	11.8	4.2	2.5	5.3																				
950	30	597	11.4	5.2	15	2.5	30	1,288	14.5	2.5	16	3.1	30	1,513	19.8	1.4	16.5	1.5	30	1,059	19.8	16.4	13	8.3	30	1,490	9.0	2.2	2.6	5.9																				
900	30	1,049	10.3	2.7	33	1.8	30	1,288	14.5	2.5	16	3.1	30	1,505	20.5	-2.9	31	2.2	30	1,550	16.9	14.8	13	7.6	30	1,991	6.7	-1.0	2.6	6.8																				
850	30	1,523	8.3	-1.7	28	2.3	30	1,498	18.6	.6	16	4.6	30	2,016	14.5	2.9	29	2.3	30	2,067	15.1	6.4	13	7.2	30	2,518	3.7	-5.4	2.6	7.6																				
800	30	2,022	6.1	-6.7	27	2.9	30	2,016	14.5	2.9	18	4.7	30	2,026	18.0	-2.0	27	3.0	30	2,152	10.4	-11.3	25	3.7	30	3,076	1.2	-10.5	2.6	8.5																				
750	30	2,548	3.9	-12.5	27	4.2	30	2,562	12.7	-5.6	21	3.9	30	2,575	14.5	-8.0	27	2.7	30	2,611	12.3	1.5	13	6.7	30	3,670	-2.0	-13.7	2.7	9.0																				
700	30	3,109	2.1	-13.6	27	6.1	30	3,135	8.1	-8.7	24	5.0	30	3,152	20.4	-11.3	25	3.7	30	3,186	8.8	-4.2	14	5.5	30	4,302	-5.8	-18.1	2.7	10.1																				
650	30	3,699	-2.1	-17.2	26	7.4	30	3,741	2.9	-10.7	25	6.3	30	3,764	6.2	-13.6	24	4.3	30	3,796	5.2	-6.8	14	4.5	30	4,930	-2.0	-13.7	2.7	9.0																				
600	30	4,334	-5.9	-21.9	27	8.5	30	4,383	-2.5	-14.7	25	7.3	30	4,416	1.7	-17.1	24	5.1	30	4,445	1.6	-9.8	15	3.5	30	4,302	-5.8	-18.1	2.7	10.1																				
550	30	5,006	-10.4	-27.0	26	9.7	30	5,066	-7.6	-19.9	25	7.7	30	5,109	-3.2	-21.6	25	5.5	30	5,142	-2.4	-11.7	18	2.6	30	4,979	-9.8	-23.5	2.7	11.6																				
500	30	5,733	-15.5	-30.9	26	11.2	30	5,800	-13.4	-26.5	25	8.8	30	5,855	-8.4	-27.3	26	6.0	30	5,894	-6.5	-16.6	22	2.3	30	5,707	-14.6	-28.6	2.7	11.7																				
450	30	6,652	-20.9	-35.1	26	12.9	30	6,594	-18.5	-32.9	25	10.6	30	6,664	-14.3	-31.7	26	6.7	30	6,709	-11.4	-22.1	24	2.4	30	6,497	-20.0	-33.6	2.7	13.5																				
400	30	7,379	-27.4	-39.6	26	14.9	30	7,462	-24.9	-39.5	25	12.9	30	7,546	-21.0	-37.7	26	8.2	30	7,603	-17.4	-29.7	26	3.4	30	7,360	-26.3	-40.0	2.7	14.0																				
350	30	8,329	-34.6	-44.9	27	15.7	30	8,423	-31.6	-45.7	25	14.1	30	8,521	-28.5	-44.0	26	9.8	30	8,593	-24.1	-33.8	28	3.6	30	8,315	-33.5	-44.8	2.7	15.6																				
300	30	9,388	-42.3	-49.5	27	17.7	30	9,492	-39.8	-51.1	25	15.6	30	9,603	-37.0	-49.4	26	12.1	30	9,697	-32.4	-43.6	28	5.5	30	9,377	-41.1	-47.7	2.7	17.9																				
250	30	10,597	-50.2	-50.2	27	20.2	30	10,715	-48.4	-50.2	26	17.5	30	10,879	-46.4	-50.2	26	15.5	30	10,955	-42.5	-50.2	28	6.6	30	10,595	-49.0	-50.2	28	21.3																				
200	30	12,133	-55.4	-55.4	27	21.7	30	12,159	-55.6	-55.6	26	20.2	30	12,290	-55.6	-55.6	26	18.3	30	12,423	-54.9	-50.2	29	9.7	30	12,042	-53.8	-28.0	28	20.3																				
175	30	12,888	-54.4	-54.4	26	16.4	30	13,000	-57.2	-57.2	26	19.8	30	13,133	-59.1	-57.2	26	17.9	30	13,264	-61.4	-50.2	30	11.4	30	12,901	-53.3	-3.3	28	19.5																				
150	30	13,874	-54.5	-54.5	26	14.8	30	13,987	-57.6	-57.6	26	18.4	30	14,020	-61.9	-57.6	26	15.8	30	14,204	-68.5	-50.2	30	13.0	30	13,893	-53.6	-28.0	28	17.0																				
125	30	15,042	-52.5	-52.5	26	11.9	30	15,126	-59.6	-59.6	25	14.0	30	15,214	-64.4	-59.6	25	15.8	30	15,205	-61.9	-56.2	30	10.5	30	15,062	-59.9	-56.2	28	13.2																				
100	30	16,464	-50.6	-50.6	25	8.1	30	16,550	-50.9	-50.9	25	8.0	30	16,646	-56.6	-50.9	25	6.7	30	16,881	-73.6	-50.9	30	4.9	30	16,903	-73.6	-50.9	28	10.1																				
850	30	17,878	-46.6	-46.6	25	5.5	30	17,962	-46.6	-46.6	25	6.0	30	17,969	-52.1	-46.6	25	4.5	30	18,098	-60.8	-46.6	30	2.9	30	18,103	-60.8	-46.6	28	5.5																				
700	30	18,727	-55.7	-55.7	26	2.5	30	18,746	-57.6	-57.6	23	9.9	30	18,739	-63.0	-57.6	23	10.2	30	18,768	-67.2	-57.6	09	7.5	30	18,755	-55.0	-57.6	28	3.4																				
600	30	19,710	-55.2	-55.2	27	1.6	30	19,719	-56.9	-56.9	12	1.4	30	19,695	-60.1	-56.9	10	4.7	30	19,635	-63.9	-56.9	10	10.7	29	19,743	-53.9	-30.0	30	1.7																				
500	30	20,878	-54.6	-54.6	11	2.8	30	20,875	-55.3	-55.3	09	3.0	30	20,882	-57.6	-55.3	09	6.6	30	20,769	-60.1	-55.3	10	14.2	29	20,916	-52.8	-55.3	28	0.6																				
400	30	22,311	-52.3	-52.3	09	2.6	30	22,312	-52.8	-52.8	08	4.2	30	22,260	-54.8	-52.8	08	9.9	30	22,168	-56.7	-52.8	11	16.6	27	22,363	-51.3	-52.8	07	2.6																				
300	30	24,189	-49.6	-49.6	08	3.8	26	24,180	-50.0	-50.0	08	4.2	30	24,226	-54.8	-50.0	08	9.9	30	24,218	-56.7	-50.0	11	19.7	27	24,294	-48.2	-50.0	08	3.9																				
250	30	25,388	-47.7	-47.7	09	4.2	26	25,378	-47.7	-47.7	08	6.0	30	25,310	-49.0	-47.7	09	12.4	29	25,193	-50.1	-47.7	11	21.4	26	25,449	-46.3	-47.7	09	4.6																				
200	30	26,872	-44.6	-44.6	08	4.4	27	26,865	-44.7	-44.7	06	7.1	30	26,791	-46.0	-44.7	06	13.7	29	26,661	-46.7	-44.7	10	14.2	26	26,945	-43.4	-44.7	08	5.2																				
150	30	28,813	-40.2	-40.2	06	6.3	26	28,806	-45.6	-45.6	09	8.0	30	28,722	-42.7	-45.6	09	13.3	27	28,587	-42.8	-45.6	10	26.0	23	28,892	-40.5	-45.6	09	5.7																				
100	30	31,594	-35.8	-35.8	09	8.7	24	31,502	-35.8	-35.8	09	8.3	30	31,450	-38.7	-35.8	09	15.1	19	31,352	-38.2	-35.8	11	26.9	5	31,616	-34.9	-35.8	08	16.9																				
70	6	34,119	-32.2	-32.2	09	8.7	19	31,577	-37.1	-37.1	09	8.3	30	31,450	-38.7	-35.8	09	15.1	19	31,352	-38.2	-35.8	11	26.9	5	31,616	-34.9	-35.8	08	16.9																				

* VANDENBERG AFR, CA 1003 MB	VICTORIA, TX 1012 MB										WAKE ISL., PACIFIC AREA 1015 MB										WALLOPS ISLAND, VA NASA 1019 MB										WASHINGTON DULLES INT. AP 1009 MB									
No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m.p.s.					
5FC	30	100	12.0	9.6	34	1.3	30	33	22.4	21.1	13	.7	30	56	26.1	21.0	20	1.2	30	2	28.3	24.6	08	2.6	30	789	21.6	3.1												

RAWINSONDE DATA

Average monthly values

JUNE 1979

WAYCROSS, GA 1013 MB				WEST PALM BEACH, FL 1016 MB				WINNEMUCCA, NV 870 MB				WINSLOW, AZ 853 MB				YAKUTAT, AK 1017 MB					
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	
55 F 30	1,005	15.2	20.1	19.3 34	30	5	30	7	23,5	20.8	1.5	30	1,312	11.5	-2.2	30	1,487	13.5	2.3	24	
100 S 30	1,005	15.2	21.2	16.8 36	30	*.8	30	1,063	21.6	1.0	30	1,507	15.7	-2.3	36	1,532	15.6	-9	17		
95 S 30	1,005	21.0	15.5	15.5 C3	30	1	30	594	21.0	1.1	30	2,019	13.6	-4.3	31	2,033	18.2	-1.1	24		
90 S 30	1,005	18.3	17.7	17.7 C3	30	1	30	1,063	19.5	13.3	11	2,059	14.3	-6.2	30	2,582	14.5	-4.0	24		
85 S 30	1,053	15.0	13.1	13.1 C3	30	1	30	1,553	17.0	9.8	09	1,507	15.7	-2.3	36	1,532	15.6	-9	17		
80 S 30	2,065	12.3	4.6	4.6 C9	30	1,7	30	2,068	14.3	4.9	11	30	2,019	13.6	-4.3	31	1,730	20.3	.0	57	
75 S 30	2,604	9.7	-5.5	-5.5 C9	29	2.3	30	2,611	11.5	1.1	17	4	2,059	9.8	-6.2	30	2,582	14.5	-4.0	24	
70 S 30	3,174	6.8	-3.2	-3.2 C30	28	2.0	30	3,185	8.6	-3.8	25	6	3,128	5.3	-8.9	28	3,160	10.0	-6.9	23	
65 S 30	3,780	3.6	-8.2	-8.2 C30	30	3.5	30	3,795	5.2	-7.1	26	10	3,729	1.1	-12.4	25	6.1	3,771	5.4	-9.8	23
60 D 30	4,426	0.0	-13.2	-13.2 C29	4.0	30	4,446	1.6	-12.1	28	1.8	30	4,367	-3.5	-17.8	29	9.0	30	4,419	.4	
55 S 30	5,117	-4.2	-17.3	-17.3 C29	2.9	4.6	30	5,140	-2.3	-17.4	28	2.1	30	5,049	-8.1	-21.0	24	10.2	30	5,111	-4.4
50 S 30	5,863	-8.6	-23.6	-23.6 C28	5.1	30	5,891	-6.7	-21.6	29	3.1	30	5,781	-13.3	-26.4	25	9.9	30	5,858	-9.7	
45 S 30	6,672	-13.7	-29.0	-29.0 C28	6.6	30	6,706	-11.6	-27.4	29	4.1	30	6,575	-18.8	-33.7	25	10.6	30	6,659	-15.2	
40 D 30	7,557	-19.5	-34.5	-34.5 C28	7.9	30	7,598	-17.6	-32.4	30	4.5	30	7,442	-25.4	-38.9	25	11.4	30	7,538	-21.8	
35 S 30	8,538	-26.7	-40.5	-40.5 C29	9.9	30	8,587	-24.7	-38.5	30	5.5	30	8,470	-32.6	-44.7	26	13.6	30	8,510	-28.8	
30 D 30	9,629	-35.1	-48.7	-48.7 C29	12.6	30	9,687	-33.2	-46.9	30	7.3	29	9,647	-40.5	-50.1	26	14.8	30	9,591	-37.6	
25 S 30	10,876	-44.7	-29	-29 C42	14.2	30	10,941	-43.4	-43.4	30	8.5	29	10,658	-48.7	-50.1	26	17.2	30	10,882	-46.9	
20 D 30	12,332	-55.7	-30	-30 C47	15.7	30	12,404	-54.7	-54.7	31	10.8	29	12,128	-56.0	-56.0	26	19.5	30	12,073	-55.6	
17 S 29	13,175	-60.1	-30	-30 C47	15.4	30	13,249	-60.1	-57.2	31	11.8	29	12,975	-57.2	-57.2	25	18.4	30	13,118	-58.4	
15 S 29	14,129	-63.7	-30	-30 C47	13.6	30	14,200	-65.0	-57.4	31	10.2	29	13,949	-59.4	-57.4	25	16.7	30	14,146	-61.2	
12 S 29	15,239	-66.9	-31	-31 C47	9.5	30	15,300	-69.2	-57.4	32	8.7	29	15,098	-59.1	-57.4	25	15.1	30	15,203	-64.8	
10 D 29	16,578	-69.0	-34	-34 C48	6.8	30	16,628	-70.0	-56.4	36	5.4	29	16,571	-64.4	-56.4	25	7.6	30	16,529	-57.2	
8 D 29	17,920	-65.7	-05	-05 C43	4.3	30	17,962	-67.3	-56.4	05	5.4	29	17,884	-62.4	-56.4	22	2.9	29	17,903	-64.8	
7 D 29	18,918	-63.9	-07	-07 C43	2.0	29	18,918	-65.7	-57.4	07	1.7	29	18,723	-56.4	-56.4	21	1.7	29	18,724	-62.1	
6 D 29	19,695	-63.1	-08	-08 C43	8.0	29	19,721	-64.6	-57.4	08	10.2	29	19,698	-56.5	-56.5	11	1.2	29	19,682	-60.1	
6 D 29	20,827	-57.5	-09	-09 C43	2.0	29	20,861	-57.4	-56.4	09	11.7	29	20,859	-56.4	-56.4	10	3.2	29	20,827	-57.1	
4 D 29	22,249	-54.1	-09	-09 C43	10.7	29	22,284	-53.3	-52.8	09	13.5	28	22,300	-52.8	-52.8	08	3.7	29	22,294	-54.2	
3 D 29	24,112	-50.0	-09	-09 C43	11.2	29	24,153	-50.0	-50.0	10	14.8	28	24,168	-50.0	-50.0	08	5.3	29	24,108	-50.8	
2 D 29	25,309	-48.2	-09	-09 C43	12.2	28	25,152	-47.8	-47.8	09	14.7	28	25,364	-47.7	-47.7	08	5.8	29	25,302	-48.8	
2 D 29	26,790	-45.7	-09	-09 C43	13.3	27	26,835	-44.9	-44.9	09	15.8	26	26,844	-44.6	-44.6	08	6.3	28	26,775	-46.1	
1 D 29	28,172	-42.5	-08	-08 C43	15.9	23	28,775	-42.1	-42.1	09	18.2	25	28,793	-40.9	-40.9	09	7.1	26	28,711	-42.1	
1 D 29	28,411	-37.2	-09	-09 C43	18.8	14	31,539	-38.5	-38.5	09	21.8	12	31,626	-35.0	-35.0	10	7.8	14	31,475	-37.7	

YAP, CAROLINE IS.
1008 MB

5FC	30	14	28.0	25.2	10	2.6
1000	30	85	26.7	24.9	10	2.9
950	30	539	23.8	22.3	10	4.5
900	30	1,012	21.1	18.9	10	4.5
850	30	1,507	18.7	15.4	10	4.1
800	30	2,027	16.2	12.6	10	4.4
750	30	2,575	13.6	9.4	10	4.8
700	30	3,154	10.5	4.4	10	4.7
650	30	3,723	7.2	1.0	0.09	5.5
600	30	4,424	3.5	-5.8	0.09	5.5
550	30	5,126	-4.4	-5.4	0.09	4.8
500	30	5,884	-4.5	-10.0	0.09	4.2
450	30	6,707	-9.1	-15.2	0.08	2.7
400	30	7,610	-14.7	-21.9	0.08	1.6
350	30	8,611	-21.2	-28.8	0.06	1.2
300	30	9,728	-29.4	-36.6	0.03	1.0
250	30	11,002	-39.9	-48.6	28	1.9
200	30	12,485	-52.6	-27	3.0	
175	30	13,333	-59.9	-29	3.4	
150	30	14,277	-67.9	3C	3.3	
125	30	15,353	-75.6	30	3.0	
100	30	16,627	-79.4	35	2.1	
80	30	17,959	-74.1	C6	3.0	
70	30	18,695	-70.3	C9	4.5	
60	30	19,619	-6.9	09	6.3	
50	30	20,734	-62.3	09	10.7	
40	30	22,123	-59.0	09	18.5	
30	30	23,945	-54.6	09	27.7	
25	27	25,121	-51.9	09	30.6	
20	25	26,574	-48.0	09	33.4	
15	23	26,486	-43.8	09	36.3	
10	12	31,222	-39.3			

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

JUNE 1979

Date	Sun's zenith distance								Date	Sun's zenith distance									
	A.M.				*	P.M.					A.M.				*	P.M.			
	78°*	75°*	70°*	60°*		60°*	70°*	75°*	78°*	60°*	70°*	75°*	78°*		60°*	70°*	75°*	78°*	
MAUNA LOA OBSERVATORY, HI																			
	Air mass									Air mass									
	3.34	2.67	2.01	1.34	*	1.34	2.01	2.67	3.34		4.64	3.71	2.78	1.86	*	1.86	2.78	3.71	4.64
1-----	1.18	1.25	1.34	1.43	----	----	----	----	----	1-----	.80	.91	1.04	1.22	1.46	1.24	1.07	.94	.84
7-----	1.07	1.16	1.26	1.38	1.52	----	----	----	----	2-----	.72	.87	1.02	1.18	----	1.24	1.07	.95	.86
8-----	1.09	1.18	1.28	1.40	----	----	----	----	----	3-----	.77	.87	1.00	1.16	----	----	----	----	----
9-----	1.14	1.21	1.29	1.41	1.52	----	----	----	----	4-----	.72	----	----	----	----	----	----	----	----
13----	1.16	1.22	1.31	1.35	----	----	----	----	----	6-----	----	----	1.05	1.32	1.10	.92	.80	.69	----
14----	1.16	1.24	1.34	1.45	1.53	----	----	----	----	7-----	.69	.81	.94	1.13	1.35	1.05	.89	.75	.65
16----	1.17	1.24	1.33	1.43	1.52	----	----	----	----	9-----	.79	.89	1.04	1.22	1.42	1.27	1.12	1.01	.91
17----	1.14	1.21	1.30	1.41	----	----	----	----	----	10----	.87	.98	1.10	1.25	1.40	1.11	.91	.76	.65
23----	1.14	1.21	1.26	1.41	----	----	----	----	----	11----	.77	.88	1.00	1.19	1.43	1.19	1.04	.91	.81
Aver-	1.14	1.21	1.17	1.41	1.52	----	----	----	----	12----	.94	1.04	1.15	1.20	1.44	1.17	1.01	.90	.78
ages										13----	.87	.97	1.09	1.24	1.39	----	----	----	----
										14----	.66	.76	.89	1.07	1.30	----	----	----	----
										15----	.61	.72	.86	1.05	1.30	----	----	----	----
										16----	----	----	1.20	1.22	1.26	1.06	.96	.85	
										17----	.92	1.03	1.14	1.29	1.49	1.26	1.10	.97	.86
										18----	.83	.95	1.07	1.24	1.44	1.24	1.06	.94	.83
										19----	.85	.96	1.10	1.25	1.47	1.23	1.08	.95	.83
										20----	.85	.95	1.07	1.22	1.41	1.21	1.06	.94	.85
										21----	.73	.84	.97	1.15	1.41	1.20	1.07	.93	.84
										22----	.83	.91	----	----	----	1.16	1.02	.92	.81
										23----	.83	.94	1.06	1.22	1.42	1.24	1.06	.93	.83
										24----	.85	.95	1.09	1.26	1.45	1.22	1.09	.98	.88
										25----	.82	.92	1.04	1.20	1.36	1.13	.93	.76	.65
										26----	.61	.73	.87	1.07	1.32	----	----	----	----
										27----	.66	.76	.87	1.05	1.28	----	----	----	----
										28----	.55	.67	.81	.99	----	----	----	----	----
										29----	----	----	----	1.29	----	----	----	----	----
										30----	.53	.61	----	----	----	----	1.03	.69	----
										Aver-	.76	.87	1.01	1.18	1.39	1.19	1.03	.89	.80

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

JUNE 1979

Date, . . .	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Avg.
Langleys, . . .	188	148	116	85	126	199	121	172	194	223	158	156	191	102	223	212	144	211	214	159	117	253	235	239	153	111	174	125	340	168	175

CORRECTIONS

Heating Degree Days - April 1979

	This Month	Period July through this Month
Birmingham:	83	2767
		2824

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES: Dates in the table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

- + And also on an earlier date or dates.
- 0 Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch of water equivalent to every 10 inches of snow-fall.

CLIMATOLOGICAL DATA - METRIC UNITS: Data from airport unless otherwise specified.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

- B Number of days maximum 21.1°C. or above for Alaskan Stations.
- Y Peak Gust.
- + And also on an earlier date or dates.
- U Indicates Urban site.
- R Indicates Rural site.
- Ø Station pressures apply to elevations shown in the "Elevations" table of the annual issue of this publication.

Conversion formulae to English Units are as follows:

$$\begin{aligned} 1 \text{ foot} &= 0.3048 \text{ meters} \\ ^{\circ}\text{F.} &= \frac{9}{5} \times ^{\circ}\text{C} + 32 \\ 1 \text{ inch} &= 25.4 \text{ millimeters} \\ 1 \text{ mile per hour} &= 0.447 \text{ meters per second} \end{aligned}$$

HEATING DEGREE DAYS: Data from airport unless otherwise specified.

- U Indicates Urban site.
- R Indicates Rural site.

COOLING DEGREE DAYS: Data from airport unless otherwise specified.

- U Indicates Urban site.
- R Indicates Rural site.

STORM SUMMARY:

- o Includes crop damage.
- C Crop damage.
- * No occurrence of storms or unusual weather phenomena reported.
- @ Includes heavy sleet storm.
- # Freezing drizzle and freezing rain, commonly known as glaze.
- Ø For breakdown of "All Others," and for detailed listing of other storms, see the Environmental Data and Information Service, NOAA, monthly publication STORM DATA.
- † No Storm Data Report received for this State.
- ◇ Report Incomplete.
- + Storm damages are placed in categories varying from 1 to 9 as follows:
 - 1 Less than \$50
 - 2 \$50 to \$500
 - 3 \$500 to \$5,000
 - 4 \$5,000 to \$50,000
 - 5 \$50,000 to \$500,000
 - 6 \$500,000 to \$5 Million
 - 7 \$5 Million to \$50 Million
 - 8 \$50 Million to \$500 Million
 - 9 \$500 Million to \$5 Billion

RAWINSONDE DATA (Average Monthly Values):

All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 60° above the horizon, or any obstruction above the horizon. The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygrometers. These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

- * Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.
- + Observations for these stations are scheduled at 0000 G.C.T.
- + Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

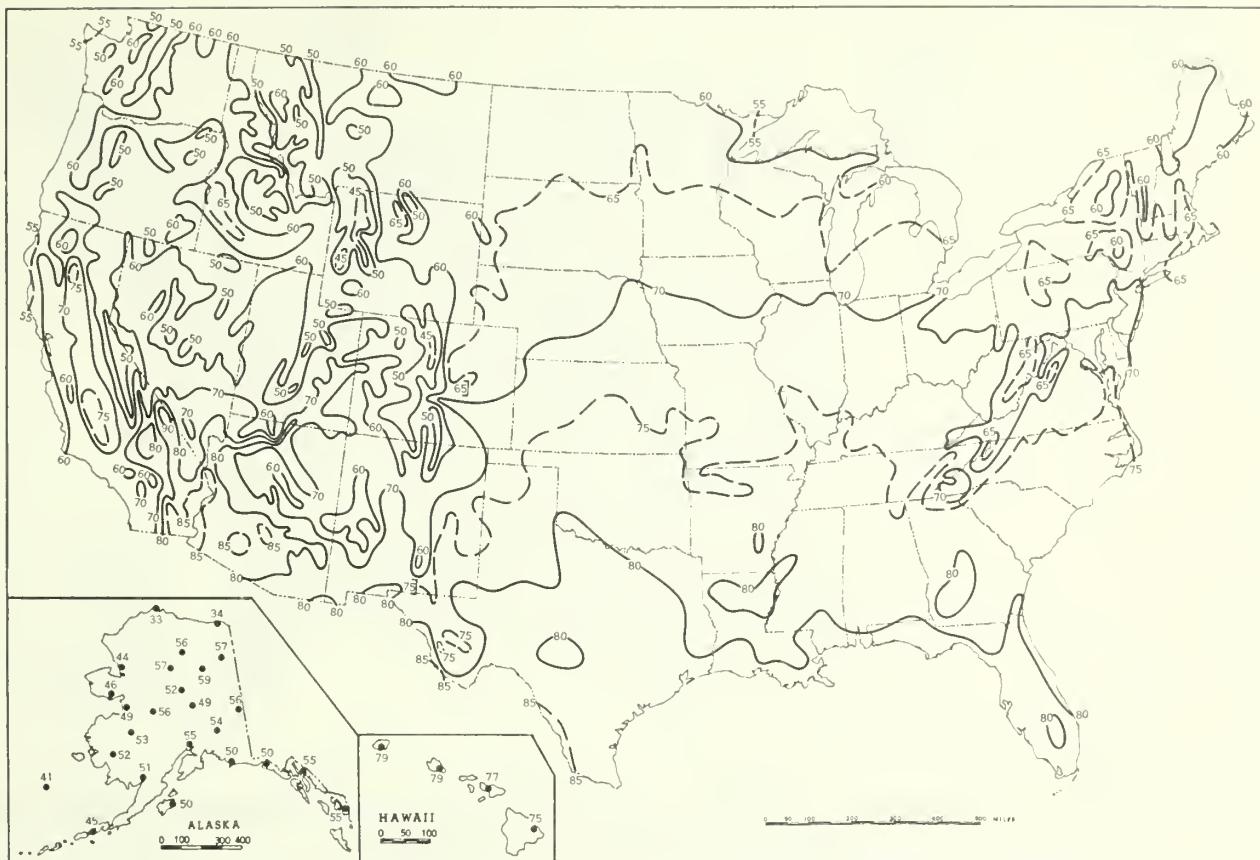
SOLAR RADIATION INTENSITIES: Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

()	Clouds Present	0M	Moderate Dust	HM	Moderate Haze	KS	Slight Smoke
*	Values corresponding to true solar noon	DS	Slight Oust	HS	Slight Haze	M	Moderate Haze-indeterminable
BD	Blowing Oust	F	Fog	I	Intense Haze-indeterminable		
BN	Blowing Sand	GF	Ground Fog	K	Smoke	N	Sand
O	Oust	H	Haze	KI	Intense Smoke	S	Slight Haze-indeterminable
01	Intense Dust	HI	Intense Haze	KM	Moderate Smoke		

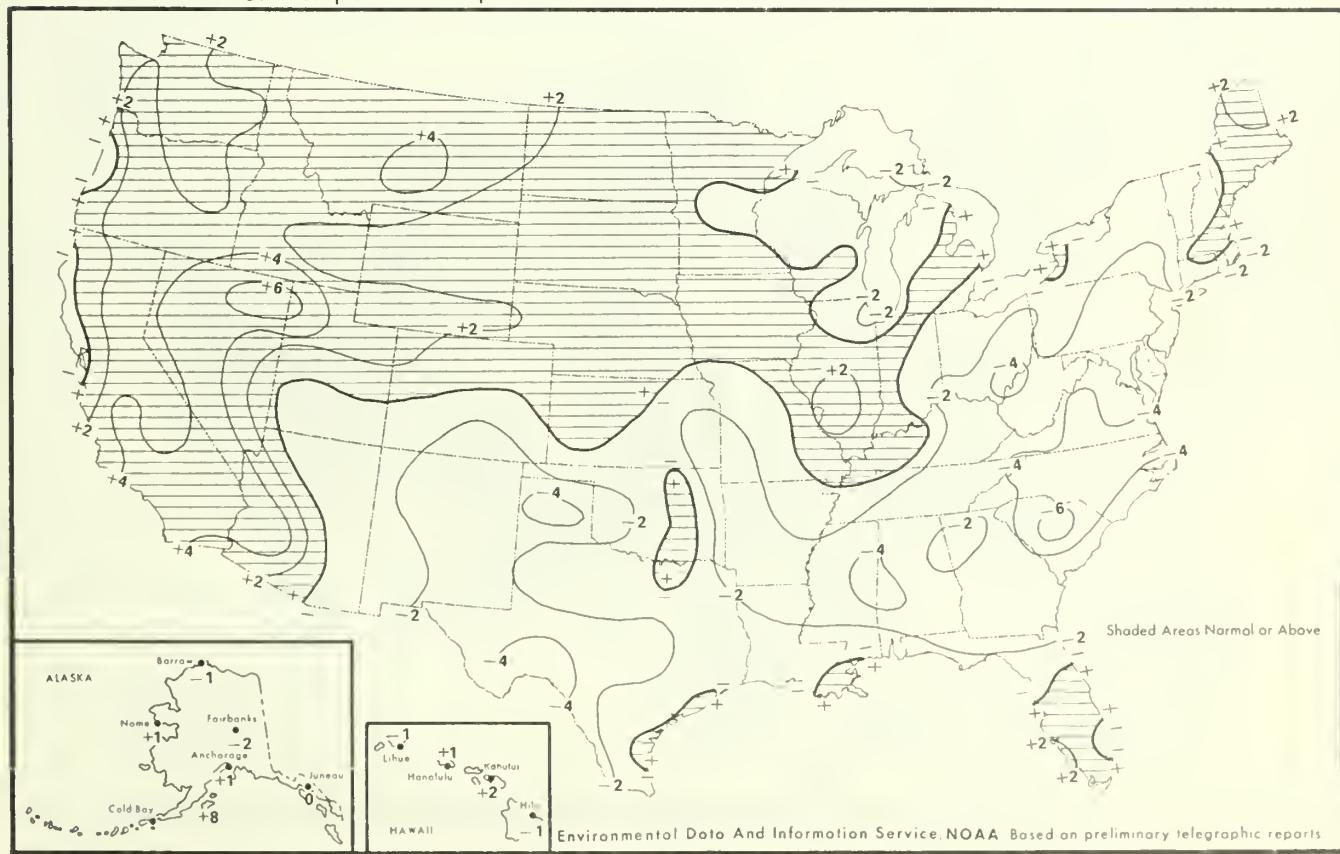
NET RADIATION: The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

Chart 1. A. Normal Daily Average Temperature (°F. 1941-70), June.

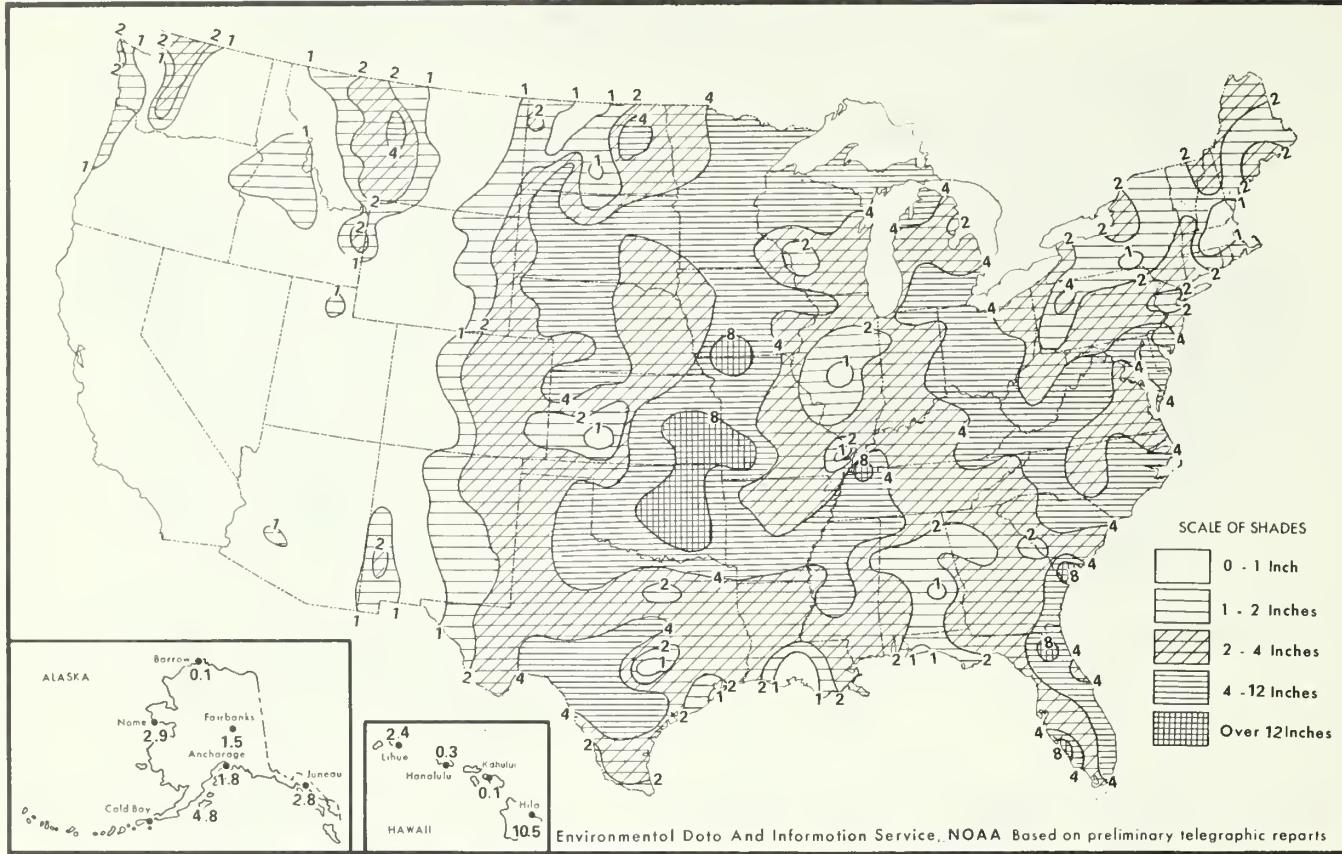


B. Temperature Departure from 30 - Year Mean (°F 1941-70), June 1979



Environmental Data And Information Service, NOAA Based on preliminary telegraphic reports

Chart II. A. Total Precipitation (Inches), June 1979



B. Percentage of Normal Precipitation, June 1979

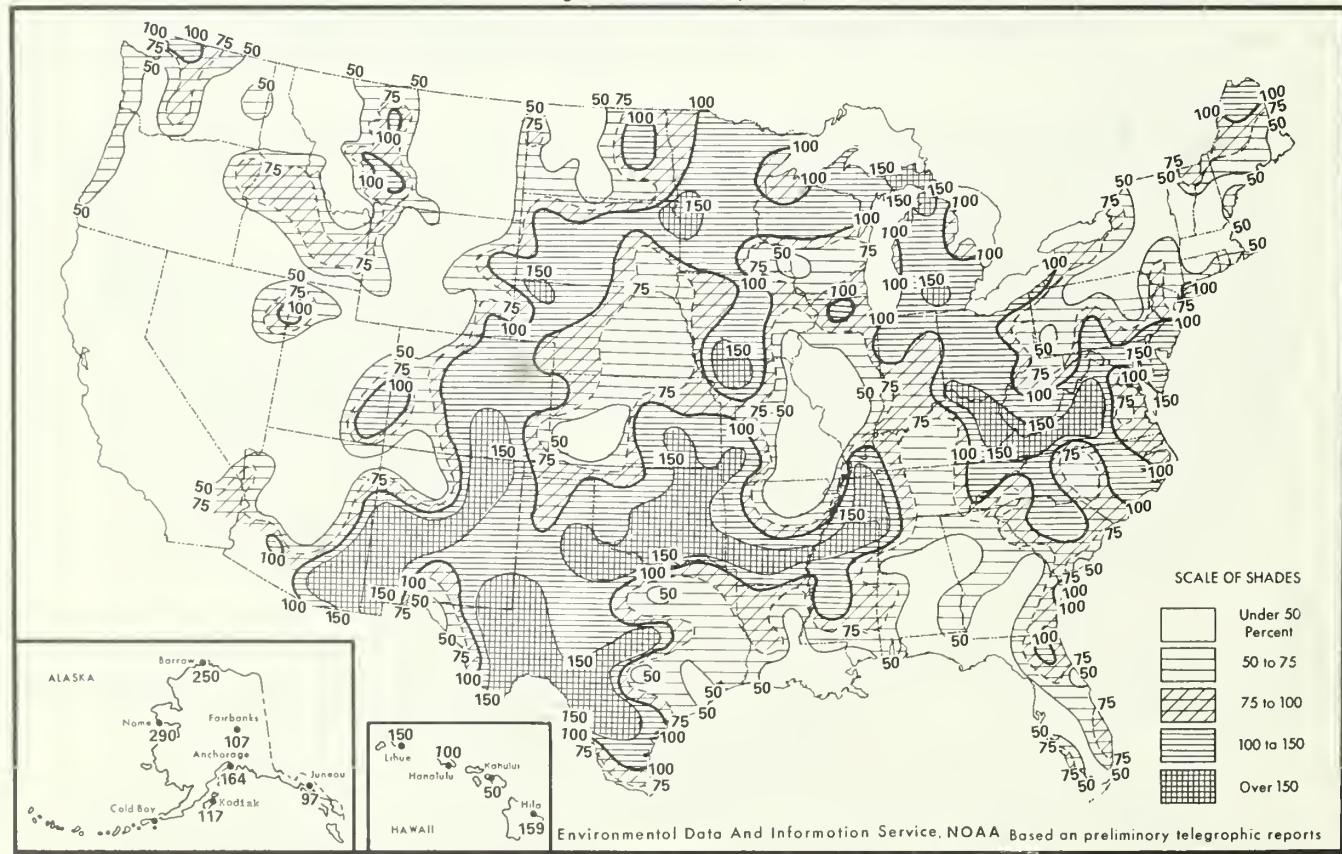
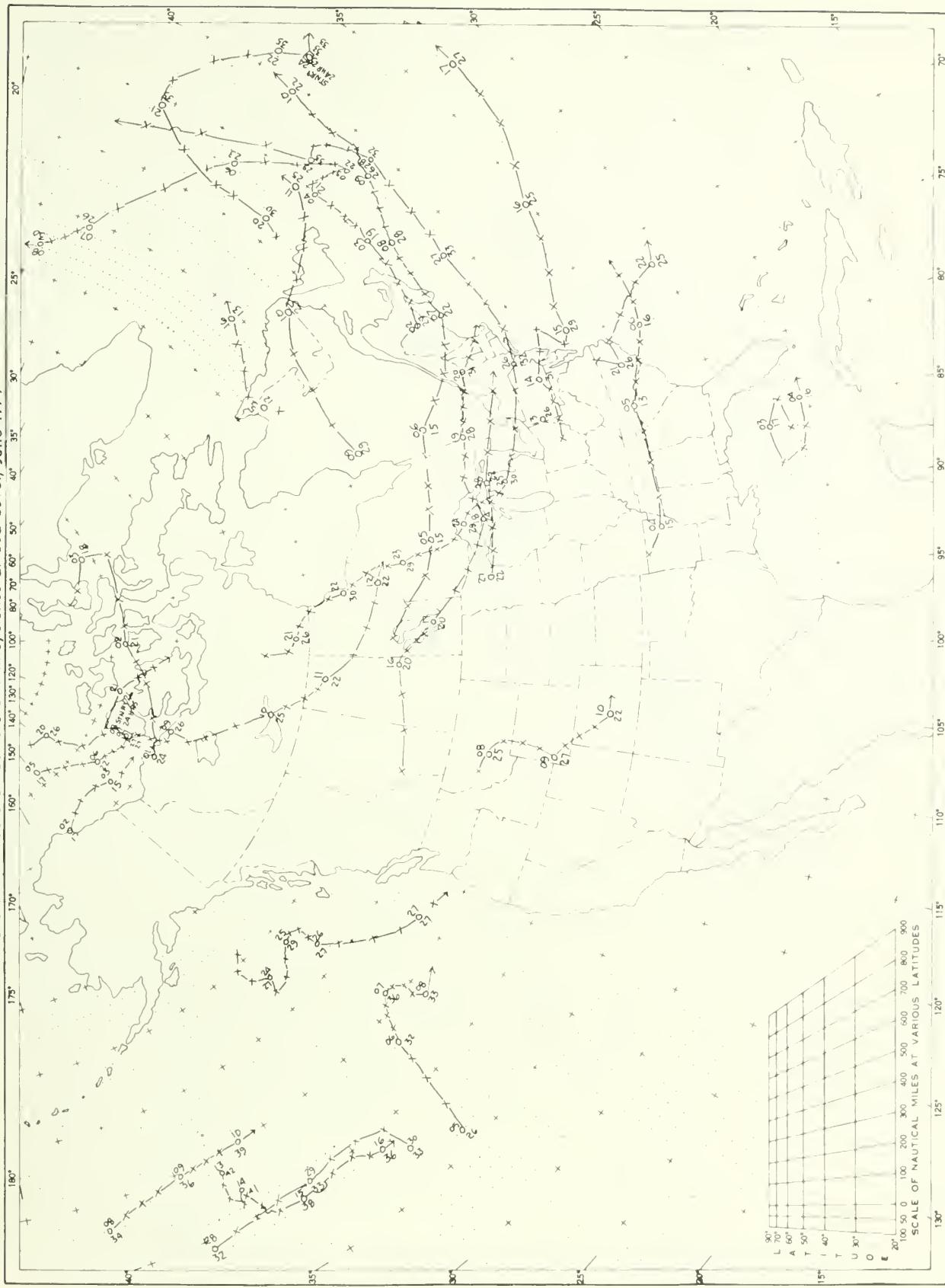
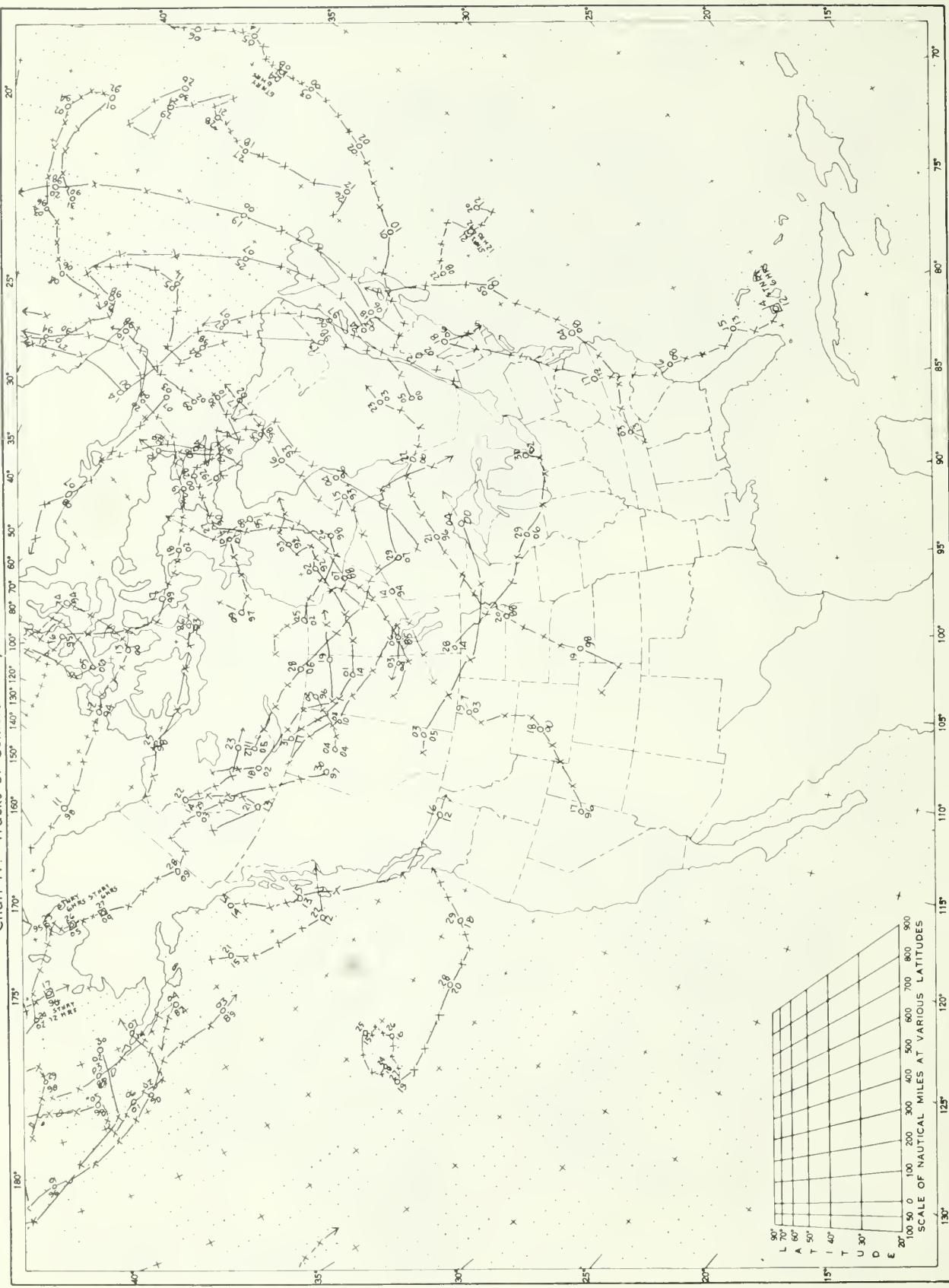


Chart III. Tracks of Centers of Anticyclones at Sea Level, June 1979



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date figure below pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IV. Tracks of Centers of Cyclones at Sea Level, June 1979



USCOMM-NOAA-ASHEVILLE, N.C. 1979-2070

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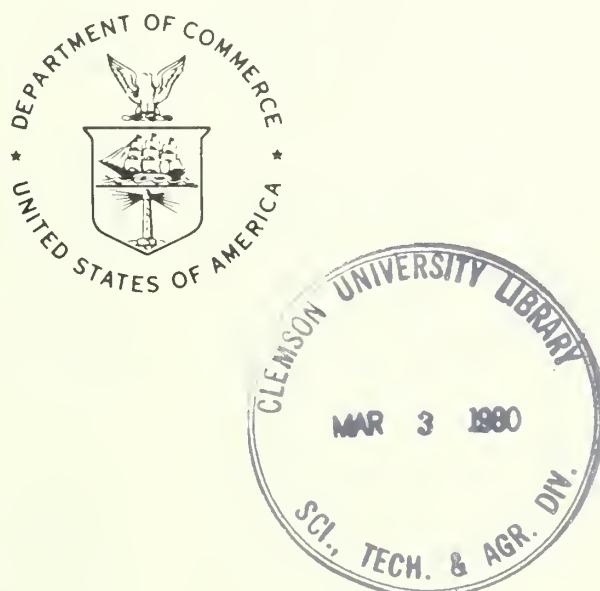
JULY 1979

VOLUME 30

NUMBER 7

CLIMATOLOGICAL DATA

NATIONAL SUMMARY



"I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF
THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINIS-
TRATION AND IS COMPILED FROM INFORMATION RECEIVED AT
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CAROLINA 28801."

Daniel B. Mitchell

DIRECTOR
NATIONAL CLIMATIC CENTER

noaa

NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION

ENVIRONMENTAL DATA AND
INFORMATION SERVICE

NATIONAL CLIMATIC CENTER
ASHEVILLE, N.C.

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

JULY 1979

GENERAL SUMMARY OF WEATHER CONDITIONS

Lyle Denny, Climatologist
Environmental Data and Information Service, NOAA

HIGHLIGHTS: July rainfall covered nearly every point in the country. Some areas in the normally dry Southwest and Plateau Region received up to 2 inches. Two tropical systems, Bob and Claudette, dominated the rain patterns in the East. Both storms, occurring a week apart, followed similar tracks from southeastern Texas to the Ohio Valley and the middle Atlantic States. Flooding occurred in Texas and Indiana. Temperatures in the Pacific Northwest averaged above normal. During parts of the month, unusual high readings ranged above 100° in the State of Washington. Temperatures in New Mexico and New England also averaged well above normal for the month.

A cool high pressure system was poised over Hudson Bay in Canada as July began. As the first week of the month progressed, the cold front marking the periphery of the cool air moved southward and encompassed all of the central and eastern United States. Precipitation fell all along the front as it moved southward. Light amounts were recorded in very dry central Illinois. The heaviest rain fell in the eastern portion of the southern Plains and in the central Gulf Coast States, where severe weather, including heavy downpours and tornadoes, was reported. Tornadoes also touched down in the eastern Great Plains.

Many record low temperatures chilled the Midwest and Eastern Seaboard. Only the Rocky Mountains and Florida showed warmer than normal temperatures.

The cool air moved eastward out of the Nation during the early part of the second week (9th to 15th). Light showers edged through the eastern part of the Midwest as the cooler air departed. At midweek, Hurricane Bob moved onto the Louisiana coast and proceeded to the Ohio Valley and the Middle Atlantic States. Heavy downpours fell along the track of the

storm. Five to 8 inches were measured in Mississippi, Alabama and southern Indiana. Another area of thunderstorms rolled into the northern Plains in the latter half of the week. Temperatures ranged warmer than normal throughout the Southwest, the Plains, and through the Great Lakes to New England.

Early in the third week of the month (16th to 22d), showers and thunderstorms formed in the central and northern Plains, but then the moisture from the Gulf of Mexico began to flow toward the Southwest. Above-normal rain fell as showers in the Southwest and the Plateau Region. Heavy showers also fell in central and western Texas, the Southeast, and throughout the area east of the Appalachians.

The Pacific Northwest averaged 9 to 10° warmer than normal with some daytime temperatures exceeding 100° as far north as the State of Washington. The central Plains cooled to an average of 6° below normal.

In the beginning of the last period (23d to 31st), Tropical Storm Claudette approached the southeastern coast of Texas. The storm was downgraded to a low pressure system as it moved slowly to northeastern Texas. A circulation pattern carried large amounts of moisture into the area from southeastern Texas to the Midwest. More than 12 inches of rain flooded portions of the Texas coast. Five or more inches fell on already wet southern Indiana and flooded large acreages there. Only at week's end did the remnants of the storm move out of the country through the Middle Atlantic States. The last two days of the month produced thunderstorms from the central Plains to the upper Mississippi Valley. Hot weather continued in the West and from the mid-Atlantic Coast through New England.

HURRICANE BOB

July 9 - 16, 1979

National Hurricane Center, NOAA
Miami, Florida

Hurricane Bob developed from one of the many disturbances that originate over Africa each hurricane season. It was first detected in the eastern North Atlantic near the Cape Verde islands the last week of June and continued westward without showing any signs of development until the system reached the northwest Caribbean on 6 July.

After passing across the Yucatan Peninsula during the 7th, a weak circulation began forming on the 8th and organized into the third tropical depression of the year by the 9th.

On the morning of the 10th an Air Force reconnaissance aircraft reported a developing tropical storm about 400 mi south of the Louisiana Coast with maximum winds estimated 50 kts and lowest pressure 998 mbs. This was a drop of 14 mbs since the flight on the previous day. Afternoon flights measured winds of 60 to 70 kts and reported that the lowest pressure had dropped another 10 mbs. The storm was upgraded to a hurricane in the late afternoon and it remained a minimal hurricane with lowest pressure 986 mbs as the center moved inland west of Grand Isle, LA, early on the morning of the 11th.

During the development stage the depression moved toward the northeast around 10 kts. After reaching tropical storm strength, Bob made a gradual turn to the north with an increase in forward speed to 15 kts as it approached the coast. This motion was associated with the effects of a deepening upper level trough west of the system. The upper atmospheric acceleration of the wind field over Bob, which was produced by this trough, contributed significantly to the hurricane's rather rapid intensification.

After moving inland Bob moved north northeast up the Mississippi Valley into western Tennessee on the 12th

and into southern Ohio the 13th. Thereafter, the low pressure area that was once Bob drifted southeast off the mid-Atlantic coast on the 16th and was absorbed in a low pressure system over the western Atlantic.

The statistics associated with Bob were typical of a minimal hurricane. Tides were generally 3 to 5 feet above normal and rainfall totals between 3 and 6 inches. Highest winds were 45 to 55 kts along the coast with a few locations reporting 65 kt winds. Eight tornadoes were reported but only one produced significant damage. A tornado caused damage estimated at \$27,500 in Biloxi, MS. There was one death and one injury in Lafitte, LA, when two men were blown off a marina roof during the height of the storm.

No serious flooding was reported in Louisiana, Mississippi, or Alabama. The remnants of Bob produced flooding over portions of Indiana, Ohio, and West Virginia, but details are sketchy at this time.

A number of boats were sunk or damaged and there was considerable pier damage due to high tides and rough seas. Besides the usual tree and power line damage, gusty winds produced some window breakage in the business district of New Orleans. Total storm damage may reach several million dollars including an estimated one quarter million dollars in Harrison County, MS, alone.

Hurricane Bob was a well behaved storm so that warnings and forecasts were exceptionally good. The fact that Bob was a minimal hurricane may make it difficult for the public to comprehend the danger, and to heed the warnings, when a more severe storm strikes the United States coast.

HURRICANE BOB

Preliminary Report

<u>DATE</u>	<u>TIME (GMT)</u>	<u>LAT.</u>	<u>LONG.</u>	<u>PRESSURE (MB)</u>	<u>WIND (KT)</u>	<u>STAGE</u>
7/9	1200	22.0	96.0	1012	20	DEPRESSION
	1800	22.5	95.3	1010	25	
7/10	0000	23.0	94.6	1007	30	TROPICAL STORM
	0600	23.5	93.8	1004	35	
	1200	24.0	93.0	998	50	
	1800	25.0	92.3	996	55	
7/11	0000	26.2	91.6	988	65	HURRICANE
	0600	27.8	91.1	991	65	
	1200	29.1	90.6	986	65	
	1800	31.0	90.2	992	40	
7/12	0000	32.5	89.9	998	30	DEPRESSION
	0600	34.0	89.7	1002	25	
	1200	35.9	89.1	1004	25	
	1800	37.2	87.8	1006	25	
7/13	0000	38.5	86.5	1006	25	
	1200	39.0	84.0	1007	25	
7/14	0000	39.0	81.3	1009	20	
	1200	38.3	78.8	1010	20	
7/15	0000	37.5	76.5	1011	20	
	1200	36.0	76.0	1012	20	
7/16	0000	34.0	76.5	1013	20	
	1200	33.0	75.0	1014	20	

TROPICAL STORM CLAUDETTE

July 15 - 29, 1979

National Hurricane Center, NOAA
Miami, Florida

Claudette was a tropical storm for two brief periods separated by a five day interval during which it weakened to a disorganized tropical wave. However, the storm will long be remembered for its record-breaking rains in eastern Texas. If a measurement of 42 inches or rain in twenty-four hours near Alvin, TX, is accepted, Claudette has the dubious distinction of establishing a United States record for the greatest twenty-four hr rainfall total. This may also be a record for the world's greatest twenty-four hour rainfall occurring over flat terrain.

Claudette began as a tropical wave which moved off the African coast on 11 July. The wave was characterized by strong middle level winds just to the east of the wave axis. The rawinsonde report from Dakar, Senegal, at 1200 GMT, 12 July showed winds of 85 kts at 550 mbs - the strongest winds recorded at any level at that station during the hurricane season thus far.

A tropical depression formed from the wave on 16 July, about 450 miles east of the Leeward Islands. The depression was tracked west northwestward using satellite imagery until 1225 GMT, 17 July, when the first reconnaissance flight into the system measured winds of 45 kts, although the lowest pressure was only 1011 mbs. Even though the minimum pressure did not suggest a tropical storm, the depression was upgraded to Tropical Storm Claudette at 1600 GMT, based on wind measurements, and gale warnings were issued for the Leeward and Virgin Islands and Puerto Rico.

The center crossed the northern Virgin Islands but the heaviest convection extended for a considerable distance to the south and east of the center. Rainfall amounts generally ranged from 1.5 inches in the Virgin Islands to 2.5 inches in the larger islands of the French Antilles. However, there were reports of 7 to 8 inches of rain with flooding in the Point a Pitre to Grand Fonds region of Guadeloupe.

As the center approached Puerto Rico during the night of 17 July, the circulation became disorganized and the system weakened to a tropical depression. Further weakening ensued as the depression crossed the Mona Passage, and upon encountering the island of Hispaniola, the system became a disorganized tropical wave.

As the center skirted along the north coast of Puerto Rico, heavy rains fell over the southern part of the island. Amounts exceeding nine inches were measured in the Ponce area. One man drowned while attempting to cross a swollen river. Property losses were estimated at \$750,000. The metropolitan San Juan area received less than two inches of rain, and storm effects on the city were negligible.

During the period 18-21 July, portions of the wave

crossed the Dominican Republic, Haiti, Jamaica, the Bahamas, Cuba and extreme southern Florida, causing locally heavy rains and gusty winds. As the wave emerged into the southeast Gulf of Mexico, a depression formed on 21 July. Since the depression could be traced to the remnants of Claudette, the original name was retained.

As the depression moved northwestward through the Gulf of Mexico, its lack of organization made tracking difficult. The accompanying "best track" represents a considerably smoothed fit to reconnaissance and satellite position estimates that were frequently at variance with one another, which fell systematically to the north of corresponding reconnaissance fixes during the period. There is some suggestion that satellite images depicted a middle level vorticity center which paralleled the track of the surface center as determined from aerial reconnaissance data.

During the early morning hours of 23 July, an Air Force reconnaissance mission found that winds had reached gale force, and Claudette once again became a tropical storm. Gale warnings were issued from Biloxi, MS, to Freeport, TX, at 1300 GMT. As the storm approached the upper Texas coast, the situation became increasingly complex. The central part of the storm circulation elongated, and there is some evidence that the original center, situated in the southern part of this elongated envelope, weakened while a new center formed to the north. As the original center drifted to the west and dissipated, gale warnings were discontinued during the night of 24 July. However as the new center formed, and offshore oil rigs reported winds increasing to 40 kts, gale warnings were issued at 1430 GMT from Grand Isle, LA to Galveston, TX.

By midday on 24 July, the storm center came under surveillance of radars at Lake Charles, LA, and Galveston, TX. These radar reports showed that the center drifted northward and crossed the coast near the Texas-Louisiana border about 1900 GMT, 24 July. The center passed just north of Beaumont during the evening. It was thought that the predominant northward motion would continue since the storm was embedded in a strong east-west pressure gradient. Based on this reasoning, gale warnings were discontinued along the coast at 2200 GMT, 24 July. However, during the night the motion of the center became slow and erratic. Based on an examination of the surface winds and pressures at Beaumont, Houston, Lufkin and College Station, it appears that the track of the low pressure center described a small counterclockwise loop within the area bounded by these cities.

Since the center remained close to the coast, and the main source of inflow was a confluent band of southerly winds off the warm waters of the northwest Gulf

TROPICAL STORM CLAUDETTE

of Mexico, the storm did not weaken as expected. Instead, the minimum pressure at Beaumont dipped to 997.8 mbs at 0030 GMT, 25 July, which was the lowest measurement during the life of the storm.

Finally, on 26 July the residual low pressure system weakened as it moved northward, passing just to the east of Waco and Dallas. The low crossed eastern Oklahoma, Missouri, Illinois, Indiana, Ohio and into West Virginia where it merged with a frontal system on 29 July.

As the storm stalled over eastern Texas during the night of 24 July, torrential rains began along the coastal sections of Texas from the Houston-Galveston area to Matagorda. This area of heavy rain coincided with a zone of low level convergence which persisted for about 30 hours. Maximum amounts in excess of thirty inches occurred near Alvin, in Brazoria County and near Sargent, in Matagorda County. A subsequent report received from a cooperative observer located 8.5 miles due west of WSO, Alvin showed that 42 inches of rain fell between 1200 GMT, 25 July and 1200 GMT, 26 July - a United States record for twenty-four

hour rainfall amount. The same station had a storm total rainfall of 45 inches.

No estimate of dollar damage due to flooding is available at this writing. However, it is likely to exceed \$100 million. At least one death in Texas was attributed to Claudette. Minor damage due to tide and wave action occurred along the Louisiana coast, where tides were generally 1.5 to 3.5 feet above normal. Several boats were sunk and homes damaged in Cameron, LA, where about one hundred persons were evacuated.

The highest sustained winds associated with Claudette were 45 kts reported by an oil rig off the central Louisiana coast from 1200 GMT to 1600 GMT 24 July. Oil rigs also reported winds of 40 kts off the upper Texas and Louisiana coasts on 26 July, thirty hours after the storm center moved inland. Winds were estimated at 45 to 55 kts at Cameron at 1915 GMT, 24 July. Air Force reconnaissance reported surface winds of 45 kts at 1225 GMT, 17 July as Claudette originally developed east of the Virgin Islands.

TROPICAL STORM CLAUDETTE

Preliminary Report

DAY	TIME Z	LATITUDE	LONGITUDE	MIN. PRES. (mbs)	MAX WIND (kts)	CATEGORY
15	12	12.5	46.3	1014	20	trop disturbance
	18	12.8	48.4	1014	20	
16	00	13.4	50.4	1012	25	trop depression
	06	14.6	52.1	1012	25	
	12	15.7	53.8	1011	30	
	18	16.5	55.5	1011	30	
17	00	17.0	57.2	1011	30	trop storm
	06	17.5	58.8	1011	30	
	12	17.8	60.3	1011	40	
	18	18.0	62.1	1010	40	
18	00	18.2	63.8	1010	40	trop depression
	06	18.3	65.4	1011	30	
	12	18.4	67.0	1011	30	
	18	18.5	68.5	1012	25	
19	00	18.7	69.5	1012	20	(wave)
	06	18.8	70.5	1012	20	
	12	18.8	71.4	1012	20	
	18	19.0	72.4	1012	20	
20	00	19.0	73.3	1013	20	trop depression
	06	19.2	74.7	1013	20	
	12	19.5	76.7	1013	20	
	18	20.0	78.7	1013	20	
21	00	20.6	80.4	1013	20	trop depression
	06	21.4	82.2	1013	25	
	12	22.1	83.5	1012	30	
	18	22.8	85.0	1010	30	
22	00	23.5	86.5	1007	30	trop storm
	06	24.0	87.4	1007	30	
	12	24.5	88.5	1007	30	
	18	25.0	89.5	1006	30	
23	00	25.4	90.5	1005	30	trop storm
	06	25.9	91.4	1004	30	
	12	26.4	92.4	1003	35	
	18	26.9	92.9	1003	35	
24	00	27.5	93.4	1003	35	trop depression (over-land)
	06	28.3	93.5	1003	35	
	12	28.8	93.7	1002	45	
	18	29.6	93.9	1000	45	
25	00	30.3	93.9	997	40	trop depression (over-land)
	06	30.3	94.3	998	35	
	12	30.5	94.8	1000	30	
	18	30.5	95.2	1001	30	
26	00	30.2	95.3	1001	30	

TROPICAL STORM CLAUDETTE

Day	Time	Latitude	Longitude	Min. Pres.	Max Wind	Category
26	06	30.6	95.1	1002	30	trop depression (over land)
	12	30.8	95.4	1003	30	
	18	31.3	96.3	1004	25	
27	00	31.8	96.6	1004	20	
	06	32.7	96.4	1006	20	
	12	34.0	95.9	1007	15	
28	18	35.3	95.3	1007	15	
	00	36.4	94.6	1007	15	
	06	37.8	93.4	1008	15	
29	12	38.6	91.0	1009	15	
	18	38.8	88.0	1009	15	
	00	39.0	85.2	1010	15	
29	06	39.0	82.8	1011	15	
	12	39.0	80.2	1011	15	

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

JULY 1979

STATE	Temperature						Precipitation					
	Monthly extremes						Monthly extremes					
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least		
		°F			°F			In.		In.		
Alabama	2 Stations	103	6+	Scottsboro	52	2	Dadeville	13.94	Hightower	2.73		
Alaska	2 Stations	87	25+	Barrow WSD AP	27	11	Little Port Walter	17.25	Five Mile	.36		
Arizona	Chandler	123	29	Fort Valley	29	8+	Arivaca 1 E	15.22	6 Stations	.00		
Arkansas	2 Stations	101	5+	2 Stations	54	5+	Prescott	11.27	Lake City	2.16		
California	2 Stations	123	19+	Bodie	17	8	Deep Canyon Laboratory	3.53	126 Stations	.00		
Colorado	Holly	107	14	Spicer	26	31	Stratton	5.78	Boulder	T		
Connecticut	2 Stations	96	13	2 Stations	37	7+	Stevenson Dam	3.88	East Haven Saltonstall	.32		
Delaware	3 Stations	92	29+	Milford 2 WSW	47	6	Middletown 1 WSW	4.89	Newark University Park	2.10		
Florida	Myakka River State Park	101	3	4 Stations	62	22+	Pensacola PAA AP	20.36	Hoore Haven Lock 1	1.45		
Georgia	Lumpkin 2 SE	104	5	2 Stations	49	1	Atkinson 2 E	15.24	Codfrey 3 NE	2.22		
Hawaii	3 Stations	93	24+	Mauna Kea Obs 111.2	22	1	Fuochokamo 2 343	21.80	25 Stations	.00		
Idaho	2 Stations	110	18+	Stanley	25	11	Malad City	2.16	6 Stations	.00		
Illinois	Du Quoin 4 SE	101	15	2 Stations	42	6+	Mt Carmel	14.26	Antioch 2 NW	1.26		
Indiana	Crane Naval Depot	98	30	Logansport Radio WSAL	40	6	Elliston	16.66	Goshen College	1.08		
Iowa	Leon	100	13	Elkader 5 SSW	40	6	Parkersburg	10.03	Mapleton	1.25		
Kansas	Webster Dam	110	12	Brewster	50	20	Highland	10.52	Sublette	1.11		
Kentucky	5 Stations	96	31+	2 Stations	46	7+	Taylorsville	11.34	Fords Ferry Dam 50	2.87		
Louisiana	Bogalusa	102	6	Monroe FAA AP	64	14	Hackberry 8 SSW	22.01	Dak Grove 2 WSW	2.99		
Maine	Saco	94	13	Clayton Lake 2	32	5	West Buxton 2 NNW	5.96	Jackman	1.14		
Maryland	Baltimore WSD CI	96	12	Dakland 1 SE	36	7	Cambridge Wtr Trmt Plant	7.88	Fredrick Police Brks	1.78		
Massachusetts	Chester 2	103	14	Chester 2	33	7	Holyoke	8.82	Edgartown	.98		
Michigan	2 Stations	93	24+	2 Stations	31	17+	Ishpeming	8.46	Hesperia 4 WNW	.49		
Minnesota	Ada	94	9	Tower 3 S	32	5	Waseca Exp Station	9.64	Willmar State Hospital	.86		
Mississippi	Liberty 1 W	102	7+	2 Stations	57	1	Standard	18.49	Rosedale	2.93		
Missouri	4 Stations	101	14+	Bowling Green 2 NE	47	18	Bloomfield	11.73	Bowling Green 2 NE	.86		
Montana	Thompson Falls Power House	106	19	Polebridge	25	3	Albion 6 NE	5.13	Eureka Ranger Station	T		
Nebraska	2 Stations	105	14+	Agate 3 E	41	15	Moorefield	9.89	Lyman	.55		
Nevada	Sunrise Man Las Vegas	116	16+	Spring Valley State Park	26	7	Lake Valley Steward	3.78	Paradise Valley 1 NW	.13		
New Hampshire	6 Stations	94	23+	Mount Washington	27	5	Bradford	7.72	Bethlehem	1.44		
New Jersey	Plainfield	96	13	2 Stations	40	7+	Princeton Waterworks	7.98	Ringwood	1.14		
New Mexico	3 Stations	109	15+	Dulce	31	18	Duval Potash Mine	6.82	Tohatchi 6 NE	.00		
New York	Valatie 1 N	99	15	Dld Forge	32	7	Solvair	9.37	Lyons Falls	.49		
North Carolina	Willard 4 SW	98	29	Transou	39	6	Highlands	21.48	Butner Filter Plant	1.10		
North Dakota	2 Stations	100	22+	Foxholm 7 N	35	16	Mandan Exp Station	6.99	Foxholm 7 N	.37		
Ohio	Painesville 4 NW	94	16	Dorset	37	6	West Manchester 3 SW	10.17	Put In Bay Perry Monument	1.55		
Oklahoma	Great Salt Plains Dam	106	5+	Boise City 2 E	52	19	Taloga	11.53	Chickasaw NRA	.80		
Oregon	Pelton Dam	110	19+	Brothers	19	2	Nehalem 9 NE	2.68	28 Stations	.00		
Pennsylvania	Marcus Hook	98	16+	Clermont 4 NW	31	6	Coatesville 1 SW	10.14	Rushville	1.01		
Puerto Rico	Manati 2 E	97	11	Cerro Maravilla	4B	1B	San Lorenzo 3 S	15.68	Puerto Real	.70		
Rhode Island	Providence WSD AP	92	13	Kingston	42	6	Woonsocket	2.76	North Foster 1 E	1.63		
South Carolina	4 Stations	99	15+	Caesars Head	52	8	Minneapolis Dam	10.51	Clark Hill Dam	2.94		
South Dakota	Spearfish 1 W	101	11	Pactola Dam	41	15	Hill City 1 SSE	8.85	Centerville 6 SE	1.56		
Tennessee	Jackson FAA AP	99	4	2 Stations	51	6+	Rockwood 2	14.64	Newbern	2.74		
Texas	El Paso WSD AP	112	10	Ysleta	47	6	Alvin (Houston Area WSD)	35.70	5 Stations	.00		
Utah	Hanksville	109	27	Thistle 2 SW	26	29	Corinne	1.99	5 Stations	.00		
Vermont	Vernon	96	15	Mount Mansfield	31	5	Cavendish	6.17	South Hero	.67		
Virginia	3 Stations	95	14	Burkes' Garden	37	6	Painter 2 W	9.99	Louisa	.90		
Virgin Islands	Truman Field FAA AP	97	30+	Alex Hamilton Field FAA	67	19	Granard	8.29	East End	2.85		
Washington	Priest Rapids Dam	110	19	Rainier Paradise Ranger Station	28	2+	Baring	4.42	2 Stations	T		
West Virginia	2 Stations	93	31+	Canaan Valley	32	7+	Hacker Valley	12.26	Franklin 2 NE	2.05		
Wisconsin	Grantsburg	95	21	Newald 4 N	34	5	Brule Ranger Station	6.88	Milwaukee WSD AP	1.06		
Wyoming	2 Stations	104	10	Darwin Ranch	24	15	Alva 5 SE	5.31	2 Stations	.00		

CLIMATOLOGICAL DATA
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JULY 1979

State and Station	Elevation (ground)	Pressure		Temperature				Precipitation				Wind				No. of days (sunrise to sunset)				Possible sunshine
		mb	mb	°C	°C	°C	°C	Depature from normal	Depature from normal	No. of days	Snow, ice pellets	Resultant speed	Speed	Direction	Cloudy, 8-10	Pretty cloudy, 4-7	Clear, 0-3	Clouds to sunless	%	
		ft	ft	Max 32.2°C or above	Min 0°C or lower	Average dew point	%	Total	Departure from normal	2.5 mm. or more	With thunderstorms	Resultant direction	m/s		Cloudy	Cloudy	Cloudy	Cloudy	%	
ALABAMA																				
BIRMINGHAM U	207	995.3	1017.2	31.1	21.5	26.3	-0.9	36.7	5	15.0	1	1.4	0	1.60	0	0	0.7	20	53	
BIRMINGHAM	189	994.2	1017.0	31.1	20.9	25.4	-1.0	37.2	5	15.0	1	1.5	0	1.65	1.21	1.4	1.25	10	7.2	
HUNTSVILLE	190	1009.1	1016.8	31.7	23.1	27.4	-0.2	35.6	5	15.0	1	1.6	0	2.22	0.80	0	1.3	12	7.2	
MONTGOMERY	64	1011.2	1017.2	31.4	22.2	26.8	-0.4	36.1	5	15.1	1	1.5	0	2.26	0.76	0	1.2	11	7.2	
MONTGOMERY	59	1011.2	1017.2	31.4	22.2	26.8	-0.4	35.6	5	18.3	1	1.5	0	2.06	0.75	0	1.1	10	4.2	
ALASKA																				
ANCHORAGE	35	1009.3	1014.3	19.2	12.3	15.8	1.4	26.1	3	8.9	26	9	0	12.2	8.2	9.5	10.3	5	4.4	
ANNECY	34	1012.9	1015.6	18.1	12.0	15.1	0.7	25.0	4	8.9	1	0	0	11.1	8.1	6.2	7.4	10	5.3	
BARRON	19	1012.5	1012.8	10.4	1.8	6.1	2.4	18.3	3	-2.6	11	0	0	12.4	8.0	8.9	8.0	11	7.7	
BARTER ISLAND	12	1011.9	1013.7	2.8	0.9	2.0	1.4	20.0	14	1.1	20	0	0	1.3	0.9	9.9	12.6	2	10	
BETHLEHEM	38	1010.5	1015.9	8.1	12.0	-0.6	23.3	1.4	4.4	7	0	0	0	1.9	1.2	2.0	1.5	5	4.8	
BIG DELTA	194	989.2	1013.2	20.6	9.1	14.9	0.5	27.8	15	4.4	12	0	0	0	1.2	1.0	1.5	6	3.2	
CALOOSA	186	1013.4	1014.9	21.4	11.1	16.3	1.1	29.4	4	7.2	7	20	0	0	1.7	1.5	2.0	2.0	5	
CAIRO BAY	29	1013.6	1013.9	13.6	8.9	11.3	1.3	19.4	18	7.2	18	0	0	8.9	8.8	5.5	1.2	3	7.2	
FAIRBANKS	133	996.3	1013.1	21.6	16.3	0.3	27.8	24	7.2	17	19	0	0	6.5	6.5	1.6	19	15	7.2	
GULKAIA	479	20.0	8.7	14.4	8.7	14.4	0.6	27.2	4	2.2	17	12	0	0	3.6	1.4	0	1.4	31+	7.2
HOMER	19	1011.9	1014.3	16.8	8.7	14.5	0.5	21.1	2	1.0	0	10.0	83	0	0	1.4	0	10	7.2	
JUNEAU	4	1014.9	1015.8	17.9	9.5	13.7	0.6	24.4	25	5.0	16	8	0	0	1.3	0	0	1.3	20	7.2
KING SALMON	15	1012.5	1014.5	19.1	9.6	14.3	1.6	26.1	17	3.9	19	9	0	0	1.9	1.4	2.3	2.2	1	7.2
KODIAK	4	1010.5	1014.9	18.4	11.2	14.8	1.2	26.1	2	7.2	8	0	0	0	1.3	0	0	1.3	21	7.2
KOTZEBIE	3	1012.5	1012.9	15.1	9.3	12.2	0.5	21.7	22	3.7	9	0	0	0	1.9	1.1	0	1.1	23	7.2
MC GRATH	105	1020.0	1014.6	19.5	12.2	14.2	-0.3	26.7	1	3.7	12	1	0	0	1.4	1.2	2.0	1.6	5	9.3
NUMI	4	1012.5	1013.3	13.0	7.7	10.3	0.3	22.2	21	1.7	11	1	0	0	6.7	7.6	3	18+	3	9.3
ST. PAUL ISLAND	7	1015.2	1016.1	20.7	10.3	9.3	1.7	16.1	16	2.0	4	0	0	0	11	24	0	2.1	20	7.2
TALKEETNA	105	1013.5	1015.5	15.5	1.5	1.1	2.8	9	13	5.0	10	16	0	0	0	0	0	2.5	3	9.4
UNALASKA	5	1013.9	1015.0	17.1	9.1	13.1	1.3	29.4	2	6.7	17	5	0	0	10.0	84	1.53	32	5	8.1
VALdez	11	1013.9	1014.9	16.4	9.8	13.1	1.2	24.4	3	4.4	2	3	0	0	11.1	88	6.3	17	10	2.6
YAKUTAT	9	1013.9	1014.9	16.4	9.8	13.1	1.2	24.4	3	4.4	2	3	0	0	11.1	88	6.3	17	10	2.6
ARIZONA																				
FLAGSTAFF	2135	970.9	1008.5	27.9	7.7	31.7	-0.8	42.3	9	0.6	4	0	0	0	31.0	27	8	1.4	10	8.7
PHOENIX	338	924.5	1009.5	36.3	23.4	34.3	1.4	45.6	9	22.8	7	31	0	0	10.6	27	9	20	16	9.3
TUCSON	788	924.5	1009.5	38.8	30.6	43.3	0.7	43.3	5	19.4	5	30.8	8.9	0	9.9	20	7.0	17	9	9.3
WINSLOW	1492	952.7	1016.2	36.3	15.6	25.9	0.2	39.4	12*	10.0	5	30	0	0	7.7	8	0	15.2	21	9.3
YUMA	54	54	41.4	26.1	33.7	-0.6	46.1	28	21.1	5	30	0	0	7.7	2.3	8	15.3	21	9.3	
ARKANSAS																				
FORT SMITH	136	998.6	1015.1	31.6	21.4	26.6	-1.3	35.0	4	18.3	21	16	0	21.1	77	1.66	100	9	1.4	
LITTLE ROCK	78	1006.1	1015.7	31.9	21.8	27.2	-0.2	36.7	4	19.4	22	20	0	21.7	76	10.8	100	11	1.4	
NO. LITTLE ROCK	165	31.4	21.8	26.7	-0.8	36.7	4	18.9	6	16	0	0	0	14	13	0	0	12.1	9	
CALIFORNIA																				
BAKERSFIELD	145	995.3	1012.3	36.7	21.7	29.2	-0.4	43.3	16	16.1	7	24	0	13.3	39	0	1.67	31	10.3	
BISHOP	1252	1027.3	1011.6	24.4	13.1	14.8	-1.2	31.0	18	6.7	8	25	0	0	1.4	1.1	0	0.8	21	2.6
BLUE CANYON	1609	439.8	1011.6	14.5	1.2	1.0	1.0	6.7	6	0	0	3.9	41	0	0	0	0	0	2.6	
EUREKA U	13	1000.7	1012.1	17.2	11.8	14.5	1.0	22.2	9	8.9	3	0	0	0	1.4	1.4	0	0	13+	8.3
FRESNO	100	1000.7	1012.1	16.8	10.0	19.0	0.9	27.9	19	13.9	1	25	0	0	1.4	1.4	0	0	14	9.7
LUNG BACH	8	1011.9	1013.4	23.7	16.7	22.8	-0.1	34.4	31	13.9	4	0	0	15.0	70	7	0	2.1	3	
LOS ANGELES	30	1009.8	1013.4	23.7	16.7	20.2	0.1	27.2	17	10.1	77	0	0	15.6	77	0	0	2.1	3	
MT. SHASTA R	1077	992.7	1014.7	27.4	10.2	22.3	-0.5	31.7	31	14.4	6	0	0	0	0	0	0	0	0	
OAKLAND	12	1014.9	1015.0	32.1	14.4	14.8	1.0	37.8	10	19.0	4	10.6	41	0	0	5.6	2.1	8	2.6	
RED BLUFF	104	999.3	1011.5	36.7	1.7	1.0	0.5	28.3	30	12.8	75	2	0	0	0	0	0	0	0	
SACRAMENTO	15	1012.5	1012.4	33.6	19.8	24.9	0.4	44.4	44	23	0	0	0	1.5	12.5	59	0	0	1.4	
SAN OLAF	4	1012.5	1013.4	24.9	19.2	22.1	1.2	28.3	8	11.7	53	6	0	0	0	0	0	0	0	
SAN FRANCISCO	2	1014.2	1014.9	22.8	12.5	17.1	2.8	27.8	12	11.1	75	2	0	0	0	0	0	0	0	
SANTA MARIA U	16	34.9	16.2	11.6	11.6	15.7	0.9	31.1	18	11.1	18	0	0	0	0	0	0	0	0	
STOCKTON	7	1011.5	22	11.6	11.6	15.7	0.8	41.1	31	18	7	0	0	0	0	0	0	0	0	

CLIMATOLOGICAL DATA

METRIC UNITS

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State and Station	Pressure		Temperature						Precipitation			Wind			Sunshine		
	Elevation (ground)	Sea level	Average maximum			Average minimum			Departure from normal	To 0°	Average relative humidity	No. of days	Snow, ice pellets	Frost/mile (1.6 kilometers)	No. of days (sunrise to sunset)		
			Date	Lowest	Highest	Date	Lowest	Highest									
COLORADO	2297	28.3	6.8	17.6	-0.8	31.7	13	0	5	-25	2	17	0.7	0	9.19	3 4.4	
ALAMOSA	2151	1014.6	29.0	13.8	-0.1	34.4	13+	0.5	53	-9	29	1.1	0	10.15	6 7		
COLORADO SPRINGS	1873	1012.8	31.9	14.3	23.2	0.4	35.6	16+	18	21	-2	1.1	0	8.16	7 5.4		
DENVER	1610	1011.3	30.6	17.3	25.9	0.0	38.3	16	12.8	42	-1	1.1	0	15.13	3 4.3		
GRAND JUNCTION	1476	1011.3	30.8	15.6	24.7	0.1	38.9	13	12.0	31	37	1.1	0	15.13	3 4.0		
PUEBLO	1428	1011.3	30.8	15.6	24.7	0.1	38.9	13	12.0	23	0	1.1	0	16.16	5 8.7		
CONNECTICUT	2	1015.9	1016.5	26.9	19.4	23.2	0.0	31.1	12	11.1	6	0	18.3	7	14	13 4.2	
BRIDGEPORT	52	1009.5	1015.9	30.1	17.2	23.7	1.1	35.6	13	10	0	16.1	66	5	9	17 5.6	
HARFORD	23	1014.2	1017.2	29.0	19.1	24.1	-0.3	32.8	16+	10.0	6	0	18.3	7	18	19 6.7	
DELAWARE																	
WILMINGTON																	
OIST. OF COLUMBIA	8A	1005.4	1017.1	29.1	17.8	23.4	-0.6	32.8	13	7.2	6	0	18.9	79	5	17 5.1	
WASHINGTON NATIONAL	3	1014.9	1017.2	30.0	21.7	25.9	-0.1	33.9	12	13.9	6	0	20.6	75	87	25 2.1	
FLORIDA	6	1017.3	1017.9	31.8	22.9	27.4	-0.1	35.0	16	21.1	17	0	22.8	78	226	12 1.5	
APALACHICOLA	9	1016.9	1018.4	32.0	23.6	27.8	0.6	34.4	15+	21.7	1.5	0	23.9	83	297	12 1.5	
DAYTONA BEACH	6	1017.3	1018.2	34.8	24.9	29.8	1.8	22.2	4	31.0	0	0	15.1	52	175	12 1.5	
FORT MYERS	8	1017.3	1018.2	34.8	22.7	27.8	0.6	35.6	4+	21.1	20	0	22.8	80	119	12 1.5	
JACKSONVILLE	1	1017.3	1017.3	32.3	26.9	29.0	0.4	33.3	31+	24.4	24	0	22.4	77	167	12 1.5	
KEY WEST																	
MIAAMI	29	1018.1	1018.1	31.6	25.2	28.4	0.1	32.8	11+	22.2	20	1	12.9	56	10	12 1.5	
ORLANDO/MC CAY AF8	34	1012.6	1018.2	33.8	23.2	28.5	1.4	35.6	15+	21.1	1	0	23.3	81	202	12 1.5	
PENSACOLA	17	1017.2	1017.5	31.9	24.2	28.1	0.2	34.5	15	18.7	9	0	23.0	82	109	12 1.5	
TALLAHASSEE	1	1015.2	1017.5	32.5	25.1	29.7	-0.1	37.2	4	18.9	0	0	22.8	85	150	12 1.5	
TAMPA	6	1018.1	1018.1	32.4	25.9	28.2	1.1	34.4	31	23.3	8	0	24.7	80	156	12 1.5	
WEST PALM BEACH	5	1017.6	1018.4	32.4	25.1	28.2	0.4	34.4	31	23.3	8+	0	22.8	76	111	12 1.5	
GEORGIA	244	989.2	1017.7	29.8	20.8	25.3	-0.8	35.0	4	15.0	13	0	20.6	78	151	12 1.5	
ATLANTA	308	981.7	1018.3	30.3	21.7	26.0	0.4	35.0	17+	17.8	8	0	20.6	75	192	12 1.5	
AUGUSTA	41	1012.2	1017.5	32.1	21.2	26.7	-0.2	37.2	15+	16.1	9	0	20.6	73	136	12 1.5	
COLUMBUS	136	1009.1	1017.7	32.6	23.1	27.8	-0.5	38.9	5	16.3	1	0	22.2	80	105	12 1.5	
MACON	108	1014.7	1017.6	32.3	22.1	27.2	-0.2	36.3	4	17.8	0	0	21.1	76	121	12 1.5	
ROME	194	1016.6	1018.4	32.6	23.1	27.8	0.6	37.2	4	20.6	8+	0	22.2	76	274	12 1.5	
SAVANNAH																	
HAWAII	8	1016.6	1017.7	27.6	19.8	23.7	-0.4	29.4	13+	17.8	10+	0	20.0	82	166	12 1.5	
HONOLULU	2	1015.6	1016.8	30.7	21.7	26.2	0.5	32.2	30+	20.0	11	0	18.9	64	12	12 1.5	
KAHULUI	15	1012.6	1018.1	29.1	22.4	25.8	0.0	31.7	12	16.7	3	0	18.3	74	21	12 1.5	
LIHUE	31	1012.9	1018.1	30.7	21.7	26.2	0.5	32.2	30+	20.0	73	21	0	18.3	74	21	12 1.5
IDAHO																	
BOISE	864	916.0	1011.8	32.4	14.3	23.4	-0.2	36.9	17	7.8	2	0	3.9	29	14	12 1.5	
LEWISTON	431	916.0	1011.8	31.8	15.8	24.4	1.4	41.1	20	7.8	3+	0	5	7	1	12 1.5	
POCATELLO	1358	916.0	1011.8	31.8	11.9	21.9	-0.1	37.2	17	5.6	1	0	5	6	13	12 1.5	
ILLINOIS	96	992.6	1016.7	30.9	22.9	26.9	-0.2	35.0	3	16.3	7	12	0	0	0	12 1.5	
CAIRO	201	991.1	1016.7	15.3	17.8	22.2	0.1	34.4	23	6.1	8	0	15.0	64	21	12 1.5	
CHICAGO N HAB	185	991.9	1017.0	29.6	17.8	22.7	-1.0	31.7	27+	11.7	8	0	15.6	66	97	12 1.5	
CHICAGO MIDWAY	177	991.9	1016.3	29.3	16.8	23.1	0.5	32.2	23+	8.3	6	0	17.2	72	112	12 1.5	
MOLINE	199	991.2	1016.2	29.7	16.8	23.0	-1.2	32.2	23+	10.6	1	0	17.2	73	122	12 1.5	
PEDERIA	221	991.9	1017.5	28.0	15.8	21.9	-0.7	31.7	23+	7.2	6	0	16.7	73	110	12 1.5	
RUCIFORD	179	994.6	1016.4	29.9	18.3	24.1	-0.4	34.4	13	11.1	6	0	18.3	74	21	12 1.5	
SPRINGFIELD																	
INDIANA																	
EVANSVILLE	116	1002.4	1016.1	29.9	19.6	24.8	-0.7	33.9	30	15.0	6+	8	0	20.0	74	183	12 1.5

CLIMATOLOGICAL DATA
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July 1979

State and Station	Elevation (ground) Sea level	Pressure		Temperature				Precipitation				Wind				No. of days (sunrise to sunset)				
		Average maximum		Average minimum		Departure from normal		Departure from normal		Greatest in 24 hours		With underrun		Maximum depth on ground		Snow, ice pellets		Fastest mile (1 kilometer)		
		Date	Lowest	Date	Highest	Date	Lowest	Date	Highest	Date	Greatest	Date	Total	Date	Resultant speed	Date	Resultant direction	Date	Possible sunshine (sunrise to sunset)	
INDIANA FORT WAYNE	241	mb	987.5	mb	1016.9	21.6	-1.2	31.1	16	8.9	5	0	0	16.7	77	121	22	12.1	27	
INDIANAPOLIS SOUTH RENO	241	mb	988.2	mb	1017.0	28.1	-1.1	31.7	30	10.0	5	0	0	16.4	84	281	110	14	1.1	
IDAHO BURLINGTON	211	mb	986.4	mb	1016.7	28.3	-2.4	32.2	23	10.6	19*	1	0	16.1	69	46	23	8	11.2	
DES MOINES DUBUQUE	286	mb	981.7	mb	1015.7	28.6	-1.0	32.8	13	11.5	6	1	0	17.2	70	114	23	8	1.1	
SIOUX CITY WATERLOO	265	mb	979.7	mb	1015.3	29.1	-0.2	30.6	15*	13.5	19*	6	0	16.9	6	171	61	9	13	
KANSAS CONCORDIA	449	mb	962.4	mb	1014.2	30.6	-0.6	38.3	13	13.9	6	0	0	19.4	75	57	8	1.9	10	
OODGE CITY GOODLAND	787	mb	924.8	mb	1013.2	32.4	-0.7	38.3	8	15.6	20*	0	0	16.1	62	132	54	0	15	
TOPEKA	1114	mb	980.3	mb	1014.9	30.0	-0.4	40.0	11	11.7	19	1.8	0	16.1	67	115	49	12	12	
WICHITA	403	mb	967.4	mb	1014.0	32.9	-0.2	36.3	29*	16.7	20*	0	0	17.2	73	177	49	6	11	
KENTUCKY COVINGTON	264	mb	986.5	mb	1017.4	27.4	-1.2	31.1	30*	11.7	5	0	0	18.3	76	139	35	4	1.3	
LEXINGTON	294	mb	982.4	mb	1017.2	28.1	-1.2	31.7	16	11.1	5	0	0	17.8	74	120	-3	20	1.3	
Louisville	145	mb	999.0	mb	1016.3	28.6	-1.0	32.2	16	12.8	6	1	0	20.0	82	255	160	7	1.3	
LOUISIANA BATON ROUGE	20	mb	1013.9	mb	1016.4	31.6	-0.3	36.7	5	21.1	12*	0	0	22.8	81	223	57	14	1.3	
LAKE CHARLES NEW ORLEANS	3	mb	1014.2	mb	1015.5	31.6	-0.4	35.6	16	21.7	26*	1.4	0	23.9	85	334	169	13	1.2	
SHREVEPORT	77	mb	1005.8	mb	1014.8	32.3	-0.9	36.1	5	21.1	12	23	0	23.3	76	297	120	6	1.1	
MAINE CARBON PORTLAND	190	mb	990.5	mb	1015.2	26.9	-0.7	32.8	24	11.1	5	0	0	17.8	74	222	77	0	0.7	
MARYLAND BALTIMORE	49	mb	1011.5	mb	1016.9	29.4	-0.4	34.4	12	10.6	6	0	0	18.9	75	94	-9	35	1.2	
MASSACHUSETTS BLUFF MOUNTAIN	192	mb	1016.5	mb	1015.5	28.3	-0.3	32.8	24	6.7	6*	2	0	15.6	76	15n	85	2	0	
WORCESTER	301	mb	979.3	mb	1016.8	26.7	-1.6	32.2	13	8.3	4	1	0	16.0	76	10.7	77	0	0	
MICHIGAN ALPENA	210	mb	991.2	mb	1016.3	26.6	-1.2	34.4	14	8.3	6	3	0	14.4	76	115	52	40	7	
DETROIT METROPOLITAN	189	mb	992.0	mb	1016.5	27.1	-1.7	30.6	23	10.6	4	0	0	15.0	67	161	60	47	78	
FLINT	193	mb	988.8	mb	1016.3	28.4	-1.5	30.0	23*	8.9	6*	0	0	16.1	74	16.1	75	1	43	
GRAND RAPIDS	234	mb	988.2	mb	1016.9	28.3	-1.0	32.2	22	9.4	5	0	0	15.6	71	58	22	9	30+	
HOUGHTON LAKE	350	mb	985.4	mb	1016.7	26.2	-1.2	31.1	13*	5.0	6*	0	0	15.6	71	58	24	7	36	
LANSING	256	mb	985.4	mb	1016.7	26.8	-1.4	31.2	23*	6.1	5	0	0	15.6	74	47	24	9	30+	
MARQUETTE	431	mb	993.9	mb	1016.5	26.6	-1.0	31.1	12	3.9	5	0	0	15.6	74	11.8	47	19	7	
HUSKIEGAN	191	mb	989.8	mb	1016.0	25.8	-0.8	30.0	13	7.8	7	0	0	14.4	73	43	-21	18	1.1	
SAULT ST. MARIE	220	mb	989.8	mb	1016.0	25.8	-1.3	32.2	12	8.9	0.9	1	0	14.4	78	112	44	40	9	
MINNESOTA DULUTH	435	mb	966.1	mb	1017.0	13.2	-0.3	31.1	11	6.1	5	0	0	12.2	68	13*	44	78	12	
INTERNATIONAL FALLS	359	mb	972.9	mb	1014.6	25.8	-1.2	31.1	21*	5.0	16.1	6	0	14.4	77	27	-74	9	31+	
MINNEAPOLIS	254	mb	986.1	mb	1016.9	28.6	-1.5	32.2	23*	11.7	12*	3	0	15.6	71	58	21	22	10	
ROCHESTER	395	mb	969.7	mb	1016.8	28.6	-1.6	32.0	12	1.4	2*	0	0	15.6	71	58	21	24	10	
ST. CLOUD	313	mb	979.7	mb	1016.4	27.1	-0.6	20.6	-0.7	32.2	9	1	0	16.1	69	31	-51	11	1.1	
MISSISSIPPI JACKSON	94	mb	1004.4	mb	1016.0	31.6	-0.8	36.7	5	18.3	1	13	0	0	23.3	86	137	22.8	17	6

CLIMATOLOGICAL DATA
METRIC UNITS

JULY 1979

State and Station	Elevation (ground) m	Station No.	Pressure mb	Temperature			Precipitation			Wind			No. of days (sunrise to sunset)					
				Average maximum °C		Date of highest temp. °C	Average minimum °C		Date of lowest temp. °C	Departure from normal mm		Resultant speed m/s		No. of days (sunrise to sunset)				
				No. of days above MDA 32.7°C or lower	Min. 0°C or lower		No. of days above MDA 32.7°C or higher			Total	Departure from normal mm	No. of days above 2.5 mm. or more in 24 hours	Resultant direction	Speed m/s	Sky cover to sunset	Possible sunshine %		
MISSISSIPPI MERIDIAN	66	1005.8	1016.7	32.7	22.5	27.6	0.3	37.2	5	15.6	1	22	8.1	16.5	20.25+	1 12 18 7.5		
MISSOURI COLUMBIA REGIONAL	270	984.4	1016.1	30.4	18.6	24.5	-0.7	35.0	30*	23.9	13	0	18.9	7.4	7.5	17 17 6.9		
KANSAS CITY KANSAS CITY MUN AP	297	979.3	1015.3	28.8	19.8	24.4	-0.9	33.9	13	12.3	1.5	0	20.0	8.0	0.9	17 6.9		
ST JOSEPH ST LOUIS	226	247	21.7	26.2	-0.3	26.7	1.3	14.4	5	14.4	5	0	1.3	1.5	1.4	13 4.4		
SPRINGFIELD	386	971.2	1015.9	31.3	21.1	24.1	-1.6	34.4	13*	12.8	1.3	0	1.3	1.5	1.4	13 5.5		
MONTANA BILLINGS	1087	992.0	1013.5	31.1	14.8	23.0	0.9	36.7	21*	10.0	1	15	0	1.2	1.0	1.1	15 5.5	
Glasgow	699	936.0	1014.2	29.8	14.8	22.3	0.9	36.7	21*	10.0	16	10	0	1.0	0.8	1.0	15 4.9	
Great Falls	1116	980.3	1014.5	29.9	12.0	20.6	-0.2	38.3	2.0	12.6	1.3	0	1.0	1.2	1.0	13 5.6		
Hayre	1784	923.8	1014.7	29.9	12.3	21.1	0.1	36.7	14*	13.6	1.4	0	1.1	1.2	1.0	13 5.6		
Helena	1167	981.2	1014.5	29.5	11.8	20.7	0.7	35.0	2.1	13.9	1.1	0	1.1	1.2	1.0	13 5.6		
Kalispell	904	912.3	1015.5	29.3	10.3	19.8	1.9	37.2	20	10.0	3	11	1.1	0	0.9	1.0	13 5.6	
Miles City	901	922.1	1013.1	31.1	16.2	23.7	0.1	39.4	22*	10.0	15	14	0	1.2	1.0	1.1	13 5.6	
Missouri	972	905.2	1015.0	30.2	11.1	20.7	1.4	37.2	19	2.2	2	13	0	1.1	0	0.9	1.1	13 5.6
NEBRASKA GRAND ISLAND	561	920.2	1014.9	28.6	18.1	23.3	-1.3	38.3	13	13.9	6	7	0	18.3	7.6	-9	23 11 5.7	
LINCOLN	359	972.9	1014.8	28.9	19.1	23.9	-1.3	36.7	15*	15.0	18*	7	0	19.4	7.7	9	23 11 5.7	
NORFOLK	471	961.5	1015.2	29.0	17.9	23.4	-0.7	36.1	13	13.9	1.3	0	17.8	7.4	10	23 11 5.7		
NORTH PLATE	846	918.7	1014.4	29.3	17.4	23.4	-0.1	35.0	1.1	13.9	1.6	0	17.0	7.0	10	23 11 5.7		
OMAHA (REIPLEY)	298	920.2	1014.7	29.5	19.3	24.4	-0.7	36.1	1.3	13.9	1.8	0	18.7	7.3	10	23 11 5.7		
OMAHA (NORTH)	399	981.1	1013.6	31.7	18.7	23.5	-0.7	35.6	1.3	14.4	6	3	0	12.8	7.1	31	14 12 5.7	
SCOTTSDALE	1206	981.1	1013.6	31.7	16.0	23.9	-0.7	38.3	10	12.6	1.0	15	0	1.1	0	0.9	12 11 5.7	
Valentine	789	923.8	1014.8	29.9	16.1	23.0	-0.4	36.1	21	11.1	5	14	0	15.6	6.9	-3	12 11 5.7	
NEVADA ELKO	1539	945.6	1012.2	34.5	12.1	23.3	2.4	40.0	5	6.1	1	27	0	1.1	2.6	2	12 11 5.7	
ELY	1906	911.0	1011.4	30.7	8.6	19.7	0.1	35.6	17	3.3	1	15	0	1.7	2.8	2	12 11 5.7	
Las Vegas	659	935.0	1005.2	41.6	24.1	32.8	0.8	46.1	18	3.8	6	30	0	1.7	3.0	2	12 11 5.7	
Reno	1342	966.9	1013.4	32.9	9.2	21.1	1.1	38.9	1.3	3.0	3	17	0	1.7	2.8	2	12 11 5.7	
Winnebago	1311	868.6	1012.3	34.5	10.9	22.7	1.1	41.1	16	3.9	24	0	2.8	3	5	0	0.9	12 11 5.7
New Hampshire Concord	104	1003.4	1015.8	28.7	14.8	21.8	0.8	34.4	14	2.9	5	5	0	15.0	6.9	8	24 11.2 5	
Washington D.C.	1909	20	1014.2	30.2	7.7	10.5	1.2	18.3	14	-2.8	5	0	4	20	T	0	0.6	24 11.2 5
New Jersey Atlantic City	3	1015.6	1016.6	28.6	19.1	23.7	-0.3	32.8	12	8.9	6	3	0	17.8	7.1	9	22 11.2 5	
Newark	2	17	28.1	20.7	25.0	0.3	33.3	13*	11.7	6	0	14.4	5.6	49	21	5	22 11.2 5	
Trenton	17	17	19.1	23.6	-0.8	33.9	13	41.7	6*	3.2	0	17.2	5	172	52	49	22 11.2 5	
New Mexico Albuquerque	1619	840.2	1011.4	35.6	18.3	27.0	1.1	40.6	4	12.2	2	27	0	7.8	3.6	-15	5 4.2 7.9	
Clayton	1515	30.8	1011.1	34.2	20.7	27.2	1.0	38.3	11*	11.7	6	14	0	8.4	3.7	-7	13 11.2 7.9	
Roswell	1112	890.3	1011.1	34.2	20.7	27.2	1.0	38.3	11*	11.7	7	26	0	14.4	5.0	0	1.4 11.2 7.9	
New York Albany	84	1005.8	1016.2	28.8	16.2	22.5	0.3	35.0	14	6.7	5	0	16.7	7.2	71	-9	55	20 13.9 5.7
Binghamton	485	956.0	1017.2	26.1	14.9	27.3	1.6	32.2	14	9.4	6*	1	0	14.4	7.3	37	60 12 5.7	
Buffalo	215	991.2	1016.4	26.0	16.4	24.8	0.7	32.2	20*	9.4	6	3	0	14.4	6.7	89	13 12 5.7	
New York U	40	1013.5	1016.8	29.4	10.6	29.7	1.0	35.0	4.3	11.7	5	0	16.7	6.4	49	25 12 5.7		
New York Kennedy	4	1015.7	1016.7	27.6	19.8	23.7	-0.2	31.7	7	12.8	6	0	17.8	7.0	42	60 12 5.7		
New York La Guardia	3	1015.9	1016.9	29.4	20.7	22.1	0.2	33.9	13	13.3	6*	0	16.7	6.3	35	15 12 5.7		
Rochester	167	996.3	1016.3	28.3	16.4	22.4	0.6	35.0	23	9.4	7*	6	0	17.2	7.5	7	28 12 5.7	

State and Station		Pressure		Temperature				Precipitation				Wind				Possible sunshin e		
		Sea level	Elevation (ground)	Average minimum	Average maximum	High heat	Lowest	Date	Days	No. of days	No. of days	Snow, ice pellets	Fastest mile (1.6 kilometers)	Date	Cloudy, 8-10	Cloudy, 4-7	Sunrise, evenings (sunrise to sunset)	
RHODE ISLAND PROVIDENCE	m 1014.2	mb 1016.5	27.7	18.3	23.1	0.8	33.3	13	9.4	5	1	0	17.2	73	42	-3.0	20	8
SOUTH CAROLINA CHARLESTON U	12 1016.6	32.7	22.8	27.8	1.0	36.1	16	18.3	8	19	0	21.7	74	217	-6	13	9	
COLUMBIA	65 1009.8	31.4	20.2	25.8	0.1	34.4	28*	18.9	8*	19	0	20.0	74	185	-41	12	9	
GRANVILLE-SPRINGRG	292 983.7	28.2	19.2	23.7	-2.0	35.6	15*	18.0	9	20	2	19.4	80	220	114	7	8	
SOUTH DAKOTA ABERDEEN	395 968.5	27.2	15.6	21.4	-0.7	32.8	23	8.3	17	2	0	17.2	69	65	-5	23	10	
HURON	390 968.8	29.9	18.0	24.0	-0.8	36.1	23*	13.3	17*	10	0	15.0	70	104	51	21	9	
RAPID CITY	964 965.5	27.3	15.9	21.3	-1.2	31.9	22	11.6	17*	6	0	16.1	67	87	5	12	16	
SIOUX FALLS	432 1016.0	29.1	17.6	23.3	0.4	34.4	21	10.6	17	10	0	15.0	70	11	0	0	0	
TENNESSEE BRISTOL	459 965.1	26.3	16.9	21.6	-0.7	30.0	24	12.2	8*	0	0	17.2	80	154	29	26	7	
CHATTANOOGA	203 993.2	28.7	20.7	24.7	-1.3	34.4	4*	15.6	1	5	0	20.6	79	290	169	147	16	
KNOXVILLE	299 983.1	27.5	19.7	20.2	-1.8	31.1	31*	17.2	6*	0	0	20.6	84	241	70	19	6	
MEMPHIS	79 1006.1	32.2	24.1	28.1	0.6	36.1	24	15	0	0	0	21.1	68	79	11	23	9	
NASHVILLE	180 995.3	29.7	20.9	25.3	-1.1	33.9	4	16.1	1	6	0	20.0	1	81	108	11	0	
DAK RIGGE R	276	18.6	23.3	-1.7	32.2	31*	14.4	2	4	0	0	21.1	81	328	184	74	0	
TEXAS ABILENE	544 951.9	34.9	22.5	28.7	-0.1	37.2	30*	19.4	10	27	0	17.8	56	39	-20	26	5	
AMARILLO	1098 992.7	32.2	17.8	25.1	-0.9	37.2	1	13.9	20*	19	0	15.6	60	52	-23	22	9	
AUSTIN	182 992.2	33.4	23.4	25.4	-0.8	35.6	2	21.1	11	24	0	21.7	73	268	220	123	7	
BROWNSVILLE	6 1013.2	34.4	25.0	29.7	0.2	37.2	23	23.3	18*	30	0	23.3	73	53	-23	17	9	
CORPUS CHRISTI	12 1011.9	34.5	24.9	29.7	-0.4	37.8	24	21.7	11	31	0	23.3	73	89	-42	17	5	
DALLAS - FORT WORTH	168 993.2	35.0	24.8	29.2	-0.2	38.5	1	21.7	11	28	0	21.4	67	49	-3	21	6	
DEL RIO	194 981.8	37.3	30.3	30.8	-0.4	41.1	25	19.4	10	20	0	20.0	58	6	-20	17	4	
EL PASO	378 1009.7	28.8	21.8	29.5	-1.0	40.1	10	13.9	9	29	0	12.2	39	25	-14	11	7	
GALVESTON	29 1010.5	32.9	25.6	28.1	-0.5	33.3	27	22.8	25	0	0	21.8	59	0	0	0	0	
HOUSTON INTERCDN	992 904.5	32.0	23.9	26.1	-0.6	33.6	16*	24.1	11	24	0	23.9	84	444	332	30	0	
LUBBOCK	469 1012.4	33.9	21.3	27.7	-1.2	39.4	1	17.2	10	25	0	15.6	57	47	-10	25	9	
MIDLAND	916.0	34.7	20.5	27.8	-0.1	38.9	1	13.3	9	27	0	17.2	57	77	-31	39	5	
PORT ARTHUR	5 1014.2	31.3	24.6	29.7	-0.2	37.9	24	21.7	11	31	0	25.0	89	249	268	12	0	
SAN ANGELO	580 967.9	1012.7	34.8	29.8	-0.7	37.9	57*	22.2	11	14	0	21.7	57	33	-1	27	0	
SAN ANTONIO	240 986.1	1013.5	34.4	25.1	29.3	-0.7	36.7	25*	21.1	10	28	0	17.8	57	187	145	69	10
VICTORIA	32 1010.4	34.5	30.2	32.8	-0.8	38.4	24*	21.1	11	24	0	23.3	80	176	105	60	11	
WACO	153 996.3	32.8	23.1	27.9	-0.8	36.4	31*	20.0	10	23	0	21.7	71	127	90	8	11	
WICHITA FALLS	303 1013.5	36.3	22.7	29.5	-0.4	40.6	29*	18.9	17	28	0	20.0	63	44	-11	15	5	
UTAH MILFORD	1533 946.9	1012.1	34.2	11.6	23.0	-0.5	38.3	17	5.6	4	24	0	4.4	29	1	-12	1	
SALT LAKE CITY	1287 971.3	1011.4	34.6	17.5	26.1	1.2	38.3	27*	12.8	1	27	0	4.4	29	10	-8	3	
VERMONT BURLINGTON	101 1003.1	1015.3	28.6	16.1	22.3	1.3	33.9	25	6.7	4	5	0	16.1	70	31	-59	8	
VIRGINIA LYNCBURG	279 984.4	1017.5	28.9	18.1	23.5	-0.7	32.8	31*	11.1	6	4	0	18.9	71	114	-26	55	
NORFOLK	7 1010.9	29.6	20.5	25.1	-0.7	33.9	29	12.2	7	5	0	20.0	12	111	-32	60	9	
RICHMOND	50 1017.1	29.8	20.0	26.9	-0.6	33.9	12	12.6	6	9	0	21.1	78	101	-55	100	5	
ROANOKE	350 976.3	1017.7	27.9	19.9	24.9	0.3	32.2	31*	0.9	4	0	0	16.3	12	154	-19	55	0
WALLOPS ISLAND	3 1017.3	28.2	18.7	22.7	-0.4	32.2	12	12.8	6	2	0	0	11.1	13	20	-19.7	24	0
WASHINGTON OLYMPIA	59 1009.5	1016.7	26.4	10.4	18.4	-0.8	36.7	16	5.6	4*	5	0	11.1	69	40	-5	31	0
QUILLAYUTE	55 1010.5	20.8	10.2	15.6	0.5	35.0	16	4*	3	1	0	0	0.8	1.1	55	-5	32	0
SEATTLE	6	24.1	14.0	19.1	0.3	32.2	16	8.3	2	16	4	0	0	0	0	0	0	

CLIMATOLOGICAL DATA
METRIC UNITS

July 1979

State and Station	Elevation (ground)	Pressure		Temperature		Precipitation		Wind		Fog		No. of days (sunrise to sunset)	
		Sea level	Station	°C	°C	Total	Depature from normal	No. of days	Snow ice pellets	Fog (1.6 kilometers)	No. of days	Possible sunshine	
WASHINGTON	122	1000.7	1017.0	25.9	13.4	19.7	1.6	36.7	16	0	10.6	59	84
SEATTLE - A.D.U.A.	718	931.3	1013.6	29.2	13.4	21.3	0.4	38.4	20	0	6.1	39	84
SPOKANE	811.5	885.8	1016.9	18.5	8.5	13.5	0.1	29.4	17	-0.6	10	1.0	8.4
STAMPEDE PASS R	1206	948.9	1017.4	32.6	17.0	24.8	0.6	41.7	20	-0.6	1.0	12	8.4
MALLA WALLA U	289	975.3	1013.2	31.7	12.8	22.3	0.8	40.0	19	1.7	2	0	8.4
YAKIMA	321	921	1015.2	31.8	25.4	28.6	1.4	33.9	10+	0	6.7	39	8.4
SAN JUAN P.R.	4	1015.2	1017.8	24.4	15.3	19.6	1.3	28.9	31	6.1	0	17.2	87
WEST VIRGINIA	763	931.3	1017.8	27.8	17.6	22.7	-1.2	32.2	31	0	0	12.4	8.4
BECKLEY	286	983.4	1018.2	25.3	14.7	20.0	-0.4	30.6	31	1.0	1.0	17.8	8.4
CHARLESTON	594	948.9	1017.4	287.8	87.8	18.6	23.3	32.8	31	0	0	13.1	8.4
ELKINS	252	921	1017.4	27.1	17.6	22.4	-1.6	32.8	31	0	0	10.6	8.4
HUNTINGTON	187	975.3	1015.2	24.4	15.3	19.6	1.3	28.9	31	6.1	0	18.3	8.4
PARKERSBURG U	187	921	1015.2	24.4	15.3	19.6	1.3	28.9	31	6.1	0	18.3	8.4
WISCONSIN	208	991.2	1016.6	27.3	15.3	21.3	0.7	32.2	32	1.0	15.0	69	6.4
GREEN BAY	198	992.9	1017.0	28.5	16.1	22.3	-0.4	32.8	31	0	16.7	75	6.4
LA CROSSE	262	985.8	1016.9	28.4	13.6	21.0	-0.2	31.7	15+	0	15.0	73	6.4
MADISON	205	992.2	1017.3	26.9	16.3	21.6	0.6	32.2	27+	9.4	0	15.0	6.4
MILWAUKEE	162*	940.2	1013.8	31.6	11.6	21.6	-0.4	36.7	10	1.4	0	6.1	45
MINNESOTA	162*	940.2	1013.8	29.1	12.0	21.1	0.4	32.8	4+	9.4	31	7	5.4
CASPER	166*	916.9	1014.0	30.5	12.5	21.5	0.1	33.3	10	7.8	6	5.4	6.7
CHEYENNE	166*	916.9	1013.8	30.5	12.5	21.5	0.1	33.3	10	7.8	6	5.4	6.7
LARIMER	166*	931.7	1013.8	29.3	10.8	20.1	-1.3	36.7	10	6.1	1.5+	9.4	8.2
SHERIDAN	1208	980.5	1014.8	29.3	10.8	20.1	-1.3	36.7	10	6.1	1.5+	7.0	8.2

HEATING DEGREE DAYS

(Base 65°F.)

JULY 1979

State and Station	Current season			State and Station			Current season			State and Station			Current season			State and Station		
	This month	Period July through this month	Normals	This month	Period July through this month	Normals	This month	Period July through this month	Normals	This month	Period July through this month	Normals	This month	Period July through this month	Normals	This month	Period July through this month	Normals
ALABAMA BIRMINGHAM U	0	0	c	IDAHO ROISE	5	5	NEBRASKA GRAND ISLAND	0	0	TENNESSEE BRISTOL	3	3	TEXAS ABILENE	0	0	0	0	0
BIRMINGHAM	0	0	0	LEWISTON	12	12	LINCOLN	3	3	CHATTANOOGA	0	0	AMARILLO	0	0	0	0	0
HUNTSVILLE	0	0	0	POCATELLO	1	1	NORFOLK	3	3	KNOXVILLE	0	0	AUSTIN	0	0	0	0	0
MOBILE	0	0	0	ILLINOIS CAIRNS U	0	0	NORTH PLATTE	4	4	MEMPHIS	0	0	BROWNSVILLE	0	0	0	0	0
MONTGOMERY	0	0	0	CHICAGO U MAKE	16	16	OMAHA (EPPLEY)	1	1	NASHVILLE	0	0	CORPUS CHRISTI	0	0	0	0	0
ALASKA ANCHORAGE	138	138	227	CHICAGO MIDWAY	22	24	OMAHA (NORTH)	4	4	OAK RIDGE	0	0	DALLAS FT WORTH	0	0	0	0	0
ANCHORAGE	176	176	231	PEORIA	3	3	SCOTTSBLUFF	0	0	FL PASTO	0	0	FL PASTO	0	0	0	0	0
BARTON	676	676	815	ROCKFORD	9	9	VALENTINE	14	14	GALVESTON	0	0	HOUSTON INTERCON	0	0	0	0	0
BARTER ISLAND	680	680	775	SPRINGFIELD	0	0	NEVADA ELKO	0	0	LUCKLO	0	0	INDIANO	0	0	0	0	0
BETHEL	345	345	319	EVANSVILLE	0	0	FLY	22	22	RIO GRANDE	0	0	RIO GRANDE	0	0	0	0	0
BETLES	194	194	231	FORT WAYNE	0	0	LAS VEGAS	0	0	ROBERTS	0	0	ROBERTS	0	0	0	0	0
BIG DELTA	118	118	181	INDIANAPOLIS	3	3	RENO	9	9	ROSEBURG	0	0	ROSEBURG	0	0	0	0	0
COLD BAY	387	387	462	SOUTH REND	3	3	WINNEMUCCA	1	1	SPRINGFIELD	0	0	SPRINGFIELD	0	0	0	0	0
FAIRBANKS	124	124	148	NEW HAMPSHIRE CONCORD	3	3	NEW HAMPSHIRE	33	33	ST. LOUIS	0	0	ST. LOUIS	0	0	0	0	0
GULKA	215	215	254	MT WASHINGTON OBS	430	430	MT WASHINGTON DBS	502	502	ST. PAUL	0	0	ST. PAUL	0	0	0	0	0
HOMER	302	302	394	NEW JERSEY	0	0	NEW JERSEY	0	0	ST. LOUIS	0	0	ST. LOUIS	0	0	0	0	0
JUNEAU	251	251	288	NEW YORK U	0	0	ATLANTIC CITY	6	6	ST. LOUIS	0	0	ST. LOUIS	0	0	0	0	0
KING SALMON	214	214	326	NEW YORK U	1	1	ATLANTIC CITY U	5	5	ST. LOUIS	0	0	ST. LOUIS	0	0	0	0	0
KODIAK	200	200	338	NEW YORK U	6	6	NEWARK	2	2	ST. LOUIS	0	0	ST. LOUIS	0	0	0	0	0
KOTZEBUE	332	332	375	NEW YORK U	1	1	YAKUTIN U	7	7	ST. LOUIS	0	0	ST. LOUIS	0	0	0	0	0
MC GRATH	221	221	219	NEW YORK U	2	2	NEW MEXICO	0	0	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
NAME	435	435	462	NEW YORK U	3	3	ALBUQUERQUE	0	0	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
STA. RAUL ISLAND	497	497	598	NEW YORK U	4	4	CLAYTON	0	0	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
TALKETNA	152	152	227	NEW YORK U	5	5	RUSSELL	0	0	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
UNALAKleet				NEW YORK U	6	6	NEW YORK U	19	19	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
VALUZ	287	287	363	NEW YORK U	7	7	NEW YORK U	37	37	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
YAKUTAT	284	284	360	NEW YORK U	8	8	NEW YORK U	16	16	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
ARIZONA FLAGSTAFF	68	68	57	NEW YORK U	9	9	NEW YORK U	21	21	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
PHOENIX	0	0	0	NEW YORK U	10	10	NEW YORK U	4	4	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
TUCCSON	0	0	0	NEW YORK U	11	11	NEW YORK U	2	2	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
MESHLWD	0	0	0	NEW YORK U	12	12	NEW YORK U	13	13	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
YUMA	0	0	0	NEW YORK U	13	13	NEW YORK U	19	19	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
ARKANSAS FORT SMITH	0	0	0	NEW YORK U	14	14	NEW YORK U	20	20	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
LITTLE ROCK	0	0	0	NEW YORK U	15	15	NEW YORK U	21	21	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
NO. LITTLE ROCK	0	0	0	NEW YORK U	16	16	NEW YORK U	22	22	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
CALIFORNIA BAKERSFIELD	0	0	0	NEW YORK U	23	23	NEW YORK U	23	23	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
BISHUP	0	0	0	NEW YORK U	24	24	NEW YORK U	24	24	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
BLUE CANYON	94	94	27	NEW YORK U	25	25	NEW YORK U	25	25	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
EUREKA U	208	208	270	NEW YORK U	26	26	NEW YORK U	26	26	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
FRESNO	0	0	0	NEW YORK U	27	27	NEW YORK U	27	27	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
LONG BEACH	0	0	0	NEW YORK U	28	28	NEW YORK U	28	28	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
LOS ANGELES	0	0	0	NEW YORK U	29	29	NEW YORK U	29	29	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
LOS ANGELES U	0	0	0	NEW YORK U	30	30	NEW YORK U	30	30	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
MT SHASTA R	44	44	37	NEW YORK U	31	31	NEW YORK U	31	31	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
OAKLAND	33	33	38	NEW YORK U	32	32	NEW YORK U	32	32	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
RED BLUFF	0	0	0	NEW YORK U	33	33	NEW YORK U	33	33	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
SACRAMENTO	0	0	0	NEW YORK U	34	34	NEW YORK U	34	34	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
SAN DIEGO	55	55	6	NEW YORK U	35	35	NEW YORK U	35	35	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
SAN FRANCISCO	55	55	93	NEW YORK U	36	36	NEW YORK U	36	36	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
SAN FRANCISCO U	151	151	202	NEW YORK U	37	37	NEW YORK U	37	37	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
SANTA MARIA	69	69	112	NEW YORK U	38	38	NEW YORK U	38	38	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
STOCKTON	0	0	0	NEW YORK U	39	39	NEW YORK U	39	39	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
COLORADO ALAMUSA	57	57	54	NEW YORK U	40	40	NEW YORK U	40	40	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
COLORADO SPRINGS	6	6	9	NEW YORK U	41	41	NEW YORK U	41	41	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
DENVER	0	0	0	NEW YORK U	42	42	NEW YORK U	42	42	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
GRAND JUNCTION	0	0	0	NEW YORK U	43	43	NEW YORK U	43	43	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
PUEBLO	0	0	0	NEW YORK U	44	44	NEW YORK U	44	44	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
CUNNNECTICUT BRIDGEPORT	8	8	0	NEW YORK U	45	45	NEW YORK U	45	45	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
HARTFORD	16	16	10	NEW YORK U	46	46	NEW YORK U	46	46	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
DELAWARE WILMINGTON	4	4	0	NEW YORK U	47	47	NEW YORK U	47	47	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
WIST. OF COLUMBIA WASHINGTON DULLES	7	7	7	NEW YORK U	48	48	NEW YORK U	48	48	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
WASHINGTON NATIVUAL	0	0	0	NEW YORK U	49	49	NEW YORK U	49	49	NEW YORK U	0	0	NEW YORK U	0	0	0	0	0
FLORIDA APALACHICOLA U	0	0	0	MISSISSIPPI JACKSON	50	50	MISSISSIPPI JACKSON	50	50	MISSISSIPPI JACKSON	0	0	MISSISSIPPI JACKSON	0	0	0	0	0
DAYTONA BEACH	0	0	0	MISSISSIPPI MERIDIAN	51	51	MISSISSIPPI MERIDIAN	51	51	MISSISSIPPI MERIDIAN	0	0	MISSISSIPPI MERIDIAN	0	0	0	0	0
FORT MYERS	0	0	0	MISSISSIPPI ST JOSEPH	52	52	MISSISSIPPI ST JOSEPH	52	52	MISSISSIPPI ST JOSEPH	0	0	MISSISSIPPI ST JOSEPH	0	0	0	0	0
JACKSONVILLE	0	0	0	MISSISSIPPI ST LOUIS	53	53	MISSISSIPPI ST LOUIS	53	53	MISSISSIPPI ST LOUIS	0	0	MISSISSIPPI ST LOUIS	0	0	0	0	0
KEY WEST	0	0	0	MISSISSIPPI SPRINGFIELD	54	54	MISSISSIPPI SPRINGFIELD	54	54	MISSISSIPPI SPRINGFIELD	0	0	MISSISSIPPI SPRINGFIELD	0	0	0	0	0
MIAMI	0	0	0	MISSISSIPPI RILLING	55	55	MISSISSIPPI RILLING	55	55	MISSISSIPPI RILLING	0	0	MISSISSIPPI RILLING	0	0	0	0	0
ORLANDO	0	0	0	MISSISSIPPI GLASGOW	56	56	MISSISSIPPI GLASGOW	56	56	MISSISSIPPI GLASGOW	0	0	MISSISSIPPI GLASGOW	0	0	0	0	0
PENSACOLA	0	0	0	MISSISSIPPI GREAT FALLS	57	57	MISSISSIPPI GREAT FALLS	57	57	MISSISSIPPI GREAT FALLS	0	0	MISSISSIPPI GREAT FALLS	0	0	0	0	0
TALLAHASSEE	0	0	0	MISSISSIPPI HAWKE	58	58	MISSISSIPPI HAWKE	58	58	MISSISSIPPI HAWKE	0	0	MISSISSIPPI HAWKE	0	0	0	0	0
TAMPA	0	0	0	MISSISSIPPI HELEIA	59	59	MISSISSIPPI HELEIA	59	59	MISSISSIPPI HELEIA	0	0	MISSISSIPPI HELEIA	0	0	0	0	0
WEST PALM BEACH	0	0	0	MISSISSIPPI KALISPELL	60	60	MISSISSIPPI KALISPELL	60	60	MISSISSIPPI KALISPELL	0	0	MISSISSIPPI KALISPELL	0	0	0	0	0
GEORGIA ATHENS	0	0	0	MISSISSIPPI MILES CITY	61	61	MISSISSIPPI MILES CITY	61	61	MISSISSIPPI MILES CITY	0	0	MISSISSIPPI MILES CITY	0	0	0	0	0
ATLANTA	0	0	0	MISSISSIPPI MISSJULA	62	62	MISSISSIPPI MISSJULA	62	62	MISSISSIPPI MISSJULA	0	0	MISSISSIPPI MISSJULA	0	0	0	0	0
AUGUSTA	0	0	0	MISSISSIPPI NEW YORK	63	63	MISSISSIPPI NEW YORK	63	63	MISSISSIPPI NEW YORK	0	0	MISSISSIPPI NEW YORK	0	0	0	0	0
COLUMBUS	0	0	0	MISSISSIPPI NEW YORK	64	64	MISSISSIPPI NEW YORK	64	64	MISSISSIPPI NEW YORK	0	0	MISSISSIPPI NEW YORK	0	0	0	0	0
MACON	0	0	0	MISSISSIPPI NEW YORK	65	65	MISSISSIPPI NEW YORK	65	65	MISSISSIPPI NEW YORK	0	0	MISSISSIPPI NEW YORK	0	0	0	0	0
ROME	0	0	0	MISSISSIPPI NEW YORK	66	66	MISSISSIPPI NEW YORK	66	66	MISSISSIPPI NEW YORK	0	0	MISSISSIPPI NEW YORK	0	0	0	0	0
SAVANNAH	0	0	0	MISSISSIPPI NEW YORK	67	67	MISSISSIPPI NEW YORK											

COOLING DEGREE DAYS

(Base 65°F.)

JULY 1979

State and station	Current season			Current season			Current season			Current season			Current season			
	This month	Period January through this month	Normals January through this month	This month	Period January through this month	Normals January through this month	This month	Period January through this month	Normals January through this month	This month	Period January through this month	Normals January through this month	This month	Period January through this month	Normals January through this month	
ALABAMA				HAWAII			NEBRASKA			SOUTH CAROLINA			TENNESSEE			
BIRMINGHAM U	452	996	1284	MILD	302	1647	GKANO ISLAND	294	541	CHARLESTON	533	1191	1201			
BIRMINGHAM	606	1014	1131	HONOLULU	300	2287	LINCOLN	320	646	CHARLESTON U	516	1087	1341			
HUNTSVILLE	400	610	1054	KAMULUI	446	2057	NORFOLK	297	530	COLUMBIA U	425	884	1235			
MOBILE	512	1403	1504	LIMUE	423	2053	NORTH PLATTE	294	477	GRVILLE-SPRNBRG	312	727	932			
MONTGOMERY	482	1134	1297	10AMO			OMAHA (EPPLEY)	344	645	SOUTH OAKOTA						
ALASKA				ROISF	293	449	403	SCOTTLERUFF	317	517	BERDEEN	183	277	343		
ANCHORAGE	4	6	7	LEWISTON	340	506	366	VALENTINE	280	440	MURON	324	499	438		
ANNETTE	1	1	14	POCATELLO	207	271	254	NEVADA			RAPID CITY	179	297	374		
BARKOW	0	0	0	ILLINOIS			ELKO	284	413	SIOUX FALLS	289	448	442			
BARTER ISLAND	0	0	0	CAIRO U	484	1031	1090	ELY	103	138	DOAK RIDGE	285	568	816		
BETHEL	0	0	0	CHICAGO U MARE	241	468	394	LAS VEGAS	813	1888	EL PASO	194	367	651		
BETTLES	11	11	17	CHICAGO MIDWAY	251	468	545	RENO	169	241	FRISTOL	361	771	965		
BIG DELTA	13	13	28	MOLINE	272	361	554	WINNEMUCCA	256	399	CHARANDOGA	317	705	922		
COLD BAY	0	0	0	PEDRIA	259	527	594	NEW HAMPSHIRE			KNOXVILLE	558	1218	1267		
FAIKBANKS	16	16	46	ROCKFORD	217	407	437	CONCORDO	232	317	MEMPHIS	393	776	1002		
GULKAHA	I	0	0	SPRINGFIELD	327	727	681	MT WASHINGTON OBS	0	0	NASHVILLE	285	568	816		
HOMER	0	0	0	INDIANA			NEW MEXICO			OAK RIDGE	701	1732	2065			
JUNEAU	0	0	0	EVANSVILLE	363	753	934	ALBUQUERQUE	491	832	ABILENE	586	1319	1424		
KING SALMON	0	0	0	FORT WAYNE	198	416	457	CLAYTON	283	435	AMARILLO	380	674	842		
KOTLAKA	8	8	8	INDIANAPOLIS	253	516	603	RUSSELL	306	945	AUSTIN	370	1375	1650		
KOTZEBUE	1	1	1	SOUTH BEND	236	467	414	NEWARK	381	589	BROWNSVILLE	645	2155	2233		
MC GRATH	1	1	14	IOWA			TRENTON U	308	484	CORPUS CHRISTI	639	206	1973			
NAME	0	0	0	BURLINGTON	275	552	608	NEW JERSEY			DALLAS FT WORTH	613	1358	1437		
St. Paul Island	0	0	0	DESMOINES	304	546	567	ATLANTIC CITY	308	466	EL PASO	630	1318	1280		
TALKEETNA	0	0	0	OUROUFOU	203	343	373	ATLANTIC CITY U	252	331	GALVESTON	544	1453	1647		
VALDEZ	4	4	0	SIOUX CITY	299	521	584	NEW YORK	381	597	HOUSTON INTERCON	552	1491	1637		
YAKUTAT	0	0	0	WATERLOO	237	425	424	KENNEBECY	310	419	LUBBOCK	524	1122	1006		
ARIZONA				KANSAS			LA GUARDIA	382	541	MIDLAND	539	1196	1307			
FLAUSTAFF	47	87	84	CONCORDIA	381	687	749	NEW YORK LA	382	541	PORT ARTHUR	529	1474	1588		
PHOENIX	901	2255	1931	RODGE CITY	411	774	820	RUTHERFORD	217	301	SAN ANGELO	549	1332	1589		
TUCSON	706	1000	1665	GOODLAND	346	554	543	NEW YORK U	378	612	VICTORIA	619	1633	1725		
WINSLOW	430	675	491	TOPEKA	401	725	807	WICHITA	310	419	WACO	544	1230	1610		
YUMA	867	2319	2258	WICHITA	408	882	978	WICHITA FALLS	382	541	WICHITA FALLS	628	1349	1486		
ARKANSAS				KENTUCKY			RUTHERFORD	244	418	WILDFORD	267	360	386			
FORT SMITH	464	924	1161	COVINGTON	271	473	641	SYRACUSE	232	393	SALT LAKE CITY	439	709	517		
LITTLE ROCK	502	1148	1124	LEXINGTON	287	553	713	WILMINGTON	487	1090	WALLOPS ISLAND	375	526	603		
No. Little Rock	472	978	1138	LOUISVILLE	326	693	745	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
CALIFORNIA				LOUISIANA			WINDSOR	178	251	WALLOPS ISLAND	375	526	603			
BAKERSFIELD	614	1487	1196	RATON RUGGE	521	1376	1510	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
BISHOP	365	622	616	LAKE CHARLES	521	1393	1573	WILMINGTON	487	1090	WALLOPS ISLAND	375	526	603		
BLUFF CANYON	128	U	0	NEW ORLEANS	381	1654	1554	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
EUREKA U	0	0	0	SHREVEPORT	509	1213	1440	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
LONG BEACH	541	1205	926	MAINE			WILLISTON	180	275	WALLOPS ISLAND	375	526	603			
LOS ANGELES	226	542	484	CARIBOU	153	211	89	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
LOS ANGELES U	229	536	483	PORTLAND	162	211	147	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
MY SHASTA R	123	174	110	RATLIMORE	348	622	654	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
OAKLAND	35	77	42	BLUE MILL OBS R	264	346	276	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
SACRAMENTO	336	657	625	ROSTON	304	461	397	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
SAN DIEGO	216	447	267	WORCESTER	225	293	249	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
SAN FRANCISCO	25	55	34	WORCESTER	225	293	249	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
SAN FRANCISCO U	10	34	5	YOUNGSTOWN	147	231	251	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
SANTA MARIA	21	43	27	YOUNGSTOWN	147	231	251	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
STOCKTON	412	913	677	YOUNGSTOWN	147	231	251	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
COLORADO				YOUNGSTOWN	147	231	251	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
ALAMUSA	21	21	64	YOUNGSTOWN	147	231	251	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
COLUADAO 5PKINGS	185	270	783	YOUNGSTOWN	147	231	251	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
DENVER	273	389	358	YOUNGSTOWN	147	231	251	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
GRAND JUNCTION	428	711	681	YOUNGSTOWN	147	231	251	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
PUEBLO	363	558	585	YOUNGSTOWN	147	231	251	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
CONNECTICUT				YOUNGSTOWN	147	231	251	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
RIDGEPORT	288	383	401	YOUNGSTOWN	147	231	251	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
MARTHORO	320	531	365	YOUNGSTOWN	147	231	251	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
DELAWARE				YOUNGSTOWN	147	231	251	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
WILMINGTON	327	512	579	YOUNGSTOWN	147	231	251	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
DIST. OF COLUMBIA				YOUNGSTOWN	147	231	251	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
WASHINGTON DULLES	297	527	564	YOUNGSTOWN	147	231	251	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
WASHINGTON NATIONAL	431	605	829	YOUNGSTOWN	147	231	251	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
FLORIDA				YOUNGSTOWN	147	231	251	WILLISTON	180	275	WALLOPS ISLAND	375	526	603		
APPALACHICOLA U	513	1330	1486	MISSISSIPPI	482	1135	1358	GUAM TAGUAC R	461	2993	WYOMING	187	249	259		
OATYNA BEACH	538	1642	1778	JACKSON	526	1073	1329	JOHNSTON	370	2804	CASPER	187	249	259		
FORT MYERS	650	2229	2026	MERIDIAN			KODOR R	306	3528	CHEYFNE	160	203	194			
JACKSONVILLE	532	1341	1468	ST JOSEPH			KWAJALEIN	346	3650	CLARK	185	208	210			
KEY WEST	637	2704	2755	ST LOUIS	331	578	803	MAJURU	320	3492	LAUDER	100	151	233		
MIAMI	572	2291	2197	SPRINGFIELD	319	664	757	PAGO PAGO	424	3345	SHERIDAN					
ORLANDO	575	1766	1779	COLUMBIA REGIONAL	357	664	757	PUNAPE K	516	3513	WISCONSIN	191	255	240		
PENSACOLA	566	1493	1552	KANSAS CITY	348	658	754	PORTLAND	183	246	GREEN BAY	191	255	240		
TALLAHASSEE	503	1237	1476	ST JOSEPH	331	578	803	SALEM	121	190	LA CROSSE	226	300	324		
TAMPA	592	1030	1069	ST LOUIS	446	913	883	WAKE	632	3362	HUNTINGTON	168	289	286		
WEST PALM BEACH	555	1212	2041	SPRINGFIELD	319	568	796	YAP R	475	3426	MADISON	209	312	255		
GEORGIA				HONOLUA			PENNSYLVANIA			WILWAUKEE						
ATLANTIS	398	904	1115	RILLINGS	270	408	587	ALLEGHENY	274	443	WYOMING	187	249	259		
ATLANTA	436	990	917	GLASGOW	236	314	254	ERIE	125	226	CASPER	187	249	259		
AUGUSTA	473	1009	1182	GREAT FALLS	152	209	187	HARRISBURG	279	465	CHEYFNE	160	203	194		
COLUMBUS	536	1286	1255	HAVRE	187	275	234	PHILADELPHIA	347	604	CLARK	187	249	259		
MACON	505	1166	1364	HELENA	152	190	149	PIITSBURGH	193	368	CLARK	187	249	259		
ROME				KALISPELL	142	160	670	SCRANTON	218	330	CLARK	187	249	259		
SAVANNAH	537	1317	1450	MILES CITY	305	473	434	WILLIAMSPORT	262	418	CLARK	187	249	259		
				MISSOULA	177	227	107	RHOE ISLAND	211	233	CLARK	187	249	259		
							PROVINCIE	279	344	CLARK	187	249	259			

STORM SUMMARY

JULY 1979

STATE	TORNADOES				HAILSTORMS				WINDSTORMS				LIGHTNING				@HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				φ ALL OTHER						
	NUMBER	DAYS	DEATHS	INJURIES	DEATHS	INJURIES	PROP. ERITY	†DAMAGE	DEATHS	INJURIES	PROP. ERITY	†DAMAGE	DEATHS	INJURIES	PROP. ERITY	†DAMAGE	DEATHS	INJURIES	PROP. ERITY	†DAMAGE	DEATHS	INJURIES	PROP. ERITY	†DAMAGE	DEATHS	INJURIES	PROP. ERITY	†DAMAGE			
Alabama	4	3			4	5				1	3				4	5				2	1	5					2	6	6		
Alaska	1	1									6	?				5	?				1	6						4			
Arizona																															
Arkansas																															
California																															
Colorado	*	21	11			4	1	25	7	5		1			17	4	5	?		2	1	5	6					1	1		
Connecticut																															
Delaware																															
Florida	8	6			6	3				?	?				2	5	4	?		1	10	7	4	?			2	1	8		
Georgia	2	2																													
Hawaii																															
Idaho																															
Illinois	1	1			5					?	?					2	5	2			2	2									
Indiana	3	3			4					5	6					5	5	?			9	4									
Iowa	9	5			5					?	?					1	6	?			3	5									
Kansas	3	3			5					6	6					1	6	5			4										
Kentucky	1	1			5					?	?					2	6	?			1	3	5	1							
Louisiana																															
Maine																															
Maryland & DC																															
Massachusetts																															
Michigan	4	3			4					5	7					5	4	?			2	5	5								
Minnesota	4	3			6					3	4					4	5	3			1	6	5	5							
Mississippi																															
Missouri																															
Montana	3	2																													
Nebraska	6	4			1	5				6	8					5	6	5			2	1	?	?							
Nevada																															
New Hampshire	*																														
New Jersey																															
New Mexico	4	3								4	3					4	4	3			2	1	4	4							
New York	1	1			1	4				3	4					4	4	4			3	3	5	4							
North Carolina	1	1			2					4	5					5	5	5			5	5	4	?							
North Dakota	7	3			2					4	6					05	5	3			1	4	4	4							
Ohio	1	1			4																										
Oklahoma	2	2				5				5	5					6	5	?			1	4	5								
Oregon																															
Pacific																															
Pennsylvania																															
Puerto Rico																															
Rhode Island																															
South Carolina	1	1			3	6				?	5					3	4	5			1	4	3	4							
South Dakota	10	6																													
Tennessee																															
Texas	13	9			5					6	6					2	6	?			1	4	5	?							
Utah	*																														
Vermont	*																														
Virginia	1	1			5					3	5					4					1	5									
Virgin Islands										?	5					05	?	?			2	1	5	5							
Washington	1	1																													
West Virginia	1	1			1					3	?					1	?	?			2	1	5	5							
Wisconsin	2	1			3	7				?	7					05	?	?			1	5	5	5							
Wyoming	18	7	1	40	1	7				07	C																				

RAWINSONDE DATA

Average monthly values

July 1979

ALBANY, NY 1007 MB				ALBUQUERQUE, NM 840 MB				AMARILLO, TX 893 MB				ANCHORAGE, AK 1010 MB				ANNAPOLIS, MD 1013 MB																
Standard pressure surface mb	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	Direction tens of deg	Wind speed m.p.s.	No. of observations	Standard pressure surface mb	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	Direction tens of deg	Wind speed m.p.s.	No. of observations	Standard pressure surface mb	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	Direction tens of deg	Wind speed m.p.s.	No. of observations	Standard pressure surface mb	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	Direction tens of deg	Wind speed m.p.s.		
5FC 31	86	18.2	16.4	1.0	30	1,619	19.8	8.6	07	2.5	31	1,095	19.3	14.8	19	2.8	31	4.5	13.6	11.5	17	1.9	31	3.7	13.2	11.3	1.3	1.2	1.9			
1000 29	150	18.2	15.4	2.0	9	1,619	19.8	8.6	07	2.5	31	1,095	19.3	14.8	19	2.8	31	4.5	13.6	11.5	17	1.9	31	3.7	13.2	11.3	1.3	1.2	1.9			
950 31	586	18.2	13.4	2.6	3	1,619	19.8	8.6	07	2.5	31	1,095	19.3	14.8	19	2.8	31	4.5	13.6	11.5	17	1.9	31	3.7	13.2	11.3	1.3	1.2	1.9			
900 31	1,049	16.2	10.4	2.6	3	1,619	19.8	8.6	07	2.5	31	1,095	19.3	14.8	19	2.8	31	4.5	13.6	11.5	17	1.9	31	3.7	13.2	11.3	1.3	1.2	1.9			
850 31	1,553	12.9	7.5	2.9	3.8	1,619	19.8	8.6	07	2.5	31	1,095	19.3	14.8	19	2.8	31	4.5	13.6	11.5	17	1.9	31	3.7	13.2	11.3	1.3	1.2	1.9			
800 31	2,060	9.8	3.1	2.9	3.1	1,619	20.0	6.3	12	2.1	31	2,043	19.1	8.2	23	4.6	31	5.58	11.9	6.9	16	1.7	31	5.65	11.9	6.9	16	1.7	1.9			
750 31	3,574	6.4	-1.5	2.7	4.1	1,619	20.2	2,595	17.2	2.9	21	1,531	2,595	15.9	3.9	25	2.7	31	2,497	6.7	2.1	28	1.6	31	2,497	6.7	2.1	28	1.6	1.8		
700 31	3,139	3.8	-7.2	2.7	5.7	30	3,180	13.1	-0.2	27	1.8	3,177	11.6	-1.1	24	1.8	31	3,049	-2.7	-2.6	15	1.6	31	3,049	-2.7	-2.6	15	1.6	1.8			
650 31	3,733	-1.3	-13.7	2.8	5.7	30	3,799	9.5	-3.5	27	2.9	2,211	3.7	-3.4	28	1.7	31	3,634	-5.5	-10.3	11	3.1	31	3,634	-5.5	-10.3	11	3.1	1.8			
600 31	4,179	-1.8	-18.3	2.8	7.6	30	4,455	3.3	-7.1	3.0	3.2	1,511	4,446	2.7	-6.8	30	2.1	31	4,258	-9.0	-16.0	0.0	5.5	31	4,258	-9.0	-16.0	0.0	5.5	1.8		
550 31	5,066	-5.6	-21.8	2.8	8.5	30	5,153	-1.5	-15.1	-2.1	-11.2	29	3.7	1.1	5,144	-2.0	-12.1	31	3.1	31	4,927	-13.4	-20.0	4.1	5.5	31	4,927	-13.4	-20.0	4.1	5.5	1.8
500 31	5,808	-10.1	-26.2	2.8	9.3	30	5,904	-7.1	-18.4	2.9	4.6	31	5,896	-6.7	-17.7	30	4.1	31	5,646	-16.7	-26.5	15	4.9	31	5,646	-16.7	-26.5	15	4.9	1.8		
450 31	6,612	-15.1	-31.2	2.8	10.3	30	6,718	-12.3	-24.1	3.0	5.5	31	6,711	-12.1	-21.2	29	4.8	31	6,427	-23.1	-31.3	3.1	5.5	31	6,427	-23.1	-31.3	3.1	5.5	1.8		
400 31	7,492	-21.5	-35.5	28	12.3	30	7,607	-18.5	-31.0	3.0	6.0	31	7,602	-18.0	-28.1	29	5.6	31	7,278	-29.4	-38.1	15	2.5	31	7,278	-29.4	-38.1	15	2.5	1.8		
350 30	8,464	-28.7	-41.1	28	13.4	29	8,595	-25.5	-38.4	29	7.9	31	8,590	-24.6	-34.9	29	7.1	30	8,220	-36.4	-45.4	3.6	2.7	31	8,220	-36.4	-45.4	3.6	2.7	1.8		
300 30	9,546	-37.2	-47.4	28	15.2	29	9,691	-33.8	-45.2	28	8.9	31	9,691	-33.0	-44.2	29	7.6	30	9,268	-44.6	-53.3	3.3	3.2	31	9,268	-44.6	-53.3	3.3	3.2	1.8		
250 30	10,783	-45.8	-54.8	28	20.1	28	10,943	-34.6	-53.6	27	11.5	31	10,946	-33.1	-52.6	28	9.5	30	10,469	-51.4	-60.4	3.1	4.9	31	10,469	-51.4	-60.4	3.1	4.9	1.8		
200 30	12,241	-53.8	-63.8	28	19.9	27	12,408	-54.7	-63.7	28	13.3	31	12,413	-54.1	-63.5	28	9.4	30	11,924	-49.4	-59.2	2.9	4.6	31	11,924	-49.4	-59.2	2.9	4.6	1.8		
175 30	13,099	-56.5	-65.5	28	17.5	28	13,256	-59.6	-65.6	28	14.2	31	13,259	-59.2	-65.2	28	11.2	30	12,803	-47.6	-56.6	2.8	3.2	31	12,803	-47.6	-56.6	2.8	3.2	1.8		
150 30	14,069	-57.7	-67.7	27	14.4	26	14,208	-64.5	-73.5	28	12.3	31	14,216	-63.3	-72.3	28	11.0	30	13,821	-87.1	-97.9	2.7	2.7	27	13,821	-87.1	-97.9	2.7	2.7	1.8		
125 30	15,216	-58.9	-67.7	27	11.7	26	15,313	-68.1	-76.1	28	8.8	31	15,326	-66.6	-75.6	29	7.2	30	15,023	-84.4	-94.4	2.6	1.9	27	15,023	-84.4	-94.4	2.6	1.9	1.8		
100 30	16,617	-58.3	-68.7	28	6.8	26	16,649	-68.7	-76.7	32	1.2	31	16,671	-67.7	-76.7	29	1.2	30	16,491	-84.5	-94.5	2.3	3.8	27	16,491	-84.5	-94.5	2.3	3.8	1.8		
80 30	18,024	-57.2	-67.2	29	2.3	28	17,991	-65.5	-74.5	09	3.7	31	18,020	-65.0	-74.0	09	3.1	17	19,760	-84.8	-94.8	1.7	3.8	31	19,760	-84.8	-94.8	1.7	3.8	1.8		
70 30	18,872	-57.5	-67.5	04	9	28	18,810	-62.7	-71.7	09	6.0	31	18,840	-62.5	-71.5	09	5.6	30	18,839	-84.8	-94.8	1.2	3.8	31	18,839	-84.8	-94.8	1.2	3.8	1.8		
60 20	19,861	-54.3	-64.3	08	2.6	26	19,767	-59.8	-68.8	09	8.4	30	19,797	-59.8	-68.8	08	8.0	30	19,854	-64.3	-73.3	0.9	1.7	31	19,854	-64.3	-73.3	0.9	1.7	1.8		
50 29	21,035	-52.3	-62.3	09	5.2	26	20,045	-55.7	-64.7	09	9.5	31	20,946	-56.0	-65.0	09	9.7	30	21,057	-54.7	-63.8	0.9	2.9	31	21,057	-54.7	-63.8	0.9	2.9	1.8		
40 28	22,485	-50.6	-59.6	08	6.8	26	22,340	-53.8	-62.8	11	11.5	31	22,375	-53.5	-62.5	09	11.4	30	22,552	-57.2	-66.2	0.9	4.1	27	22,552	-57.2	-66.2	0.9	4.1	1.8		
30 27	24,522	-47.9	-56.9	09	4.0	26	24,300	-54.9	-63.9	13	3.9	30	24,344	-54.6	-63.6	09	3.4	27	24,344	-54.6	-63.6	0.9	4.6	31	24,344	-54.6	-63.6	0.9	4.6	1.8		
25 25	25,584	-45.7	-54.7	08	10.1	25	25,398	-48.5	-57.5	09	13.8	29	25,430	-48.3	-57.3	09	14.3	29	25,663	-43.8	-52.8	0.8	5.6	30	25,663	-43.8	-52.8	0.8	5.6	1.8		
20 23	27,081	-42.9	-52.9	09	12.6	22	26,874	-45.9	-54.9	09	14.9	26	26,913	-45.6	-54.6	09	14.9	27	27,170	-41.4	-50.4	0.9	7.4	30	27,170	-41.4	-50.4	0.9	7.4	1.8		
15 14	29,030	-40.3	-49.3	09	12.6	21	28,799	-43.6	-52.6	09	18.4	24	28,846	-42.6	-51.6	08	18.1	27	29,137	-38.1	-47.1	0.8	8.6	30	29,137	-38.1	-47.1	0.8	8.6	1.8		
10					12	31,540	-38.9			15	31,606	-39.0		09	21.5	20	31,967	-32.5			08	10.4	19	31,077	-34.6			08	10.5			

ATHENS, GA		BARTON, AK		BARTER ISLAND, AK		BETHEL, AK		BISMARCK, ND	
	989 MB		1013 MB		1012 MB		1011 MB		957 MB
5FC	31	246	21.2	19.8	041	+4	28	8	3.8
1000							28	42	7.2
950	31	598	21.7	17.8	29	-1.2	28	645	87.2
900	31	1,067	19.6	15.5	26	-2.7	29	992	6.0
850	31	1,558	16.7	11.9	26	-3.6	28	1,459	4.5
800	31	2,074	14.1	8.4	26	-4.6	28	1,051	1.7
750	31	2,617	11.0	4.6	27	-5.5	28	2,469	-1.0
700	31	3,190	7.6	5.5	27	-6.5	28	3,017	-3.4
650	31	3,798	4.3	-2.3	27	-7.1	28	3,599	-7.1
600	31	4,496	-6.7	-6.7	27	-7.7	28	4,219	-10.6
550	31	5,140	-2.9	-11.9	27	-7.6	28	4,883	-14.8
500	31	5,890	-7.0	-18.4	27	-7.2	28	5,598	-19.5
450	31	6,701	-11.5	-21.6	27	-7.5	28	6,373	-24.6
400	31	7,599	-17.2	-28.7	27	-8.4	28	7,220	-30.7
350	31	8,530	-23.9	-35.0	27	-9.5	28	8,052	-37.0
300	31	9,495	-30.4	-43.2	27	-9.7	28	8,944	-45.4
250	31	10,955	-45.4	-52.4	27	-10.5	28	10,400	-51.2
200	31	12,224	-54.1	-59.1	29	-12.4	28	11,855	-67.9
175	31	13,270	-60.0	-72.6	29	-12.6	28	12,740	-86.0
150	31	14,220	-65.1	-70.0	30	-10.3	25	13,767	-85.9
125	31	15,323	-67.3	-73.3	31	-5.4	25	14,980	-96.1
100	31	16,667	-67.6	-76.6	34	-3.1	24	16,464	-95.7
80	31	18,017	-64.7	-74.7	05	4.8	24	17,953	-95.1
70	31	18,839	-62.1	-72.1	08	6.5	23	18,845	-94.8
60	30	19,798	-59.5	-69.5	08	8.3	23	19,876	-94.7
50	30	20,949	-55.9	-65.9	08	11.1	23	21,098	-94.1
40	20	22,388	-52.6	-62.6	09	12.9	23	22,597	-93.8
30	20	29,498	-49.4	-59.4	09	14.0	16	24,542	-92.4
25	29	31,255	-47.4	-57.4	09	14.1	13	25,700	-91.1
20	28	26,794	-43.3	-53.3	09	16.1	13	25,780	-82.0
15	26	28,866	-42.4	-52.4	09	18.4	13	25,780	-82.0
10	12	31,625	-37.9	-47.9	09	23.4	13	24,156	-80.8
7							5	34,641	-27.5

BOISE, ID 914 MB										BROOKVILLE, PA 1016 MB										BROWNSVILLE, TX 1012 MB										BUFFALO, NY 991 MB									
SFC	31	871	17.5	3.1	17	1.2	21	1	26.1	24.0	18	1.5	31	7	25.6	23.6	16	1.4	31	218	17.1	14.6	19	1.9	25	4	22.9	21.0	33	1.9									
1000								21	140	26.2	23.5	19	2.2	31	113	26.2	24.3	16	3.5	31	583	18.6	12.0	24	2.9	25	145	23.8	20.2	30	2.9								
950								21	592	23.1	20.1	19	3.3	31	566	23.5	20.9	17	8.2	31	1,051	15.8	9.0	26	3.7	25	593	21.3	16.3	29	2.9								
900	31	1,002	20.4	4.0	21	7.7	21	1,015	15.6	14.6	1.5	31	3.8	1,532	21.0	16.8	18	6.1	31	1,050	15.8	9.0	26	3.7	25	1,051	15.3	14.3	29	2.9									
850	31	1,499	21.0	1.2	31	1.7	21	1,555	18.4	18.4	6.1	17	1,040	16.0	12.4	16	6.7	31	1,552	21.7	17.0	27	3.9	25	1,549	15.2	11.1	28	2.8										
800	31	1,499	15.5	-1.0	30	1.4	21	1,075	15.5	15.5	6.1	17	1,056	16.0	12.4	16	6.7	31	2,036	16.0	11.4	27	5.2	25	2,062	12.6	6.2	28	5.1										
750	31	2,565	13.4	-4.0	28	2.6	21	2,620	12.7	1.1	1.7	3.3	31	5977	13.1	3.8	14	3.5	31	2,570	7.7	-3.8	27	5.2	25	2,603	10.4	2.6	28	6.4									
700	31	3,140	9.0	-6.7	26	4.7	21	3,196	9.0	-1.9	1.7	3.6	31	3.174	9.4	-2.3	13	2.9	31	3,136	4.6	-7.1	27	6.0	25	3,175	7.4	-1.2	28	6.4									
650	31	3,750	4.7	-8.6	25	7.8	21	3,807	5.5	-4.8	1.8	2.4	31	3,766	6.5	-4.5	12	2.5	31	3,736	4.1	-11.0	27	6.7	25	3,783	4.6	-5.9	27	6.9									
600	31	4,396	-5.5	-11.9	24	10.5	20	4,456	1.6	-10.0	0.8	1.8	31	4,439	2.6	-9.2	0.9	2.5	31	4,377	-1.9	-15.6	28	7.1	25	4,431	1.3	-11.2	28	7.2									
550	31	5,045	-5.3	-16.2	24	11.6	20	5,153	-2.5	-14.2	1.9	2.2	31	5,138	-1.3	-15.3	0.7	2.3	31	5,054	-5.8	-20.8	27	8.2	25	5,127	-2.3	-14.8	27	8.2									
500	31	5,827	-10.4	-21.7	24	12.9	20	5,903	-6.8	-19.1	2.2	1.1	31	5,891	-5.8	-19.4	0.6	2.0	31	5,804	-10.2	-25.7	27	9.1	25	5,878	-6.8	-20.3	28	9.9									
450	31	6,630	15.9	-27.1	25	13.3	20	6,719	-11.5	-23.9	2.1	1.1	31	6,709	-10.9	-24.5	0.6	2.4	31	6,608	-15.4	-26.6	-29.7	27	9.8	25	6,693	-11.5	-23.8	28	10.2								
400	31	7,507	-22.2	-35.3	25	14.0	20	7,612	-17.3	-29.7	2.5	1.5	31	7,604	-16.8	-30.1	0.6	2.2	31	7,486	-21.9	-35.6	27	11.2	25	8,577	-17.1	-30.0	29	11.0									
350	31	8,477	-29.4	-41.7	25	14.7	20	8,603	-23.6	-36.7	2.2	2.1	31	8,597	-23.7	-37.1	0.8	1.6	31	8,458	-20.8	-41.9	27	13.2	25	8,577	-24.1	-36.5	29	11.9									
300	31	9,555	-38.1	-48.2	25	17.9	20	9,708	-32.1	-44.4	2.1	2.5	31	9,702	-31.9	-44.2	1.3	1.6	30	9,540	-37.0	-64.1	27	14.6	25	9,680	-32.6	-43.2	29	13.4									
250	31	10,766	-47.3	-48.2	25	20.0	20	10,970	-41.8	-41.8	2.6	4.5	30	10,953	-41.8	-20	1.1	30	10,777	-45.9	-29.7	27	17.4	25	10,930	-42.8	-24.8	29	16.7										
200	31	12,235	-55.0	-50.0	26	22.3	20	12,443	-53.8	-53.8	2.7	4.5	30	12,437	-53.8	-53.8	2.3	3.3	30	12,236	-53.6	-53.6	28	19.6	25	12,406	-54.3	-54.3	29	17.2									
175	31	13,086	-56.1	-56.1	26	20.3	20	13,289	-60.1	-60.1	2.5	3.8	30	13,285	-59.9	-59.9	0.4	1.0	30	13,089	-56.8	-56.8	28	17.3	25	13,251	-59.7	-59.7	30	16.5									
150	31	14,063	-57.4	-57.4	26	16.6	20	14,236	-66.3	-66.3	3.4	8.0	30	14,234	-66.1	-66.1	0.4	2.4	30	14,068	-57.2	-57.2	28	14.7	25	14,203	-64.3	-50.1	30	17.1									
125	31	15,212	-58.9	-58.9	25	11.6	20	15,328	-70.3	-70.3	0.6	2.6	30	15,323	-72.1	-60	0.6	5.3	30	15,217	-57.8	-65.8	28	12.7	25	15,311	-65.8	-58.8	31	13.1									
100	31	16,607	-59.9	-59.9	26	5.8	19	16,649	-71.8	-71.8	0.6	6.2	30	16,629	-73.1	-73.1	0.7	9.2	30	16,617	-59.1	-59.1	28	9.6	25	16,668	-65.6	-56.6	33	5.1									
80	31	18,002	-59.0	-59.0	25	1.2	19	17,973	-68.4	-68.4	0.8	9.3	30	17,949	-68.1	-68.1	0.9	11.0	29	18,022	-57.7	-65.6	30	4.8	25	18,026	-63.1	-50.5	35	3.6									
70	31	18,843	-57.3	-57.3	08	1.4	19	18,781	-65.4	-65.4	08	10.0	30	18,757	-65.5	-65.5	09	11.8	29	18,868	-56.1	-56.1	34	1.5	25	18,857	-60.7	-50.7	37	0.7									
60	31	19,822	-55.8	-55.8	08	10.3	19	19,729	-61.0	-61.0	08	13.0	30	19,704	-61.7	-61.7	09	13.9	29	19,856	-54.2	-54.2	26	2.4	25	19,825	-58.0	-58.0	38	0.8									
50	31	20,987	-54.0	-54.0	09	4.9	19	20,874	-56.5	-56.5	09	15.0	28	20,844	-58.0	-58.0	09	18.4	28	20,816	-52.3	-52.3	08	3.4	25	20,816	-58.0	-58.0	39	0.7									
40	30	22,248	-51.7	-51.7	08	5.8	19	22,298	-54.5	-54.5	10	15.4	28	22,240	-55.0	-55.0	09	18.9	28	22,260	-50.4	-50.4	08	6.0	25	22,215	-52.5	-52.5	40	10.6									
30	29	24,304	-48.6	-48.6	09	8.3	18	24,159	-50.4	-50.4	09	16.8	28	24,115	-51.1	-51.1	09	20.7	28	24,169	-47.8	-47.8	09	8.6	25	24,290	-49.0	-49.0	09	13.0									
25	28	25,511	-45.9	-45.9	09	9.1	17	25,349	-48.3	-48.3	09	18.0	26	25,306	-50.7	-50.7	09	21.5	26	25,570	-45.7	-45.7	09	9.3	25	25,924	-46.9	-46.9	09	15.1									
20	28	26,999	-44.1	-44.1	09	10.0	15	26,826	-46.0	-46.0	09	19.8	26	26,783	-46.2	-46.2	09	22.3	27	26,797	-43.1	-43.1	09	10.4	25	26,979	-44.5	-44.5	09	14.6									
15	26	28,939	-41.3	-41.3	09	12.2	11	28,753	-42.8	-42.8	09	24	28	28,709	-43.1	-43.1	09	25.1	20	29,033	-40.4	-40.4	08	12.4	25	28,921	-41.4	-41.4	09	12.6									
10	21	31,719	-36.6	-36.6	09	14.5					9	31,462	-36.1			7	31,810	-35.1						9	31,706	-3b.1													

RAWINSONDE DATA

Average monthly values

JULY 1979

CARIQUO, ME 991 MB			CENTREVILLE, AL 1001 MB			CHARLESTON, SC 1017 MB			CHATHAM, MA 1015 MB			CHIHUAHUA, MEXICO 859 MB										
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C	Direction tens of deg.	Dew Point °C	Resultant Wind Speed m.p.s.	Dynamic height meters	Temperature °C	Direction tens of deg.	Dew Point °C	Resultant Wind Speed m.p.s.	Dynamic height meters	Temperature °C	Direction tens of deg.	Dew Point °C	Resultant Wind Speed m.p.s.	Dynamic height meters	Temperature °C	Direction tens of deg.	Dew Point °C	Resultant Wind Speed m.p.s.	
5FC 31	191	15.6	13.7	2 ⁶	8 ⁶	31	14.0	21.8	21 ²	17	.9	31	13	23.6	21 ⁴	24	.5	31	16	18.4	20 ⁴	
1000 31	553	16.4	10.9	2 ⁸	2 ⁹	31	15.3	21.9	21 ²	18	.4	31	15.6	24.0	20 ⁴	24	1.2	31	14.3	19.7	16.6	
950 31	1,014	14.9	8.6	2 ⁸	4 ⁶	31	1,066	19.9	15.7	23	5.2	31	1,077	20.2	14 ⁴	25	3.2	31	1,049	16.3	9.5	
900 31	2,001	8.8	1.6	2 ⁸	5.3	31	1,558	17.0	12.1	2 ²	5.0	31	1,568	17.2	12 ¹	27	4.6	31	1,533	13.3	6.8	
850 31	1,496	11.9	6.2	2 ⁸	6.2	31	6.2	2,076	14.3	8.6	24	5.1	31	2,084	14.2	10 ⁰	27	5.6	31	2,041	10.4	2.4
800 31	2,523	5.6	-2.6	2 ⁸	7.2	31	2,617	11.2	4.7	24	5.2	31	2,627	11.2	5.5	27	5.7	31	2,576	7.4	-2.8	
750 31	3,094	2.1	-7.6	2 ⁸	7.6	31	3,191	8.1	9.4	25	5.3	31	3,201	8.1	1 ²	27	6.1	31	3,141	4.3	-5.5	
650 31	3,690	-5.5	-14.2	2 ⁸	8.4	31	3,800	4.5	-1.6	25	5.2	31	3,810	4.9	-2 ⁴	27	6.8	31	3,742	1.4	-10.4	
600 31	4,326	-3.8	-18.2	2 ⁸	9.4	31	4,448	-0.9	-4.7	25	5.0	31	4,460	1.3	-6.8	27	6.9	31	4,383	-1.7	-15.9	
550 31	5,008	-7.9	-21.5	2 ⁷	9.7	31	5,144	-1.2	-9.0	25	5.1	31	5,156	-2.4	-13 ⁰	27	7.0	31	5,070	-5.4	-15.0	
500 31	5,742	-12.4	-26.8	2 ⁷	10.3	31	5,894	-6.8	-16.7	26	5.3	31	5,905	-6.4	-16.8	27	6.6	31	5,812	-10.0	-16.8	
450 31	6,539	-17.9	-31.3	2 ⁷	11.3	31	6,670	-11.5	-21.1	27	5.5	31	6,676	-11.1	-22.2	27	7.6	31	6,614	-15.0	-20.9	
400 31	7,421	-23.0	-36.3	2 ⁶	12.0	31	7,540	-16.0	-27.1	27	6.0	30	7,617	-16.0	29 ¹	27	7.4	31	7,495	-21.5	-35.2	
350 31	8,373	-30.7	-42.7	2 ⁶	12.8	31	8,595	-23.8	-35.7	27	6.6	30	8,609	-23.7	36 ⁵	28	7.1	31	8,469	-33.3	-40.3	
300 31	9,447	-38.7	-46.0	2 ⁶	13.4	30	9,700	-30.2	-44.5	27	8.1	30	9,714	-32.2	43 ³	28	7.4	31	9,553	-36.5	-45.8	
250 31	10,675	-47.5	-46.0	2 ⁶	13.1	30	10,961	-42.0	-27	9.4	30	10,973	-42.3	43 ³	28	8.7	31	10,792	-45.8	-42.1		
200 31	12,130	-53.3	-53.3	2 ⁷	16.0	30	12,433	-5.9	-27	10.7	30	12,492	-54.9	29	9.2	31	12,247	-54.9	-42.4			
175 31	12,987	-54.4	-54.4	2 ⁷	15.8	30	13,279	-6.0	-27	10.9	30	13,286	-60.5	30	10.8	31	13,094	-58.1	-42.1			
150 31	13,979	-54.3	-54.3	2 ⁷	13.5	29	14,228	-6.5	-28	9.6	30	14,233	-66.1	31	9.2	31	14,052	-59.2	-42.8			
125 30	15,140	-55.4	-55.4	2 ⁷	10.9	29	15,130	-6.8	-30	4.9	30	15,130	-8.6	33	5.4	31	15,203	-59.8	-42.7			
100 30	16,564	-55.2	-55.2	2 ⁶	6.2	29	16,665	-6.9	-01	2.6	30	16,668	-57.4	02	3.8	31	16,596	-59.7	-28			
80 29	17,952	-54.0	-54.0	2 ⁷	3.3	29	18,008	-6.6	-07	5.6	30	18,022	-64.2	07	5.9	31	17,995	-58.1	-28			
70 29	18,853	-52.5	-52.5	2 ⁷	.9	29	18,825	-6.2	-08	6.9	30	18,845	-61.7	08	7.5	31	18,800	-56.4	10			
60 29	19,853	-51.4	-51.4	2 ⁷	.4	29	19,784	-5.9	-08	9.6	30	19,806	-58.8	08	9.4	30	19,823	-54.8	09			
50 29	21,042	-49.8	-49.8	10	2.7	28	20,933	-5.6	-09	11.5	30	20,960	-55.6	09	12.5	30	20,994	-53.0	09			
40 28	22,505	-48.7	-48.7	10	4.8	28	22,361	-5.3	-09	13.3	30	22,394	-52.4	09	14.4	30	22,438	-51.3	09			
30 28	24,407	-46.1	-46.1	06	6.7	28	24,222	-50.3	-09	14.2	30	24,271	-88.5	09	15.0	27	24,322	-48.4	09			
25 28	25,265	-44.5	-44.5	09	7.6	25	25,418	-48.7	-09	15.4	27	25,470	-46.8	09	15.4	27	25,527	-46.5	09			
20 26	27,125	-42.3	-42.3	09	9.4	23	26,895	-46.0	-09	17.6	22	26,956	-44.2	09	16.6	26	27,019	-43.8	09			
15 21	29,080	-39.2	-39.2	09	9.7	21	28,822	-43.0	-09	19.8	16	28,906	-41.9	09	18.7	25	28,960	-41.0	09			
10					13	31,591	-38.1	-09	24.4			11	31,748	-36.7								

DODGE CITY, KS 925 MB										EL PASO, TX 882 MB										ELY, NV 811 MB										FAIRBANKS, AK 997 MB									
SFC	31	791	19.4	15.7	19	2.6	31	1,193	22.8	11.5	09	*4	31	1,908	11.8	-3.0	19	3.3	31	12	27.1	22.3	12	1.3	22	135	13.6	8.3	33	.7									
1000																																							
950																																							
900	31	1,027	21.8	15.0	21	5.3	31	1,515	23.8	18.4	13	1.5									31	92	28.0	21.5	13	1.8		149	13.6	7.9	34	1.8							
850	31	1,526	21.4	15.0	21	5.3	31	4,010	20.9	7.6	16	1.8	31	2,025	17.2	*1	19	3.1	31	547	27.1	16.0	4.4	3.3	22	54	15.0	5.6	28	1.8									
800	31	2,048	18.6	15.0	21	5.3	31	2,043	20.9	7.6	16	1.8	31	2,025	17.2	*1	19	3.1	31	1,025	25.9	11.6	13	2.5	22	1,000	12.0	3.6	34	1.8									
750	31	3,599	15.1	15.5	23	5.3	25	2,511	2,599	17.4	9.8	1.9	31	2,576	16.6	-2.1	19	2.4	31	2,066	20.6	18.9	8.2	2.0	22	973	8.2	1.8	23	1.8									
700	31	3,100	10.7	*4	27	2.0	31	3,183	12.7	2.5	23	8.1	31	1,159	12.5	-5.4	22	4.0	31	3,190	12.7	*7	7	11		24	2,945	1.0	-3.3	20	1.8								
650	31	3,792	6.3	-3.2	27	2.7	31	3,801	8.2	-1.2	05	2.1	31	3,776	7.9	-8.2	22	5.5	31	3,808	8.5	-1.2	10	2.4	22	3,047	-2.3	-7.3	7-3	1.8									
600	31	4,443	1.9	-8.0	28	3.9	31	5,156	4.7	-3.3	-5.6	04	2.0	2,311	4,429	2.5	-11.5	22	6.7	31	4,465	3.6	-4.3	14	2.4	22	3,633	-5.5	-11.6	20	1.8								
550	31	5,140	-2.7	-14.0	29	3.9	31	5,156	-1.9	-9.5	06	2.3	31	5,125	-3.1	-15.9	22	6.7	30	5,166	-9.9	-9.9	16	2.5	22	4,926	-11.3	-20.0	19	1.8									
500	31	5,889	-7.7	-19.6	29	5.0	31	5,908	-6.7	-16.8	01	2.3	31	5,872	-8.2	-21.9	23	6.8	30	5,920	-5.4	-17.4	02	1.5	22	5,646	-17.5	-28.6	19	1.8									
450	31	6,701	-12.7	-24.6	28	5.7	31	6,724	-11.5	-22.5	34	2.4	31	6,682	-13.8	-27.3	24	8.3	30	6,740	-10.0	-22.2	04	1.1	20	6,419	-23.0	-33.4	19	1.8									
400	31	7,589	-18.9	-28.2	28	7.5	31	7,617	-17.5	-28.7	31	3.2	31	7,556	-20.1	-33.9	25	10.2	30	7,638	-16.1	-28.7	03	.9	20	7,272	-29.2	-39.2	18	1.8									
350	30	8,576	-25.2	-35.6	29	8.5	31	8,607	-24.3	-35.7	30	3.4	31	8,584	-27.8	-41.1	25	12.0	30	8,633	-23.0	-35.1	03	.4	20	8,215	-36.4	-44.2	18	1.8									
300	30	9,674	-33.7	-43.1	28	10.9	30	9,708	-33.0	-44.5	29	5.1	31	9,630	-36.2	-47.5	25	14.3	30	9,741	-31.3	-42.6	18	.7	20	9,263	-44.6	-54.6	18	1.8									
250	30	10,926	-43.7	-43.7	28	11.4	30	10,964	-43.0	-43.0	28	6.4	30	10,872	-45.3	-47.5	25	17.1	30	11,006	-41.5	-49.0	20	2.0	20	10,464	-51.5	-60.6	20	1.8									
200	30	12,389	-54.9		27	12.6	30	12,430	-54.4		29	10.8	30	12,331	-54.6		26	17.0	30	12,482	-53.0		25	3.5	20	11,911	-50.1		22	1.8									
175	29	13,235	-59.0		28	13.4	30	13,275	-59.9		28	11.5	30	13,179	-57.9		26	16.7	30	13,331	-59.1		25	4.3	20	12,787	-48.6		22	1.8									
150	29	14,195	-61.9		28	11.8	30	14,226	-65.2		29	8.7	30	14,143	-61.2		26	14.9	30	14,283	-65.4		25	4.1	20	13,801	-64.8		21	1.8									
125	29	15,314	-65.2		28	8.1	30	15,326	-69.1		29	4.6	30	15,271	-73.1		26	9.8	28	15,377	-70.1		25	1.0	20	14,999	-49.1		21	1.8									
100	29	16,669	-66.1		28	2.7	30	16,651	-70.7		06	1.0	30	16,639	-64.2		25	3.8	28	16,696	-71.7		08	4.9	20	16,466	-48.6		21	1.8									
80	29	18,028	-63.5		07	1.6	30	17,985	-67.1		09	5.5	30	18,010	-62.4		14	.9	25	18,024	-67.7		09	9.1	19	17,933	-48.6		17	1.8									
70	29	18,858	-6.1		08	3.6	29	19,798	-64.3		09	7.9	30	18,838	-60.5		10	2.6	28	18,834	-69.6		09	10.8	19	18,813	-48.3		15	1.8									
60	29	19,816	-59.1		09	5.9	29	19,747	-61.5		09	10.2	30	19,805	-57.8		09	4.6	25	19,784	-61.1		09	12.8	19	19,830	-47.8		13	1.8									
50	29	20,969	-55.6		09	7.9	27	20,888	-57.4		09	12.6	30	20,962	-55.4		09	7.0	23	20,924	-57.7		09	15.4	19	21,035	-47.2		11	1.8									
40	29	22,400	-53.0		09	9.4	27	22,309	-54.6		09	13.7	30	22,394	-53.0		09	8.0	21	22,346	-54.5		09	16.4	18	22,515	-46.5		09	3.9									
30	29	24,269	-49.6		09	10.7	25	24,165	-51.1		09	14.8	28	24,266	-49.7		09	10.5	19	24,205	-51.5		09	17.6	17	24,427	-45.3		09	4.9									
25	29	25,469	-47.8		09	11.7	25	25,354	-49.8		09	15.9	28	25,464	-48.0		09	11.2	18	25,399	-48.1		09	18.6	18	25,689	-45.7		07	4.7									
20	29	26,951	-45.5		09	13.5	23	26,628	-46.8		09	17.6	28	26,944	-45.5		09	12.4	16	26,886	-46.2		09	20.4	18	27,157	-41.3		09	6.8									
15	29	28,679	-43.0		09	15.4	17	26,743	-44.3		09	20.5	26	26,870	-43.1		09	14.4	12	28,784	-43.7		09	23.1	14	29,127	-36.3		09	7.9									
10	9	31,643	-37.8			6	31,494	-41.0			11	31,636	-37.4		09	17.2	5	31,542	-39.4			12	31,953	-32.0			08	0.8											

RAWINSONDE DATA

Average monthly values

Annals 1030

Standard pressure surface mib.	FLINT, MI 989 MB										GLASGOW, MT 935 MB										GRAND JUNCTION, CO 853 MB										GREAT FALLS, MT 890 MB										GREEN BAY, WI 991 MB									
No. of observations	Dynamic height meters		Temperature °C		Dew Point °C		Direction — tens of deg.		Resultant Wind Speed m.p.s		No. of observations		Dynamic height meters		Temperature °C		Dew Point °C		Direction — tens of deg.		Resultant Wind Speed m.p.s		No. of observations		Dynamic height meters		Temperature °C		Dew Point °C		Direction — tens of deg.		Resultant Wind Speed m.p.s		No. of observations		Dynamic height meters		Temperature °C		Dew Point °C		Direction — tens of deg.		Resultant Wind Speed m.p.s					
SFC	31	236	16.1	14.8	21	1.1	31	696	16.2	10.3	10	1.1	31	1,472	19.4	1.1	31	5.4	1.1	1,118	14.1	5.4	23	1.5	31	210	15.9	1.1	31	5.75	16.4	1.1	7	28	2.5															
1000	31	1,043	16.0	8.9	29	2.3	31	1,022	19.6	9.4	17	1.2	31	1,506	20.5	5.3	12	3.9	31	1,510	16.4	2.5	23	1.8	31	1,038	16.2	9.9	30	2.9																				
950	31	581	18.4	11.6	27	2.1	31	1,527	13.0	6.3	29	3.5	31	1,512	17.4	5.7	23	1.7	31	2,028	20.8	2.7	14	1.4	31	1,522	12.9	6.9	29	2.9																				
800	31	2,035	10.5	9.9	29	4.6	31	2,026	14.0	3.3	25	2.4	31	2,026	14.0	3.0	28	3.1	31	2,083	18.0	0.9	1	0.9	31	2,029	9.9	2.0	30	3.3																				
750	31	2,570	7.9	-3.4	29	4.7	31	2,569	10.0	9.9	26	3.0	31	2,583	13.6	-3.3	24	2.2	31	2,563	9.9	-1.5	26	2.5	31	2,564	7.4	-3.4	30	4.1																				
700	31	3,136	5.2	-8.3	29	5.4	31	3,138	6.1	-1.9	27	4.5	31	3,169	13.6	-3.3	24	2.8	31	3,132	5.7	-4.5	25	4.5	31	3,129	4.4	-6.6	25	5.6																				
650	30	3,141	1.7	-10.6	28	6.2	31	3,141	2.4	-1.9	27	6.2	31	3,141	3.6	-6.4	25	3.1	31	3,143	5.7	-4.5	25	3.1	31	3,143	3.0	-5.6	30	5.6																				
600	30	4,378	-1.7	-10.8	28	6.7	31	4,384	-1.1	-11.7	27	7.7	31	4,384	-0.3	-1.2	26	3.6	31	4,374	-1.5	-1.0	25	3.6	31	4,370	-0.2	-1.6	30	5.6																				
550	30	5,045	-5.6	-24.5	28	7.4	31	5,070	-6.9	-15.5	27	9.0	31	5,141	-2.9	-12.2	25	5.9	31	5,058	-7.5	-19.0	25	5.9	31	5,056	-4.4	-25.1	29	7.1																				
500	30	5,806	-10.2	-23.8	28	8.6	31	5,807	-11.8	-21.6	27	9.8	31	5,888	-8.7	-18.0	26	5.9	31	5,058	-7.5	-19.0	25	5.9	31	5,058	-10.7	-25.1	29	7.1																				
450	30	6,610	-15.9	-26.6	28	9.9	31	6,607	-16.8	-28.8	27	10.6	31	6,697	-13.7	-25.9	26	8.1	31	6,588	-17.9	-29.4	25	12.3	31	6,598	-16.0	-30.3	29	9.2																				
400	30	7,469	-21.3	-33.9	28	10.2	31	7,481	-22.9	-34.5	27	12.0	31	7,582	-19.7	-33.7	27	9.4	31	7,458	-21.4	-35.1	25	12.5	31	7,458	-20.7	-35.1	29	10.0																				
350	30	8,464	-28.3	-41.0	28	12.8	31	8,444	-30.3	-41.6	27	14.2	31	8,583	-26.6	-40.4	27	12.3	31	8,420	-31.3	-42.6	25	15.1	31	8,445	-29.2	-40.9	29	11.6																				
300	30	9,558	-36.6	-47.9	28	15.6	31	9,522	-38.9	-49.8	26	15.0	31	9,655	-34.9	-47.1	26	14.9	31	9,491	-39.6	-49.9	26	17.4	31	9,526	-37.1	-47.8	29	14.9																				
250	30	10,787	-45.4	29	19.0	31	10,747	-48.5	26	16.3	31	10,901	-44.8	26	16.3	31	10,713	-48.9	26	18.9	31	10,753	-46.0	29	18.4																									
200	30	12,246	-53.5	29	22.3	31	12,192	-54.4	27	17.3	31	12,341	-54.5	27	17.2	31	12,150	-54.6	27	20.0	31	12,220	-54.1	28	21.8																									
175	30	13,102	-55.9	29	21.1	31	13,047	-53.9	27	16.8	31	13,259	-58.0	27	16.1	31	13,012	-53.8	26	17.0	31	13,072	-56.3	29	21.3																									
150	30	14,079	-57.6	29	16.5	31	14,035	-53.5	26	15.3	31	14,173	-61.0	26	14.0	31	14,000	-54.3	26	15.1	31	14,051	-56.5	29	16.3																									
125	30	15,224	-59.7	28	12.5	31	15,209	-54.9	27	11.5	31	15,282	-64.0	27	10.7	31	15,150	-55.8	27	11.5	31	15,204	-58.0	29	12.4																									
100	30	16,686	-61.0	28	9.9	31	16,553	-56.5	26	6.7	31	16,650	-64.0	27	5.7	31	16,560	-57.2	27	6.7	31	16,605	-58.8	29	8.0																									
80	29	18,099	-59.3	31	3,81	29	18,099	-57.7	29	2.9	31	18,099	-59.2	29	1.3	31	18,099	-62.4	29	2.6	31	18,099	-57.6	29	4.0																									
70	29	18,853	-56.0	34	1.9	31	18,902	-53.3	31	0.9	31	18,859	-60.2	10	2.7	31	18,850	-64.5	0.1	31	18,856	-57.4	31	3.9																										
60	29	19,833	-55.3	0.5	2.1	31	19,891	-53.6	0.4	1.8	31	19,825	-57.7	0.9	5.0	31	19,836	-64.1	0.8	1.8	29	19,844	-56.2	0.3	1.6																									
50	29	21,003	-51.1	0.8	4.0	31	21,068	-51.9	0.8	2.9	31	20,983	-55.0	0.9	6.8	31	21,000	-52.6	0.9	3.3	29	21,016	-52.5	0.7	2.7																									
40	28	22,449	-51.1	0.8	6.0	31	22,528	-49.4	0.9	4.5	31	22,418	-52.3	0.9	7.9	29	22,558	-50.2	0.8	4.8	28	22,467	-50.5	0.8	4.7																									
30	28	24,334	-48.0	0.9	7.8	31	24,418	-47.6	0.9	6.0	31	24,294	-49.3	0.9	9.9	29	24,348	-47.4	0.9	6.6	28	24,354	-47.5	0.9	7.2																									
25	26	25,540	-46.3	0.9	8.7	31	25,628	-45.8	0.9	6.5	31	25,493	-47.7	0.9	10.4	28	25,557	-45.7	0.9	7.9	27	25,557	-45.9	0.9	8.0																									
20	25	27,036	-43.6	0.8	9.9	31	27,123	-42.9	0.9	8.0	27	26,976	-45.0	0.9	11.6	27	27,053	-42.8	0.9	8.5	26	27,073	-43.3	0.9	9.5																									
15	18	28,975	-41.0	0.8	11.9	31	29,081	-39.6	0.9	9.8	25	28,912	-42.0	0.9	13.6	31	29,005	-40.3	0.8	9.8	21	29,004	-40.6	0.9	11.0																									
10					11	31,672	-35.5			19	31,680	-37.5		0.9	17.2	31	31,790	-35.9		0.9	12.6	14	31,780	-36.4																										

* INTERNATIONAL FALLS, MN 973 MB				* ISLE OEL CLENE 1012 MB				JACKSON, MS 1006 MB				JOHN F. KENNEDY INT. AP NY 1016 MB				JOHNSTON IS., PACIFIC AREA 1015 MB															
5FC	31	359	13.3	12.3	19	.5	31	10	27.1	24.2	09	4.5	30	100	22.5	24.4	14	.5	29	5	20.6	16.5	22	1.0	31	3	26.4	23.5	.08	7.7	
1000							31	119	27.1	24.5	09	5.6	29	141	23.1	21.7	21	1.0	29	143	20.2	16.2	26	1.1	31	131	25.3	22.0	0.08	8.0	
950	31	562	17.5	12.6	25	2.7	31	572	23.7	21.3	10	8.7	30	589	22.9	19.6	22	4.4	29	586	19.1	13.7	31	1.7	31	581	21.6	19.9	0.88	8.8	
900	31	1,025	16.1	8.3	26	3.4	31	1,045	20.9	17.7	11	9.2	30	1,060	20.6	16.4	22	4.2	29	1,050	16.4	11.1	20	1.7	31	1,049	18.6	15.9	0.09	8.8	
850	31	1,508	13.0	5.0	28	3.6	31	1,533	18.0	13.9	11	9.3	30	1,553	17.9	12.4	22	4.0	29	1,535	13.2	8.1	21	2.6	31	1,521	15.8	12.4	0.08	7.7	
800	31	2,155	9.7	2.1	24	2.6	31	2,171	15.5	10	9.4	30	2,071	15.2	7.8	20	3.9	29	2,033	12.3	7.2	20	3.4	31	2,053	13.4	8.6	0.08	7.7		
750	31	2,858	6.4	1.6	19	4.4	31	2,862	11.7	5.1	10	8.0	30	2,815	12.5	1.3	20	3.7	29	2,767	7.9	1.6	20	3.0	31	2,749	11.9	4.9	0.09	6.5	
700	31	3,112	3.6	-9.2	29	4.8	31	3,111	17.9	9.6	3	11	30	3,100	19.0	7.1	14	2.4	30	3,059	11.45	5.1	-5.7	2.8	6.1	31	3,170	9.1	-6.8	0.08	3.6
650	31	3,710	-6.6	-1.4	25	5.5	31	3,791	2.1	-5.1	11	6.9	30	3,600	24.7	-2.7	24	3.3	29	3,749	3.74	1.9	-9.5	2.8	7.3	31	3,780	6.0	-10.5	0.09	2.9
600	31	4,384	-3.1	-18.0	30	6.7	31	4,443	2.5	-0.1	11	6.2	30	4,449	1.2	-6.3	23	3.0	29	4,389	-1.3	-1.5	3.8	2.8	8.1	31	4,432	2.8	-16.1	0.08	2.4
550	31	5,032	-7.2	-23.3	30	8.1	31	5,141	-1.7	-1.4	16	6.2	31	5,146	-2.4	-11.5	23	3.0	29	5,077	-5.0	-21	2.5	2.7	8.1	31	5,131	-1.1	-19.1	0.08	2.1
500	31	5,768	-12.2	-28.2	30	8.5	31	5,893	-6.3	-17.9	11	4.3	30	5,897	-6.5	-17.4	22	2.9	29	5,820	-9.3	-25	2.7	2.7	8.3	31	5,816	-5.5	-23.7	0.08	1.5
450	31	6,565	-17.7	-33.0	30	9.5	31	6,710	-11.1	-22.0	10	4.1	30	6,713	-11.3	-23.1	26	3.5	28	6,627	-14.7	-13.1	30	0.27	9.1	31	6,705	-10.5	-28.6	0.03	3.1
400	30	7,439	-23.7	-37.5	30	10.3	31	7,605	-17.0	-28.3	10	3.4	29	7,607	-17.0	-30.1	27	3.4	26	7,508	-20.9	-33.9	27	10.3	31	7,600	-16.9	-34.2	2	1.3	
350	30	8,403	-31.1	-44.1	30	11.2	31	8,597	-24.0	-34.8	9	3.4	29	8,599	-23.6	-36.3	25	4.4	26	8,485	-27.7	-40.1	27	11.1	31	8,592	-24.0	-39.8	2	3.5	
300	30	9,475	-39.4	-50.4	30	13.8	31	9,703	-32.2	-42.4	0.7	3.9	29	9,704	-31.9	-44.9	26	5.9	26	9,570	-36.5	-45.0	27	13.4	31	9,694	-32.7	-46.0	0.05	5.6	
250	30	10,699	-48.3		29	17.9	31	10,966	-42.3		0.6	4.6	29	10,965	-42.1		25	6.7	26	10,810	-45.6		27	17.4	31	10,924	-43.0		26	8.4	
200	30	12,146	-55.0		28	21.5	30	12,428	-54.6		0.4	5.5	29	12,437	-53.7		25	8.2	26	12,261	-57		27	18.0	31	12,307	-51.7		26	11.3	
175	30	12,987	-55.1		29	19.2	30	13,242	-54.6		0.4	5.6	28	13,241	-53.7		26	9.3	26	13,081	-57.9		28	19.1	31	13,250	-51.1		26	11.3	
150	30	13,974	-54.8		29	16.4	30	14,214	-56.7		0.6	5.3	28	14,215	-57.6		29	6.1	26	14,081	-59.8		28	16.1	31	14,201	-57.5		25	9.5	
125	30	15,145	-54.4		29	13.3	30	15,296	-57.7		0.6	6.2	27	15,336	-56.1		32	4.2	26	15,217	-60.7		28	10.9	31	15,284	-75.1		25	7.1	
100	30	17,570	-52.2		30	8.7	30	18,605	-57.2		0.7	10.1	27	18,665	-69.6		03	2.5	26	18,607	-60.1		29	7.1	31	18,582	-74.9		19	2.2	
80	29	17,989	-55.7		31	5.6	30	17,926	-59.4		08	11.5	27	18,006	-66.5		07	5.8	26	18,003	-58.4		11	2.5	31	17,890	-70.9		09	8.6	
70	29	18,811	-54.6		32	3.3	30	18,729	-66.1		08	13.3	27	18,818	-63.5		08	7.4	26	18,816	-58.6		36	7.0	31	18,687	-66.0		09	12.7	
60	29	19,832	-53.2		35	2.1	30	19,671	-63.3		08	15.6	27	19,771	-60.8		08	9.4	25	19,728	-55.4		07	2.0	31	19,622	-65.1		09	14.1	
50	29	21,011	-51.5		06	2.1	30	20,001	-60.1		08	19.1	27	20,916	-57.1		09	11.8	25	20,997	-53.2		08	4.6	30	20,743	-61.2		09	18.3	
40	29	22,467	-49.6		07	3.4	29	22,206	-57.0		09	21.1	27	22,338	-54.1		09	13.6	25	22,441	-51.3		08	7.2	30	22,138	-58.3		09	20.9	
30	29	24,353	-47.1		08	5.7	27	24,045	-52.2		09	24.1	27	24,200	-50.4		09	14.2	21	24,323	-49.4		08	9.2	30	24,196	-54.6		09	25.4	
25	29	25,575	-45.3		08	7.0	26	25,233	-49.6		09	26.4	26	25,393	-48.7		09	15.9	21	25,529	-46.3		08	10.4	30	25,140	-52.1		09	27.5	
20	28	27,073	-43.1		09	8.2	26	26,707	-45.7		09	26.8	26	26,868	-46.1		09	17.8	21	27,025	-43.4		08	12.1	30	26,595	-49.2		09	30.3	
15	28	29,025	-39.7		08	9.9	21	28,643	-42.5		09	29.2	24	28,794	-43.2		09	19.7	14	28,964	-40.9		09	13.7	27	28,493	-46.5		09	31.0	
10	22	31,818	-35.1		09	12.0	6	31,402	-39.7		15	31,541	-38.9										20	31,196	-42.9		09	34.9			
5	9	34,313	-31.0		09	14.5																	9	33,585	-41.8						

RAWINSONDE DATA

Average monthly values

JULY 1979

		KEY WEST, FL 1017 MB										KING SALMON, AK 1013 MB										KOTZEBUE, AK 1007 MB										LAKE CHARLES, LA 1014 MB									
Standard pressure surface mb	No. of observations	Resultant Wind					Dew Point °C +					Resultant Wind					Dew Point °C +					Resultant Wind					Dew Point °C +					Resultant Wind									
		Temperature °C	Dynamic height meters	Dew Point °C	Direction tens of deg	Speed m.p.s.	Temperature °C	Dynamic height meters	Dew Point °C	Direction tens of deg	Speed m.p.s.	Temperature °C	Dynamic height meters	Dew Point °C	Direction tens of deg	Speed m.p.s.	Temperature °C	Dynamic height meters	Dew Point °C	Direction tens of deg	Speed m.p.s.	Temperature °C	Dynamic height meters	Dew Point °C	Direction tens of deg	Speed m.p.s.	Temperature °C	Dynamic height meters	Dew Point °C	Direction tens of deg	Speed m.p.s.	Temperature °C	Dynamic height meters	Dew Point °C	Direction tens of deg	Speed m.p.s.					
5FC	31	3.9	27.8	24.0	12	3.1	3.1	19	11.0	9.1	2.7	3.0	3.1	1.2	3.1	3.0	2.7	8.8	8.3	2.5	2.0	31	5	11.1	8.3	2.5	2.0	31	5	24.1	23.9	12	1.7								
1000	31	1.9	27.3	23.6	12	4.4	31	19	11.0	9.2	2.0	3.1	1.9	2.0	3.1	3.0	2.7	8.7	8.2	2.5	2.0	31	5	11.0	8.2	2.5	2.0	31	5	22.6	22.2	12	1.4								
900	31	6.0	23.6	20.5	5.8	5.1	5.1	19	11.0	9.0	2.0	3.1	5.0	2.0	3.1	3.0	2.7	8.6	8.1	2.5	2.0	31	5	11.0	8.1	2.5	2.0	31	5	44.5	44.5	12	1.4								
800	31	1.075	20.4	15.6	13	5.9	1.001	8.7	1.0	2.2	3.1	3.1	1.019	20.9	1.0	2.2	3.1	3.0	2.7	8.5	8.0	2.5	2.0	31	5	11.0	8.0	2.5	2.0	31	5	15.4	15.4	12	1.4						
850	31	1.568	11.0	11.0	13	5.2	1.9	1.9	1.472	6.2	2.8	2.7	1.3	3.1	1.512	17.9	1.5	2.6	2.7	3.0	1.449	1.42	2.5	2.0	31	5	11.0	1.42	2.5	2.0	31	5	15.4	15.4	12	1.4					
800	31	2.085	15.5	6.8	13	4.8	1.9	1.9	1.968	4.3	1.4	2.7	2.2	3.1	2.031	15.4	1.1	2.9	2.7	1.7	1.940	1.6	6.0	5.6	31	5	11.0	1.6	6.0	5.6	31	5	20.0	19.8	12	1.4					
750	31	2.631	12.6	3.1	13	4.7	1.9	1.9	2.491	1.6	4.9	2.8	2.8	3.1	2.577	12.8	7.6	2.6	9.9	3.0	2.458	1.1	10.3	2.0	31	5	11.0	1.1	10.3	2.0	31	5	2.6	2.6	12	1.4					
700	31	3.207	9.5	-6.3	13	4.1	1.9	1.9	3.045	-1.3	-7.8	2.7	2.8	3.1	3.154	9.6	1.7	3.3	3.0	4.0	3.006	-4.0	-15.3	2.1	31	5	11.0	-4.0	-15.3	2.1	31	5	3.4	3.4	12	1.4					
650	31	3.819	6.0	-3.6	12	3.8	1.9	1.9	3.633	-4.4	-11.5	2.5	3.8	3.1	3.767	6.2	1.5	0.8	2.9	2.9	3.588	-6.9	-17.5	2.0	31	5	11.0	-6.9	-17.5	2.0	31	5	2.9	2.9	12	1.4					
600	31	4.970	2.0	-7.3	11	3.6	1.9	1.9	4.259	-8.1	-14.5	2.5	4.5	3.1	4.420	2.4	-1.5	0.8	2.9	2.9	4.028	-10.6	-22.2	2.1	31	5	11.0	-1.5	-8.3	1.7	31	5	2.4	2.4	12	1.4					
550	31	5.167	-2.2	-11.7	11	2.9	1.9	1.9	4.930	-12.3	-20.7	2.6	5.5	3.1	5.120	-1.2	-6.0	0.9	3.4	2.9	4.872	-14.9	-25.7	2.1	4.4	30	5	11.0	-6.0	-25.7	2.0	4.4	30	5	1.2	1.2	12	1.4			
500	31	5.919	-6.4	-16.2	10	3.1	1.9	1.9	5.652	-16.8	-26.3	2.6	6.2	3.1	5.875	-5.1	-11.1	0.9	4.6	5.5	5.87	-19.7	-32.3	2.1	4.6	30	5	11.0	-11.1	-32.3	2.0	4.6	30	5	5.884	5.884	12	1.4			
450	30	6.735	-11.5	-22.5	10	3.2	1.9	1.9	6.436	-21.8	-32.8	2.7	6.2	3.1	6.697	-9.7	-17.5	0.9	5.0	29	6.361	-25.0	-37.3	2.1	4.8	30	6	7.00	-11.2	-23.5	2.1	4.8	30	6	1.0	1.0	12	1.4			
400	30	7.629	-17.4	-26.7	8	2.9	1.9	1.9	7.293	-27.8	-39.7	2.7	8.4	3.1	7.597	-15.3	-22.4	0.9	5.6	29	7.206	-31.2	-42.1	2.1	5.4	30	7	5.95	-16.9	-29.7	2.0	5.4	30	7	2.0	2.0	12	1.3			
350	30	8.619	-23.9	-34.4	7	4.1	1.9	1.9	8.241	-35.2	-44.2	2.7	9.4	3.0	8.598	-22.0	-30.6	0.9	6.1	29	8.142	-37.8	-46.8	2.1	6.1	30	8	5.857	-23.7	-35.5	2.3	6.1	30	8	2.3	2.3	12	1.3			
300	29	9.726	-31.8	-43.0	6	4.8	1.9	1.9	9.295	-43.2	-47.8	2.7	10.5	3.0	9.711	-30.1	-40.7	0.9	6.9	29	9.184	-45.8	-46.2	2.1	6.6	30	9	6.932	-32.1	-44.4	2.2	6.6	30	9	3.1	3.1	12	1.3			
250	29	10.988	-42.1	-50.4	5	6.2	1.9	1.9	10.501	-50.6	-59.6	2.9	12.6	3.0	10.981	-40.6	-48.0	0.8	7.6	29	10.380	-51.3	-52.0	2.0	6.8	30	10	9.953	-42.0	-52.0	2.3	6.8	30	10	2.3	2.3	12	1.3			
200	29	12.458	-54.3	-64.9	4	7.8	1.9	1.9	11.952	-54.0	-64.0	2.9	13.6	3.0	12.460	-53.2	-64.0	0.8	10.5	29	11.843	-46.4	-52.0	2.1	7.2	30	11	8.247	-52.0	-53.1	2.1	7.2	30	11	2.4	2.4	12	1.3			
175	29	13.302	-60.8	-68.0	3	8.8	1.9	1.9	12.842	-60.4	-68.6	2.9	14.9	3.0	13.202	-59.6	-68.4	0.8	14.4	29	12.842	-64.6	-72.0	2.1	8.2	30	11	8.276	-59.1	-69.1	2.1	8.2	30	11	2.1	2.1	12	1.3			
150	29	14.246	-66.9	-74.0	2	9.5	0.9	1.9	13.371	-65.0	-73.0	2.9	15.4	3.0	14.250	-64.8	-73.0	0.8	14.4	29	13.752	-64.8	-72.0	2.1	8.4	30	11	8.227	-64.5	-72.7	2.1	8.4	30	11	2.1	2.1	12	1.3			
125	29	15.311	-73.1	-81.1	1	10.5	0.9	1.9	14.033	-70.3	-78.3	2.9	16.6	3.0	15.320	-69.1	-78.3	0.8	14.6	29	14.963	-67.7	-75.7	2.1	8.5	30	11	8.255	-70.0	-78.0	2.1	8.5	30	11	2.1	2.1	12	1.3			
100	28	16.555	-75.5	-84.7	0	7	0.8	1.9	14.946	-74.5	-82.6	2.9	18.0	3.0	16.606	-71.7	-82.6	0.8	11.2	28	16.444	-64.6	-74.4	2.1	8.6	30	11	8.227	-72.0	-80.0	2.1	8.6	30	11	2.1	2.1	12	1.3			
80	28	17.098	-67.8	-76.8	-1	8	0.9	1.9	17.956	-65.2	-73.2	3.3	14.8	2.8	17.907	-70.3	-78.0	0.8	11.4	28	17.277	-64.3	-72.7	2.1	8.7	30	11	8.277	-65.7	-73.9	2.1	8.7	30	11	2.1	2.1	12	1.3			
70	28	18.795	-64.9	-73.8	-2	9	0.9	1.9	18.956	-62.8	-70.8	3.3	15.8	2.8	18.795	-67.9	-75.8	0.8	11.6	28	18.177	-64.3	-72.3	2.1	8.8	30	11	8.277	-64.9	-73.8	2.1	8.8	30	11	2.1	2.1	12	1.3			
50	28	19.726	-59.5	-68.5	-3	10	0.9	1.9	19.688	-58.2	-66.2	3.3	16.8	2.8	19.726	-57.0	-65.0	0.8	11.8	28	19.089	-56.0	-64.0	2.1	8.9	30	11	8.277	-59.5	-68.5	2.1	8.9	30	11	2.1	2.1	12	1.3			
30	28	20.816	-54.8	-63.8	-4	11	0.9	1.9	20.749	-53.6	-61.6	3.3	17.8	2.8	20.816	-52.4	-60.4	0.8	12.0	28	20.189	-51.2	-59.2	2.1	9.0	30	11	8.277	-54.8	-63.8	2.1	9.0	30	11	2.1	2.1	12	1.3			
15	28	21.637	-48.1	-57.1	-5	12	0.9	1.9	21.562	-47.0	-55.0	3.3	18.8	2.8	21.562	-45.8	-53.8	0.8	12.2	28	20.917	-44.6	-52.6	2.1	9.1	30	11	8.277	-48.1	-57.1	2.1	9.1	30	11	2.1	2.1	12	1.3			
10	7	21.698	-37.4	-46.4	-6	13	0.9	1.9	21.637	-36.2	-44.2	3.3	19.8	2.8	21.637	-35.0	-43.0	0.8	12.4	28	20.816	-33.8	-41.8	2.1	9.2	30	11	8.277	-37.4	-46.4	2.1	9.2	30	11	2.1	2.1	12	1.3			
7	7	21.698	-37.4	-46.4	-7	14	0.9	1.9	21.637	-36.2	-44.2	3.3	19.8	2.8	21.637	-35.0	-43.0	0.8	12.6	28	20.816	-33.8	-41.8	2.1	9.3	30	11	8.277	-37.4	-46.4	2.1	9.3	30	11	2.1	2.1	12	1.3			

		MAJURO, MARSHALL 15° 1011 MB										MEDFORD, OR 970 MB
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RAWINSONDE DATA

Average monthly values

JULY 1979

MONETT, MO 966 MB												NASHVILLE, TN 996 MB												NOKE, AK 1013 MB												NORTH PLATTE, NE 919 MB												OAKLAND, CA 1014 MB											
Standard pressure surface mb.	No. of observations	Resultant Wind			No. of observations			Resultant Wind			No. of observations			Resultant Wind			No. of observations			Resultant Wind			No. of observations			Resultant Wind			No. of observations			Resultant Wind			No. of observations			Resultant Wind																					
		Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m/p/s		Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m/p/s		Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m/p/s		Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m/p/s		Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m/p/s		Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m/p/s		Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m/p/s																	
SFC	31	438	20.0	18.6	14	1.6	31	180	21.1	19.2	17	.8	30	30	5.0	9.0	2.2	2.2	31	18.4	18.4	17	1.8	30	30	1.2	14.5	2.2	12.5	27	1.1	30	555	121	11.8	27	1.7																						
1000	31	582	21.6	18.3	13	3.0	31	590	21.7	19.1	23	4.1	30	2.9	115	9.2	2.2	2.2	29	2.1	5.0	9.2	2.2	30	1,020	20.3	1.8	30	1,020	20.3	1.8	30	1,511	19.3	2.3	25	2.5																						
950	31	1,545	20.4	15.8	22	5.6	31	1,960	19.0	16.8	24	5.1	30	980	5.9	1.0	21	6.1	31	1,024	18.7	14.9	14	1.8	30	1,511	19.3	2.3	25	2.5																													
900	31	2,061	17.5	12.8	25	4.0	31	1,551	16.0	13.3	25	5.2	30	1,447	4.1	2.0	20	3.9	31	1,517	19.6	10.0	20	3.0	30	1,511	19.3	2.3	25	2.5																													
850	31	2,630	14.9	6.9	23	3.2	31	2,067	14.2	9.0	25	5.1	30	1,379	1.8	4.6	20	4.0	31	2,038	17.4	6.2	23	3.1	30	2,038	17.4	6.2	23	3.1																													
700	31	3,182	12.6	2.5	29	3.1	31	2,610	11.3	4.8	26	5.0	30	2,457	-9	7	21	2.1	30	2,036	14.0	3.1	21	2.1	30	2,036	14.0	3.1	21	2.1																													
650	31	3,792	9.5	-5.2	29	2.6	31	3,073	6.7	-2.7	27	6.4	30	3,588	-3.7	16.7	21	4.5	31	3,776	5.6	4.6	28	4.3	30	3,575	13.3	3.0	23	3.0																													
600	31	4,441	9.9	-9.1	31	3.0	31	4,422	1.1	-7.5	27	7.1	30	4,210	-9.5	-20.6	22	4.9	31	4,426	1.1	-9.2	29	7.0	30	4,426	1.0	-17.5	23	5.6																													
550	31	5,136	-3.0	-14.5	30	3.8	31	5,137	-2.0	-12.5	27	7.8	30	4,878	-13.7	-25.6	23	4.9	31	5,112	-3.7	-12.8	29	7.2	30	5,112	-2.9	-21.2	23	6.0																													
500	31	5,885	-7.4	-21.4	29	4.7	31	5,887	-7.1	-18.2	27	7.6	30	5,596	-16.6	-30.2	24	5.1	31	5,855	-8.7	-18.1	29	7.0	30	5,855	-8.1	-26.1	24	6.9																													
450	31	6,698	-12.3	-26.1	29	5.6	31	6,702	-11.0	-23.3	27	8.3	30	6,376	-23.9	-39.9	25	6.0	31	6,674	-14.1	-25.6	29	7.9	30	6,667	-13.7	-31.1	24	8.4																													
400	31	7,588	-18.0	-31.9	29	6.3	31	7,593	-17.5	-30.9	27	9.4	30	7,223	-30.2	-39.3	25	6.7	31	7,558	-20.1	-31.5	28	10.3	29	7,558	-20.5	-35.9	25	10.7																													
350	31	8,576	-24.9	-36.9	29	7.5	30	8,582	-24.6	-35.2	27	10.3	30	8,162	-37.1	-46.6	25	7.1	30	8,536	-27.2	-39.9	28	12.3	29	8,527	-27.7	-42.8	25	12.1																													
300	31	9,676	-33.2	-44.8	29	8.6	30	9,686	-32.5	-42.7	27	13.1	30	9,208	-40.7	-49.5	25	8.5	30	9,625	-35.4	-47.7	28	15.0	29	9,613	-35.3	-50.0	25	13.5																													
250	31	10,930	-43.4	-53.4	30	10.5	30	10,992	-42.6	-50.1	27	15.7	30	10,410	-50.7	-58.7	25	9.0	30	10,870	-44.9	-52.7	27	16.7	29	10,853	-45.4	-54.5	25	14.3																													
200	31	12,395	-53.9	-63.9	29	11.6	30	12,412	-53.8	-63.8	28	17.1	30	12,329	-54.9	-64.7	25	6.5	26	12,329	-54.9	-64.7	27	18.2	29	12,311	-54.5	-64.2	26	15.2																													
175	31	13,243	-58.0	-68.0	28	12.8	30	13,259	-59.2	-68.0	28	17.2	30	12,757	-64.8	-74.8	24	5.5	29	13,174	-58.7	-67.7	27	18.3	29	13,169	-57.7	-66.8	25	15.4																													
150	31	14,203	-62.4	-72.4	29	12.0	30	14,215	-63.1	-72.4	28	12.2	30	13,780	-64.8	-76.8	24	4.1	29	14,138	-60.6	-70.6	27	14.6	28	14,113	-60.5	-70.5	25	12.8																													
125	31	15,318	-65.6	-75.6	29	8.3	30	15,332	-65.2	-75.2	28	7.9	30	14,987	-67.0	-79.0	24	3.0	29	15,268	-62.6	-72.3	28	11.2	29	15,265	-62.9	-72.9	25	9.3																													
100	31	16,670	-69.4	-79.4	30	2.8	30	16,685	-69.1	-79.1	30	3.8	29	16,465	-68.8	-79.8	23	1.7	29	16,633	-63.2	-73.2	28	5.5	29	16,633	-63.8	-73.8	24	4.1																													
80	31	18,027	-64.2	-74.2	06	2.1	30	18,043	-63.0	-73.0	06	2.6	28	17,944	-67.0	-79.0	20	1.3	29	18,021	-61.4	-71.4	29	1.3	29	18,000	-62.6	-72.6	20	2.0																													
60	31	18,850	-51.4	-61.4	07	4.1	30	18,866	-50.8	-60.8	07	4.6	28	18,622	-54.4	-64.4	17	1.5	29	18,622	-59.2	-69.2	06	0.6	18	18,619	-58.0	-68.0	09	4.0																													
50	30	20,964	-55.7	-65.7	08	8.0	30	20,965	-55.2	-65.2	09	9.4	28	20,961	-64.6	-74.6	10	2.2	29	20,967	-59.2	-69.2	09	5.7	20	20,949	-59.7	-69.7	09	6.1																													
30	31	24,262	-49.8	-59.8	09	11.5	27	24,264	-49.3	-59.3	09	11.7	26	24,464	-49.8	-59.8	09	0.6	27	24,302	-49.8	-59.8	09	8.8	24	24,200	-50.0	-59.0	09	11.0																													
25	30	25,450	-47.9	-57.9	09	12.9	27	25,496	-47.8	-57.8	09	12.6	26	25,688	-43.3	-53.3	08	5.1	27	25,506	-47.0	-57.0	09	9.4	25	25,445	-46.9	-56.9	09	12.9																													
20	30	26,936	-46.0	-56.0	09	14.6	27	26,976	-45.6	-56.0	09	15.2	26	27,198	-40.9	-50.9	08	6.5	26	26,991	-45.1	-55.1	09	10.3	26	26,914	-46.2	-56.2	09	13.9																													
15	27	28,862	-42.8	-52.8	09	16.2	27	28,916	-42.0	-52.0	09	17.0	26	29,159	-38.3	-48.3	08	7.4	23	28,926	-42.2	-52.2	09	12.8	22	28,837	-43.5	-53.5	09	17.2																													
10	32	31,615	-39.0	-49.0	09	9	31,691	-37.9	-47.9	09	11.8	27	31,978	-33.3	-43.3	14	3.1	31,697	-37.8	-43.8	09	14.9	14	31,599	-38.1	-48.1	09	18.1																															
7	31	31,723	-37.0	-47.0	10	14	31,272	-42.8	-52.8	10	5.9	9	31,733	-35.9	-43.9	15	3.1	34,150	-33.8	-43.8	09	14.9	14	31,336	-38.3	-48.3	09	18.1																															
OMAHA, NE 969 MB												PAGO PAGO, AMERICAN SAMOA 1013 MB												PEDRIA, PR 994 MB												PITTSBURGH, PA 976 MB												PONAPE, CAROLINE 1006 MB											
SFC	31	403	19.3	17.0	11	1.2	31	5	27.9	22.7	11	3.9	29	200	17.6	19.7	05	.5	31	359	17.0	15.1	26	.5	31	39	28.9	24.8	08	0.8	30	27.4	23.0	19.1	0.8	1.2	30	27.4	23.0	19.1	0.8	1.2																	
1000	31	568	20.4	16.4	15	2.1	31	574	23.3	19.8	11	4.3	29	587	20.1	15.5	09	.5	31	589	18.5	14.1	26	1.8	31	52	23.9	19.4	10.0	3.3	30	52	23.9	19.4	10.0	3.3																							
950	31	1,036	19.8	12.0	21	3.3	31	1,043	18.8	16.8	09	1.5	30	1,053	17.5	11.3	31	.9	31	1,053	16.5	11.6	27	3.1	31	1,015	20.9	18.0	10.0	4.9	30	1,015	20.9	18.0	10.0	4.9																							
850	31	1,528	17.4	11.1	25	3.4	31	1,532	15.9	13.3	07	3.0	29	1,539	14.4	8.7	31	2.7	31	1,538	13.6	7.6	28	3.5	31	1,508	18.1	14.3	10.0	5.7	30	1,508	18.1	14.3	10.0	5.7																							
700	31	2,588	11.6	2.6	29	4.6	31	2,592	12.8	3.6	33	2.0	29	2,589																																													

RAWINSONDE DATA

Average monthly values

JULY 1979

SALEM, IL 996 MB												SALEM, DR 1010 MB												SALT LAKE CITY, UT 871 MB												SAN DIEGO, CA 998 MB.												SAN JUAN, P. R. 1017 MB											
Standard Pressure surface mbar	No. of observations	Resultant Wind			Temperature °C			Resultant Wind			Temperature °C			Resultant Wind			Temperature °C			Resultant Wind			Temperature °C			Resultant Wind			Temperature °C																														
		Dynamic height meters	Temperature °C +	Dew Point °C +	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C +	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C +	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C +	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C +	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C +	Direction tens of deg.	Speed m.p.s.																												
950	11	1.52	21.5	15.6	22	1.6	31	5.77	15.1	9.0	0.1	1.1	31	1.288	19.1	6.0	16	3.7	124	17.3	15.7	34	1.3	31	6	25.3	23.6	11	3.2																														
1000	6	1.91	16.7	11.6	22	1.6	31	1.035	13.7	5.7	31	1.3	31	7	127	16.7	14.5	8.2	1.9	31	153	25.3	22.7	11	5.1																																		
850	31	1.538	15.6	8.5	27	3.6	31	1.515	12.1	2.6	23	3.5	31	2.027	21.2	1.8	24	4.7	31	1.013	22.4	2.2	30	1.5	31	1.074	19.6	16.8	12	8.8																													
800	31	2.051	13.1	4.7	27	4.4	31	2.021	10.2	-3.5	25	3.5	31	2.035	20.3	-1.9	25	4.7	31	2.080	24.4	6.2	12	7.9	31	1.020	12	10.3	8.4																														
750	31	2.592	10.8	-1.4	28	4.6	31	2.556	7.8	-7.0	24	5.2	31	2.581	17.0	-2.7	21	2.9	31	2.588	16.9	-5.1	22	2.9	31	2.624	12.1	-1.1	22	7.3																													
700	31	3.165	7.8	-4.0	28	5.2	31	3.122	5.0	-10.7	23	6.8	31	3.164	-5.3	-24	4.0	31	3.171	12.8	-8.3	23	3.3	31	3.198	8.5	-5.0	12	6.9																														
650	31	3.772	4.3	-7.6	29	6.1	31	3.723	1.6	-1.1	23	7.9	31	3.780	7.5	-7.8	24	5.2	31	3.788	8.6	-1.1	23	3.6	31	3.807	5.1	-0.9	12	6.2																													
600	31	4.19	1.3	-11.8	29	6.6	31	4.363	-2.4	-16.2	24	8.6	31	4.433	-1.0	-11.4	24	7.2	31	4.443	5.4	-4.7	25	4.0	31	4.464	4.2	-0.4	12	5.2																													
550	31	5.12	-0.3	-16.6	28	6.6	31	5.127	-9.0	-6.2	22	9.7	31	5.127	-1.3	-11.4	24	8.0	31	5.146	-1.7	-10.0	25	4.5	31	5.152	-2.4	-15.6	12	5.1																													
500	31	5.95	-6.0	-27.6	28	9.0	31	5.788	-10.6	-10.6	20	9.7	31	5.782	-9.3	-20.3	25	11.5	31	5.899	-9.2	-22.7	24	4.6	31	5.903	-6.9	-20.1	12	4.2																													
450	31	6.70	-13.0	-27.6	29	8.5	31	6.589	-16.6	-31.4	25	12.1	31	6.678	-15.0	-26.6	25	13.1	31	6.715	-11.9	-29.3	24	5.7	31	6.717	-12.1	-26.0	12	3.3																													
400	31	7.558	-18.6	-35.4	29	9.7	31	7.464	-22.9	-36.7	25	13.4	31	7.559	-21.1	-34.0	25	11.5	31	7.605	-18.4	-34.4	24	6.3	31	7.606	-17.9	-32.1	11	1.7																													
350	31	8.542	-25.7	-38.8	28	10.1	30	8.427	-30.1	-33.7	26	15.2	31	8.534	-28.2	-41.4	26	13.1	31	8.591	-28.4	-41.6	25	8.4	31	8.595	-25.0	-38.2	02	.8																													
300	31	9.637	-34.1	-46.1	28	11.7	30	9.502	-38.6	-51.5	25	15.6	30	9.618	-36.7	-48.3	26	15.7	31	9.687	-34.0	-49.1	25	10.0	31	9.694	-33.4	-46.5	31	1.7																													
250	30	10.888	-43.9	28	14.4	29	10.733	-47.9	25	18.3	30	10.856	-45.8	26	18.5	31	10.939	-43.4	25	12.6	31	10.948	-34.4	31	2.6																																		
200	30	12.350	-54.8	28	17.5	29	12.185	-53.5	25	20.8	30	12.312	-54.7	26	19.7	31	12.406	-53.7	25	14.3	31	12.410	-55.5	31	4.0																																		
175	30	13.196	-58.8	28	18.2	29	13.044	-53.7	25	19.7	30	13.160	-57.6	26	19.0	31	13.256	-58.7	25	14.2	31	13.250	-61.5	32	5.2																																		
150	30	14.158	-61.0	29	14.5	29	14.032	-55.2	26	16.5	30	14.128	-59.8	26	15.6	31	14.212	-63.3	25	15.5	31	14.191	-67.8	34	3.5																																		
125	30	15.284	-63.9	29	9.8	29	15.198	-56.2	25	11.8	30	15.259	-62.6	26	10.0	31	15.321	-67.4	25	7.9	31	15.277	-71.5	08	1.9																																		
100	30	16.645	-65.0	29	4.9	29	16.607	-57.5	24	6.5	30	16.633	-63.5	26	4.6	31	16.661	-68.5	20	3.1	31	16.589	-72.2	05	6.0																																		
80	30	18.141	-62.2	29	2.0	29	18.016	-57.2	24	2.0	30	18.043	-60.0	21	5.1	31	18.084	-66.4	09	5.3	31	18.033	-70.3	00	1.0																																		
70	30	18.690	-61.0	36	3.8	29	18.662	-56.6	16	1.0	29	18.693	-59.0	09	2.1	31	18.719	-66.3	10	13.7	31	18.741	-70.6	10	1.0																																		
60	30	19.812	-57.1	36	5.5	29	19.793	-55.2	16	2.1	29	19.814	-57.2	09	4.3	31	19.827	-67.7	09	9.6	31	19.855	-73.3	10	16.4																																		
50	30	20.974	-54.4	09	7.3	29	21.013	-52.2	09	3.0	29	20.975	-54.9	09	6.0	31	20.916	-57.2	09	11.9	31	20.784	-60.2	11	18.2																																		
40	30	22.412	-52.1	09	9.0	29	22.456	-51.5	09	5.2	26	22.411	-52.2	09	7.8	29	22.338	-54.1	09	13.0	31	22.187	-57.0	11	20.4																																		
30	30	24.288	-49.1	09	10.9	29	24.337	-48.6	09	7.6	26	24.287	-49.3	09	9.6	29	24.198	-51.0	09	14.5	31	24.026	-52.9	11	23.5																																		
25	29	25.490	-47.1	09	11.4	29	25.541	-46.9	09	8.2	26	25.498	-49.5	09	10.5	28	25.390	-49.7	09	16.1	31	25.210	-50.1	11	25.5																																		
20	25	26.976	-44.6	09	13.6	28	27.027	-44.8	09	8.6	25	26.989	-45.1	09	11.0	26	26.858	-47.7	09	18.2	31	26.677	-47.7	10	26.6																																		
15	20	28.924	-41.0	09	15.9	26	28.963	-41.9	09	10.6	23	28.902	-42.1	09	13.5	26	28.772	-44.4	09	20.6	30	28.589	-44.7	10	29.4																																		
10	13	31.685	-37.5	09	18.1	22	31.740	-36.8	09	13.6	19	31.667	-37.6	09	15.9	20	31.515	-39.6	09	24.0	22	31.320	-40.5	11	32.0																																		

*	SAULT STE MARIE, MI 990 MB				SPOKANE, WA 931 MB				TAMPA BAY, FL 1016 MB				TOPEKA, KS 984 MB				TRUX, CAROLINE IS. 1011 MB								
SFC	31	221	14.1	12.0	01	.8	31	720	15.1	6.1	17	1.7	31	13	23.4	22.5	12	1.4	31	268	21.6	19.6	11		
1000													31	156	25.4	23.3	14	2.2							
950	31	571	16.6	9.5	32	2.1							31	607	23.6	18.9	16	3.5	31	573	22.1	18.2	19	3.6	
900	31	1,031	14.9	7.3	30	3.6	31	1,010	17.7	3.7	20	2.6	31	1,079	21.0	14.9	17	3.5	31	1,043	20.9	15.6	23	4.8	
850	31	1,513	12.1	5.7	29	4.1	31	1,498	16.5	-2	23	2.5	31	1,573	18.2	10.4	17	3.0	31	1,537	18.3	13.1	25	3.8	
800	31	2,019	9.3	.2	28	4.6	31	2,011	12.7	-2	6	2.4	31	2,019	15.7	5.0	16	3.3	31	2,055	15.2	9.6	27	4.1	
750	31	2,551	6.6	-3	9	2.8	6.0	31	2,549	8.5	-4	4.2	3.0	31	2,635	12.4	1.5	16	3.2	31	2,600	11.9	5.1	28	4.0
700	31	3,114	3.6	-9	6	28	6.3	31	3,116	4.2	-6	5.2	3.6	31	3,211	9.1	-4	2	2.6	31	3,175	8.7	-9	28	4.5
650	31	3,713	.2	-12	7	29	6.8	31	3,713	.3	-10	7.3	5.1	31	3,822	6.5	-6	2	1.6	31	3,784	4.9	-3	28	4.9
600	31	4,350	-3.1	-17	14	29	7.9	31	4,350	-3.7	-15	4.3	2.3	31	4,472	1.9	-9	5.5	1.7	31	4,433	.7	-8	29	5.4
550	31	5,034	-7.0	-21	3	29	8.4	31	5,032	-7.8	-21	2.9	9.8	31	5,169	-1.3	-13	1.5	5.5	31	5,127	-3.6	-14	3.0	6.1
500	31	5,771	-11.6	-27	3	29	9.0	31	5,765	-12.7	-25	9.4	11.0	31	5,920	-6.6	-18.3	3.0	6.6	31	5,874	-8.3	-20	9.9	7.1
450	31	6,570	-16.9	-32	7	29	9.4	31	6,566	-18.3	-30	12.0	9.9	31	6,737	-11.4	-25	3.6	9.3	31	6,684	-13.2	-26	9.9	7.2
400	31	7,436	-21.4	-36	8	29	10.4	31	7,436	-24.4	-38	4.2	14.4	31	7,633	-16.7	-31.2	2.0	1.2	31	7,514	-25.4	-32	5.3	8.5
350	31	8,409	-30.6	-42.7	29	11	2.1	31	8,392	-31.7	-43.3	2.6	16.1	31	8,723	-25.5	-36.2	0.5	1.4	31	8,555	-25.4	-37.6	2.9	3.1
300	31	9,484	-39.3	-49.0	29	11	3.9	31	9,460	-40.9	-50.0	1.7	16.7	31	9,729	-31.1	-44.0	1.3	1.4	31	9,525	-33.0	-43.7	1.9	1.5
250	31	10,715	-47.1	-47.1	29	16.7	31	10,693	-48.2	-48.2	25	20.1	31	10,992	-42.0	-42.0	0.2	3.2	31	10,902	-44.1	-44.1	29	15.5	
200	31	12,168	-53.7	28	19.9	28	12	139	-52.5	25	20.4	31	12,463	-54.2	0.1	5.0	31	12,363	-54.8	28	15.7	3.0			
175	31	13,025	-51.9	29	18.7	28	13	1,002	-52.4	25	16.7	31	13,306	-60.6	0.2	6.1	31	13,203	-58.6	28	15.8	30			
150	31	14,012	-55.1	28	16.1	28	13	996	-53.5	25	14.0	31	14,250	-57.2	0.3	6.6	31	14,173	-61.0	28	13.8	30			
125	31	15,175	-55.7	28	12.5	28	15	1,166	-54.9	25	10.7	31	15,337	-71.5	0.4	7.4	31	15,298	-63.6	28	10.1	29			
100	31	16,593	-56.6	29	9.0	28	16	589	-55.9	26	6.2	31	16,675	-70.6	0.6	7.0	31	16,662	-64.7	29	4.9	29			
80	30	18,012	-55.1	30	4.7	28	18,006	-55.9	24	2.0	31	17,989	-67.6	0.8	8.7	30	18,032	-62.5	36	1.1	29				
70	30	18,866	-54.3	31	2.7	28	18,858	-55.0	18	.4	31	18,798	-64.8	0.8	9.7	30	18,860	-60.3	0.6	3.3	29				
60	30	19,858	-52.8	02	1.3	28	19,846	-53.7	07	2.2	31	19,746	-61.7	0.8	13.7	30	19,827	-58.0	08	5.6	29				
50	30	21,041	-50.7	06	2.8	28	21,022	-52.1	08	3.7	31	20,886	-57.9	0.9	16.4	30	20,984	-55.2	08	7.6	29				
40	30	22,499	-49.5	08	4.0	28	22,473	-50.4	08	4.9	31	22,303	-55.0	09	18.4	28	22,415	-52.3	09	8.9	28				
30	28	24,394	-46.9	08	6.3	27	24,361	-47.4	08	6.9	31	24,159	-50.9	09	18.9	26	24,290	-49.4	09	10.2	28				
25	27	25,611	-45.2	08	7.3	27	25,572	-45.5	08	7.4	31	25,351	-49.1	09	19.0	23	25,491	-47.3	08	11.8	27				
20	23	27,110	-43.1	08	8.5	24	27,068	-43.2	09	8.8	31	26,823	-46.5	09	20.0	22	26,979	-44.5	09	13.1	25				
15	19	29,068	-40.3	08	10.9	24	29,017	-40.3	09	9.0	28	28,745	-44.1	08	23.0	17	28,918	-41.8	09	14.2	21				
10	6	31,824	-36.1		18	31,809	-35.3	08	11.7	19	31,490	-39.6	09	27.9	11	31,689	-37.1	7	31,339	-40.4					
7													8	33,910	-36.7										

RAWINSONDE DATA

Average monthly values

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Standard pressure surface mb.	WASHINGTON DULLES INT. AP 1007 MB						WAYCROSS, GA 1012 MB						WEST PALM BEACH, FL 1017 MB						WINNEMUCKA, NV 869 MB						IN SLOW, AZ 853 MB					
	No. of observations			Resultant Wind			No. of observations			Resultant Wind			No. of observations			Resultant Wind			No. of observations			Resultant Wind			No. of observations			Resultant Wind		
	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.
5FC	30	85	18.5	17.6	.3	31	14	27.8	22.7	.03	31	15.9	24.7	22.2	.14	31	1.3	1,503	19.6	1.5	.35	.9	29	1,519	19.4	4.8	19	1.3		
1000	27	154	19.6	17.3	.2	31	14	26.5	22.6	.1	31	15.9	26.3	23.2	.15	31	2.023	17.7	.4	.31	1.6	31	2,043	21.7	4.5	27	2.9			
950	30	19.5	14.7	2.3	.1	31	15.9	23.4	20.9	.15	31	15.9	24.7	23.4	.15	31	2.572	14.4	.2	.28	1.6	31	2,599	18.0	1.7	27	2.4			
900	30	1,055	17.0	12.4	.1	30	14	28.1	20.9	.15	31	15.9	26.3	23.4	.15	31	3,215	9.3	1.3	14	3.1	31	3,185	13.5	-1.0	24	2.4			
850	30	1,515	13.4	9.9	.2	31	14	29.1	17.4	.15	31	15.5	3.6	1.0	.9	31	1,098	19.9	15.5	15	3.8	31	1,089	20.4	4.0	20	4.3			
800	30	2,051	11.3	5.9	.2	31	14	20.8	15.0	.15	31	15.9	2.1	1.0	.9	31	2,094	15.1	2.5	13	3.3	31	2,023	17.7	4.5	27	2.9			
750	30	2,588	8.7	1.5	.2	29	14	26.5	11.8	.37	25	4.5	31	2,639	12.6	2.8	13	2.9	31	3,149	10.2	5.4	24	3.1	31	3,185	13.5	-1.0	24	2.4
700	30	3,157	5.9	-4.4	.2	28	14	5.9	31	.2	31	3.2	2.0	5.1	3.1	31	3,215	9.3	1.3	14	2.7	31	3,149	10.2	5.4	24	3.1			
650	30	3,760	2.7	-8.6	.2	27	14	3.809	5.1	.2	29	2.4	2.7	5.0	3.1	31	3,827	5.8	2.0	1.0	2.0	31	3,761	6.0	3.1	23	6.0			
600	30	4,400	-13.3	-13.0	.2	27	14	5.1	4.9	.15	27	1.3	2.7	5.0	3.1	31	4,478	2.1	1.5	1.5	1.5	31	4,410	1.1	-12.1	23	7.9			
550	30	5,095	-4.4	-17.1	.2	27	14	8.8	11	.5156	-2.5	-11.1	2.3	4.9	31	5,175	-2.0	-12.1	12	1.5	31	5,109	-3.6	-17.0	23	8.8				
500	30	5,840	-8.9	-20.4	.2	27	9.5	31	5.907	-6.5	5.1	5.1	5.1	5.1	5.1	31	5,927	-6.4	-10.3	11	1.0	31	5,849	-9.3	-21.8	24	9.5			
450	30	6,649	-13.7	-25.7	.2	27	10.5	31	6.724	-11.2	2.2	2.6	27	4.2	31	6,744	-11.3	-21.4	9	1.3	31	6,655	-14.9	-29.1	25	10.2				
400	30	7,535	-19.6	-32.0	.2	27	12.0	31	7.618	-16.9	2.8	2.8	2.8	3.5	3.1	31	7,638	-17.1	-27.9	7	2.0	31	7,535	-21.2	-33.5	25	12.2			
350	30	8,515	-26.7	-38.8	.2	27	14.3	31	8.610	-23.7	3.7	3.7	3.7	3.4	31	8,630	-23.4	-35.6	0.5	3.1	31	8,510	-28.4	-40.7	25	13.6				
300	30	9,609	-34.5	-45.8	.2	27	16.5	31	9.716	-31.8	2.9	2.9	2.9	4.0	31	9,736	-31.8	-44.5	0.4	4.3	31	9,593	-36.8	-47.3	25	17.3				
250	30	10,857	-44.2	-54.8	.2	27	19.5	31	10,977	-42.0	2.9	2.9	2.9	5.3	31	10,999	-41.6	-53.6	0.3	6.3	31	10,830	-45.9	-54.7	25	17.3				
200	30	12,319	-54.3	-64.8	.2	28	22.0	31	12,448	-54.2	3.0	3.0	3.0	7.6	30	12,474	-53.6	-64.1	0.3	8.1	31	12,285	-54.7	-64.7	25	18.2				
175	30	13,165	-59.0	-69.0	.2	28	22.4	31	13,292	-60.5	3.0	3.0	3.0	8.1	30	13,320	-60.1	-69.0	0.3	8.7	31	13,135	-57.1	-61.0	26	17.5				
150	30	14,126	-61.0	-70.0	.2	29	16.5	31	14,238	-66.4	3.0	3.0	3.0	7.2	30	14,267	-66.6	-70.0	0.4	8.4	31	14,105	-59.4	-64.6	25	15.2				
125	30	15,282	-62.8	-71.0	.2	29	11.3	31	15,330	-70.4	3.0	3.0	3.0	5.0	30	15,365	-70.0	-74.0	0.4	7.6	31	15,242	-61.3	-66.6	25	10.9				
100	30	16,652	-62.8	-72.0	.2	30	7.3	31	16,545	-69.5	3.0	3.0	3.0	6.0	30	16,685	-69.9	-74.0	0.6	7.4	31	16,545	-69.4	-74.6	26	5.0				
80	29	18,007	-64.0	-73.0	.2	33	1.7	31	17.997	-70.0	0.7	6.8	0.7	18,022	-71.1	0.7	8.5	31	18,007	-70.4	-70.7	15	5.1							
70	29	18,492	-58.9	-68.7	.2	06	1.7	31	18,812	-63.7	0.8	8.3	3.0	18,834	-64.1	0.7	10.5	31	18,842	-58.8	-64.8	10	2.1							
60	29	19,616	-57.3	-68.0	.2	08	3.8	31	19,765	-60.6	0.8	10.6	3.0	19,785	-61.2	0.8	14.1	31	19,815	-57.0	-60.9	09	4.3							
50	28	20,977	-54.3	-64.3	.2	08	6.6	30	20,909	-56.7	0.8	13.5	3.0	20,928	-57.3	0.9	16.9	31	20,976	-54.5	-56.7	09	5.6							
40	28	22,415	-52.1	-64.3	.2	09	8.5	29	22,332	-53.7	0.8	15.1	3.0	22,350	-54.1	0.9	18.5	30	22,412	-52.5	-54.1	09	7.7							
30	27	24,291	-48.8	-64.3	.2	09	10.7	27	24,197	-49.7	0.9	16.2	2.9	24,214	-50.2	0.9	19.0	20	24,287	-49.2	-50.5	08	9.2							
25	26	25,493	-47.1	-64.3	.2	09	10.8	27	25,396	-48.0	0.9	16.6	2.9	25,410	-48.2	0.9	19.7	28	25,489	-47.1	-50.5	09	10.2							
20	24	26,976	-44.2	-64.2	.2	09	12.5	25	26,871	-46.3	0.9	17.2	2.9	26,888	-45.9	0.9	21.6	26	26,974	-45.3	-47.0	09	11.5							
15	21	28,913	-41.9	-64.3	.2	09	13.2	24	28,797	-43.3	0.8	21.0	2.6	28,815	-43.1	0.9	24.1	26	28,903	-42.3	-43.0	09	13.3							
10	17	31,073	-38.2	-64.3	.2	09	14.1	19	31,550	-38.3	0.9	26.1	1.6	31,573	-38.9	0.9	28.8	23	31,670	-37.7	-39.7	09	16.1							

YAKUTAT, AK 1014 MB						YAP, CAROLINE 15. 1009 MB						
SFC	30	12	11.0	10.4	0.8	1.3	31	14	27.8	24.7	0.3	.3
1000	30	127	12.1	10.5	1.0	1.7	31	92	26.5	23.7	32	.3
950	30	558	11.1	7.7	1.2	3.0	544	23.4	20.8	28	1.3	
900	30	1,007	8.4	5.4	1.3	3.4	31	0.16	20.8	17.4	27	1.1
850	30	1,778	5.6	2.1	19	3.1	31	1.510	17.9	14.3	28	.2
800	30	1,972	3.3	-4.4	19	2.9	31	0.204	15.5	11.7	0.9	.2
750	30	2,494	.8	-4.2	19	2.7	31	2.575	12.8	8.0	0.9	1.3
700	30	3,066	-1.8	-8.3	14	2.9	31	3.152	9.7	4.0	0.8	1.8
650	30	3,632	-4.9	-12.9	14	3.7	31	3.765	6.3	.6	0.9	2.7
600	30	4,258	-8.6	-17.0	13	4.0	31	4,418	2.8	-3.2	1.0	3.2
550	30	4,927	-13.0	-22.6	13	4.0	31	5,118	-1.0	-6.4	1.0	4.3
500	30	5,647	-17.6	-27.4	14	3.9	31	5,874	-5.4	-12.5	1.0	5.3
450	30	6,288	-23.1	-31.6	15	4.1	31	6,696	-9.6	-19.2	1.0	5.8
400	30	7,280	-29.6	-36.7	15	4.0	31	7,596	-15.0	-25.5	1.0	5.8
350	30	8,216	-36.4	-42.1	15	3.4	30	8,000	-17.1	-32.4	0.6	6.6
300	30	8,269	-41.2	-47.2	16	3.8	30	9,710	-30.0	-41.4	0.9	6.6
250	30	10,474	-50.4	-54.4	18	4.9	30	10,981	-40.5	-49.6	0.9	6.3
200	30	11,929	-48.8	-54.8	20	3.5	30	12,460	-51.2	-50.6	0.6	8.2
175	30	12,809	-47.7	-54.8	21	2.4	30	14,250	-68.1	-51.2	0.6	10.8
150	30	13,827	-48.2	-54.8	20	2.4	30	14,250	-68.1	-51.2	0.6	13.6
125	30	15,026	-49.1	-54.8	20	2.2	30	15,325	-75.9	-54.8	0.6	16.3
100	30	16,489	-49.4	-54.8	19	1.8	30	16,602	-77.8	-54.8	0.7	13.8
80	30	17,951	-49.6	-54.8	16	1.5	29	17,905	-71.2	-54.8	0.8	12.5
70	30</											

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

JULY 1979

Date	Sun's zenith distance								Sun's zenith distance										
	A.M.				•	P.M.				A.M.				•	P.M.				
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°	60.0°	70.7°	75.7°	78.7°		60.0°	70.7°	75.7°	78.7°	
MAUNA LOA OBSERVATORY, HI																			
Air mass																			
	3.34	2.67	2.01	1.34	*	1.34	2.01	2.67	3.34	4.64	3.71	2.78	1.86	*	1.86	2.78	3.71	4.64	
1-----	1.13	1.21	1.30	1.40	1.52	1.37	1.26	1.17	1.11	1-----	1.76	.87	.99	1.15	1.40	1.19	1.03	.93	.84
2-----	1.11	1.18	1.28	1.39	1.51	----	----	----	----	3-----	.75	----	----	1.17	1.39	1.22	1.06	.95	.85
3-----	1.13	1.21	1.30	1.41	1.52	----	----	----	----	4-----	.84	.95	1.06	1.23	1.41	1.23	1.07	.95	.84
4-----	1.15	1.22	1.31	1.41	1.52	----	----	----	----	5-----	.80	.90	1.04	1.19	1.42	1.18	1.04	.93	.83
6-----	1.12	1.21	1.29	1.40	1.52	----	----	----	----	7-----	.73	.86	.94	1.11	1.36	1.23	1.09	.93	.89
8-----	1.14	1.21	1.30	1.41	1.55	----	----	----	----	9-----	.76	.86	.98	1.16	1.32	1.14	.99	.90	.82
10-----	1.14	1.21	1.30	1.41	1.55	----	----	----	----	10-----	.76	.87	.99	1.15	1.36	1.17	1.05	.93	.83
11-----	1.16	1.22	1.31	1.42	1.52	----	----	----	----	11-----	.85	.96	1.05	1.23	1.39	1.21	.95	.83	.71
12-----	1.17	1.25	1.31	1.42	1.52	----	----	----	----	12-----	.85	.95	1.07	1.23	1.41	1.23	1.08	.96	.87
13-----	1.16	1.21	1.30	1.40	1.52	----	----	----	----	13-----	H .33	H .47	H .64	H .88	1.27	1.13	1.02	.86	.67
14-----	1.14	1.21	1.29	1.39	1.52	----	----	----	----	14-----	.81	----	----	1.02	1.27	.89	.70	----	----
15-----	1.14	1.22	1.29	1.39	1.52	----	----	----	----	15-----	----	----	----	1.02	1.27	1.13	.90	.74	----
16-----	1.11	1.17	1.27	1.40	1.52	----	----	----	----	17-----	----	----	----	1.27	1.52	1.37	1.27	1.13	1.00
17-----	1.17	1.26	1.35	1.40	1.56	----	----	----	----	18-----	----	----	.78	.96	1.23	1.17	1.05	1.00	
18-----	1.19	1.28	1.35	1.40	1.58	----	----	----	----	19-----	----	----	----	1.23	1.52	1.37	1.27	1.13	1.00
19-----	1.18	1.30	1.37	1.48	1.57	----	----	----	----	20-----	----	----	----	1.23	1.52	1.37	1.27	1.13	1.00
21-----	1.10	1.20	1.28	1.40	1.55	----	----	----	----	21-----	.51	.61	.76	.94	1.26	1.17	1.05	.92	.82
22-----	1.10	1.21	1.29	1.41	1.56	----	----	----	----	22-----	.61	.71	.86	1.08	1.38	1.23	1.17	.92	.82
23-----	1.18	1.27	1.36	1.47	1.58	----	----	----	----	23-----	.76	.85	.97	1.13	1.38	1.23	1.17	.92	.82
24-----	1.21	1.30	1.38	1.49	1.58	----	----	----	----	24-----	----	----	.84	1.12	1.32	1.22	1.17	1.05	
25-----	1.16	1.24	1.31	1.42	1.52	----	----	----	----	25-----	.66	.77	.91	1.08	1.29	1.17	.88	.75	.65
26-----	1.16	1.24	1.32	1.42	1.52	----	----	----	----	26-----	.52	.63	.77	.95	1.27	1.05	.89	.73	.60
27-----	1.16	1.24	1.33	1.42	1.52	----	----	----	----	27-----	.52	.63	.78	.95	1.26	.99	.80	.66	.54
28-----	1.16	1.24	1.33	1.42	1.52	----	----	----	----	28-----	.53	.62	.76	.95	1.25	1.05	1.00	1.00	1.00
29-----	1.16	1.24	1.33	1.42	1.52	----	----	----	----	29-----	.68	.79	.89	1.07	1.18	.97	.83	.68	.59
31-----	1.16	1.24	1.33	1.44	1.55	----	----	----	----	31-----	.62	.72	.86	1.04	1.29	1.08	1.00	1.00	1.00
Aver-ages	1.15	1.23	1.31	1.42	1.55	1.37	1.26	1.17	1.11	Aver-ages	.69	.80	.91	1.09	1.32	1.13	.97	.86	.76

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

Date . . .	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys . . .	217	228	238	173	141	77	76	59	218	220	150	48	92	51	47	103	221	107	207	219	70	188	143	184	52	215	177	162	146	56	143	

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES:

Dates in the table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

+ And also on an earlier date or dates.

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch of water equivalent to every 10 inches of snow-fall.

CLIMATOLOGICAL DATA - METRIC UNITS: Data from airport unless otherwise specified.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.

Y Peak Gust.

+ And also on an earlier date or dates.

U Indicates Urban site.

R Indicates Rural site.

Ø Station pressures apply to elevations shown in the "Elevations" table of the annual issue of this publication.

Conversion formulae to English Units are as follows:

1 foot = 0.3048 meters

°F. = $\frac{9}{5} \times ^\circ C + 32$

1 inch = 25.4 millimeters

1 mile per hour = 0.447 meters per second

HEATING DEGREE DAYS: Data from airport unless otherwise specified.

U Indicates Urban site.

R Indicates Rural site.

COOLING DEGREE DAYS: Data from airport unless otherwise specified.

U Indicates Urban site.

R Indicates Rural site.

STORM SUMMARY:

o Includes crop damage.

C Crop damage.

* No occurrence of storms or unusual weather phenomena reported.

@ Includes heavy sleet storm.

Freezing drizzle and freezing rain, commonly known as glaze.

Ø For breakdown of "All Others," and for detailed listing of other storms, see the Environmental Data and Information Service, NOAA, monthly publication STORM DATA.

† No Storm Data Report received for this State.

◇ Report incomplete.

† Storm damages are placed in categories varying from 1 to 9 as follows:

1 Less than \$50

2 \$50 to \$500

3 \$500 to \$5,000

4 \$5,000 to \$50,000

5 \$50,000 to \$500,000

6 \$500,000 to \$5 Million

7 \$5 Million to \$50 Million

8 \$50 Million to \$500 Million

9 \$500 Million to \$5 Billion

RAWINSONDE DATA (Average Monthly Values):

All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon. The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygrometers. These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.C.T.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES: Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

()	Clouds Present	DM	Moderate Dust	HM	Moderate Haze	KS	Slight Smoke
*	Values corresponding to true solar noon	DS	Slight Dust	HS	Slight Haze	M	Moderate Haze-indeterminable
BD	Blowing Dust	F	Fog	I	Intense Haze-indeterminable		
BN	Blowing Sand	GF	Ground Fog	K	Smoke	N	Sand
D	Dust	H	Haze	KI	Intense Smoke	S	Slight Haze-indeterminable
DI	Intense Dust	HI	Intense Haze	KM	Moderate Smoke		

NET RADIATION: The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

DESCRIPTION OF CHARTS

CHART I. A. NORMAL DAILY AVERAGE TEMPERATURE ($^{\circ}$ F. 1941-70) FOR MONTH. B. TEMPERATURE DEPARTURE FROM 30-YEAR MEAN ($^{\circ}$ F. 1941-70) FOR MONTH. Chart I-A is reproduced from monthly normals maps prepared at the National Climatic Center. Chart I-B is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin," a publication of Environmental Data Service.

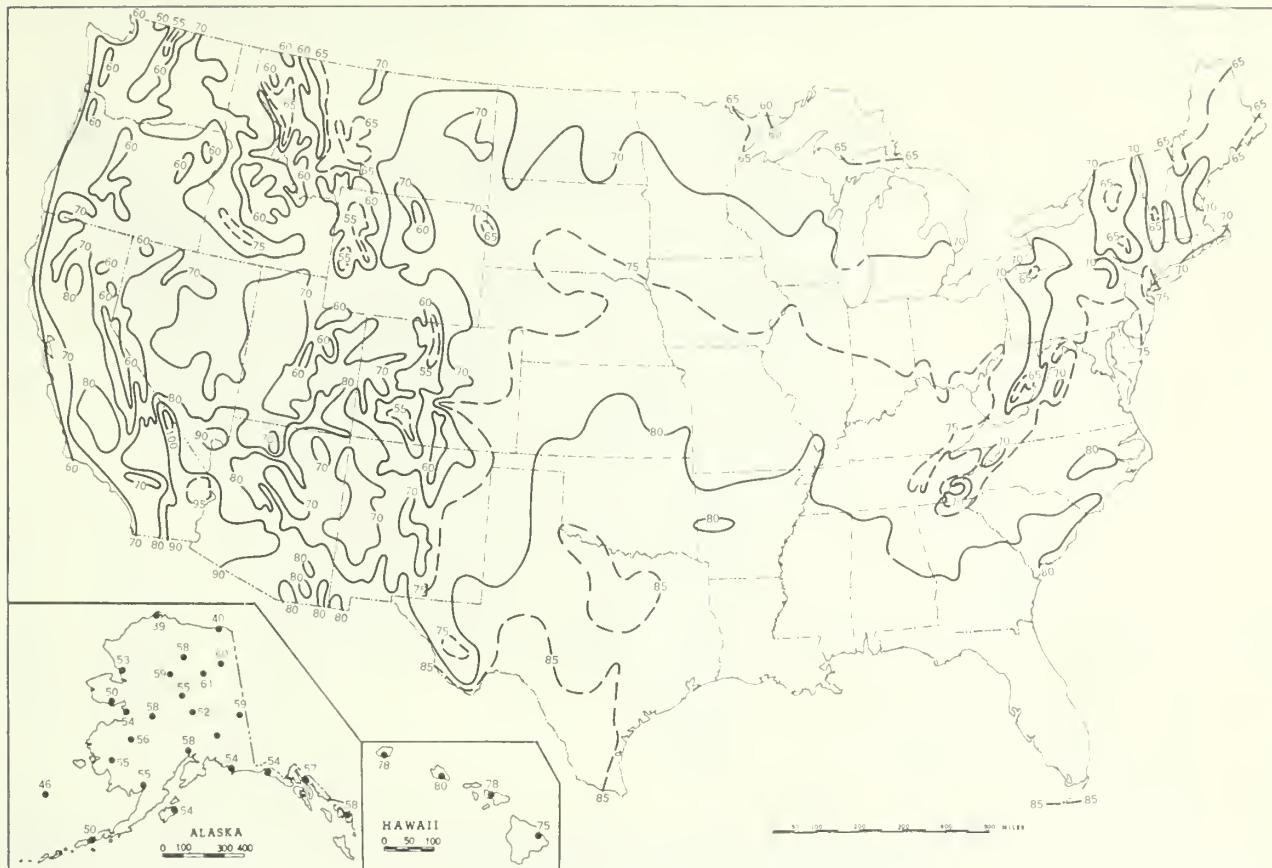
CHART II. A. TOTAL PRECIPITATION. Chart II. A. is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin."

CHART II. B. PERCENTAGE OF NORMAL PRECIPITATION. Chart II. B. is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin."

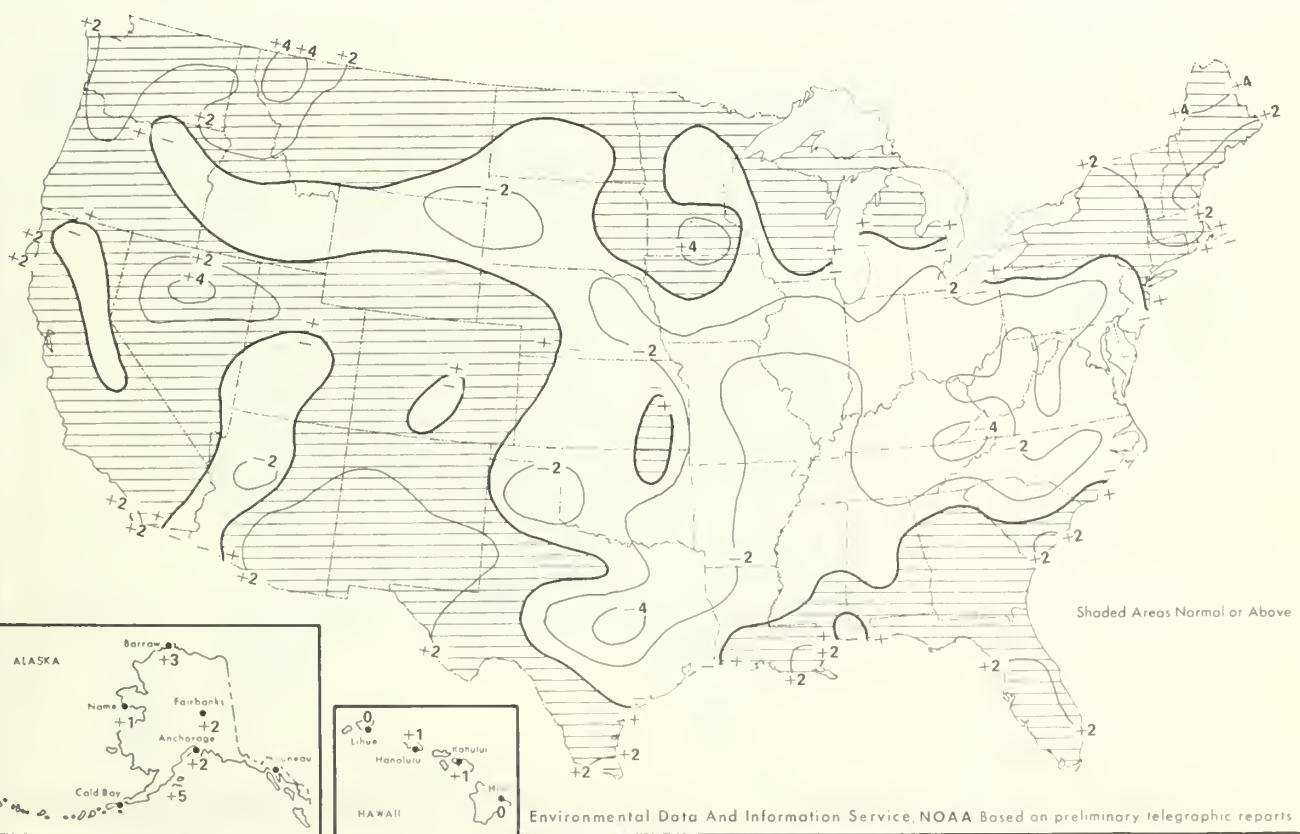
CHART III. TRACKS OF CENTERS OF ANTICYCLONES AT SEA LEVEL.

CHART IV. TRACKS OF CENTERS OF CYCLONES AT SEA LEVEL. Centers which can be identified for 24 hours or more are tracked in these charts. Semi-permanent features such as the Great Basin and Pacific Highs and Colorado and Mexico Lows are not shown. The 7:00 a.m., e.s.t., positions are shown by open circles, with the intermediate positions at 6-hour intervals shown by X's. The date is given above the circle and the central pressure to whole millibars below. A dashed track indicates a regeneration rather than actual movement to the next position. Squares indicate position of stationary center for period shown beside it.

Chart 1. A. Normal Daily Average Temperature (°F. 1941-70), July

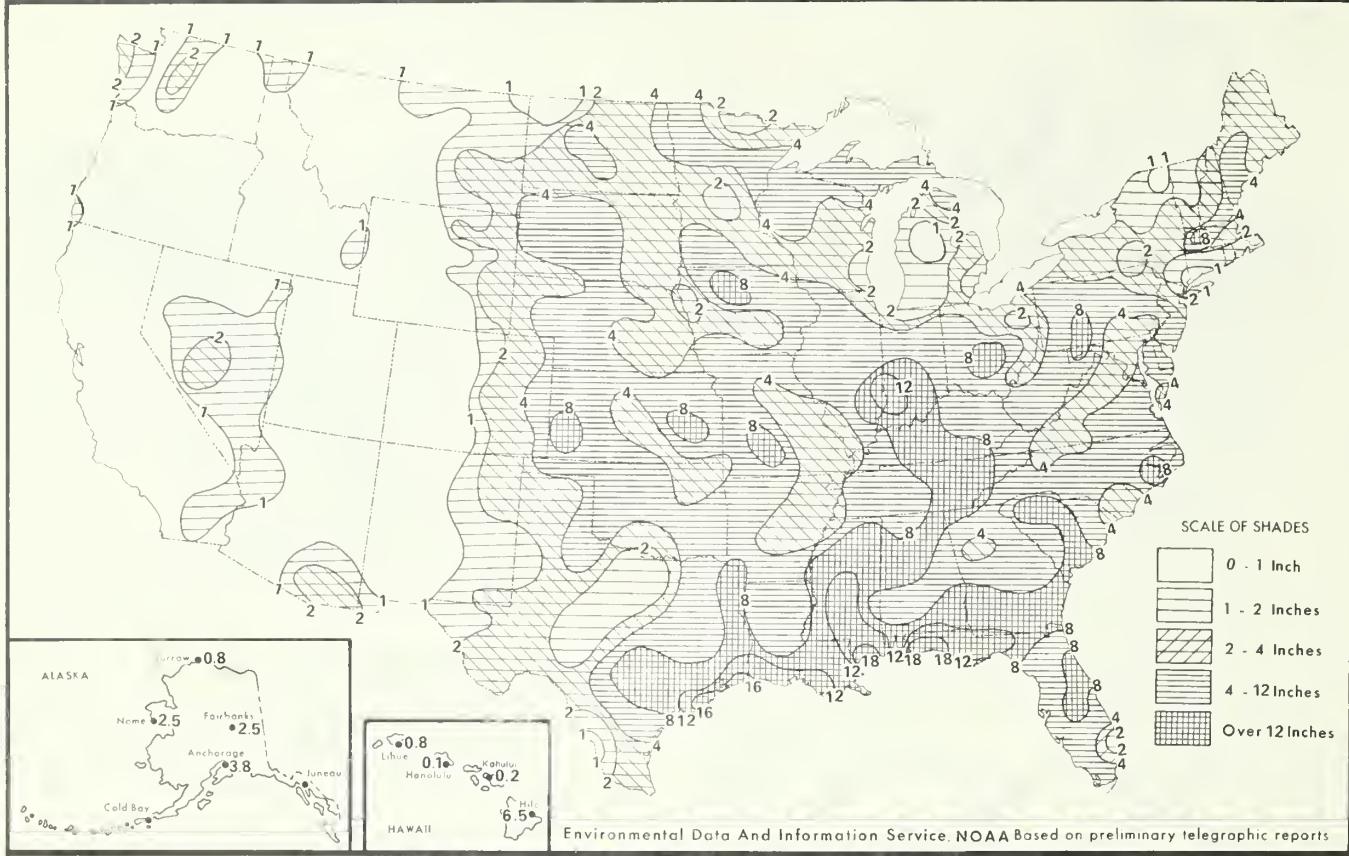


B. Temperature Departure from 30 - Year Mean (°F 1941-70), July 1979



Environmental Data And Information Service, NOAA Based on preliminary telegraphic reports

Chart II. A. Total Precipitation (Inches), July 1979



B. Percentage of Normal Precipitation, July 1979

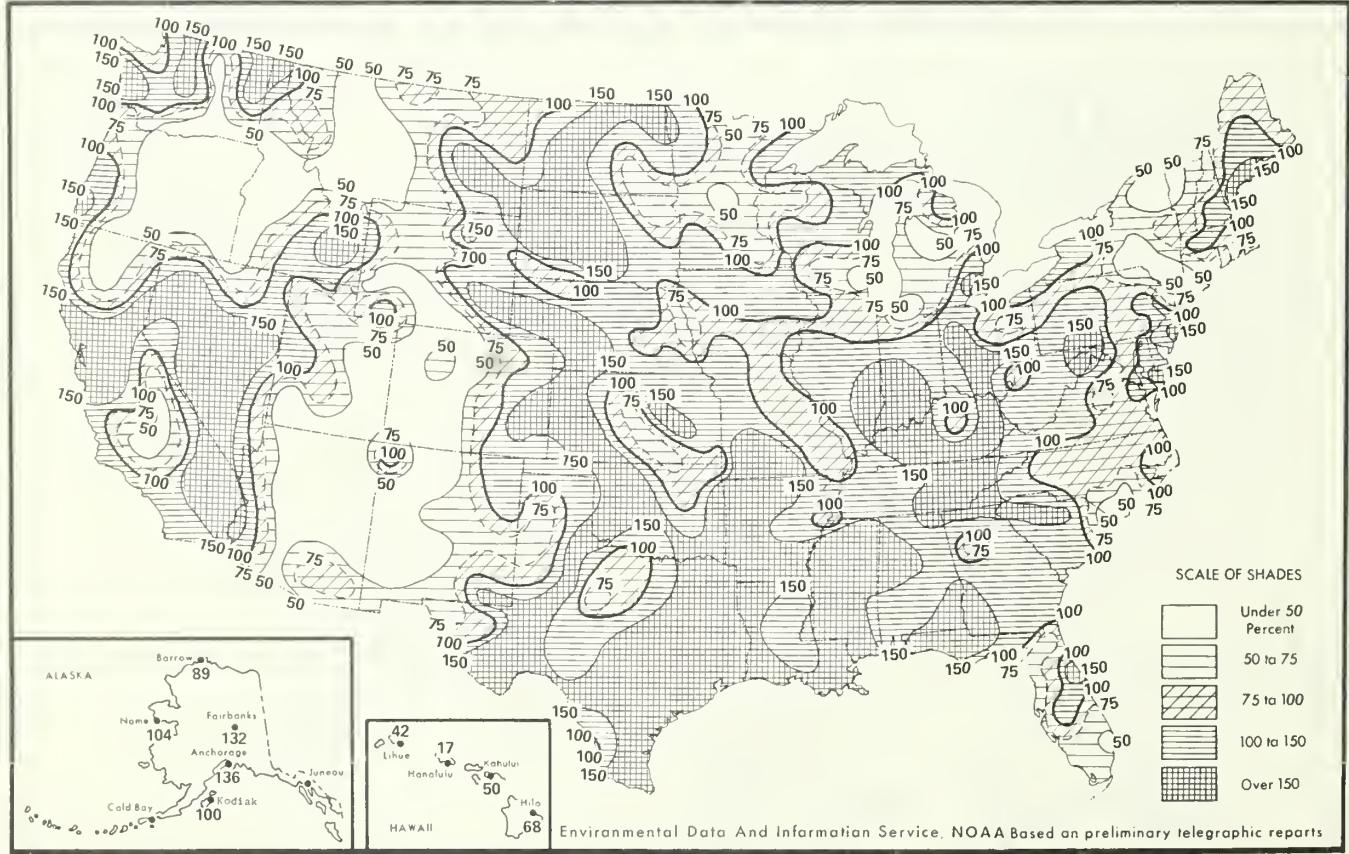
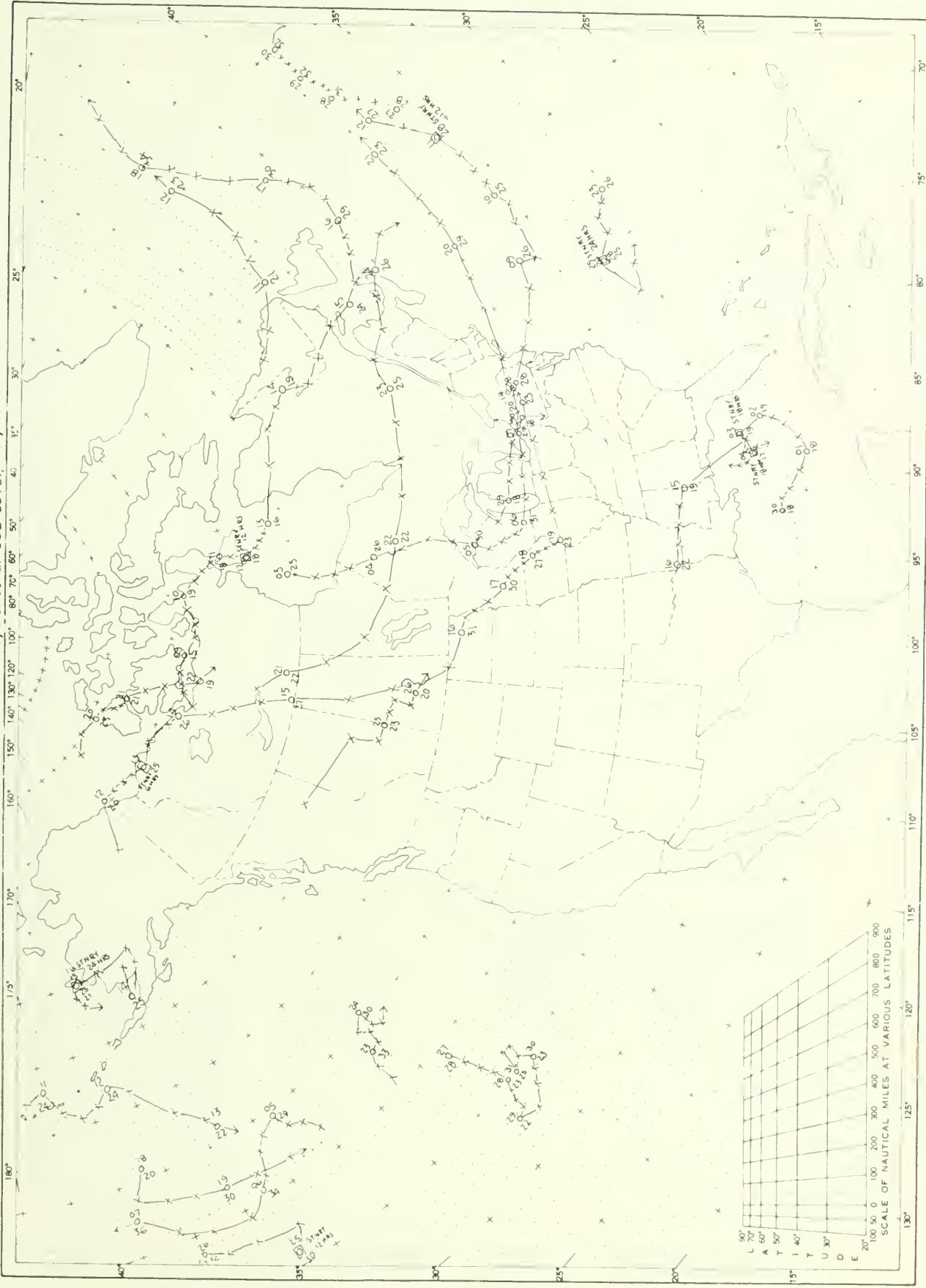
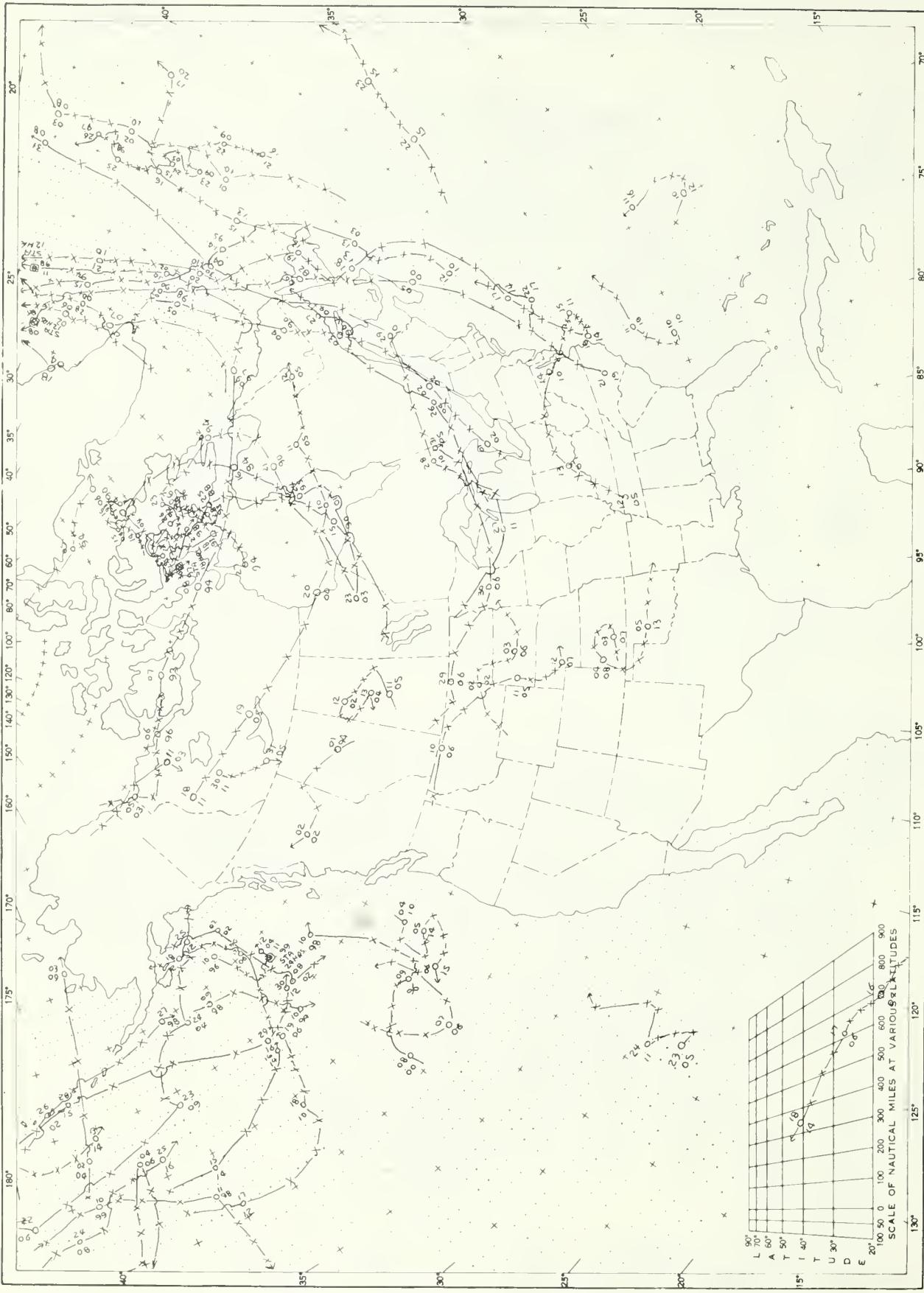


Chart III Tracks of Centers of Anticyclones at Sea Level, July 1979



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new positions. Only those centers which could be identified for 24 hours or more are included.

Chart IV. Tracks of Centers of Cyclones at Sea Level, July 1979



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track
 indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

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AUGUST 1979

VOLUME 30

NUMBER 8

CLIMATOLOGICAL DATA

NATIONAL SUMMARY



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Daniel B. Mitchell
DIRECTOR
NATIONAL CLIMATIC CENTER

noaa

NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION

ENVIRONMENTAL DATA AND
INFORMATION SERVICE

NATIONAL CLIMATIC CENTER
ASHEVILLE, N.C.

C O N T E N T S

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

AUGUST 1979

GENERAL SUMMARY OF WEATHER CONDITIONS

Lyle Denny, Climatologist
Environmental Data and Information Service, NOAA

HIGHLIGHTS: August was a month of many contrasts. Some areas reported both record high and low temperatures. The season's first frost occurred in the northern tier from North Dakota to New England. Some of the heaviest precipitation of the month fell in the northern part of Iowa and in Ohio where as much as three times the normal amount was recorded.

A typical summer rainfall pattern prevailed from July 30 to August 5 as warm, moist air from the Gulf of Mexico flowed northward causing showers and thunderstorms in nearly all areas east of the Rockies. Seasonal showers edged westward into southern New Mexico and Arizona. Temperatures ranged cooler than normal in the northern and southern Plains, but most of the Nation was near or above normal.

August showers began in earnest in the Southwest, Plateau, and central Rockies during the week of the 6th-12th. The showers extended northward into southern Idaho where numerous fires burned dry forests. East of the Rockies, the influx of warm air continued into the early part of the week, but cooler air from Canada covered the area by the end of the week. Record high temperatures early in the week were followed by record low readings. Frost was reported in northern Minnesota and Michigan.

The cool air enveloped nearly all of the Nation early in the week of the 13th-19th and frost spanned the Canadian border from North Dakota through New England. Showers and thunderstorms were moderate to heavy throughout the Southwest, Plateau, and northward into the State of Washington. The fire danger lowered in the West. Heavy showers also extended into the central Rockies and eastward into the upper Midwest. Flooding plagued northern Nebraska, Iowa, and Illinois. Moderate to heavy rain fell along the Gulf Coast.

The week of the 20th-26th was one of very heavy rain in some areas. Six to 8 inches aggravated the flooding in parts of Iowa and Minnesota. The lower Mississippi Valley, northern Alabama, and Georgia also reported heavy rain. Isolated heavy thunderstorms occurred throughout the week from northern Texas through the Plains. A succession of cool air surged into the central portion of the Nation triggering heavy downpours. Storm systems formed in the central United States and moved eastward. Most of the cold air remained in Canada producing some light frost near the North Dakota border. Average temperatures for the week were 3 to 6° colder than normal in the central Rockies and eastern slopes, and about 3° warmer than normal east of the Appalachians and on the West Coast.

Frequent rains fell from the eastern Great Plains to the Atlantic Coast from the 27th to the end of the month. Heavy amounts soaked eastern Kansas, western Missouri, and eastern Oklahoma where thunderstorms were most frequent at midweek. Early in the week, a tropical storm in the Gulf of Mexico dumped 5 or more inches of rain on Texas's southern tip. The storm stalled off the Mexican Coast and slowly dissipated but still brought moderate rain all along the Texas Gulf Coast. At the end of the month, another tropical storm was moving toward the Texas Coast, while Hurricane David brought rampaging winds and torrential rains to Puerto Rico on its westward trek.

Most of the Nation ranged warmer than normal during the last week of August. The area from Nebraska eastward through Ohio averaged 3 to 6° warmer than normal.

HURRICANE DAVID

August 25 - September 7, 1979

National Hurricane Center, NOAA
Miami, Florida

The following is a summary of the major meteorological events that occurred in connection with Hurricane David. Many of the descriptions of damage and fatalities are extracted from a report authored by Dick DeAngelis of the Environmental Data and Information Services (EDIS) NOAA.

A "best track" is attached. This is a listing of position coordinates every six hours, as well as the intensity parameters of minimum central pressure and maximum sustained wind speed. The best track is based on analysis of all available data.

David may be regarded as a typical "Cape-Verde" hurricane. It moved off of the African coast in late August and a mostly smooth path was followed around the periphery of the Atlantic subtropical high pressure ridge.

This trajectory resulted in an impact on a large number of people. David was a continual threat to populated land areas from the time it approached the eastern Caribbean on August 29th until it lost tropical characteristics over New England on September 6th. Hurricane warnings were posted at various times for most of the Lesser Antilles, Puerto Rico, Hispaniola, the Bahamas, and from the middle Florida Keys northward to southern North Carolina. Gale warnings were extended in stages from the Carolinas north to Eastport, Maine.

Historically, there have been few storms whose effects were so widespread.

David's track basically resembles an outline of the Atlantic subtropical high pressure ridge. This track describes an arc extending across the tropical Atlantic and then roughly paralleling the Greater Antilles and the U. S. east coast. This similarity of storm track and pressure patterns is, of course, the observational basis for using pressure patterns to understand and forecast the motion of hurricanes.

During most of David's history, the subtropical ridge extended westward to the vicinity of the United States' east coast and David proceeded steadily across the Atlantic and into the eastern Caribbean. As it moved just south of the eastern tip of the Dominican Republic, an abrupt turn to the north northwest was noted on August 31st, followed by another turn to the west. Then a mostly northwesterly course was resumed. This oscillation in course resulted in a landfall near Santa Domingo, after which the storm assumed a heading toward the United States.

During the 31st, a short wave trough in the westerlies moved off the United States coast to a position north of the storm along longitude 70° W. It is possible that such a trough could, with subtlety,

weaken the subtropical ridge and be a factor in the change in course, referred to above. It is also possible that the mountainous terrain of Hispaniola with peaks to 10,000 feet was a factor in David's motion, although the theoretical details of such an interaction are poorly understood.

A study of the storm track shows that there are several oscillations in the track. It could also be surmised that the zig-zag across Hispaniola is just the largest of these oscillations.

Late on September 2d, as David was over Andros Island and approaching southern Florida, the track heading was 310°...David was heading directly for Miami. Less than 12 hours later, the heading had changed to 330°, a change of 20°. Because of the orientation of the southeast Florida coast relative to the track, this small change in course resulted in a landfall north of Palm Beach rather than at Miami. This 20° change appears to be part of one of the oscillations discussed above.

David was first identified as a tropical weather system on August 22d, while moving westward from Africa into the tropical Atlantic. Satellite surveillance indicated substantial concentrated convection and organization as this system passed to the south of Cape Verdes. On the 25th, it was assigned tropical depression status, and was named Tropical Storm David on the 26th while located midway between Cape Verdes and the Lesser Antilles.

With this auspicious start, conditions remained favorable for David's strengthening. Hurricane intensity was reached by the 27th. The naming of David and the upgrading to hurricane status was based solely on satellite data. Reconnaissance aircraft began monitoring the storm on the 27th. Deepening occurred at the rate of 1.5 mb/hr for 36 hours, beginning when David became a hurricane. On the 29th David moved directly across Dominica with maximum winds estimated at 125 knots. This estimate is based on aerial reconnaissance data and should qualify David as the most intense storm to affect Dominica during this century.

Dominica took the brunt of the storm. Winds were estimated in excess of 100 knots, and rainfall up to 10 inches caused extensive flooding. The capital, Roseau, was devastated, resembling an air raid. The city was without food, water, or shelter for several days. Damage was heaviest over the southwest portion of the island. Roads to and from the capital were made impossible by landslides, washouts, and fallen trees. Some shipping was possible to the port of Roseau, but the pier was partially damaged. Death estimates have reached into the 50's with 180 reported injured. Some 60,000 people were made homeless--nearly three-

HURRICANE DAVID

fourths of the island's population. Crop damage was extensive. About three-fourths of the banana and coconut crops was destroyed.

On Martinique winds at Fort St. Louis were measured at 89 knots. Fifteen-foot waves battered the port of Fort de France. There were no deaths, 20 to 30 injuries, and 500 people left homeless. Crop damage, mainly bananas, was estimated at \$50 million. On Guadeloupe the southern region of Basse Terre was hit severely. The dock at the main banana port was destroyed. Crop damage was estimated at \$100 million; the banana crop in Basse Terre was completely destroyed. No deaths, few injuries, and several hundred homeless were reported on the island. Marie Galante and Les Saintes, a small island group, were both devastated by the storm.

More strengthening occurred as the storm moved into the Caribbean. Moving west northwestward, the eye passed about 70 n.mi. south of Puerto Rico, where torrential rainfall was the primary effect. Severe flooding occurred over many sections of Puerto Rico on the 31st. Rainfall totals from David reached to near 20 inches in the central mountains, 19 inches in the southwest and lesser amounts elsewhere.

St. Croix reported some flooding with rainfall amounts of 10-12 inches.

Puerto Rico was declared a disaster area. The death count was seven. Three deaths in Toa Baja and one in Guaynebo were accidents involving electrocution from loose electric wires. A person in San Sebastian was killed by a falling tree. Agricultural losses were reported as severe.

Winds continued to increase before landfall in the Dominican Republic. Aerial reconnaissance reported 150 knot winds and a central pressure of 924 millibars. This is the maximum intensity of the hurricane and occurred at 1800 GMT on August 30, while located south of Puerto Rico.

Maintaining winds close to 150 knots, David made landfall on the afternoon of the 31st just west of Santo Domingo on the south coast of the Dominican Republic. The year 1930 was the last time that a storm of such intensity directly affected the Dominican Republic.

Floods were the great killer. They isolated communities, swept villages away, and were mainly responsible for more than 1,000 deaths that have been estimated so far. The port of Santo Domingo was closed for several days to permit soundings in the channels. At the Sea-Land terminal in Rio Haina a rail-mounted container crane collapsed. Most roads were heavily damaged as were the cities of Jarabacoa, San Cristobal, and Bani.

In the mountain village of Padre las Casas several hundred people were killed when a church and school they were using as a haven was swept away by a rampaging river. Crop damage was severe and widespread. Almost 70% of the crops were destroyed, 150,000 were left homeless. President Guzman was reported to have estimated the agricultural, industrial and other pro-

perty losses at \$1 billion.

Crossing Hispaniola on September 1st while moving in a northwesterly direction, David emerged over the Windward Passage in a much weakened state. Maximum winds were reduced to 60 knots as a result of passage over the mountainous terrain.

The path continued across the eastern tip of Cuba and then northwestward toward Florida. Intensification began anew as warm Bahamian waters were encountered, but David did not regain its previous strength. It crossed Andros Island in the western Bahamas on the 2d. During that afternoon Andros Island reported 60-70 knot winds shortly before the eye arrived. Up to 8 inches of rainfall was reported in the Bahamas.

Early on the 3d (Labor Day) David was less than 150 n.mi. away from the southeast Florida coast, when aerial reconnaissance reports indicated that the central pressure had dropped to 965 millibars. The report is questionable because within a few hours, the pressure was back up to 980 millibars.

David moved inland just north of Palm Beach at approximately 1600 GMT on the 3d. At this time the eye diameter was 20 to 30 n.mi. The eye passed over a number of coastal cities in a zone from Jupiter in Martin County northward to New Smyrna Beach (just south of Daytona Beach), where it moved offshore. Since the storm was moving almost due north at about 10 knots, some locations were within David's eye for periods of about two hours.

Minimum pressure along the central Florida east coast was in the lower 970 millibar range. Highest surface winds experienced in Florida were gusts to 75 knots at South Melbourne Beach and a 74 knot gust at Jupiter. Heavy surf and rainfall amounts in the 5-10 inch range accompanied the storm. Vero Beach measured 8.92 inches and up to 12 inches were estimated in the vicinity of the city.

Changing very little in intensity, David made its final landfall just south of Savannah Beach, GA, during the afternoon of the 4th. Savannah reported 50 knot sustained winds and 970 millibars pressure. Pressure-wind relationships suggest that 75-80 knot winds may have occurred on the beach in the landfall area. Tides were generally 3 to 5 feet above normal. Two people were drowned in the heavy surf off Jekyll Island. To the north gusts along the coast ranged from 50 to 60 knots. Charleston reported 49 knot gusts. Several tornadoes occurred between Charleston and Myrtle Beach. Rainfall was heavy in some areas with Savannah receiving 6.86 inches. There were reports of up to 10 inches in interior South Carolina. Flooding was light to moderate. However, in North Carolina major flooding was reported on the Lumber River.

The storm accelerated to the north, then to the northeast as it moved across the middle Atlantic states into New England. Sustained winds gradually decreased to near 40 knots. Raleigh and Greensboro reported gusts to 31 knots. To the east Elizabeth City was drenched by 8.52 inches of rain. Tornadoes touched

HURRICANE DAVID

down in Maryland, Virginia, Pennsylvania, Delaware, and New Jersey. Wilmington, DE, recorded a 46 knot gust, while winds at Richmond gusted to 39 knots. Wind and rain were responsible for widespread power outages all along the eastern seaboard. In the New York metropolitan area, 2.5 million people were without electricity.

David lost its tropical characteristics on the 6th, by the time it reached New England. As an extratropical storm it moved across New Brunswick and New-

foundland on the 7th and into the far North Atlantic by the 8th.

Fatality estimates in the United States range from 10 to 20. Although United States damage was generally light in most areas, the total loss is substantial, due to the large total area affected. Rainfall flooding, several tornadoes, minor to occasionally moderate beach erosion, and agricultural losses all figure in the damage totals.

HURRICANE DAVID

Preliminary Report

DATE	TIME (GMT)	LAT.	LONG.	PRESSURE (MB)	WIND (KT)	STAGE
8/25	1200	11.7	36.1	1008	25	Tropical Depression
	1800	11.7	38.2	1007	25	
8/26	0000	11.7	40.3	1006	30	Tropical Storm
	0600	11.6	42.2	1005	35	
	1200	11.6	44.0	1003	40	
	1800	11.6	45.5	998	45	
8/27	0000	11.7	47.0	990	55	Hurricane
	0600	11.8	48.5	980	65	
	1200	11.8	50.0	966	80	
	1800	11.9	51.5	954	95	
8/28	0000	12.2	52.9	947	115	
	0600	12.5	54.4	941	125	
	1200	12.8	55.7	938	130	
	1800	13.2	56.9	941	125	
8/29	0000	13.7	58.0	944	120	
	0600	14.2	59.2	942	120	
	1200	14.8	60.3	938	125	
	1800	15.3	61.6	933	125	
8/30	0000	15.6	62.8	929	130	
	0600	16.0	64.2	925	140	
	1200	16.3	65.2	924	145	
	1800	16.6	66.2	924	150	
8/31	0000	16.8	67.3	927	145	
	0600	17.0	68.3	928	145	
	1200	17.2	69.1	927	145	
	1800	17.9	69.7	926	150	
9/01	0000	18.8	70.4	953	130	
	0600	19.3	72.0	978	100	
	1200	19.7	73.7	1002	65	
	1800	20.6	74.6	1002	60	
9/02	0000	21.3	75.2	997	65	Tropical Storm
	0600	21.9	75.5	990	70	
	1200	23.0	76.3	984	70	
	1800	23.9	77.4	979	75	
9/03	0000	24.6	78.3	976	80	
	0600	25.3	79.1	974	80	
	1200	26.3	79.6	973	85	
	1800	27.2	80.2	972	85	
9/04	0000	28.0	80.5	971	85	
	0600	29.1	80.8	970	85	
	1200	30.2	80.9	970	85	
	1800	31.5	81.2	970	80	
9/05	0000	32.5	81.1	972	65	Tropical Storm
	0600	33.5	80.9	976	55	
	1200	34.9	80.6	980	45	
	1800	36.2	80.1	984	40	

HURRICANE DAVID

DATE	(GMT)	LAT.	LONG.	PRESSURE (MB)	WIND (KT)	STAGE
9/06	0000	37.6	79.5	987	40	Extratropical
	0600	39.2	78.5	989	40	
	1200	41.5	76.3	991	40	
	1800	43.3	73.7	992	40	
9/07	0000	45.0	70.0	991	45	Extratropical
	0600	46.5	66.0	988	50	
	1200	47.5	61.5	987	50	
	1800	50.0	57.0	986	55	
9/08	0000	52.5	52.5	985	60	

HURRICANE FREDERIC

29 August - 14 September 1979

National Hurricane Center, NOAA
Miami, Florida

The tropical wave from which Frederic developed left the west African coast late on August 27th with little to distinguish it from most other waves. By midday on the 28th, however, satellite pictures showed a rather large, circular area of convection south of the Cape Verde Islands. Peripheral ship and satellite data indicated that a tropical depression had formed by 0600 GMT on the 29th. The depression gradually strengthened while moving westward at 18 kts for the next 24 hours and reached tropical storm strength near 11.5N 36.0W about 1200 GMT on the 30th. Frederic continued at a remarkably steady 18 kt forward movement for the next 48 hours while gradually turning to the west northwest. Conditions appeared ideal for Frederic to become a very intense hurricane, as David had in the same area. An eye became visible on infrared satellite pictures about 0600 GMT on September 1 and Frederic was upgraded to a hurricane near 13N 49W.

About this time the outflow from David, which had become a very intense hurricane lashing Hispaniola, began to descend from the northwest right over Frederic, and the newborn hurricane weakened to a tropical storm again by 0000 GMT on the 2d. Frederic gradually turned more to the west and decelerated with the weakening trend continuing until winds finally dropped below storm strength just north of Haiti about 1800 GMT on the 6th.

Frederic had passed over Puerto Rico and the Dominican Republic which helped disrupt the low level wind circulation in addition to the continued unfavorable impact of the outflow from David. The storm actually moved towards the southwest at less than 10 kts while southeast of the Dominican Republic, and then suddenly changed course towards the northwest during the afternoon of the 5th in a manner similar to David, passing just west of Santo Domingo about 0000 GMT on the 6th.

As David weakened over the northeastern United States, Frederic continued slowly westward over or just south of the Cuban coast for the next four days. Escaping the unfavorable influence of David, Frederic proceeded to strengthen beginning about midday on the 7th, and regained tropical storm strength about 100 miles east of the Isle of Pines, Cuba, about 0000 GMT on the 9th. Frederic turned to the northwest during the next 48 hours, moving at an average forward speed of 4 kts, and regained hurricane intensity over the western end of Cuba about 1200 GMT on the 10th. Factors which probably contributed to the strengthening while the center was so close to land were the very warm sea surface temperatures of 29-30°C, the large cyclonic envelope of the storm, and the establishment of a large anticyclone at 200 mb over the storm.

Except for the trochoidal motion frequently observed

with tropical cyclones, Frederic moved steadily northwest and turned to the north northwest with increasing forward speed for the next 60 hours, the eye passing across Dauphin Island, AL about 0300 GMT on the 13th and crossing the coastline near the Mississippi-Alabama border about one hour later.

Frederic turned north and northeast and increased its forward speed to 20 kts during the next 24 hours, losing hurricane intensity near Meridian, MS, about 1200 GMT on the 13th and becoming part of a frontal low pressure area near the southwest corner of Pennsylvania about 1200 GMT on the 14th. The extra-tropical remnants of Frederic moved very rapidly northeastward through Pennsylvania, New York, and western New England during the day and exited from northern Maine that evening.

METEOROLOGICAL STATISTICS, DEATHS, AND DAMAGES.

- a.) Leeward Islands, Virgin Islands, and Puerto Rico.
Frederic weakened approaching the Leeward Islands and post-analysis indicates sustained winds had dropped below hurricane force well before the center reached the Leeward Islands. Maximum sustained winds were 25-35 kts with gusts of 45-60 kts. Rainfall amounts were 10 inches in 12 hours in eastern Puerto Rico, 12 inches in 24 hours in St. Thomas, and 24 inches in 30 hours at St. Croix. A few tornadoes were reported in the Virgin Islands and Puerto Rico. Seven deaths have been reported at St. Maarten.
- b.) Dominican Republic, Haiti, and Cuba.
Frederic continued to weaken to a tropical depression while over eastern Cuba, but regained hurricane status before leaving western Cuba. Heavy rains occurred over the Dominican Republic for several days after the center passed, augmenting the damage caused by David. Rains diminished as Frederic moved over eastern Cuba, but heavy rains and gale force winds were reported over western Cuba as the depression regained hurricane strength. No reports of deaths have been received from these areas, but damage estimates from western Cuba are high.
- c.) As Frederic strengthened over the southeastern Gulf of Mexico, winds of 45-50 kts were reported at Dry Tortugas during the evening of the 10th and morning of the 11th.

The highest winds reported in squalls and gusts are as follows: Dauphin Island bridge, 126 kts; Dauphin Island Sea Lab, 119 kts before equipment destroyed; Pascagoula Ingalls Ship Yard, 110 kts; Pascagoula Civil Defense, 100 kts before equipment broke;

HURRICANE FREDERIC

Biloxi Civil Defense, Keesler AFB, and Gulfport Air National Guard, all 85 kts; Mobile Airport and Civil Defense, both 84 kts; Pensacola Naval Air Station, 83 kts; Hattiesburg, MS, 78 kts; Meridian, MS, Airport 70 kts; Pensacola Municipal Airport 68 kts; Hancock County, Mississippi, 64 kts.

Gale force winds in gusts occurred near the track of Frederic throughout eastern Mississippi, western Alabama, and many sections of Tennessee, Kentucky, southern Ohio, western portions of Pennsylvania and New York, and through western New England. Along the coasts, gale force winds or higher occurred from the New Orleans east area southward to the Mississippi River delta and eastward to the Panama City area, as well as along portions of the New England coast.

Tides of 8 to 12 feet above normal were reported in the hurricane warning area from Pascagoula, Mississippi to western Santa Rosa Island. Tides were 12 feet at Gulf Shores, AL, 11 feet at Fort Morgan, AL, 9.5 feet at Gulf State Park, 12 feet just south of Mobile Tunnel and 8 feet just north of Mobile Tunnel, 10 feet on the east end of Dauphin Island and 7.5 feet on the west end, 9 feet at Bayou La Batre, 9 feet at Fairhope, 9 feet on western Santa Rosa Island, FL.

Rainfall amounts of 8 to 12 inches fell from Pascagoula to Mobile with 4 to 6 inches through other parts of eastern Mississippi and western Alabama, and northwestern Florida and northward through Tennessee. Amounts of 2 to 4 inches were reported along the track all the way to New England. No rainfall induced flooding of any consequence was associated with Frederic in the United States.

Over a dozen tornadoes were reported, mostly along the Gulf coastal sections, but they resulted in no

deaths or injuries and only minor property damage.

Thus far, 11 storm related deaths have been attributed to Frederic in the United States, but only 2 were caused directly. Although a final count of storm related deaths is unavailable, it is believed to be less than 15.

Preliminary estimates of damages exceeding \$2 billion make it likely that Frederic will rank as one of the costliest if not the costliest hurricane ever to hit the United States. Insurance industry estimates of insured losses stand at \$750 million as of this report.

Between 300,000 and 400,000 persons were evacuated.

The maximum sustained winds in Frederic during its lifetime were estimated at 115 kts, based on aircraft reconnaissance and pressure-wind relationships. The NOAA research aircraft reported a flight level wind of 138 kts a short time prior to landfall, very close to that observed at Dauphin Island. The lowest central pressure of 943 millibars was reported by Air Force reconnaissance aircraft about 1200 GMT on the 12th, when the center was about 200 miles southeast of Mobile. However, the central pressure reported by reconnaissance aircraft during the last 6 hours was 946 millibars. Unofficial pressure reports along the coast in the eye were Dauphin Island Sea Lab 943 mb, Grand Bay, AL 931 mb (appears unrealistic), Pascagoula Civil Defense 946 mb. Meridian, MI had a minimum sea level pressure of 977 mb (28.85 inches), the lowest in their records. Calm winds were observed at Pascagoula for about one hour, and over the western end of Dauphin Island. Calm winds were not observed in Mobile.

HURRICANE FREDERIC

Preliminary Report

<u>DATE</u>	<u>TIME</u> <u>(GMT)</u>	<u>LAT.</u>	<u>LONG.</u>	<u>PRESSURE</u> <u>(MB)</u>	<u>WIND</u> <u>(KT)</u>	<u>STAGE</u>
8/29	06	11.0	25.5		25	TROPICAL DEPRESSSION
	12	11.1	28.0		30	
	18	11.2	30.5		30	
8/30	00	11.3	32.5		30	TROPICAL STORM
	06	11.4	34.2		30	
	12	11.5	36.0		35	
8/31	18	11.6	37.8		40	TROPICAL STORM
	00	11.7	39.7		45	
	06	11.8	41.6		50	
9/01	12	11.9	43.5		55	HURRICANE
	18	12.0	45.1		55	
	00	12.5	47.0		60	
9/02	06	12.9	48.7		65	TROPICAL STORM
	12	13.3	50.4		65	
	18	13.8	52.3		65	
9/03	00	14.3	54.1		60	TROPICAL STORM
	06	14.9	55.5		60	
	12	15.5	57.2	996	60	
9/04	18	16.3	58.8	999	55	TROPICAL STORM
	00	16.7	59.8	1002	55	
	06	17.1	60.8		55	
9/05	12	17.5	61.8	999	50	TROPICAL STORM
	18	17.8	62.8		50	
	00	18.0	63.8		50	
9/06	06	18.1	64.8		45	TROPICAL DEPRESSION
	12	18.1	65.8	1004	45	
	18	18.1	66.8		45	
9/07	00	18.0	67.8		45	TROPICAL DEPRESSION
	06	17.5	68.7		45	
	12	17.4	69.2	1008	40	
9/08	18	17.8	69.6		40	TROPICAL DEPRESSION
	00	18.5	69.9	1005	40	
	06	19.4	70.7		35	
9/09	12	19.9	71.8	1006	35	TROPICAL DEPRESSION
	18	20.0	73.0		30	
	00	20.1	74.5		30	
9/10	06	20.3	75.8		25	TROPICAL DEPRESSION
	12	20.6	77.0	1005	25	
	18	20.9	78.0	1004	25	
9/11	00	21.1	78.7	1003	30	TROPICAL DEPRESSION
	06	21.3	79.3	1003	30	
	12	21.5	79.8	1002	30	
9/12	18	21.6	80.5	1002	30	TROPICAL DEPRESSION

HURRICANE FREDERIC

<u>DATE</u>	<u>TIME (GMT)</u>	<u>LAT.</u>	<u>LONG.</u>	<u>PRESSURE (MB)</u>	<u>WIND (KT)</u>	<u>STAGE</u>
9/09	00	21.7	81.0	1001	35	TROPICAL STORM
	06	21.8	81.5	1000	40	
	12	21.9	82.0	999	45	
	18	22.0	82.5	997	50	
9/10	00	22.4	83.0	995	55	HURRICANE
	06	22.7	83.3	992	60	
	12	22.8	83.6	990	65	
	18	23.0	83.8	987	70	
9/11	00	23.3	84.0	985	75	
	06	23.8	84.4	983	75	
	12	24.4	84.8	980	85	
	18	25.0	85.2	968	95	
9/12	00	25.7	85.8	960	105	
	06	26.5	86.4	952	110	
	12	27.4	87.0	943	115	
	18	28.4	87.7	950	115	
9/13	00	29.7	88.0	946	115	TROPICAL STORM
	06	30.8	88.5	955	95	
	12	32.2	88.7	975	65	
	18	34.0	88.0	985	45	
9/14	00	35.2	87.0	990	40	
	06	37.0	84.5	996	35	
	12	39.5	81.0	997	35	
	18	42.5	76.0	998	30	
9/15	00	48.0	68.0			EXTRA TROPICAL

LANDFALLS (APPROXIMATE)

1	9/03	18	17.8	62.8	ST. BARTHELMY
2	9/04	12	18.1	65.8	HUMACAO, PUERTO RICO
3	9/06	00	18.5	69.9	SANTO DOMINGO, DOMINICAN REPUBLIC
4	9/07	00	20.1	74.5	EASTERN TIP OF CUBA
5	9/13	03	30.3	88.2	DAUPHIN ISLAND, ALABAMA

TROPICAL STORM ELENA

29 August - 1 September 1979

National Hurricane Center, NOAA
Miami, Florida

The tropical wave from which Elena developed was relatively weak when it passed over Florida on 27 August. After that the wave amplified slowly and by the morning of the 29th, ship and data buoy reports and satellite photographs suggested that a low level circulation was forming. An Air Force reconnaissance flight confirmed the existence of a tropical depression in the central Gulf of Mexico at 2308 GMT on the 29th. Slow development ensued as the depression moved generally west northwestward about 10 kt, and by early afternoon on the 30th minimal tropical storm strength was attained.

Elena continued toward the west northwest without intensification but turned gradually toward the north as the center reached the Texas coast near Matogorda on the morning of 1 September. Barely of tropical storm strength when it made landfall, Elena could no longer be identified even as a tropical depression by the morning of the 2d.

The steering of Elena was controlled by a high pressure area located over the Southern United States. Pressure falls ahead of an approaching frontal trough began to erode the high by 31 August, allowing the storm to turn toward the north as it neared the Texas coast.

The flow at 200 mb was anticyclonically curved

throughout Elena's existence, but generally from a northerly direction. When the depression formed on the 29th, the 200 mb anticyclone was centered over extreme southern Texas, and by 1 September when the storm made landfall it had moved westward to Baja California. Although tropical storms sometimes develop under this type of upper flow, it is not usually conducive to continued strengthening.

Gale warnings were issued from Port O'Connor, TX to Morgan City, LA, in the first tropical storm advisory, and remained in effect until the center moved inland on the afternoon of 1 September. The highest wind reported on shore was a gust to 40 kt at Galveston on the evening of the 1st.

Some heavy rains fell along the Texas coast on the 1st, including 4.6 inches in downtown Houston, 3 inches in Beaumont, and over an inch at Victoria.

Highest tides reported were just over three feet MSL at Galveston, Texas City, and Baytown.

There have been no reports of damages or casualties associated with Elena.

TROPICAL STORM ELENA

Preliminary Report

<u>DATE</u>	<u>TIME</u> <u>(GMT)</u>	<u>LAT.</u>	<u>LONG.</u>	<u>PRESSURE</u> <u>(MB)</u>	<u>WIND</u> <u>(KT)</u>	<u>STAGE</u>
8/30	0000	25.5	89.1	1008	25	DEPRESSION
	0600	26.0	89.9			
	1200	26.4	90.7			
	1800	26.8	91.8	1006	35	
8/31	0000	26.5	93.0	1004		TROPICAL STORM
	0600	26.8	93.8			
	1200	27.0	94.2	1008		
	1800	27.3	94.7			
9/01	0000	27.6	95.1			DEPRESSION
	0600	27.9	95.5			
	1200	28.5	95.8			
	1800	29.0	95.8		25	
9/02	0000	29.6	95.8			

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

AUGUST 1979

STATE	Temperature						Precipitation					
	Monthly extremes						Monthly extremes					
	Station	Highst	Date	Station	Lowest	Date	Station	Greatest	Station	Least		
		°F			°F				In.			In.
Alabama	Bankhead Lock and Dam	100	9	Athens 2	49	13	Moulton 2	10.84	Clanton	.95		
Alaska	2 Stations	86	25+	Chandalar Lake	19	30	Cannery Creek	16.94	Haines	.01		
Arizona	Willow Beach	119	2	Sunrise Mountain	27	22	Oracle 2 SE	7.87	Willow Beach	.08		
Arkansas	Alicia	99	7+	Calico Rock	49	14	Buffalo Tower	8.75	Blytheville	.59		
California	Death Valley	120	4+	Boide	18	23	Mitchell Caverns	8.39	157 Stations	.00		
Colorado	Grand Valley	107	5	Hermit	27	29+	Fountain	6.23	Colorado National Monument	.13		
Connecticut	Wigwam Reservoir	95	6	Falls Village	37	17	West Hartford	11.02	Stevenson Dam	3.42		
Delaware	Lewes 1 SW	95	10	Middletown 1 WSW	47	17	Bridgeville 1 NW	11.39	Middletown 1 WSW	4.34		
Florida	Winter Haven	100	1	2 Stations	61	16+	Saint Leo	16.99	St. Augustine WFOY	1.10		
Georgia	2 Stations	102	22+	Clayton 1 SSW	49	17	Hahnta	13.14	Lumber City	.31		
Hawaii	Aloha Stadium-Halawa	97	29	Mauna Kea Obs 111.2	17	19	H Waialua Ditch 1051	12.62	7 Stations	.00		
Idaho	Boise Lucky Peak Dam	107	11	Stanley	27	17	Boise 7 N	2.75	2 Stations	.27		
Illinois	Griggsville	100	7	2 Stations	39	15	Peru 2 W	12.41	Havana 4 NNE	.66		
Indiana	North Vernon 2 SW	97	8	Angola	39	16	Gosher College	11.68	Hewburgh Lock & Dam	1.77		
Iowa	Knoxville	99	7	2 Stations	39	15	Forest City	16.17	Beaconsfield	.95		
Kansas	Webster Dam	104	10+	Syracuse 2 W	44	11	Gridley	8.32	Anthony	.25		
Kentucky	2 Stations	99	7	2 Stations	44	17+	Barren River Lake	10.48	Louisville WFO	2.37		
Louisiana	Rosepine Exp Station	99	6	2 Stations	60	29+	Franklin 3 NW	10.49	Marksville	.08		
Maine	Ellsworth	94	5	Rangeley	32	17	Vanceboro 2	7.76	Harris Station	.95		
Maryland	Baltimore WSO CI	98	8	Oakland 1 SE	36	17	Solomons	11.07	Hancock Fruit Lab	.31		
Massachusetts	Chester 2	97	1	Chester 2	33	17	Hardwick	11.47	Heath	.42		
Michigan	2 Stations	94	8	5 Stations	29	16+	Hudson	8.09	Port Huron	.76		
Minnesota	3 Stations	96	6	Tower 3 S	27	15	Fairmont	13.90	Leech Lake Dam	.63		
Mississippi	5 Stations	98	30+	Iuka	55	17	Abbeville	9.85	Lambert 5 E	.89		
Missouri	Vandalia	102	7	Bowling Green 2 HE	41	12	Conception	6.95	Fisk	1.09		
Montana	Biddle 8 SW	105	5	Wisdom	28	10	Livingston FAA AP	3.90	Brockway 3 WSW	T		
Nebraska	2 Stations	105	8+	Elsworth 15 HHE	41	26	Northeast Nebraska Exp Station	8.63	Arnold	.54		
Nevada	Sunrise Manr Las Vegas	117	1	2 Stations	29	31+	Elgin 3 SE	5.32	Minden	.00		
New Hampshire	3 Stations	92	5+	Mount Washington	28	9	Mount Washington	7.53	Lebanon FAA AP	2.58		
New Jersey	Hewark WSO AP	96	10	Essex Fells Serv 8ldg	37	17	Mays Landing 1 W	9.73	High Point Park	2.83		
New Mexico	2 Stations	103	8	2 Stations	30	21	Kelly Ranch	6.13	Shiprock	.10		
New York	New York Laurel Hill	98	5	3 Stations	32	17	Sinclairville	10.05	Avon	1.81		
North Carolina	Smithfield	101	10	Transou	35	16	Lake Toxaway 2 SW	11.61	Hashville	.53		
North Dakota	Breien	98	6	Kenmare 1 WSW	27	16	Cavalier 7 NW	5.37	Grenora	.02		
Ohio	Cincinnati-Fernbank	96	9	3 Stations	37	18	Gallipolis	11.29	Put in Bay Perry Mon	2.36		
Oklahoma	Mangum Research Station	104	19	Boise City 2 E	46	11	Hollis	7.68	Helena 1 SSE	.49		
Oregon	Lost Creek Dam	102	1	Sisters	31	7	Eugene WSO AP	3.46	Port Orford 2	.29		
Pennsylvania	3 Stations	95	11+	3 Stations	34	17	Burgettstown 2 W	10.73	80sville 1 H	1.75		
Puerto Rico	Magueyes Island	98	29+	Pico Del Este	54	30	Cidra 1 E	24.67	Ponce City	3.98		
Rhode Island	2 Stations	89	5+	2 Stations	46	18	Providence WSO AP	10.09	Newport	4.80		
South Carolina	Marion	104	21	Ninety Nine Islands	49	17	Salem	8.41	Parr	.41		
South Dakota	3 Stations	107	6	Ipswich	36	14	Faulkton 1 NW	6.57	Dupree 15 SSE	.49		
Tennessee	Pulaski Water Plant	99	9	Tazewell	43	16	Cordell Hull Lock and Dam	8.84	Ripley	.80		
Texas	Uvalde	108	22	Vega	46	11	Weatherford	8.46	3 Stations	.00		
Utah	Hanksville	110	5	Hardware Ranch	30	23	Blowhard Mtn Radar	3.65	Eskdale	.08		
Vermont	Vernon	93	2	Chelsea	34	17	Mount Mansfield	9.72	Whittingham 1 W	2.62		
Virginia	2 Stations	100	11	Burkes Garden	33	16	The Plains 2 NNE	11.51	Stuart 1 SSE	1.18		
Virgin Islands	Truman Field FAA AP	99	8	Alex Hamilton Field FAA	67	31	Annaly	15.12	Charlotte Amalie 2	5.64		
Washington	Walla Walla FAA AP	102	10	Greenwater	33	4	Rainier Paradise R S	4.41	Watatchee	.07		
West Virginia	2 Stations	97	10+	Canaan Valley	32	17	Hogsett Gallipolis Dam	9.61	Princeton	1.78		
Wisconsin	3 Stations	94	7	Coddington 1 E	29	15	Clinton 2 NNW	12.41	Superior	1.61		
Wyoming	4 Stations	107	5	Bondurant	26	3	Lance Creek 3 WNW	4.56	Bitter Creek 4 HE	.49		

CLIMATOLOGICAL DATA
METRIC UNITS

AUGUST 1979

State and Station	Elevation (ground)	Pressure		Temperature		Precipitation		Wind		No. of days (sunrise to sunset)	
		mb	mb	°C	°C	Total	mm	m/s	m/s	mm	mm
		500 mb	mb	Average maximum	Average minimum	Depature from normal	Greatest in 24 hours	Resultant speed	Direction	Postage mile (1.6 kilometers)	Sky cover to sunset
ALABAMA											
BIRMINGHAM U	207	995.3	1017.5	20.5	18.6	-0.4	35.0	0.4	149	48	0
BIRMINGHAM	189	995.3	1017.5	20.1	19.6	-0.4	34.4	1.1	58	51	0
HUNTSVILLE	190	972.6	1017.3	31.4	25.3	-0.8	35.0	1.3	78	51	0
MOBILE	64	1009.1	1017.0	32.3	22.3	-0.2	34.4	1.3	77	11	0
MONTGOMERY	59	1010.2	1017.2	31.7	21.6	-0.4	33.9	2.0	20.0	11	0
ALASKA											
ANCHORAGE	35	1009.1	1014.2	18.6	11.2	1.6	22.8	2.3	40	48	11
ANNECY	34	1012.9	1017.0	19.9	11.8	1.5	21.1	2.0	111	51	9
BARRROW	9	1009.4	1010.4	19.5	5.2	7.8	4.7	1.1	42	10	21
BARTER ISLAND	12	1004.7	101C.3	9.1	3.1	6.1	2.2	1.5	82	19	10
BETHLEHEM	18	1004.7	101C.3	15.2	11.5	0.4	24.4	2.2	51	11	0
BETTLES	196	988.2	1012.1	19.4	9.2	14.3	3.3	2.4	5.0	30	17
BIG DELTA	366	1006.8	1010.6	13.2	10.5	0.3	15.6	2.4	5.9	29	17
COLD BAY	229	1006.8	1012.6	20.5	10.0	1.2	27.8	2.4	5.0	19	12
FAIRBANKS	133	995.9	1012.6	20.5	10.0	1.2	25.8	2.4	5.1	19	12
GULKAHA	479	1004.7	1010.6	20.6	7.9	14.3	2.5	2.5	5.6	31	15
HOMER	19	1010.5	1016.6	16.7	8.4	12.6	1.2	2.8	5.6	28	15
JUNEAU	4	1010.5	1016.6	20.3	8.8	1.6	2.2	2.3	5.6	31	14
KING SALMON	15	1009.0	1010.9	11.3	9.3	1.2	24.4	2.3	5.9	22	14
KODIAK	4	1000.4	1013.5	17.4	10.4	1.2	23.9	2.2	7.2	24*	14
KOTZEBUE	3	1008.6	1015.6	10.7	13.1	2.7	22.2	2.3	7.8	31	13
MC GRATH	105	990.1	1012.4	18.9	8.8	1.5	26.1	2.3	8.5	71	20
NOME	4	1006.6	1007.7	13.9	9.5	11.7	2.4	2.2	6.6	47	19
ST. PAUL ISLAND	7	1007.1	1007.9	10.1	10.3	1.7	14.4	2.8	2.2	17	14
TALKEETNA	105	1017.5	1017.7	9.1	10.4	1.4	26.1	2.2	3.9	28	15
UNALASKA	5	1016.0	1016.9	16.3	8.5	1.3	26.7	2.2	5.0	79	12
VALdez	11	1014.9	1016.0	16.6	8.6	12.4	1.3	2.1	5.0	31	14
YAKUTAT	9	1015.6	1016.7	16.6	8.6	12.7	1.1	2.2	4.4	87	10
ARIZONA											
FLAGSTAFF	2135	971.2	1008.8	24.8	6.8	15.8	-1.7	32.2	1	0	0
PHOENIX	338	924.5	1009.8	35.6	24.6	31.9	0.2	43.3	27*	36	-7
TUCSON	1492	59	33.1	14.3	35.1	39.7	-0.2	40.0	26	30	31
YUMA											
ARKANSAS											
FORT SMITH	136	1000.0	1016.3	31.1	20.6	25.6	-1.6	33.9	5	16.7	79
LITTLE ROCK	78	1007.1	1016.7	31.2	21.1	26.1	-0.9	34.4	5	16.1	70
NO. LITTLE ROCK	165	30.9	30.9	20.9	25.9	-1.0	35.6	19	15.6	12	0
CALIFORNIA											
BAKERSFIELD	145	994.6	1011.8	38.8	20.4	27.7	0.1	44.4	1	15.6	14
BISHOP	1252	877.0	1011.0	33.4	11.7	22.6	-0.9	31.7	0	0	0
BLUE CANYON	1609	835.5	1011.0	22.3	11.6	16.9	-0.4	29.4	2	14.7	9
EUREKA U	13	1011.2	1011.7	15.1	12.4	15.2	1.3	21.7	26	3	4
FRESNO	100	1000.3	1011.7	34.9	18.7	26.6	0.9	43.9	26	13.3	4
LONG BEACH	8	1011.2	1012.6	28.1	18.0	23.1	0.1	33.9	23	16.7	7
LOS ANGELES	30	1008.1	1012.8	25.3	17.9	21.7	0.8	29.4	22*	16.1	11
LOS ANGELES U	82	1013.4	1014.4	21.1	18.3	22.7	-0.7	32.2	9	16.7	48
M. SHASTA R	1077	891.3	1014.4	26.9	6.2	17.6	-1.3	35.0	2	13.0	19
OAKLAND	2	1011.2	1011.0	22.2	14.5	18.3	0.8	31.6	12.8	10.3	86
RED BLUFF	104	994.6	1011.0	31.1	17.5	25.8	-0.6	38.3	1	15.0	7
SACRAMENTO	5	1010.8	1011.9	31.8	13.9	22.8	-0.6	31.7	6	12.8	98
SAN DIEGO	4	1011.5	1012.7	20.0	13.2	23.3	1.4	26.1	24	9.8	97
SAN FRANCISCO	2	1011.5	1014.3	22.9	13.2	17.6	0.6	26.7	31	14.8	63
SAN MARCIA U	16	12.8	12.3	13.1	16.7	0.8	24.4	31	11.1	27	5
STOCKTON	7	1011.2	1011.0	34.0	16.2	25.1	1.1	20.6	4	13.7	2

CLIMATOLOGICAL DATA
METRIC UNITS

AUGUST 1979

State and Station	Elevation (ground)	Pressure		Temperature						Precipitation						Wind						No. of days (sunrise to sunset)					
		Sea level		Average minimum			Average maximum			Depature from normal			Total			Resultant speed			Speed			Cloudy, 8-10					
		Q	mb	No. of days	Min. 0 °C or lower	Max. 32.7 °C or above	Min. 0 °C or lower	Max. 32.7 °C or above	Min. 0 °C or lower	Depature from normal	Greatest in 24 hours	With thunderstorms	2.5 mm. or more	25 mm. or more	Total	W/S	E/W	N/S	W/S	Cloudy cloudy, 4-7	Possibly sunny, 0-3	Sky cover, tenth's	Possible sunshine %				
COLORADO	2297	2.8	6.4	16.7	-0.9	31.6	1.0	21	0	0	41	12	23	7	0	0	1.0	5	9.8	35.13	14	7	3.8				
ALAMOSA	1014.1	2.8	6.0	19.7	-0.9	35.6	6	8.9	0	0	64	-2	23	14	11	0	1.0	15	16.5	W 9	13	7	4.9				
COLORADO SPRINGS	1012.7	2.8	6.1	13.6	20.8	6	17.2	6	0	9	0	50	116	43	12	12	0	0	0.8	SE 30	5	11	4.7				
DENVER	1011.4	2.8	6.1	17.7	-0.4	38.9	5	1.2	17	6.1	15	-11	7	4	0	0	1.6	14	13.4	5	9	11	4.4				
GRAND JUNCTION	1476	2.4	3.3	16.0	23.7	22.1	-1.6	10.0	31	0	52	2	28	8	0	0	0	19.2	16	4	11	4.8					
PUEBLO	1428	2.4	3.4	12.7	22.1	22.1	-1.6	10.0	31	1.4	52	2	28	8	0	0	0	19.2	16	4	11	4.4					
CONNECTICUT																											
BIDGEPORT	2	1015.9	1016.6	2.8	19.7	22.7	0.1	32.2	8	12.8 18*	1	0	18.9	83	110	14	4	0	1.7	24	10.3	26	14	6.3			
HARTFORD	52	1016.1	2.8	16.3	21.6	0.2	33.9	1	7.2 17	3	0	15.0	71	113	13	37	18	7	0	0.7	26	21.9	4	9	7.0		
DELAWARE																											
WILMINGTTON	23	1014.2	1017.2	2.8	19.0	23.9	0.5	34.4	10	9.4 17	7	0	17.8	73	155	54	64	14	9	0	0.7	27	15.6	31	2	11	
DIST. OF COLUMBIA																											
WASHINGTON OULLES	88	1005.8	1017.2	2.8	17.5	23.6	0.4	35.0	10*	6.7 17	7	0	18.9	80	154	46	43	13	7	0	0.3	23	13.0	29	8	6.4	
*WASHINGTON NATIONAL	3	1014.9	1017.2	2.8	20.1	21.5	0.8	36.1	10	14.4 17	12	0	21.1	78	137	19	57	14	8	0	0.7	25	15.2	W 11	6	15	
FLORIDA																											
APALACHICOLA U	6	1016.9	1017.6	2.8	31.7	22.5	-0.6	32.8	13*	20.0 30*	14	0	21.1	73	97	108	34	12	17	0	0.7	13	8.5	5	13	6.0	
DAYTONA BEACH	9	1016.0	1016.0	2.8	31.0	22.3	0.6	33.3	13	20.6 29*	5	0	23.3	85	133	-41	43	15	11	0	0	1.0	12	11.2	26	1	5
FORT MYERS	5	1016.6	1016.9	2.8	32.8	24.2	0.8	34.1	13	22.2	7	29	0	23.9	81	376	180	61	21	23	0	0	1.2	9	9.4	13	24*
JACKSONVILLE	3	1015.6	1016.6	2.8	31.1	21.7	0.3	26.9	8	14.0 21*	21	0	22.0	70	179	82	9	8	0	0	0.5	13	15.2	NE 5	16	10	
KEY WEST																											
MAMI	2	1015.9	1017.1	2.8	31.0	24.6	0.4	27.8	8	12.2 28*	24	0	24.4	77	124	-50	15	15	17	0	0	4.1	12	11.2	18	6	
ORLANDO-MC COY AFB	29	1017.9	1017.7	2.8	32.0	33.9	0.3	32.2	18	22.8 28*	22	0	22.8	74	122	-49	55	15	9	0	0	2.8	10	10.7	21	0	
PENSACOLA	34	1012.9	1017.2	2.8	32.1	23.2	0.3	35.6	14*	21.1 13*	25	0	22.8	83	149	-22	66	14	20	0	0	1.2	10	11.6	25	12	
TALLAHASSEE	17	1014.9	1017.2	2.8	31.9	20.9	0.4	34.4	20*	21.1 16*	21	0	21.1	82	22	49	19	19	0	0	0.4	11	11.6	5	6		
TAMPA	6	1017.3	1017.4	2.8	31.8	23.9	0.0	33.9	3	22.2 11	22	0	23.9	84	324	-52	13	15	0	0	0.5	8	8.9	23	21		
WEST PALM BEACH	5	1016.6	1017.4	2.8	31.5	23.5	0.1	33.3	22*	21.1 9	29	0	22.2	73	78	-97	20	14	0	0	0	0	14.3	32	12	0	
GEORGIA																											
ATHENS	244	988.8	1017.3	2.8	31.7	20.5	2.1	26.1	0.3	16.7 18*	15	0	19.4	73	88	-3	32	10	11	0	0	0.3	33	9.4	36	30*	
ATLANTA	308	981.8	1017.8	2.8	31.7	21.7	1.4	36.1	7	14.8 17*	14	0	20.0	71	185	95	46	11	11	0	0	0.5	34	11.4	72	9	
AUGUSTA	41	1011.9	1017.2	2.8	32.4	20.4	0.0	36.1	10	14.4 18	18	0	20.0	74	190	-17	28	10	10	0	0	0.6	15	11.6	33	21	
COLUMBUS	136	1003.7	1017.4	2.8	32.9	22.1	0.7	37.6	7*	17.2 14*	23	0	22.0	78	64	42	9	9	9	0	0	0.7	15	8.0*	5	11	
MACON	108	1004.4	1017.3	2.8	33.6	21.2	0.2	36.7	8*	15.6 13*	23	0	20.6	72	106	13	30	9	10	0	0	0.1	9	15.2	5	11	
ROME	194	1016.3	1018.2	2.8	32.9	21.9	0.4	36.2	0.6	15.6 15	18	0	20.0	69	95	6	39	10	0	0	0	0	19.2	NE 30	8	15	
SAVANNAH	14	1014.3	1018.2	2.8	32.9	21.9	0.4	37.8	14*	21.8 14*	22	0	21.1	74	67	-97	34	9	12	0	0	0	0	19.2	NE 30	8	15
HAWAII																											
HONOLULU	8	1014.6	1015.9	2.8	30.6	19.9	0.3	24.2	-0.2	31.1 15	15	0	20.0	80	179	-98	70	18	0	0	0	0	7.2	E 30	3	16	
KAHULUI	2	1014.9	1015.4	2.8	31.4	22.3	0.9	34.0	13*	33.3 18*	18	0	20.0	69	4	6	3	4	0	0	4.3	5	12.5	NE 3	4		
LIMU	15	1010.9	1016.2	2.8	29.8	22.5	0.0	31.1	31	18.9 9*	15	0	21.7	76	48	-8	24	17	0	0	3.6	6	9.4	NE 3	4		
IDAHO																											
BOISE	865	913.0	1011.2	2.8	29.8	13.7	0.6	37.2	10*	8.9 29*	11	0	7.2	44	46	38	41	7	3	0	0	0.1	3	10.7	SW 19*	12	
LEWISTON	431	913.0	1011.2	2.8	31.8	15.9	1.9	37.8	10	12.2 7	15	0	14	-1	5	8	0	0	0	0	0	0	11	10	8	4.7	
POCATELLO	1358	913.7	29.7	11.6	20.7	-0.2	38.3	4	7.2 26*	11	0	11	2	18	2	10	7	0	0	0	0	15.2	W 30	8	12		
ILLINOIS																											
CAIRO U	96	201	991.9	1015.7	2.8	30.4	21.9	-0.1	36.7	7	15.0 16	10	0	16.1	72	121	33	60	9	0	0	0	0	12.5	5	30	
CHICAGO O HARE	185	993.6	1015.9	2.8	28.0	18.1	-1.1	33.3	7	10.6 12	1	0	17.2	76	219	140	72	57	14	11	0	0	0.4	20	11.0	31	8
CHICAGO MIDWAY	177	994.2	1015.4	2.8	27.9	16.5	-0.5	34.0	7	8.3 15*	5	0	17.8	74	191	63	12	15	0	0	0.8	19	11.0	32	7		
MOLINE	199	1001.6	1016.3	2.8	28.4	16.6	-0.6	34.6	7	7.2 15*	7	0	17.8	76	22	-56	9	14	0	0	1.3	20	6	14	5.7		
PEORIA	199	1001.9	1016.5	2.8	28.7	16.0	-0.8	33.3	7	7.8 16*	1	0	17.8	82	171	78	52	14	0	0	0.8	19	11.0	30	4		
ROCKFORD	221	989.8	1016.5	2.8	28.7	17.9	-0.2	33.3	18*	10.6 12	8	0	19.4	81	72	3	45	9	6	0	0	1.2	20	9.4	5	1.5	
SPIRNGFIELD	179	994.2	1016.2	2.8	28.7	17.9	-0.2	33.3	18*	10.6 12	8	0	19.4	81	72	3	45	9	6	0	0	1.1	20	9.4	5	1.5	
INDIANA																											
EVANSVILLE	116	1003.1	1016.7	2.8	29.5	18.0	-0.8	34.4	8*	11.1 17	10	0	18.3	73	60	-15	25	11	5	0	0	0.5	22	12.1	5	1	

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State and Station	Pressure		Temperature						Precipitation						Wind						No. of days (sunrise to sunset)													
	Elevation (ground)	Sea level	Average minimum		Average maximum		Departure from normal		Average dew point		Min. 0°C or lower		Max. 32.2°C or above		Departure from normal		With thunderstorms		Maximum depth on ground		Snow, ice pellets		Farthest mile (1.6 kilometers)		No. of days (sunrise to sunset)									
			Date	Lowest	Date	Highest	No. of days	Min. 0°C or lower	No. of days	Max. 32.2°C or above	No. of days	Min. 0°C or lower	No. of days	Max. 32.2°C or above	No. of days	Min. 0°C or lower	No. of days	Max. 32.2°C or above	No. of days	Min. 0°C or lower	No. of days	Max. 32.2°C or above	No. of days	Min. 0°C or lower	No. of days									
INDIANA	241	987.1	1016.8	27.4	15.8	20.4	-1.2	32.2	7	6.7	15	1	0	17.2	82	89	15	34	16	0	0	0.9	22	13.9	N	8	3	9	19	7.4	72			
FORT WAYNE	241	988.2	1017.2	27.4	17.4	22.4	-0.4	33.3	8	7.2	16	0	20.0	88	155	84	56	12	9	0	0	0.9	22	10.7	NW	20	5	11	15	6.6	50			
INDIANAPOLIS	236	988.5	1016.1	26.1	17.5	21.8	0.2	33.3	7	8.9	16	1	0	17.8	81	211	128	71	16	10	0	0	0.8	21	12.5	35	5	3	10	18	7.5			
SOUTH BEND	236	988.5	1016.1	26.1	17.5	21.8	0.2	33.3	7	8.9	16	1	0	17.8	81	211	128	71	16	10	0	0	0.8	21	12.5	35	5	3	10	18	7.5			
IOWA	211	980.4	1014.5	28.1	16.9	22.6	-0.7	33.9	7	8.9	15	7	0	17.8	72	75	-10	35	9	11	0	0	1.7	21	9.4	36	20*	8	12	11	5.6	69		
BURLINGTON	211	980.4	1014.5	28.1	18.5	23.5	0.6	36.1	7	12.2	12	8	0	17.8	72	129	45	39	10	9	0	0	1.4	19	25.0	SW	19	9	8	14	5.8	69		
OES MOINES	286	980.4	1014.5	28.1	18.5	23.5	0.6	36.1	7	12.2	12	8	0	17.8	72	190	88	46	16	0	0	0	1.4	19	25.0	SW	19	9	8	14	5.8	69		
QUABUE	324	977.6	1013.9	27.8	17.1	22.4	-0.6	35.6	7*	10.6	24	0	0	16.7	74	160	85	51	13	12	0	0	1.4	15	12.5	SW	31+	11	6	14	5.8	62		
SIOUX CITY	332	977.6	1013.9	27.2	17.1	22.1	0.6	32.8	6	8.9	15	5	0	16.7	74	135	46	25	13	12	0	0	1.2	17	13.0	35	8	5	10	16	6.7	67		
WATERLOO	265	984.4	1015.6	27.2	17.1	22.1	0.6	32.8	6	8.9	15	5	0	16.7	74	135	46	25	13	12	0	0	1.2	17	13.0	35	8	5	10	16	6.7	78		
KANSAS	446	962.0	1013.9	31.2	18.1	24.6	-0.5	36.7	7*	12.2	15*	17	0	16.7	66	53	-27	26	8	11	0	0	3.0	18	14.3	SW	6	14	11	6	4.3	84		
CONCORDIA	787	920.2	1013.7	33.9	15.8	23.4	-2.2	35.6	9*	10.0	11	16	0	13.9	60	38	-29	17	11	8	0	0	2.9	19	13.9	SW	6	16	8	7	4.1	74		
ODGE CITY	1114	888.6	1012.7	29.6	14.4	22.0	-1.4	37.8	8*	10.1	15*	10	0	13.9	67	81	26	103	9	6	0	0	2.0	17	18.3	SW	36	11	10	14	3.5	75		
GOODLAND	267	987.6	1014.9	30.4	19.3	24.9	-0.2	34.4	22*	11.7	12	14	0	20.0	66	30	50	9	6	0	0	1.7	18	10.3	NE	24	13	8	10	4.7	67			
TOPEKA	403	967.8	1014.6	33.8	19.3	26.6	0.1	38.3	19*	12.8	12	23	0	17.8	63	17	-62	8	6	0	0	2.5	18	14.8	SW	21	16	6	9	5.1	74			
WICHITA	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
KENTUCKY	265	986.5	1017.6	26.9	17.8	22.4	-1.2	33.3	8	9.4	16*	3	0	17.8	78	55	44	12	7	0	0	1.1	23	10.7	SW	28*	6	7	18	7.1	54			
LEXINGTON	294	982.7	1017.5	28.1	18.6	23.3	-0.6	33.3	8	10.6	16	4	0	18.3	76	157	71	42	12	10	0	0	1.3	22	9.4	27	28*	9	16	6	16	3	54	
Louisville	145	599.3	1016.7	29.3	19.7	24.5	0.1	35.0	8	12.2	16	6	0	20.0	81	60	-16	11	9	0	0	1.0	23	11.6	SW	28	9	6	16	3	54			
LOUISIANA	20	1014.9	1017.2	32.0	22.3	27.2	-0.4	34.4	5	19.4	16	19	0	22.8	83	125	83	97	7	15	0	0	0.1	18	10.3	SW	20	3	22	6	5.6	56		
BATON ROUGE	20	1014.9	1016.4	31.9	21.9	27.4	-0.5	33.9	7*	21.1	24	18	0	23.8	84	23	74	54	7	15	0	0	0.8	12	8.0	SW	17	17	12	7	5.6	56		
LAKE CHARLES	1	1015.6	1016.3	30.0	23.5	28.3	0.6	35.0	6*	21.7	24*	20	0	22.8	76	116	-18	54	14	13	0	0	0.1	19	8.0	SW	22	5	15	11	6.1	55		
NEW ORLEANS	1	1015.6	1016.3	32.6	21.1	26.8	-1.6	35.0	6	18.9	24	21	0	22.2	79	47	-21	29	6	7	0	0	0.7	18	9.8	SW	31	13	8	5.1	74			
SHREVEPORT	77	1008.8	1016.0	21.8	13.3	18.2	-0.9	31.7	1*	6.1	17	0	0	14.4	81	140	74	39	13	6	0	0	0.8	24	13.9	NW	30	5	10	16	6.9	49		
MAINE	190	990.9	1015.9	21.8	11.3	16.6	-0.2	31.7	5*	5.0	17*	0	0	14.4	81	126	30	31	16	7	0	0	0	0.8	24	13.9	NW	2	9	20	7.7	56		
CARIBOU	13	1015.5	1015.9	23.1	13.3	18.2	-0.9	31.7	1*	6.1	17	0	0	14.4	81	140	74	39	13	6	0	0	0.8	24	13.9	NW	30	5	10	16	6.9	49		
PORLTAU	45	1011.2	1016.9	29.2	19.3	24.3	0.4	34.4	10	11.7	17	7	0	18.9	77	238	131	67	14	11	0	0	0.9	27	13.4	NW	2	9	14	8	5.5	56		
MARYLAND	45	1011.2	1016.9	22.0	10.3	16.0	-0.9	27.8	7*	5.0	16	1	0	15.6	79	58	-56	12	10	4	0	0	0.9	21	11.2	NW	10	5	11	15	6.7	55		
BALTIMORE	45	1011.2	1016.9	23.7	14.5	19.1	-1.4	28.9	7	2.2	16	0	0	15.6	82	105	40	21	14	10	0	0	0.9	21	15.6	SW	31	5	11	15	6.7	55		
MASSACHUSETTS	192	24.6	1014.1	25.9	18.2	22.1	0.2	32.8	2*	12.2	13	3	0	17.2	77	172	74	48	40	15	3	0	0	0.9	26	11.6	SW	7*	6	7	18	6.9	48	
BLUE HILL 085 R	192	971.2	1014.1	24.1	15.5	19.8	-0.2	30.6	1*	8.9	16	1	0	15.6	71	76	-7	32	15	3	0	0	0	0.9	26	11.6	SW	14*	30	14	5	18	6.8	48
BOSTON	192	971.2	1014.1	22.2	9.1	14.9	-1.6	33.9	7	6.1	16	1	0	15.6	60	64	-18	29	15	7	0	0	1.2	21	9.8	SW	8	7	19	6.8	48			
DETROIT METRO	189	24.6	1016.2	22.5	14.3	19.3	-0.8	32.2	7	6.1	16	1	0	15.6	60	45	31	15	7	0	0	0	1.2	21	9.8	SW	8	7	19	6.8	48			
FLINT	235	988.5	1016.0	22.5	14.9	20.3	-0.8	32.2	7	4.4	16	1	0	16.1	60	110	45	31	15	7	0	0	1.0	22	18.6	SW	10	8	7	16	6.8	44		
GRAND RAPIDS	239	987.5	1016.5	25.6	14.9	20.3	-0.8	32.2	7	1.7	16	0	0	15.6	70	125	64	31	15	7	0	0	1.1	25	14.3	SW	4	5	19	10.3	19	47		
HOUGHTON LAKE	350	25.0	1016.3	22.9	11.2	17.1	-1.2	28.9	7	1.7	16	0	0	15.6	79	99	39	69	8	3	0	0	1.1	25	14.3	SW	10	8	17	6.9	59			
LANSING	431	25.6	985.1	25.3	14.1	19.3	-1.9	33.3	7	5.0	16	1	0	15.6	79	58	-12	14	10	5	0	0	1.1	25	14.3	SW	10	8	17	6.9	59			
MUSKOGEE	191	990.2	1015.9	23.7	14.5	19.1	-1.4	27.8	7*	1.7	16	0	0	15.6	79	36	-56	12	10	4	0	0	0.9	21	11.2	SW	31	5	11	15	6.7	57		
SAULT STE MARIE	220	988.0	1015.3	22.3	10.3	16.3	-1.1	27.8	20*	2.8	16	0	0	15.6	82	133	54	68	12	4	0	0	0.7	27	15.6	SW	31	5	11	15	6.7	55		
MINNESOTA	435	964.4	1015.3	22.0	9.1	15.7	-1.7	28.3	2*	8.9	2	0	0	11.1	74	53	-43	19	10	2	0	0	0.4	21	12.5	NW	13	5	12	14	6.8	50		
DULUTH	359	971.2	1014.1	22.2	9.1	15.7	-1.6	33.9	7	6.1	16	1	0	11.1	70	101	56	11	8	5	0	0	0.7	24	10.7	NW	13	5	12	14	6.8	50		
INTERNATIONAL FALLS	359	984.4	1014.5	25.6	14.9	20.3	-0.8	32.2	7	6.1	16	1	0	11.1	70	179	10																	

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State and Station		Pressure				Temperature				Precipitation				Wind				No. of days (sunrise to sunset)																				
		Q	S _{1015.0}	S _{1016.0}	S _{1017.0}	D _{1016.0}	H _{1016.0}	C _{1016.0}	L _{1016.0}	D _{1017.0}	H _{1017.0}	C _{1017.0}	L _{1017.0}	D _{1018.0}	H _{1018.0}	C _{1018.0}	L _{1018.0}	No. of days	Snow, ice pellets	Fastest mile (1.6 kilometers)	Possible sunshin e%																	
Elevation (ground)																		Cloudy, 8-10		Partly cloudy, 4-7																		
NEW YORK	SYRACUSE	125	1001.7	1016.4	25.0	14.8	19.9	-1.0	32.2	2	6.7	17	1	0	16.1	79	94	5	2+	14	0	1.2	25	17.4	NW	10	4	11	16	7.0	41							
NORTH CAROLINA	ASHVILLE	652	943.8	1018.9	28.9	16.8	22.9	0.2	33.3	9	12.8	18*	6	0	19.4	85	92	-22	24	12	7	0	0.7	34	10.3	18	21	9	14	8	5.0	53						
CAPE HATTERAS R	2	1011.3	1017.5	25.6	21.4	25.8	0.2	33.3	10	13.3	18	2	0	21.8	79	85	-87	48	6	7	0	0.1	21	8.0	23	12	10	12	9	5.1	57							
CHARLOTTE	224	990.9	1017.7	31.3	18.9	20.2	0.4	35.6	20*	12.8	17	15	0	18.9	71	32	-68	9	11	0	0.5	25	12.5	NW	29*	13	11	11	11	7	4.7	73						
GREENSBORO	273	988.8	1017.8	30.5	18.9	24.7	0.3	35.6	10*	10.0	17	12	0	18.9	73	29	-81	15	9	8	0	0.8	26	9.8	NE	12	17	16	8	5.2	66							
Raleigh	132	1010.1	1018.5	33.2	25.1	32.0	0.4	36.7	8	15.0	13	13	0	22.0	80	63	-83	30	6	7	0	0.4	19	10.3	34	12	12	13	6	5.1	57							
WILMINGTON	9	1011.3	1018.7	32.4	21.6	27.0	0.6	37.2	9	15.0	17	19	0	22.0	80	63	-110	20	10	11	0	0.6	18	12.5	NW	12*	12	11	8	5.0	75							
NORTH DAKOTA	BISMARCK	502	955.3	1014.4	25.9	11.6	18.7	-1.9	32.8	17*	1.1	1.1	14	3	0	11.7	69	44	-6	21	8	10	0	0.5	9	13.4	NW	28	9	10	12	6.1	85					
FARO	273	950.7	1013.2	25.6	13.6	19.4	-1.9	34.4	31	6.1	15*	3	0	13.1	69	23	-50	8	8	6	0	0.6	12	12.5	NW	9	3	16	12	6.7	69							
WILLISTON	579	946.5	1013.8	27.3	11.4	19.4	-0.9	33.9	16	3.9	24	4	0	10.0	57	8	-31	8	2	4	0	0.8	4	14.8	NW	9	9	9	14	6	5.4	83						
OHIO	AKRON	368	973.6	1017.5	25.4	15.8	20.7	-0.6	30.6	1	6.7	16	0	16.1	76	109	38	22	17	10	0	0	0.9	22	10.3	30	10*	2	10	19	7.7	54						
CINCINNATI A&E OE	237	988.5	1017.1	28.1	18.2	27.1	16.8	23.2	7	7.2	16	4	0	10.0	15	70	163	86	11.3	30	16	0	0	1.3	22	8.0	32	5	4	5	22	7.8	4.3					
COLUMBUS	247	987.4	1017.4	26.7	16.6	26.7	22.2	22.0	0.0	32.2	8	7.8	16	1	0	18.9	85	219	147	52	14	9	0	0	0.8	20	19.2	NW	10	1	12	18	4.4	48				
DAYTON	303	931.4	1017.1	26.9	17.0	22.0	-0.8	33.3	8	7.8	15	3	0	17.8	80	202	137	55	15	10	0	0	1.0	22	13.4	NW	28*	3	15	15	7.5	50						
MANSFIELD	395	910.4	1017.1	24.9	15.3	20.1	-2.2	30.6	7	6.7	16	1	0	17.2	86	203	102	36	18	11	0	0	1.6	23	16.5	NW	5	21	16	7.5	50							
TOLEDO	204	991.9	1016.8	25.5	15.3	20.4	-0.1	33.3	7	6.7	16	1	0	17.2	84	120	142	59	12	9	0	0	1.4	24	14.4	NW	5	8	16	7.4	36							
YOUNGSTOWN	359	975.3	1017.6	25.4	14.7	20.1	-0.6	30.0	8	5.6	16	0	0	15.6	76	38	32	14	7	0	0	0.9	23	11.2	NW	27	10	3	9	19	7.4							
OKLAHOMA CITY	392	969.9	1015.0	33.2	20.1	26.7	-0.6	36.1	14*	14.4	12	23	0	18.1	64	96	31	45	8	9	0	0	2.2	17	14.3	NW	21	19	8	4	3.5	85						
TULSA	198	991.5	1015.1	33.6	21.8	27.7	0.2	37.8	10	16.1	12	23	0	20.0	66	121	46	65	7	8	0	0	2.5	19	14.3	NW	21	13	12	6	4.2	72						
OREGON	ASTORIA	2	1016.3	1017.1	20.7	12.4	16.6	0.8	23.9	20	8.9	6	0	13.3	84	21	-17	12	7	0	0	0	1.9	28	9.4	20	17	1	14	16	7.4	4.9						
BURNS U	1265	1002.4	1017.0	26.8	11.9	18.3	0.4	33.9	10	5.0	31	6	0	10.0	84	51	39	21	9	0	0	0	1.3	31	1.3	NW	12	13	9	13	9	4.9	4.9					
EUGENE	109	1002.4	1017.4	26.6	10.4	18.6	-0.3	32.2	10	6.1	8	1	0	8.9	81	88	73	48	8	6	5	0	0	1.5	31	7.6	30	18	14	10	7	4.3	4.3					
MEDFORD	396	967.2	1014.2	30.1	12.4	21.3	-0.1	36.1	1	6.9	1	0	8.9	52	16	16	8	16	5	3	0	0	0	1.5	31	7.6	30	18	14	10	7	4.4	4.4					
PENOBLETON	452	910.0	1015.9	28.6	14.3	21.4	-0.5	31.6	10	11.1	6	6	0	13.3	70	36	27	12	9	0	0	0	1.9	33	8.0	NW	2	9	9	13	5.6	77						
PORLIND	6	1014.6	1015.9	25.9	14.7	20.3	-1.1	31.1	9	11.1	5	0	0	12.2	70	30	10	3	7	6	0	0	0.7	31	10.3	NW	24	21	10	8	13	5.6	77					
SEXTON SUMMIT R	60	1008.4	1015.6	21.7	11.1	18.7	-0.2	31.7	10	6.1	4	0	0	12.2	70	31	20	23	7	0	0	0	2.4	34	13.9	NW	5.	5.	5.	5.	5.	5.	77					
PACIFIC AREA	GUAM TAGUAC R	110	2	1012.5	1013.1	29.9	22.0	27.0	-0.2	31.7	24*	22.0	25	0	0	23.9	81	15	86	23	17	-49	7	11	0	0	0	0	1.8	23	8.9	SE	17	0	5	26	8.7	37
JOHNSON KORR R	29	1005.8	1013.1	30.1	24.2	27.8	0.2	31.7	25*	21.1	25*	0	0	22.0	72	29	-94	136	44	32	70	24	0	0	1.5	14	15.6	NW	18	12	25	17	8.8	50				
KALJALEIN	2	1004.1	1013.7	30.2	24.2	27.0	-0.3	31.7	24*	22.0	25*	2	0	22.0	72	0	0	0	0	0	0	0	1.2	11	4	SE	17	0	5	26	8.7	52						
MAJURO	3	1009.8	1014.1	29.0	23.0	26.0	0.3	31.1	9	17.8	15	27.1	0	0	22.2	81	183	-5	73	15	2	0	0	3.2	11	11.6	SE	6	12	20	7	6.1	58					
PAGPAGO R	4	1012.5	1012.7	31.1	22.8	26.0	0.3	31.3	31*	22.1	31	13	0	0	23.3	13	0	0	56	148	189	26	1	0	0	0	0	1.1	24	10.3	SE	10	3	30	10*	5.5	77	
PONAPE R	37	2	1009.5	1011.9	30.9	23.8	27.4	-0.6	33.3	31*	22.2	32	12	7	0	23.9	83	659	318	122	23	1	0	0	2.8	27	17.9	W	6	25	9.0	44	51	22				
TRIN MORN ISLAND	2	1009.5	1011.9	30.5	24.5	27.5	-0.6	32.2	16	22.2	29*	21	0	0	23.9	83	361	199	138	25	0	0	0	3.5	10	17.9	SE	17	0	4	20	7.8	51					
WAKE	3	1010.5	1011.9	30.6	22.9	26.8	-0.4	31.7	21*	21.1	29*	21	0	0	23.9	497	113	108	25	0	0	0	2.0	26	14.5	N	15	0	3	28	9.3	43						
YAP R	13	1007.5	1011.9	27.5	17.8	22.7	0.6	33.3	10	7.8	17	5	0	16.1	70	53	-54	28	9	7	0	1.3	27	20.6	31	10	5	12	4.5	65								
PENNSYLVANIA	ALLENTOWN	110	1003.7	1017.3	27.5	17.8	22.7	0.6	33.3	10	8.3	16	5	0	15.0	72	129	44	52	13	6	0	1.2	22	9.4	25	10	3	11	17	7.3	52						
ERIE	223	990.9	1017.2	25.4	16.2	20.8	1.1	31.1	7	8.3	16	7	0	14.9	83	82	1	24	11	4	0	1.1	22	8.6	35	10	7	19	7.4	52								
HARRISBURG	103	1015.7	1017.7	23.1	17.8	20.6	1.1	32.2	7	8.9	17	2	0	10.0	77	151	47	45	13	6	0	0.8	26	14.8	18	8	12	13	6.4	52								
PHILADELPHIA	2	1015.9	1017.9	23.6	18.6	20.9	0.4	33.9	10	8.9	17	2	0	10.7	77	151	47	45	13	6	0	0.8	26	14.8	18	8	12	13	6.4	52								
PITTSBURGH	347	974.9	1017.9	25.4	16.3	21.6	0.2	31.1	8*	7.8	16	7	0	16.7	78	174	94	53	17	8	0	0	1.1	24	14.5	30	10*	3	9	19	7.5	22						
SCRANTON	283	983.4	1017.9	26.6	16.4	21.5	0.4	32.2	5*	7.8	16	7	0	16.7	74	141	-29	23	17	0	0	0	1.1	24	9.8	26	10*	3	13	15	7.5	53						
WILLIAMSPORT	160	998.3	1017.2	26.4	16																																	

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State and Station	Elevation (ground) m	Pressure				Temperature				Precipitation				Wind				No. of days (sunrise to sunset)																		
		Sea level		1014.6		Average minimum		Average maximum		Date		Departure from normal		With thunderstorms		No. of days Snow ice pellets		Fastest mile (1.6 kilometers)		Cloudy, 8-10 Partly cloudy, 4-7 Cleat, 0-3																
		Station	mm	mb	mb	°C	°C	°C	°C	Highst	Lowest	Min. 0 C or lower	Max 32.2°C or above	Total	Departure from normal	On ground	Resultant speed	m/s	m/s	No. of days (sunrise to sunset)																
PROVIDENCE	16	1014.6	1016.7	25.4	17.0	21.2	-0.1	31.7	1	10.6	18	0	0	16.7	78	256	157	170	13	7	0	0	1.3	22	11.2	22	10	4	12	15	7.2	49				
SOUTH CAROLINA	12	1016.3	1018.1	33.2	21.6	27.4	1.0	36.7	7	13.3	18	2.6	0	21.7	78	22	-141	13	6	8	0	0	1.1	20	9.4	5	22	11	17	3	4.7	80				
CHARLESTON U	3	1009.5	1017.5	32.1	23.6	27.8	0.7	35.6	7	17.6	13	1.9	0	20.0	73	38	-14	24	5	0	0	0.3	18	11.6	31	22	15	8	8	4.5	80					
COLUMBIA	65	1009.5	1017.5	32.9	20.0	26.5	-0.3	37.2	20*	13.9	18	2.0	0	19.0	78	103	-40	55	7	9	0	0	0.2	36	10.7	5	21	13	12	6	4.4	72				
GROVEL SPRINGS	292	983.4	1017.5	30.5	19.1	24.8	-0.5	35.0	9	12.2	17	1.1	0	19.4	78	110	-7	35	12	8	0	0	0	0.2	36	10.7	5	21	13	12	6	4.4	72			
SOUTH DAKOTA	395	966.8	1013.2	26.5	13.8	20.2	-1.3	33.9	6	5.6	14	2.0	0	15.0	73	31	-22	19	9	5	0	0	0	1.4	12	16.1	5	21	11	9	1.3	6.3	58			
ABERDEEN	390	967.2	1013.1	14.4	21.0	25.6	-1.3	34.4	8	5.6	14	5	0	12.2	64	59	22	14	8	3	0	0	0.6	33	25.5	5	20	11	14	10	5.7	66				
HURON	964	905.2	1014.0	26.9	13.6	20.3	-1.7	35.6	30	8.9	14	2.0	0	12.2	71	31	13	7	0	0	0	0	0	0	0	20	11.4	5	28	10	15	6	5.6	80		
RAPID CITY	964	905.4	1014.5	26.0	16.1	21.1	-1.1	34.4	6	7.8	25	1	0	16.1	75	110	38	32	14	15	0	0	0	1.4	13	11.2	36	8	9	8	14	6.0	60			
SIOUX FALLS	432	963.8	1014.5	29.9	17.7	23.8	-0.7	33.9	9*	10.6	17	8	0	10.6	77	139	42	41	9	0	0	0	0	0	0	0	13.9	11	11	12	6	5.1	52			
TELESEE	459	965.5	1018.7	28.6	16.8	22.8	-0.6	31.7	9	8.3	16	0	0	18.3	81	71	-23	33	11	7	0	0	0	0.3	28	8.9	18	28	4	19	8	5.9	59			
BRISTOL	203	993.2	1017.4	30.6	20.4	25.6	0.0	33.9	21*	15.0	17	10	0	20.6	77	114	33	53	8	10	0	0	0.4	16.5	16.5	5	30	11	10	10	17	6	5.2	72		
CHATTANOOGA	299	983.1	1017.4	30.3	20.4	25.3	0.2	34.4	8	14.4	13	7	0	20.0	76	58	-24	18	9	6	0	0	0.5	29	8.0	32	30*	11	10	10	15	6	5.2	80		
KNOXVILLE	79	1007.1	1017.1	31.7	21.6	27.2	0.3	35.0	6	17.6	13	1.5	0	20.6	71	150	66	72	13	9	0	0	0.5	18	14.3	28	28*	10	15	6	5.2	80				
MEMPHIS	180	995.4	1017.2	30.7	19.3	23.6	-0.8	35.0	6	11.7	17	1.1	0	20.6	80	117	34	77	10	5	0	0	0.8	20	11.1	34	11	12	6	5.1	52					
NASHVILLE	276	995.9	1017.2	29.9	17.7	23.8	-0.7	33.9	9*	10.6	17	8	0	10.6	77	139	42	41	9	0	0	0	0	0	0	13.9	11	11	12	6	5.1	52				
OAK RIDGE R																																				
TEXAS	544	953.3	1014.5	34.4	21.3	27.9	-0.8	37.8	22	16.1	12	2.8	0	16.1	53	39	-13	29	7	6	0	0	0	0	0	16	15.6	20	15	13	3	4.4	75			
ABILENE	1098	893.0	1014.0	30.3	15.9	23.1	-2	33.3	19*	10.6	11	1.0	0	14.4	63	129	55	91	11	10	0	0	0	0	0	4.0	2.4	2.0	15	9	3.9	75				
AMARILLO	182	991.6	1015.2	34.6	22.5	28.1	-1.2	35.6	22*	19.4	25	2.8	0	20.6	69	115	-40	9	4	4	0	0	0	0	0	4.2	19	15.6	2.4	15	9	5.1	68			
AUSTIN	1015.6	1014.4	34.1	22.2	28.0	-0.1	35.2	23*	17.8	22	2.8	0	20.6	73	133	66	83	12	11	0	0	0	0	0	4.2	18	14.8	16	10	14	5.1	70				
BROWNSVILLE	6	1013.9	1014.4	34.1	22.2	29.4	-0.1	37.2	22	21.7	25	2.8	0	23.3	74	64	-17	27	11	2	0	0	0	0	0	4.2	18	13.0	14	19	7	5.0	86			
CORPUS CHRISTI	12	1013.2	1014.0	34.3	19.9	26.1	-0.1	34.3	3	29.4	22	2.7	0	23.3	74	64	-17	27	11	2	0	0	0	0	0	4.2	18	12	12	7	5.0	86				
DALLAS - FORT WORTH	168	994.6	1015.6	34.9	21.2	28.1	-1.3	37.2	7	16.1	12	2.7	0	20.6	68	63	-26	19	5	5	0	0	0	0	0	4.0	15.6	21	12	7	5.1	78				
DEL RIO	313	994.6	1013.0	35.9	21.2	29.4	-0.6	38.3	19*	18.3	19	2.6	0	18.9	78	118	55	81	11	10	0	0	0	0	0	4.0	14.8	31	21	12	7	5.1	78			
EL PASO	1194	882.5	1011.2	33.6	18.4	26.0	-0.5	37.2	28*	20.5	24	2.6	0	20.6	72	119	54	82	18	12	0	0	0	0	0	4.0	14.8	31	21	12	7	5.1	89			
GALESVILLE	112	1012.2	1015.7	30.6	25.4	28.0	-0.5	33.3	6	12.7	12	2.6	0	20.6	72	114	32	38	18	12	0	0	0	0	0	4.0	14.8	31	21	12	7	5.1	89			
HOUSSON INTERCON	29	992	1012.2	31.1	21.9	27.5	-1.1	35.0	6	18.9	25	2.4	0	15.6	59	97	49	37	9	11	0	0	0	0	0	4.0	14.8	31	21	12	7	5.1	89			
LUBBOCK	869	917.0	1013.0	32.8	19.4	26.1	-1	35.6	7	15.6	24	2.3	0	16.1	60	55	17	38	11	11	0	0	0	0	0	4.0	14.8	31	21	12	7	5.1	89			
MIDLAND	585	917.5	1014.2	31.6	20.8	27.6	-0.8	36.7	6	11.7	23	1.1	0	10.3	61	103	-41	22	18	17	0	0	0	0	0	4.0	14.8	31	21	12	7	5.1	89			
PONTIAC	32	949.2	1015.0	33.1	23.4	28.4	-0.3	36.7	22	16.7	24	2.6	0	17.2	56	55	19	17	7	6	0	0	0	0	0	4.0	14.8	31	21	12	7	5.1	89			
SAN ANGELO	240	987.5	1015.0	32.9	22.9	23.4	-0.9	34.4	30*	20.1	21	2.7	0	20.6	72	118	-6	28	5	7	0	0	0	0	0	4.0	14.8	31	21	12	7	5.1	89			
VICTORIA	32	1015.7	1015.5	32.9	22.9	23.4	-0.9	34.4	30*	20.1	21	2.7	0	20.6	72	118	-6	27	5	7	0	0	0	0	0	4.0	14.8	31	21	12	7	5.1	89			
WACO	153	997.6	1015.3	33.4	21.9	26.0	-1.7	38.3	14*	20.6	28.0	-1.7	0	19.4	61	91	46	59	8	0	0	0	0	0	0	3.5	16	20.6	30	19	19	10	2.1	80		
WICHITA FALLS	303	979.0	1014.9	35.4	20.6	28.0	-1.7	38.3	14*	21.2	21	2.3	0	6.7	15	0	18	1	7	6	0	0	0	0	0	4.0	14.8	31	21	12	7	5.1	89			
UTAH	1533	846.6	1012.3	31.1	11.2	21.2	-1.4	38.3	4*	10.0	14	0	0	13.9	77	87	-8	19	15	6	0	0	0	0	0	4.0	14.8	31	21	12	7	5.1	89			
SALT LAKE CITY	1287	870.1	1010.6	32.3	16.1	24.2	0.6	40.0	4	11.1	25	1.7	0	8.3	43	16	-8	5	8	9	0	0	0	0	0	4.0	14.8	31	21	12	7	5.1	89			
VERMONT	101	1003.4	1015.9	23.8	13.9	18.8	-0.6	31.7	2	5.6	17	0	0	13.9	77	87	-8	19	15	6	0	0	0	0	0	4.0	14.8	31	21	12	7	5.1	89			
BURLINGTON																																				
Virginia	279	984.4	1017.4	30.3	21.4	25.8	-0.9	34.4	0*	10.0	16*	0	0	20.0	74	87	-16	36	8	0	0	0	0	0	0	4.0	14.8	31	21	12	7	5.1	89			
LYNCHBURG	7	1016.6	1017.4	30.3	21.4	25.8	-0.9	34.4	0*	10.0	16*	0	0	20.0	74	85	-105	21	11	7	0	0	0	0	0	4.0	14.8	31	21	12	7	5.1	89			
NORFOLK	50	1008.6	1017.2	30.4	20.1	25.4	-0.8	36.1	10	12.8	16	1.5	0	20.6	80	180	-50	64	10	8	0	0	0	0	0	4.0</td										

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State and Station	Elevation (ground)	Pressure		Temperature				Precipitation				Wind				Cloudiness							
		Sea level	mb	Highest	Lowest	Date	No. of days	Average dew point	Min. 0°C or lower	Total	No. of days	Snow, ice pellets	Maximum depth on ground	Resultant speed	Direction	Date	Precipitation in 24 hours	25 mm. or more	With thunderstorms	No. of days (sunrise to sunset)	Possible sunshine (%)		
WASHINGTON	999.7	1015.8	22.7	12.8	17.8	0.1	27.8	9	10.6	12*	0	0	11.1	7.0	-2	6	8	2	0	0.9	25	7.2	
SEATTLE-TACOMA	930.2	1012.2	28.6	13.6	21.1	1.1	33.9	10	10.0	6	3	0	7.2	4.6	26	1.7	5	3	1.4	18	15.2		
SPokane	718	983.7	1018.4	28.6	8.4	13.2	0.1	25.6	10	5.6	4	0	0	0	0	22	10	0	0	0	23	3.7	
STAMPEDE PASS R	1206	880.5	30.3	16.7	23.5	0.4	37.8	10	14.4	11*	7	0	0	0	0	19	22	8	0	0	14	6.4	
WALLA WALLA U	289	974.3	1012.0	29.7	12.7	21.2	0.9	35.6	10	8.9	18	7	0	9.4	4.9	11	4	1	0	1.7	29	9.8	
YAKIMA	321	974.3	1012.0	29.7	12.7	21.2	0.9	35.6	10	8.9	18	7	0	0	0	0	5	4	1	0	32	7	
WEST INDIES	4	1012.9	1015.4	31.4	25.2	28.3	0.9	32.8	28*	23.9	21*	9	0	24.4	8.3	23.8	6.1	11.2	22	10	0	3.5	8
SAN JUAN P.R.																					21.5	30	
WEST VIRGINIA	931.6	1017.9	25.2	15.4	20.3	-0.1	30.0	8	7.2	17*	0	0	17.2	8.6	-9	3.9	1.4	10	0	0	0.8	24	
CHARLESTON	310	983.7	1018.4	26.2	17.7	23.0	-0.1	32.8	9	8.3	16	2	0	18.3	7.9	12.1	28	19	14	0	0	23	
ELMINS. I.	594	949.2	25.4	14.7	20.1	0.4	31.1	1	5.0	17	0	0	0	0	0	129	26	19	16	0	0	10.3	
HUNTINGTON	252	987.8	1017.6	23.6	18.6	23.6	0.3	33.9	9*	10.0	11*	4	0	18.9	7.8	17.4	8.9	59	16	14	0	0	20
PARKERSBURG U	187	27.8	17.9	22.9	-0.3	33.3	7	10.0	17*	5	0	0	0	0	0	0	31	15	0	0	0	19	
WISCONSIN	208	990.2	1015.6	24.2	14.2	19.2	-0.7	31.7	7	7.8	16	0	0	15.0	8.0	85	4.7	7	0	0	0.7	24	
LA CROSSE	198	991.2	1015.5	25.6	15.3	20.4	-1.4	32.2	7*	6.1	15	2	0	17.2	8.6	19.2	11.5	14	11	0	0	11.2	
MADISON	262	984.8	1015.8	25.1	13.3	19.2	-1.2	32.6	7	2.8	15	1	0	15.6	8.3	12.6	4.9	36	14	12	0	0	13.4
MILWAUKEE	205	991.2	1016.3	24.6	16.2	20.4	-0.2	34.4	7	7.8	16	1	0	16.1	7.9	12.3	5.5	20	12	0	0	0	20.6
WYOMING	1627	839.1	1013.5	28.0	11.6	19.8	-1.1	38.9	5	7.8	29*	10	0	7.2	5.3	6.8	5.3	4.4	10	4	0	0.7	26
CASPER	1667	814.4	1013.7	25.9	11.8	18.8	-0.9	35.6	6	7.2	25	5	0	6.1	4.7	10	1.4	19	16	0	0	0	1.0
CHEYENNE	1696	831.4	1013.9	26.9	11.4	19.2	-1.4	38.3	5	6.7	25	7	0	6.7	5.2	5.8	4.6	27	12	10	0	0.8	24
LANDER	1208	879.1	1013.7	28.1	11.9	20.0	-0.7	37.8	5	8.3	10	6	0	0	0	21	7	4	0	0.3	29	8	
SHERIDAN																					14		

HEATING DEGREE DAYS

(Base 65°F.)

AUGUST 1979

State and Station	Current season			State and Station	Current season			State and Station	Current season			State and Station	Current season		
	This month	Period July through this month	Normals		This month	Period July through this month	Normals		This month	Period July through this month	Normals		This month	Period July through this month	Normals
ALABAMA BIRMINGHAM U	0	0	0	IDAHO BOISE	2	7	12	NEBRASKA GRAND ISLAND	10	19	6	TENNESSEE BRISTOL	3	6	0
BIRMINGHAM	0	0	0	LEWISTON	0	12	17	LINCOLN	7	10	0	AMARILLO	0	0	0
HUNTSVILLE	0	0	0	POCATELLO	10	11	20	NORFOLK	14	17	17	CHATTANOOGA	0	0	0
MOBILE	0	0	0					NORTH PLATTE	11	15	15	KNOXVILLE	0	0	0
MONTGOMERY	0	0	0					OMAHA (EPPLEY)	6	7	6	MEMPHIS	0	0	0
ALASKA ANCHORAGE	164	322	502	ILLINOIS CAIRO U	0	0	0	OMAHA (NORTH)	15	19	17	NASHVILLE	0	0	0
ANNECYTE	137	313	442	CHICAGO O HARE	19	35	25	SCOTTSBLUFF	10	10	8	OAK RIDGE	0	0	0
BARRON	579	1255	1664	CHICAGO MIDWAY	13	15	8	VALENTINE	24	38	18				
BARTER ISLAND	675	1363	1584	MOLINE	22	27	11					TEXAS EL PASO			
BETHEL	361	706	713	PEORIA	19	22	8					AIRLINE	0	0	0
BETTLES	218	412	637	ROCKFORD	26	35	22	ELY	4	4	87	AMARILLO	2	2	0
BIG DELTA	146	264	503	SPRINGFIELD	9	9	8	LAS VEGAS	95	117	85	AUSTIN	0	0	0
COLD BAY	400	787	887					RENO	28	37	67	BROWNSVILLE	0	0	0
FARIBANKS	143	267	452					WINNEMUCCA	18	19	48	CORPUS CHRISTI	0	0	0
GULKA KANA	218	433	620	EVANSVILLE	I	I	0				DALLAS FT WORTH	0	0	0	
HOMER	316	618	785	FORT WAYNE	31	39	12				DEL RIO	0	0	0	
JUNEAU	205	456	620	INDIANAPOLIS	13	16	5				EL PASO	0	0	0	
KING SALMON	274	488	673	SOUTH BEND	17	20	30				GALVESTON	0	0	0	
KODIAK	236	436	651	IOWA BURLINGTON	16	18	8	CONCORDO	64	97	61	HOUSTON INTERCON	0	0	0
KOTZEBUE	282	614	818	DES MOINES	10	11	13	MT WASHINGTON OBS	607	1037	1060	LUBBOCK	0	0	0
MC GRATH	242	463	576	DOUGIE CITY	7	7	0				HIDALGO	0	0	0	
NAME	360	795	952	GOODLAND	21	21	0				PORTRTH ARTHUR	0	0	0	
ST. PAUL ISLAND	444	941	1141	TOPEKA	4	4	0				SAN ANGELO	0	0	0	
TAKEETNA	216	368	542	WICHITA	0	0	0				SAN ANTONIO	0	0	0	
UNALAKleet				KANSAS CONCORDIA	10	16	5				VICTORIA	0	0	0	
VALDEZ	326	613	766	DODGE CITY	7	7	0				WACO	0	0	0	
YAKUTAT	308	592	735	GOODELON	21	21	0				WICHITA FALLS	0	0	0	
ARIZONA FLAGSTAFF	157	225	145	LEXINGTON	4	4	0								
PHOENIX	0	0	0	LOUISVILLE	0	0	0				VERMONT BURLINGTON	65	88	69	
TUCSON	0	0	0								UTAH MILFORD	8	8	7	
WINSLOW	0	0	0								SALT LAKE CITY	0	0	5	
YUMA	0	0	0												
ARKANSAS FORT SMITH	0	0	0												
LITTLE ROCK	0	0	0												
NO. LITTLE ROCK	0	0	0												
CALIFORNIA BAKERSFIELD	0	0	0												
BISHOP	0	0	0												
BLUE CANYON	134	228	85												
EUREKA U	165	373	518												
FRESNO	0	0	0												
LONG BEACH	0	0	0												
LOS ANGELES	0	0	34												
LOS ANGELES U	0	0	0												
MT SHASTA R	99	140	101												
OAKLAND	26	59	154												
RED BLUFF	0	0	0												
SACRAMENTO	0	0	0												
SAN DIEGO	0	0	6												
SAN FRANCISCO	56	111	177												
SAN FRANCISCO U	125	276	379												
SANTA MARIA	35	104	214												
STOCKTON	0	0	0												
COLORADO ALAMOSA	127	184	151												
COLORADO SPRINGS	41	47	22												
DENVER	20	20	0												
GRAND JUNCTION	3	3	0												
PUEBLO	8	8	0												
CONNECTICUT BRIDGEPORT	13	21	0												
HARTFORD	30	46	12												
DELAWARE WILMINGTON	7	II	0												
DIST. OF COLUMBIA WASHINGTON DULLES	15	22	0												
WASHINGTON NATIONAL	0	0	0												
FLORIDA APPALACHICOLA U	0	0	0												
DAYTONA BEACH	0	0	0												
FORT MYERS	0	0	0												
JACKSVILLE	0	0	0												
KEY WEST	0	0	0												
MIAMI	0	0	0												
ORLANDO	0	0	0												
PENSACOLA	0	0	0												
TALLAHASSEE	0	0	0												
TAMPA	0	0	0												
WEST PALM BEACH	0	0	0												
GEORGIA ATLANTA	0	0	0												
AUGUSTA	0	0	0												
COLUMBUS	0	0	0												
MACON	0	0	0												
ROME	0	0	0												
SAVANNAH	0	0	0												
MISSOURI COLUMBIA REGIONAL	4	6	0												
KANSAS CITY	5	10	0												
ST JOSEPH	6	11	0												
ST LOUIS	0	0	0												
SPRINGFIELD	1	I	6												
MONTANA BILLINGS	7	9	25												
GLASGO	17	23	45												
GREAT FALLS	15	34	60												
HAVRE	13	36	58												
HELENA	15	26	90												
KALISPELL	17	67	198												
HILES CITY	14	15	25												
MISSOULA	13	50	110												
PENNSYLVANIA ALLENTOWN	22	35	6												
ERIE	17	53	67												
EUGENE	19	52	92												
WOODBROOK	2	10	32												
PENNDLETON	0	12	19												
PORTLAND	2	10	104												
SALEM	21	45	96												
SEXTON SUMMIT R	135	257	212												
PENNSYLVANIA ALLEGHENY	92	183	314												
ERIE	45	78	98												
HARRISBURG	14	26	0												
PHILADELPHIA	7	11	0												
PITTSBURGH	26	49	23												
PITTSGURGH U	15	30	6												
SCRANTON	31	65	25												
WILLIAMSPORT	19	34	14												
SOUTH CAROLINA CHARLESTON	22	35	6												
CHARLESTON U	17	53	67												
COLUMBIA	0	0	0												
GRINNELL-SPRNBRC	0	1	0												
SOUTH DAKOTA ABERDEEN	41	47	33												
HURON	32	32	22												
RAPID CITY	25	28	30												
SIOUX FALLS	28	28	28												

COOLING DEGREE DAYS

(Base 65° F.)

AUGUST 1979

State and station	Current season		State and station	Current season		State and station	Current season		State and station	Current season	
	This month	Period January through this month		This month	Period January through this month		This month	Period January through this month		This month	Period January through this month
ALABAMA BIRMINGHAM U	453	1449	1771	HAWAII HILO	336	1994	1978	NEBRASKA GRAND ISLAND	303	844	936
BIRMINGHAM	424	1438	1571	HONOLULU	485	2772	2713	LINCOLN	330	934	1032
HUNTSVILLE	393	1211	1868	KAHULUI	486	2543	2040	NORFOLK	268	818	846
MOBILE	509	1914	2016	LIHUE	445	2498	2385	NORTH PLATTE	262	739	742
MONTGOMERY	474	1608	1784	IDAHO POISE	199	648	638	OMAHA (EPPLEY)	345	1010	1044
ALASKA ANCHORAGE	0	4	0	LEWISTON	315	821	584	OMAHA (NORTH) SCOTTSBLUFF	303	858	854
ANNEETTE	8	9	14	POCATELLO	145	416	413	VALENTINE	208	648	685
BARROW	0	0	0	ILLINOIS CAIRO U	444	1475	1530	NEVADA ELKO	207	620	316
BARTER ISLAND	0	0	0	CHICAGO O HARE	213	681	601	ELY	56	194	191
BETHEL	0	0	0	CHICAGO MIDWAY	227	695	822	LAS VEGAS	656	2544	2348
BETTLES	1	12	17	MOLINE	245	806	810	RENO	122	363	305
BIG DELTA	15	28	34	PEDORIA	258	785	866	WINNEMUCCA	165	564	382
COLD BAY	0	0	0	ROCKFORD	187	594	655	NEW HAMPSHIRE CONCORD	150	467	332
FAIRBANKS	7	23	52	SPRINGFIELD	295	1022	981	MT WASHINGTON OBS	0	0	0
GULKANA	0	0	0	INDIANAPOLIS	250	766	859	TEXAS ABILENE	539	1858	2001
HOMER	0	0	0	SOUTH BEND	220	687	625	AMARILLO	276	950	1233
JUNEAU	1	1	0	IOWA BURLINGTON	259	811	892	AUSTIN	549	1924	2261
KING SALMON	0	0	0	DES MOINES	305	851	837	BROWNSVILLE	614	2769	2814
KODIAK	0	8	0	OQUQUE	181	526	564	MEMPHIS	499	1717	1684
KOTZEBUE	0	1	0	SIOUX CITY	249	770	858	NASHVILLE	381	1157	1421
MC GRATH	1	2	14	WATERLOO	230	655	630	OAK RIDGE	314	882	1160
NAME	0	0	0	KANSAS CONCORDIA	365	1052	1132	TENNESSEE BRISTOL	259	676	936
ST. PAUL ISLAND	0	0	0	DODGE CITY	296	1070	1226	CHATTANOOGA	410	1181	1368
TALKEETNA	1	1	6	GOODLAND	235	789	829	KNOXVILLE	399	1104	1313
UNALAKLEET	0	4	0	TOPEKA	379	1104	1180	HOUSTON INTERCON	519	2010	2207
VALDEZ	0	0	0	WICHITA	465	1347	1429	TEXAS DALLAS FT WORTH	551	1909	2054
YAKUTAT	0	0	0	LEXINGTON	292	845	1026	DEL RIO	625	2357	2659
ARIZONA FLAGSTAFF	24	81	134	LOUISVILLE	350	1043	1083	EL PASO	432	1750	1761
PHOENIX	763	3016	2678	KENTUCKY COVINGTON	248	721	935	GALVESTON	547	2000	2214
TUCSON	576	2184	2148	LEXINGTON	292	845	1026	HOUROCK	519	1010	1202
WINSLOW	310	985	1035	MAINE BATAVIA	365	1052	1132	MIDLAND	442	1628	1828
YUMA	813	3132	3120	MAINE PORTLAND	296	1070	1226	PORTR THUR	523	1997	2146
ARKANSAS FORT SMITH	426	1350	1669	MAINE SAINT JOSEPH	235	789	829	SALT LAKE CITY	336	1045	817
LITTLE ROCK	442	1590	1688	MAINE SHREVEPORT	483	1698	2004	VERMONT BURLINGTON	101	491	376
NO. LITTLE ROCK	431	1409	1619	MARYLAND BALTIMORE	341	963	962	VIRGINIA LYNCHBURG	322	840	957
CALIFORNIA BAKERSFIELD	524	2011	1711	MAINE WORCESTER	57	268	128	NORFOLK	426	1118	1190
BISHOP	243	865	903	MAINE YONKERS	83	294	241	RICHMOND	404	1129	1155
BLUE CANYON	61	0	0	MASSACHUSETTS BOSTON	167	76	56	WALLOPS ISLAND	296	792	896
EUREKA U	0	0	0	MASSACHUSETTS WORCESTER	167	513	424	WASHINGTON OLYMPIA	394	920	919
FRESNO	471	1676	1338	MASSACHUSETTS YONKERS	226	687	600	QUILLAYUTE	12	91	95
LONG BEACH	272	814	644	MISSOURI COLUMBIA REGIONAL	142	435	363	SEATTLE	1	12	8
LOS ANGELES	193	482	375	MISSOURI FILER	147	526	533	SEATTLE-TACOMA	27	119	166
LOS ANGELES U	252	788	765	MISSOURI GRAND RAPIDS	155	517	668	SPokane	15	150	121
MT SHASTA R	59	203	255	MISSOURI HOUGHTON LAKE	125	498	495	STAMPEDE PASS R	166	457	354
OAKLAND	33	110	70	MISSOURI JACKSON	103	336	431	WALLA WALLA U	0	33	16
RED BLUFF	423	1632	1513	MISSOURI SAULT STE MARIE	30	130	139	YAKIMA	299	886	767
SACRAMENTO	260	927	911	MISSOURI ST JOSEPH	18	123	176	WEST INDIIES SAN JUAN P.R.	174	532	443
SAN DIEGO	283	730	468	MISSOURI ROCHESTER	181	586	555	WEST VIRGINIA BECKLEY	157	359	433
SAN FRANCISCO U	21	76	56	MISSOURI ST LOUIS	167	553	453	CHARLESTON	277	372	915
SANTA MARIA	7	50	45	MISSOURI SPRINGFIELD	142	293	414	ELKINS	149	359	355
STOCKTON	386	1299	1000	MISSOURI ST CLOUD	87	293	178	HUNTINGTON	301	866	951
COLORADO ALAMOSA	13	34	88	MISSOURI BILLINGS	216	624	460	PARKERSBURG U	267	726	907
COLORADO SPRINGS	124	394	423	MISSOURI GLASGOW	155	224	208	WEST VIRGINIA CHARLESTON	157	359	433
DOVER	163	552	566	MISSOURI KANSAS CITY	135	517	668	ELKINS	149	359	355
GRAND JUNCTION	310	1011	1007	MISSOURI KATIE	124	449	593	HUNTINGTON	301	866	951
PUEBLO	221	779	880	MISSOURI KAWALEIN	172	315	305	PARKERSBURG U	267	726	907
CONNECTICUT BRIDGEPORT	259	642	642	MISSOURI KOROR R	125	498	495	WISCONSIN GREEN BAY	91	356	378
HARTFORD	218	749	544	MISSOURI KWAJALEIN	103	336	431	LA CROSSE	161	521	649
DELAWARE WILMINGTON	324	836	861	MISSOURI MAJURO	30	154	176	MADISON	115	404	440
WILMINGTON	324	836	861	MISSOURI PAGO PAGO	18	123	176	MILWAUKEE	147	459	421
OIST OF COLUMBIA	310	837	831	MISSOURI PONAPE R	181	586	555	PACIFIC AREA GUAM TAGUAC R	435	3428	3312
WASHINGTON DULLES	310	837	831	MISSOURI PRINCE GEORGE	181	534	453	WYOMING JOHNSTON	531	3335	3238
WASHINGTON NATIONAL	425	1230	1204	MISSOURI RICOH R	103	301	237	CASPER	129	378	418
FLORIDA APPALACHICOLA U	498	1826	1998	MISSOURI ROKOR R	337	1001	1098	CHEYENNE	100	303	306
DAYTONA BEACH	471	2113	2077	MISSOURI SOUTHERN	461	1596	1860	LANDER	113	381	356
FORT MYERS	604	2833	2578	MISSOURI ST JOSEPH	493	1566	1810	SHERIDAN	121	272	414
JACKSONVILLE	484	1825	1944	MISSOURI ST LOUIS	185	460	368	MISSOURI ALLEN TOWN	268	711	690
KEY WEST	632	3341	3366	MISSOURI ST. LOUIS	103	301	237	MISSOURI ERIE	164	390	340
MIAMI	537	2828	2752	MISSOURI SPRINGFIELD	337	1001	1098	MISSOURI HARRISBURG	264	729	906
ORLANDO	546	2312	2360	MISSOURI TOMMY TEE	340	998	1115	MISSOURI PHILADELPHIA	339	943	960
PENSACOLA	527	1980	2073	MISSOURI YAP R	356	934	1165	MISSOURI PITTSBURGH	175	543	578
TALLAHASSEE	456	1693	1975	MISSOURI YAP R	103	301	237	MISSOURI SCRANTON	214	544	548
TAMPA	543	2381	2402	MISSOURI YATES CITY	420	1333	1261	MISSOURI WILLIAMSPORT	212	630	626
WEST PALM BEACH	549	2470	2577	MISSOURI YATES CITY	341	909	1177	MISSOURI PENNSYLVANIA	268	711	690
GEORGIA ATHENS	443	1347	1430	MISSOURI BILLYWOOD	216	624	460	MISSOURI BLOCK ISLAND	164	390	340
ATLANTA	475	1465	1305	MISSOURI GREAT FALLS	170	684	409	MISSOURI PROVIDENCE	264	729	906
AUGUSTA	460	1469	1635	MISSOURI HAVER	132	341	303	MISSOURI RHOE ISLAND	190	423	316
COLUMBUS	518	1804	1729	MISSOURI HELENA	185	460	368	MISSOURI PROVIDENCE	190	554	487
MACON	514	1660	1857	MISSOURI KALISPELL	103	237	108	MISSOURI RHOE ISLAND	190	423	316
ROME	447	0	0	MISSOURI MILES CITY	237	710	682	MISSOURI PROVIDENCE	190	554	487
SAVANNAH	516	1833	1834	MISSOURI MISSOULA	146	373	178	MISSOURI PROVIDENCE	190	554	487

STORM SUMMARY

AUGUST 1979

STATE	TORNADOES					HAILSTORMS			WINDSTORMS			LIGHTNING			@HEAVY SNOWSTORMS AND BLIZZARDS			# ICE STORMS			φ ALL OTHER				
	NUMBER	DEATHS	INJURIES	† DAMAGE	DEATHS	INJURIES	† PROPERTY	† DAMAGE	DEATHS	INJURIES	† PROPERTY	† DAMAGE	DEATHS	INJURIES	† PROPERTY	† DAMAGE	DEATHS	INJURIES	† PROPERTY	† DAMAGE	DEATHS	INJURIES	† PROPERTY	† DAMAGE	
Alabama	1	1																						3	5
Alaska	1	1																					1	5	?
Arizona																									3
Arkansas																									5
California																									?
Colorado	1	1																							1
Connecticut	8	4																							5
Delaware																									3
Florida																									?
Georgia																									?
Hawaii *																									4
Idaho																									5
Illinois	6	5																							?
Indiana	4	2																							?
Iowa	16	6	2	16	6																			6	
Kansas	6	2																							6
Kentucky																									3
Louisiana																									7
Maine																									?
Maryland & DC *																									6
Massachusetts	2	1	2	3	6																			29	
Michigan	9	4																							4
Minnesota	1	1																							5
Mississippi																									6
Missouri																									6
Montana *																									5
Nebraska	2	1																							6
Nevada	2	2																							5
New Hampshire																									5
New Jersey																									5
New Mexico	5	4																							6
New York	1	1																							6
North Carolina	2	1																							4
North Dakota	8	3																							4
Ohio	1	1																							4
Oklahoma	13	5																							4
Oregon																									?
Pacific	*																								?
Pennsylvania	1	1																							4
Puerto Rico																									6
Rhode Island																									4
South Carolina																									4
South Dakota																									6
Tennessee																									5
Texas	10	6																							5
Utah																									6
Vermont	*																								5
Virginia																									5
Virgin Islands																									C
Washington *	1	1																							06
West Virginia	2	1																							6
Wisconsin	15	3	1	1	3																			?	
Wyoming	7	3																							05

RAWINSONDE DATA

Average monthly values

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Standard pressure surface mb.	ALBANY, NY 1007 MB				ALBUQUERQUE, NM 940 MB				AMARILLO, TX 893 MB				ANCHORAGE, AK 1010 MB				ANNETTE, AK 1013 MB										
	No. of observations	Resultant Wind		Speed m.p.s.	Dew Point °C	Direction tens of deg.	Temperature °C	No. of observations	Resultant Wind	Speed m.p.s.	Dew Point °C	Direction tens of deg.	Temperature °C	No. of observations	Resultant Wind	Speed m.p.s.	Dew Point °C	Direction tens of deg.	Temperature °C	No. of observations	Resultant Wind	Speed m.p.s.					
		Dynamic height meters	Temperature °C		Dew Point °C	Direction tens of deg.	Temperature °C		Dynamic height meters		Dew Point °C	Direction tens of deg.	Temperature °C		Dynamic height meters		Dew Point °C	Direction tens of deg.	Temperature °C		Dynamic height meters	Temperature °C					
SFC	31	8.6	17.0	15.3	23.1	24	2.6	30	1,619	19.0	7	10.6	20.1	22	9.5	31	11.8	18	1.6	38	3.7	13.1	11.1	0.6	1.1		
1000	31	14.5	17.3	14.7	24	2.2	2.2	30								31	14.4	9.8	1.7	2.4	1.7	1.7	14.0	8.5	35	5.5	
950	31	5.84	16.3	13.1	26	2.2	2.2	30								31	5.56	12.3	7.0	1.7	2.5	31	5.80	13.1	8.5	35	5.5
900	31	1,143	14.1	10.6	28	4.5	2.2	30								31	9.6	4.6	1.6	3.7	31	1,034	11.1	4.4	21	5.5	
850	31	1,524	11.6	7.7	28	7.2	2.2	30	2,037	17.9	7.2	17	3.2	31	2,043	17.3	7.6	2.2	2.1	31	1,480	6.7	1.4	15	4.1		
800	31	2,029	8.9	3.3	28	8.8	3.0	30								31	2,051	9.7	4.1	2.3	2.1	31	1,976	4.2	1.8	15	5.3
750	31	2,562	6.9	-2.2	28	9.9	3.0	30	2,587	14.8	3.9	23	2.6	31	2,591	13.6	4.1	2.3	4.9	31	1,495	1.5	0.0	17	5.3		
700	31	3,127	4.9	-6.0	27	10.6	3.0	30	3,167	11.0	4.9	26	3.4	31	3,169	9.7	4.6	3.3	3,052	31	2,539	4.6	-8.5	25	1.7		
650	31	3,728	1.5	-9.3	27	12.5	3.3	30	3,781	6.4	-2.5	26	3.2	31	3,780	5.3	-4.3	2.3	2.4	31	3,639	4.6	-14.1	19	2.3		
600	31	4,369	-1.9	-13.8	27	13.8	3.0	30	4,432	1.4	-6.4	26	3.3	31	4,429	-0.9	-9.0	2.6	1.8	31	4,266	-2.6	-16.4	16	2.2		
550	31	5,056	-5.9	-17.5	27	15.1	3.0	30	5,125	-3.8	-11.6	26	3.5	31	5,123	-3.5	-14.0	2.1	2.1	31	4,937	-12.0	-21.5	19	6.8		
500	31	5,797	-10.4	-23.5	27	16.4	3.0	30	5,872	-8.2	-10.2	26	4.8	31	5,870	-8.2	-21.8	2.5	2.5	31	5,660	-16.4	-25.0	20	6.2		
450	31	6,600	-15.5	-27.8	27	17.6	3.0	30	6,682	-13.4	-25.1	26	5.1	31	6,681	-13.0	-27.7	2.3	3.5	31	6,444	-21.9	-31.1	21	7.0		
400	31	7,479	-21.6	-33.9	27	19.1	3.0	30	7,568	-19.4	-32.1	26	5.5	31	7,568	-19.2	-33.5	2.1	3.7	31	7,300	-28.1	-37.0	21	7.5		
350	31	8,452	-26.7	-40.4	27	21.3	3.0	30	8,550	-26.7	-39.6	26	6.3	31	8,551	-26.2	-39.7	4.8	4.8	31	8,249	-34.7	-42.4	23	8.1		
300	31	9,535	-37.0	-45.4	27	22.8	3.0	30	9,641	-35.0	-47.4	27	7.1	31	9,644	-34.6	-46.4	2.6	5.3	31	9,305	-42.4	-45.3	23	8.1		
250	31	10,773	-45.5	-52.7	27	25.9	3.0	30	10,890	-43.6	-52.7	27	9.6	31	10,893	-44.0	-52.7	2.7	2.7	31	10,598	-50.6	-53.6	20	8.0		
200	31	12,229	-54.5	-62.7	27	27.7	3.0	30	12,159	-53.1	-62.7	27	12.8	31	12,164	-53.6	-63.0	2.1	2.1	31	12,040	-53.6	-63.0	19	8.0		
150	31	13,560	-61.5	-69.7	27	29.5	3.0	30	13,520	-60.1	-69.7	27	13.9	31	13,520	-60.6	-70.0	2.1	2.1	31	13,420	-60.6	-70.0	18	8.0		
100	31	14,964	-69.4	-77.6	27	30.9	3.0	30	14,924	-68.0	-77.6	27	14.3	31	14,924	-68.5	-78.0	2.1	2.1	31	14,824	-68.5	-78.0	17	8.0		
50	31	16,594	-75.4	-83.6	27	32.7	3.0	30	16,554	-74.0	-83.6	27	15.9	31	16,554	-74.5	-84.0	2.1	2.1	31	16,454	-74.5	-84.0	16	8.0		
40	31	18,229	-81.4	-89.6	27	34.5	3.0	30	18,189	-80.0	-89.6	27	15.3	31	18,189	-80.5	-89.9	2.1	2.1	31	18,089	-80.5	-89.9	15	8.0		
25	31	24,305	-48.6	0.9	27	24.178	51.9	0.9	10,8	27	24.054	50.8	0.9	10,8	27	24.054	50.8	0.9	10,8	27	24.324	-48.9	0.9	26	1.6		
25	31	25,511	-46.7	L'9	27	26.28	25.366	-49.5	0.9	11,5	27	25.397	-48.8	0.9	11,5	27	25.397	-48.8	0.9	11,5	27	25,526	-47.2	0.9	26	1.6	
20	31	26,993	-44.4	0.9	27	26.806	24.75	-47.5	0.9	12,3	27	26.872	-46.6	0.9	12,3	27	26.872	-46.6	0.9	12,3	27	27,021	-45.0	0.9	27	1.6	
15	31	28,936	-41.9	0.9	27	26.747	24.43	-44.3	0.9	14,4	27	26.789	-43.9	0.9	14,4	27	26.789	-43.9	0.9	14,4	27	28,953	-42.5	0.9	28	1.6	
1	31	31,446	-41.9	0.9	27	26.725	24.35	-44.3	0.9	15	21,493	-39.8	0.9	20,5	22	31,536	-38.9	0.9	17,5	21	31,720	-38.6	0.9	28	1.6		
7	31	31,536	-38.9	0.9	27	26.725	24.35	-44.3	0.9	15	31,493	-39.8	0.9	20,5	22	31,536	-38.9	0.9	17,5	21	31,720	-38.6	0.9	28	1.6		

Standard pressure surface mb.	ATHENS, GA 989 MB				BARROW, AK 1010 MB				BARTER ISLAND, AK 1010 MB				BETHEL, AK 1006 MB				BISMARCK, ND 955 MB							
	No. of observations	Resultant Wind		Speed m.p.s.	Dew Point °C	Direction tens of deg.	Temperature °C	No. of observations	Resultant Wind		Speed m.p.s.	Dew Point °C	Direction tens of deg.	Temperature °C	No. of observations	Resultant Wind		Speed m.p.s.	Dew Point °C	Direction tens of deg.	Temperature °C			
		Dynamic height meters	Temperature °C		Dew Point °C		Temperature °C		Dynamic height meters	Temperature °C		Dew Point °C		Temperature °C		Dynamic height meters	Temperature °C		Dew Point °C	Direction tens of deg.	Temperature °C			
SFC	31	246	20.0	19.1	36	7	30	8	6.3	4.5	10	2.3	31	15	4.7	4.1	07	1.2	30	39	11.2	8.6	18	2.1
1000	31	597	22.2	17.0	30	12.3	30	515	8.4	4.5	17	3.1	31	520	10.6	3.3	26	1.2	30	39	11.2	8.0	24.4	2.1
900	31	1,067	19.8	14.6	27	1.9	30	962	6.9	4.1	2.0	2.7	31	970	9.5	5	27	3.2	30	960	7.0	3.2	19.8	1.0
850	31	1,556	16.8	11.8	25	2.7	30	1,429	4.3	1.4	21	3.9	31	1,442	7.2	-2.7	2	5.1	31	1,429	6.1	4.6	19.9	1.3
800	31	2,073	14.2	6.9	25	2.6	30	1,921	1.8	-3.9	2	5.1	31	1,939	4.1	-4.1	2	6.2	30	1,921	2.1	3.7	19.7	1.3
750	31	2,616	11.4	1.5	26	2.4	30	2,439	-1.2	-5.8	21	6.0	31	2,460	-0.5	-5.8	2	6.2	30	2,440	-0.1	-1.7	19.5	1.3
700	31	3,189	3.7	-2.3	26	2.1	30	2,987	-4.1	-10.0	22	6.3	31	3,011	-3.1	-10.1	2	6.5	29	2,991	-2.7	-11.0	19.5	1.3
650	31	3,796	4.6	-4.7	26	1.9	30	3,568	-7.4	-13.5	22	6.7	31	3,594	-6.3	-14.6	2	6.7	29	3,575	-5.7	-15.0	19.5	1.3
600	31	4,346	3.0	-10.5	26	1.7	30	4,188	-11.2	-17.0	22	7.0	31	4,216	-10.1	-17.6	2	6.8	29	4,195	-9.2	-19.1	19.5	1.3
550	31	5,140	-3.1	-15.0	26	1.5	30	4,851	-15.3	-22.5	22	7.5	31	4,882	-14.1	-22.1	2	6.8	29	4,867	-13.2	-23.6	19.5	1.3
500	31	5,888	-10.9	-21.2	23	1.0	30	5,164	-20.1	-28.6	22	7.4	31	5,594	-19.8	-27.1	2	6.9	29	5,586	-17.7	-28.7	20	8.0
450	31	6,607	-16.2	-27.9	23	1.0	30	6,705	-12.3	-24.6	18	5.0	31	6,741	-12.1	-22.8	10	1.7	30	6,603	-15.0	-27.		

RAWINSONDE DATA

Average monthly values

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Standard pressure surface mb.	No. of observations	CARIBOU, ME 991 MB						CENTREVILLE, AL 1001 MB						CHARLESTON, SC 1017 MB						CHATHAM, MA 1015 MB						CHIHUAHUA, MEXICO 859 MB						
		Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind						
		Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	
SFC	31	191	12.8	10.7	25	.9	31	140	20.6	19.9	0.5	1.6	31	13	22.6	21.9	2.1	2.7	1.8	1.6	31	16	17.5	16.2	2.5	2.5	31	1,520	17.8	12.5	20	1.0
1000	31	550	13.8	9.2	27	3.2	31	598	22.3	17.7	2.5	1.8	31	156	20.1	19.2	2.7	2.7	1.8	1.3	31	56	18.6	12.8	2.7	2.7	31	1,520	17.8	9.5	17	2.4
900	31	1,005	11.5	6.6	29	4.2	31	1,067	19.9	15.5	2.6	2.2	31	1,076	20.2	13.6	2.6	2.2	31	1,066	15.4	10.6	2.6	4.9	31	1,520	17.8	6.5	16	3.8		
850	31	1,481	8.5	3.9	28	4.6	31	1,557	16.0	12.1	2.6	2.6	31	1,568	16.8	11.5	2.6	1.7	31	1,529	8.4	6.5	31	2,590	14.3	6.5	16	3.8				
800	31	1,980	5.8	-5	27	5.9	31	2,072	14.1	6.2	2.6	2.5	31	2,083	14.0	5.7	2.5	2.0	31	2,036	10.0	8.1	31	2,040	17.7	9.5	17	2.4				
750	31	2,507	3.6	-4.6	27	7.7	31	2,615	11.3	2.0	2.6	1.9	31	2,626	11.2	2.1	2.6	2.2	31	2,572	7.9	4.4	27	9.6	31	2,590	14.3	6.5	16	3.8		
700	31	3,064	.8	-8.3	27	9.5	31	3,188	8.0	-2.2	2.5	1.9	31	3,199	8.3	-2.4	2.8	2.5	31	3,139	5.2	-4.4	27	10.4	31	3,169	10.3	3.1	15	4.1		
650	31	3,658	-1.6	-13.3	27	11.0	31	3,796	4.5	-7.0	2.5	1.7	31	3,808	4.9	-7.9	2.9	2.1	31	3,741	2.0	-8.5	27	11.4	31	3,783	6.1	-2.2	12	3.6		
600	31	4,292	-4.8	-17.3	27	11.8	31	4,444	1.0	-12.4	2.5	1.6	31	4,457	1.3	-13.4	2.9	2.3	31	4,364	-1.2	-13.0	27	13.0	31	4,434	1.7	-5.8	10	2.8		
550	31	4,971	-8.9	-21.3	27	13.1	31	5,138	-3.6	-16.0	2.8	2.1	31	5,152	-2.7	-17.3	2.8	2.2	31	5,073	-5.2	-17.4	27	14.0	31	5,130	-2.5	-11.6	11	2.4		
500	31	5,703	-13.5	-25.1	27	15.8	31	5,887	-7.4	-22.3	2.6	2.8	31	5,901	-6.9	-23.1	2.8	1.8	31	5,815	-9.6	-23.4	27	14.5	31	5,881	-6.8	-16.3	15	1.2		
450	31	6,497	-18.7	-30.7	27	18.3	30	6,700	-12.3	-26.6	2.6	2.6	31	6,716	-12.0	-28.6	2.8	1.7	31	6,622	-16.4	-27.7	27	15.4	31	6,696	-11.6	-23.9	23	1.6		
400	31	7,365	-24.5	-35.3	27	20.9	30	7,590	-18.2	-32.4	2.7	2.8	31	7,607	-18.0	-33.6	3.0	2.0	31	7,504	-20.6	-32.8	27	17.1	31	7,589	-17.5	-28.4	22	2.1		
350	31	8,327	-31.4	-41.2	27	23.5	30	8,576	-25.3	-38.7	2.7	3.1	31	8,597	-25.1	-38.9	3.1	2.0	31	8,481	-27.8	-40.4	27	18.2	31	8,578	-24.5	-39.9	24	2.4		
300	31	10,396	-39.5	-55.4	27	26.6	30	9,673	-33.8	-46.8	2.6	3.6	31	9,693	-33.5	-46.4	3.3	2.6	31	9,567	-36.4	-46.2	27	19.4	31	9,680	-32.5	-44.1	26	3.7		
250	31	10,761	-57.6	-73.4	27	29.7	30	10,926	-56.5	-73.4	2.6	4.0	31	10,946	-56.3	-73.4	3.3	2.8	31	10,805	-46.0	-72.7	27	21.0	31	10,940	-42.1	-76.8	26	6.8		
200	31	12,081	-52.1	-68.7	27	30.9	30	12,392	-51.5	-68.7	2.6	5.3	31	12,411	-51.3	-68.7	3.3	2.8	31	12,260	-50.8	-69.7	27	21.5	31	12,401	-53.7	-73	28	6.3		
175	31	12,943	-57.1	-73.4	27	32.6	30	13,243	-56.5	-73.4	2.7	5.7	31	13,255	-56.3	-73.4	3.3	2.8	31	13,154	-55.6	-73.4	27	21.9	31	13,235	-56.9	-73	29	6.5		
150	31	13,930	-54.7	-71.1	27	33.6	30	14,191	-63.5	-71.1	2.7	6.2	31	14,207	-62.4	-71.1	3.3	2.8	31	14,070	-60.9	-71.1	27	21.9	31	14,187	-60.9	-71.1	29	6.5		
125	31	15,094	-55.6	-71.4	27	16.4	30	15,300	-67.0	-71.4	2.6	6.2	31	15,311	-66.9	-71.4	3.4	2.8	31	15,152	-66.0	-71.4	27	21.9	31	15,035	-66.6	-71.4	29	6.4		
100	31	16,517	-55.1	-71.4	27	11.5	30	16,636	-67.5	-71.4	2.6	6.2	31	16,658	-67.4	-71.4	3.4	2.8	31	16,586	-66.1	-71.4	27	21.9	31	16,629	-66.2	-71.4	29	6.4		
80	31	17,944	-54.4	-71.4	27	6.8	30	17,994	-64.5	-71.4	2.6	6.2	31	18,013	-64.4	-71.4	3.4	2.8	31	17,976	-58.6	-71.4	27	21.6	31	17,964	-66.9	-71.4	29	6.7		
70	31	18,603	-52.6	-71.4	27	2.6	30	18,815	-62.4	-71.4	2.6	6.2	31	18,837	-60.7	-71.4	3.4	2.8	31	18,819	-56.8	-71.4	27	21.6	31	18,776	-64.1	-71.4	29	6.9		
60	31	19,801	-51.8	-71.4	27	2.7	30	19,775	-59.1	-71.4	2.6	6.2	31	19,802	-58.2	-71.4	3.4	2.8	31	19,801	-54.9	-71.4	22	2.3	31	19,730	-61.0	-71.4	29	6.9		
50	31	20,987	-50.5	-71.4	27	1.6	29	20,929	-50.5	-71.4	2.6	6.2	31	20,959	-55.1	-71.4	3.4	2.8	31	20,970	-51.6	-71.4	27	21.1	31	20,987	-51.1	-71.4	29	6.9		
40	29	22,446	-49.4	-71.4	14	.8	29	22,355	-53.7	-71.4	2.6	6.2	31	20,731	-52.7	-71.4	3.4	2.8	31	22,392	-52.7	-71.4	27	21.1	31	22,290	-55.1	-71.4	29	6.7		
30	27	24,339	-47.6	-71.4	8	.6	28	24,219	-50.3	-71.4	2.6	6.2	31	24,267	-48.8	-71.4	3.4	2.8	31	24,292	-48.6	-71.4	27	21.1	31	24,141	-51.1	-71.4	29	6.7		
25	24	25,553	-45.8	-71.4	8	.4	20	25,416	-48.2	-71.4	2.6	6.2	31	25,470	-46.8	-71.4	3.4	2.8	31	25,500	-46.7	-71.4	27	21.1	31	25,330	-49.6	-71.4	29	6.7		
20	21	27,047	-43.9	-71.4	8	.2	20	26,896	-45.9	-71.4	2.6	6.2	31	26,956	-45.1	-71.4	3.4	2.8	31	26,986	-44.5	-71.4	27	21.1	31	26,799	-47.4	-71.4	29	6.7		
15	13	28,991	-40.9	-71.4	8	.0	22	28,921	-44.0	-71.4	2.6	6.2	31	28,897	-42.2	-71.4	3.4	2.8	31	28,911	-41.6	-71.4	27	21.1	31	28,743	-43.4	-71.4	29	6.7		
10	9	34,183	-35.4	-71.4	8	.0	24	31,583	-38.4	-71.4	2.6	6.2	31	31,664	-37.8	-71.4	3.4	2.8	31	31,719	-38.3	-71.4	27	21.1	31	31,492	-42.0	-71.4	29	6.7		

SFC	No. of observations	COLD BAY, AK 926 MB						DAYTON, OH 902 MB						OEL RIO, TX 983 MB						ELY, NV 810 MB						EMPALME, MEXICO 1008 MB						FAIRBANKS, AK 996 MB					
		Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind								
		Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.						
SFC	31	30	10.3	9.4	18	2.6	31	299	18.1	16.2	2.6	2.9	31	569	23.4	20.1	14	7.6	31	51	2,025</td																

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FLINT, MI 949 MB												GLASGOW, MT 934 MB												GRAND JUNCTION, CO 853 MB												GREAT FALLS, MT 889 MB												GREEN BAY, WI 990 MB											
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.																							
15°C	31	577	16.6	-12.6	26	2.3	31	696	14.9	9.1	2	2.4	31	1,008	18.4	7.7	14	2.3	5.6	14	3.5	31	1,499	16.2	4.2	27	2.7	31	1,504	12.1	5.4	25	3.0																										
950	31	1,37	14.6	9.5	28	3.3	31	1,008	17.1	4.8	24	1.4	2.4	1,059	19.1	5.6	14	3.5	31	1,499	16.2	4.2	27	2.7	31	1,504	12.1	5.4	25	3.1																													
850	31	1,519	12.2	4.9	27	5.1	31	1,498	17.1	4.8	24	2.6	2.7	31	2,013	17.7	2.6	20	2.0	3.8	31	2,013	13.7	1.5	25	2.6	31	2,011	9.8	-6	28	6.8																											
6,0	31	2,026	9.4	-14.8	28	6.6	31	2,013	17.7	2.6	24	3.1	2,021	19.3	4.0	14	3.8	31	2,021	13.7	1.5	25	2.6	31	2,011	9.8	-6	28	6.8																														
750	31	2,561	7.9	-4.9	28	8.8	31	2,553	9.7	.8	30	4.6	3.1	2,573	16.1	1.1	21	2.0	3.1	2,554	10.3	-1.8	25	3.1	31	2,545	7.4	-5.2	28	7.6																													
700	31	3,127	5.2	-8.0	28	9.5	31	3,122	5.6	-2.8	28	5.3	5.1	3,154	11.7	-1.3	25	3.1	3,124	6.0	-4.5	26	4.5	31	3,109	4.2	-9.0	28	8.8																														
650	31	3,728	1.9	-11.3	28	10.5	31	3,724	1.3	-6.1	29	6.6	3.1	3,769	6.6	-3.8	25	4.2	3,727	1.9	-8.2	26	6.5	31	3,709	0.9	-12.2	28	9.2																														
6,0	31	4,370	-1.4	-17.1	28	12.1	31	4,364	-2.9	-12.7	28	8.5	3.1	4,420	1.1	-6.6	24	4.6	31	4,367	-2.8	-12.6	26	7.9	31	4,348	-2.7	-16.4	28	10.9																													
550	31	5,150	-5.4	-20.5	28	13.0	31	5,048	-7.1	-18.3	28	10.5	3.1	5,113	-4.3	-11.5	24	5.1	31	5,052	-6.7	-18.4	26	9.4	31	5,033	-6.5	-21.1	28	12.0																													
500	31	5,800	-10.1	-24.8	28	14.9	31	5,785	-11.7	-24.3	28	11.8	3.1	5,859	-8.5	-18.5	25	5.7	31	5,790	-11.5	-25.1	26	10.4	31	5,771	-11.3	-25.6	28	12.9																													
550	31	6,600	-15.2	-30.4	26	16.4	31	6,584	-17.0	-30.5	26	12.9	3.1	6,665	-14.5	-25.0	25	5.9	31	6,589	-16.7	-29.3	26	11.1	31	6,572	-16.5	-29.3	28	14.5																													
470	31	7,484	-21.2	-33.5	28	17.7	31	7,458	-23.1	-35.9	28	14.3	3.1	7,548	-20.2	-32.5	25	7.2	31	7,453	-23.2	-35.2	26	11.4	31	7,447	-22.4	-36.2	28	16.7																													
350	31	8,462	-27.7	-40.2	26	20.6	31	8,424	-30.5	-42.2	26	16.9	3.1	8,528	-27.4	-38.0	26	8.5	31	8,430	-30.5	-42.3	26	13.0	30	8,416	-29.2	-41.6	28	19.2																													
330	31	9,547	-36.0	-49.8	28	23.5	31	9,498	-38.9	-49.3	28	19.1	3.1	9,613	-36.0	-47.9	26	10.0	31	9,503	-39.2	-50.2	26	14.9	30	9,496	-37.2	-48.3	28	22.9																													
250	31	10,789	-45.2	-58.7	28	26.0	31	10,724	-48.1	-58.1	28	22.2	3.1	10,821	-45.2	-54.1	26	11.6	31	10,812	-48.2	-54.1	26	15.0	30	10,798	-46.4	-53.1	28	27.8																													
175	31	12,246	-55.4	-68.7	27	29.2	31	12,170	-58.5	-68.5	27	24.4	3.1	12,213	-55.4	-64.1	26	11.0	31	12,170	-58.5	-64.1	26	17.0	30	12,123	-56.4	-65.6	28	20.7																													
150	31	14,626	-65.9	-79.2	28	21.2	31	14,013	-66.6	-79.2	28	17.1	3.1	14,131	-60.7	-72.6	26	12.0	31	14,013	-55.9	-67.0	26	15.5	30	14,000	-57.0	-67.0	28	20.7																													
125	31	15,203	-60.3	-73.7	28	15.4	30	15,169	-57.4	-68.7	28	15.6	3.1	15,259	-63.1	-70.7	26	8.5	31	15,168	-57.9	-67.9	27	11.7	28	15,157	-58.9	-67.9	28	16.8																													
170	31	20,569	-61.0	-74.8	28	10.5	30	20,576	-58.4	-74.8	28	11.6	3.1	20,626	-62.4	-76.4	26	3.0	31	20,572	-58.4	-76.4	28	8.0	28	16,553	-60.1	-76.4	28	11.3																													
25	31	17,981	-59.6	-72.9	29	6.2	30	17,983	-57.4	-72.9	30	7.4	3.0	17,997	-62.4	-73.4	13	.3	31	17,977	-57.6	-73.4	13	5.4	28	17,950	-58.5	-73.4	29	9.5																													
70	31	18,821	-57.5	-72.9	29	4.0	29	18,828	-56.2	-72.9	30	4.7	3.0	18,827	-59.6	-72.9	09	1.2	31	18,821	-57.0	-72.9	30	2.7	28	18,794	-56.5	-72.9	29	4.5																													
60	31	19,799	-55.5	-72.9	31	1.2	29	19,811	-54.7	-72.9	32	2.8	2.9	19,796	-58.1	-72.9	09	2.6	30	19,801	-55.5	-72.9	31	1.9	28	19,776	-55.0	-72.9	29	2.9																													
50	31	20,968	-53.3	-72.9	31	0.5	29	20,983	-53.3	-72.9	31	1.7	2.0	20,958	-55.5	-72.9	08	3.0	30	20,968	-53.7	-72.9	31	1.6	28	20,948	-53.1	-72.9	30	1.2																													
40	29	22,413	-51.2	-72.9	31	0.9	29	22,429	-50.8	-72.9	31	0.8	2.0	22,428	-52.9	-72.9	08	0.5	29	22,428	-51.2	-72.9	31	0.9	28	22,427	-51.2	-72.9	30	1.2																													
30	27	24,291	-49.0	-72.9	31	5.6	29	24,318	-47.4	-72.9	09	2.1	2.6	24,252	-50.2	-72.9	09	7.1	28	24,296	-47.9	-72.9	08	2.4	27	24,274	-48.8	-72.9	08	3.9																													
25	25	25,494	-47.1	-72.9	31	6.2	29	25,526	-46.3	-72.9	09	3.5	2.6	25,449	-48.2	-72.9	09	8.3	28	25,503	-46.5	-72.9	08	2.9	27	25,476	-47.4	-72.9	08	4.3																													
20	19	26,978	-45.3	-72.9	31	7.2	29	27,015	-44.7	-72.9	09	3.9	2.6	26,927	-46.0	-72.9	09	10.2	27	26,989	-44.4	-72.9	08	4.4	24	26,968	-45.0	-72.9	08	5.9																													
15	15	28,926	-42.6	-72.9	31	8.1	28	28,951	-41.6	-72.9	08	5.2	2.5	28,851	-43.1	-72.9	08	11.0	25	28,925	-41.9	-72.9	09	5.0	21	28,909	-42.1	-72.9	08	7.4																													
10	7	31,669	-37.7	-72.9	31	31	31,722	-37.1	-72.9	08	6.3	2.0	31,604	-39.0	-72.9	08	12.5	19	31,699	-37.2	-72.9	07	6.1	14	31,680	-38.0	-72.9	09	7.9																														

GREENSBRO, NC 987 MB												GUADALUPE IS., MEXICO 1011 MB												GUAM, MARIAN IS. 998 MB												HILLO, HI 1015 MB												HUNTINGTON, WV 989 MB											
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Resultant Wind Speed m.p.s.																	
1000	31	275	19.4	17.9	30	+5	31	23	19.3	15.3	32	6.0	31	111	25.2	21.7	13	+5	31	139	22.8	20.0	24	2.3	31	592	20.2	17.6	26	3.5																													
950	31	604	21.3	16.7	30	2.2	31	595	19.1	7.0	33	5.6	31	541	23.6	21.7	13	+5	31	586	20.0	19.4	21	2.3	31	1,059	19.8	15.3	27	5.2																													
900	31	1,370	19.1	14.0	29	2.8	31	1,025	21.1	1.4	33	4.2	31	1,016	20.9	18.2	11	1.1	31	1,052	17.2	14.9	28	0.7	31	1,059	15.3	10.9	27	5.5																													
850	31	1,565	16.3	11.8	29	4.1	31	1,519	20.9	-1.9	33	4.1	31	1,508	18.4	14.0	1	1.8	31	1,538	14.4	11.1	25	2.1	31	1,547	13.3	10.9	27	5.5																													
800	31	2,075	13.7	6.0	28	4.8	31	2,040	13.3	-3.7																																																	

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KEY WEST, FL 1016 MB												KING SALMON, AK 1017 MB												KODORI, CAROLINE 15. 1007 MB												KOTZEBUE, AK 1008 MB												LAKE CHARLES, LA 1016 MB											
Standard pressure surface mts.	No. of observations	Resultant Wind			Dew Point °C +			Resultant Wind			Dew Point °C +			Resultant Wind			Dew Point °C +			Resultant Wind			Dew Point °C +			Resultant Wind			Dew Point °C +			Resultant Wind			Dew Point °C +			Resultant Wind			Dew Point °C +																		
		Dynamic height meters	Temperature °C	Dew Point °C +	Direction tens of deg	Speed m.p.s	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C +	Direction tens of deg	Speed m.p.s	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C +	Direction tens of deg	Speed m.p.s	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C +	Direction tens of deg	Speed m.p.s	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C +	Direction tens of deg	Speed m.p.s	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C +	Direction tens of deg	Speed m.p.s																							
5FC	31	3	27.6	24.0	11	2.7	3	31	30	27.9	24.6	2.1	1.7	25	5	31	31	26	31	5	23.3	22.6	0.7	.7	3	31	31	25.2	23.2	14	.7	2.5																											
1000	31	14	27.2	23.7	11	3.6	3	31	30	27.1	24.6	2.1	1.6	21	8	31	31	26	31	14	23.3	22.2	1.4	.7	2	31	31	23.1	21.7	19	.7	2.7																											
950	31	594	23.5	21.6	11	3.8	3	31	54.2	23.7	24.6	2.1	1.6	21	5	31	31	26	31	50.3	23.1	21.7	1.4	2	31	31	23.1	21.7	19	.7	2.0																												
900	31	1,066	20.6	17.0	12	4.6	3	31	1,015	20.9	17.6	2.5	4.0	25	9	31	31	26	31	1,064	20.5	15.7	19	2.7	31	31	23.1	21.7	19	.7	2.7																												
850	31	1,559	17.9	12.1	11	3.8	3	31	1,508	18.0	13.7	2.7	4.6	25	1,413	4.0	22	18	31	1,556	17.7	11.3	18	2.0	31	31	23.1	21.7	19	.7	2.0																												
800	31	2,077	15.4	6.5	11	3.5	3	31	2,027	15.5	10.6	2.7	4.6	25	1,904	1.0	3	-2.1	18	6.3	31	2,073	14.8	7.6	1.7	1.5	31	31	23.1	21.7	19	.7	2.0																										
750	31	2,622	12.3	2.9	11	3.4	3	31	2,573	12.8	7.9	2.7	4.2	25	2,421	-1.7	-4.6	18	7.5	31	2,617	11.7	3.6	18	.9	31	31	23.1	21.7	19	.7	2.0																											
700	31	3,197	8.9	-1.3	11	2.8	3	31	3,150	9.7	1.3	2.6	4.0	25	2,968	-4.7	-8.8	18	8.7	31	3,191	8.2	-2.7	1.7	.5	31	31	23.1	21.7	19	.7	2.0																											
650	31	3,807	5.5	-4.6	12	2.5	3	31	3,763	6.3	-4.2	2.9	3.5	25	3,548	-7.9	-13.2	18	8.7	31	3,800	4.6	-4.5	16	.7	31	31	23.1	21.7	19	.7	2.0																											
600	31	4,457	1.5	-7.2	12	2.4	3	31	4,416	2.5	-3.3	2.5	2.5	25	4,167	-11.3	-18.3	18	9.0	31	4,448	-7.9	-19	1.9	1.0	31	31	23.1	21.7	19	.7	2.0																											
550	31	5,150	-2.5	-11.9	12	2.0	3	31	5,115	-1.3	-6.7	1.9	1.1	25	4,829	-15.2	-22.2	19	9.3	31	5,142	-3.2	-15.1	21	1.3	31	31	23.1	21.7	19	.7	2.0																											
500	31	5,904	-7.0	-17.5	11	1.5	3	31	5,870	-5.3	-11.5	1.3	2.4	25	5,452	-20.0	-28.0	19	10.0	31	5,891	-7.3	-20.0	21	1.5	31	31	23.1	21.7	19	.7	2.0																											
450	31	6,719	-11.9	-24.2	08	1.6	3	31	6,691	-10.0	-17.1	1.1	3.7	25	6,315	-25.3	-33.4	19	11.8	31	6,704	-12.3	-25.8	19	1.8	31	31	23.1	21.7	19	.7	2.0																											
400	31	7,611	-17.6	-28.6	06	2.3	3	31	7,590	-15.8	-22.1	09	4.7	25	7,160	-31.5	-39.5	19	12.9	31	7,595	-18.3	-31.5	21	1.7	31	31	23.1	21.7	19	.7	2.0																											
350	31	8,600	-24.5	-33.5	04	3.0	3	31	8,587	-22.2	-30.1	09	6.6	25	8,095	-38.3	-43.3	19	13.7	31	8,581	-25.3	-38.3	23	1.6	31	31	23.1	21.7	19	.7	2.0																											
300	31	9,701	-33.0	-41.5	03	3.3	3	31	9,707	-30.5	-39.6	07	8.8	25	9,135	-45.7	-54.7	19	15.1	31	9,679	-33.6	-45.6	25	2.2	31	31	23.1	21.7	19	.7	2.0																											
250	29	10,956	-45.3	02	3.6	3	31	10,966	-40.4	-50.7	07	11.2	25	10,335	-49.9	-59.0	22	10.4	29	12,394	-54.3	-64.5	25	1.7	31	31	23.1	21.7	19	.7	2.0																												
200	27	12,499	-55.2	02	5.2	3	31	12,499	-52.7	06	12.7	2.5	25	11,806	-46.8	-56.8	22	10.4	29	12,394	-54.3	-64.5	25	1.7	31	31	23.1	21.7	19	.7	2.0																												
175	27	16,400	-61.3	02	5.3	3	31	16,400	-58.8	06	12.7	2.5	25	15,766	-62.6	-72.6	22	10.4	29	16,400	-64.5	-74.7	25	1.7	31	31	23.1	21.7	19	.7	2.0																												
150	27	14,403	-64.6	02	5.6	3	31	14,403	-61.1	06	12.7	2.5	25	13,734	-64.8	-74.8	22	10.4	29	14,403	-66.5	-76.7	25	1.7	31	31	23.1	21.7	19	.7	2.0																												
125	27	15,300	-68.6	05	5.6	3	31	15,300	-65.1	06	12.7	2.5	25	14,614	-76.3	-86.3	22	10.4	29	14,614	-78.9	-89.0	25	1.6	31	31	23.1	21.7	19	.7	2.0																												
100	26	16,436	-69.4	07	7.2	3	31	16,436	-66.9	08	12.7	2.5	25	17,919	-70.6	-88.6	22	10.4	29	17,953	-65.2	-76.2	25	1.6	31	31	23.1	21.7	19	.7	2.0																												
80	26	17,974	-66.9	08	9.0	3	31	17,974	-64.4	09	12.7	2.5	25	18,744	-67.7	-88.7	22	10.4	29	18,788	-65.2	-76.2	25	1.6	31	31	23.1	21.7	19	.7	2.0																												
70	26	18,766	-64.4	C6	11.5	3	31	18,766	-62.2	09	12.7	2.5	25	18,718	-67.2	-88.7	22	10.4	29	18,733	-64.8	-76.8	25	1.6	31	31	23.1	21.7	19	.7	2.0																												
60	26	19,735	-61.7	09	14.0	3	31	19,735	-59.2	09	12.7	2.5	25	19,653	-65.0	-88.7	22	10.4	29	19,748	-64.8	-76.8	25	1.6	31	31	23.1	21.7	19	.7	2.0																												
50	26	20,872	-58.7	09	16.6	3	31	20,872	-56.2	09	12.7	2.5	25	20,949	-59.5	-88.7	22	10.4	29	20,945	-57.4	-76.8	25	1.6	31	31	23.1	21.7	19	.7	2.0																												
40	26	24,137	-51.3	09	19.6	3	31	24,137	-49.1	09	12.7	2.5	25	24,137	-53.9	-88.7	22	10.4	29	24,137	-51.6	-76.8	25	1.6	31	31	23.1	21.7	19	.7	2.0																												
25	25	25,329	-49.1	09	21.3	3	31	25,329	-46.6	09	12.7	2.5	25	25,329	-51.0	-88.7	22	10.4	29	25,329	-48.4	-76.8	25	1.6	31	31	23.1	21.7	19	.7	2.0																												
20	25	26,833	-46.8	09	20.5	3	31	26,833	-44.3	09	12.7	2.5	25	26,833	-47.6	-88.7	22	10.4	29	26,832	-45.4	-76.8	25	1.6	31	31	23.1	21.7	19	.7	2.0																												
15	22	28,723	-44.6	08	23.1	3	31	28,723	-42.1	08	12.7	2.5	25	28,723	-43.8	-88.7	22	10.4	29	28,723	-44.7	-76.8	25	1.6	31	31	23.1	21.7	19	.7	2.0																												
10	11	31,579	-39.0	07	17.0	3	31	31,579	-36.5	07	12.7	2.5	25	31,579	-38.0	-88.7	22	10.4	29	31,579	-38.0	-76.8	25	1.6	31	31	23.1	21.7	19	.7	2.0																												
7	31	31,288	-42.6	07	14.6	3	31	31,288	-40.0	07	12.7	2.5	25	31,288	-41.6	-88.7	22	10.4	29	31,288	-40.5	-76.8	25	1.6	31	31	23.1	21.7	19	.7	2.0																												

MAJURO, MARSHALL 15. 1011 MB												MEDFORD, OR 969 MB												MERIDA, MEXICO 1013 MB												MIDLAND, TX 917 MB												MONTERREY, MEXICO 964 MB											
Resultant Wind			Dew Point °C +																																																								

RAWINSONDE DATA

Average monthly values

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MONETTE, MO 957 MB												NASHVILLE, TN 997 MB												NOME, AK 1007 MB												NORTH PLATTE, NE 918 MB												OAKLAND, CA 1013 MB											
Standard pressure surface mb.	No. of observations			Resultant Wind			Dew Point °C †			Temperature °C			No. of observations			Resultant Wind			Dew Point °C †			Temperature °C			No. of observations			Resultant Wind			Dew Point °C †			Temperature °C			No. of observations			Resultant Wind			Dew Point °C †			Temperature °C													
	No. of observations	Dynamic height meters	Temperature °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Direction tens of deg.	Speed m.p.s.																			
SFC	31	4.3±0	19.2±2	17.9±7	1.5±3	31	18.0	19.8±2	19.5±2	1.4±6	31	2.4	8.7	10.4±2	31	9.0	9.4±2	8.8±2	1.4±7	31	5	11.0±0	11.7±0	1.5±7	31	5.4	5.9±0	6.4±0	1.4±6	30	6	11.5±0	14.2±2	1.2±6	26	1.5																							
1000	31	5.8±6	21.2±2	18.0±0	2.2±3	31	3.9	5.9±6	21.6±0	16.1±0	2.7±2	31	2.4	8.7	8.6±0	31	6.4	7.8±0	17	2.4±8	31	5	9.4±3	5.7±1	4.1±18	31	4.8	3.0±0	1.5±0	1.0±10	30	6	11.5±0	14.2±2	1.2±6	26	1.5																						
950	31	1.3±5.6	20.3±3	15.2±2	2.5±3	31	6.3	1.0±6.5	19.1±3	14.3±2	3.6±2	31	2.4	3.7	3.1±0	31	1.4	2.9±0	1.7	2.4±8	31	5	10.4±0	10.7±0	1.4±7	31	5.4	5.8±0	6.2±0	1.4±6	29	2.9																											
900	31	1.5±4.9	17.9±2	9.6±2	2.6±3	31	5.2	1.5±5.5	16.6±0	10.7±2	3.6±1	31	1.4	3.0	3.2±0	31	1.0	2.0±0	1.8	1.6±8	31	5	10.5±0	10.0±0	1.4±7	31	5.4	5.8±0	6.2±0	1.4±6	29	2.9																											
850	31	1.5±4.9	17.9±2	9.6±2	2.6±3	31	5.2	1.5±5.5	16.6±0	10.7±2	3.6±1	31	1.4	3.0	3.2±0	31	1.0	2.0±0	1.8	1.6±8	31	5	10.5±0	10.0±0	1.4±7	31	5.4	5.8±0	6.2±0	1.4±6	29	2.9																											
800	31	2.0±6.6	15.1±2	4.7±2	2.7±3	40	4.3	2.0±7.0	14.2±2	5.6±2	3.9±1	31	1.4	2.9	3.1±1	1.8	1.0	2.9±8	18	7.1	31	2.0	2.0±2	16.4±4	4.2±2	2.5±5	52	3.0	2.0±1	14.0±4	6.2±2	24	3.9																										
750	31	2.6±0.9	11.7±1	-3.3	2.7±3	32	3.1	2.6±1.2	11.2±2	1.5±2	4.1±1	31	2.0	2.4	2.0±1.0	3.1	2.4	2.0±0	1.0±0	6.8±18	7.8	3.1	2.5±2	13.4±2	1.7±5	2.7±3	57	3.0	2.2±2	14.8±4	6.8±2	24	3.8																										
700	31	3.4±1.8	7.9±2	-3.3±2	2.8±3	31	3.1	3.1±1.8	8.0±0	-3.5±2	2.6±1	31	2.0	2.6	4.6±1	3.1	2.9±5.6	-3.6±6	10.9±19	19	8.3	3.1	3.1±1.9	9.3±3	-1.1±25	2.5±2	52	3.0	3.1±2	12.8±2	4.1±1	24	4.1																										
650	31	3.7±9.0	4.1±2	-7.7±2	2.5±3	31	3.1	3.7±9.3	4.5±5	-7.0±2	2.6±1	31	2.0	3.5	3.3±1.7	3.1	3.5±3.9	-6.6±6	13.7±19	19	8.3	3.1	3.1±3.7	9.3±3	-4.8±9	2.6±2	52	3.0	3.1±2	14.5±3	4.5±5	24	4.5																										
600	31	4.4±3.6	-1.4±2	-12.7±2	2.5±3	31	3.1	4.4±4.1	-8.8±2	-11.3±2	2.7±1	31	2.0	4.7	3.1±1.1	1.6±10.1	10.3±13	-17.6±19	19	8.6	3.1	3.1±4.0	4.0±8	-8.5±8	2.1±2	52	3.0	3.1±3	14.0±4	5.4±4	24	4.4																											
550	31	5.1±2.9	-3.6±2	-19.4±2	2.4±3	31	3.1	5.1±3.6	-3.2±2	-15.5±2	2.5±1	31	2.0	5.4	4.8±2.6	4.4±13	14.3±22	-7.7±19	19	8.6	3.1	3.1±5.0	5.0±8	-13.8±28	2.1±2	52	3.0	3.1±3	22.9±4	7.2±2	24	4.2																											
500	31	5.7±2.4	-1.4±2	-25.2±2	2.4±3	31	3.1	5.7±2.4	-3.2±2	-25.7±2	2.6±1	31	2.0	5.4	5.1±2.4	5.1±15	15.0±24	-9.0±24	24	8.6	3.1	3.1±5.0	5.0±8	-19.0±30	2.1±2	52	3.0	3.1±3	22.8±4	8.8±2	24	4.2																											
450	31	6.6±8.0	-13.9±2	-33.7±2	2.7±1	31	5.0	6.1±3.1	-9.6±2	-12.6±2	2.5±1	31	2.0	6.7	6.2±2.7	6.2±17	16.2±26	-3.0±26	26	11.3	31	6.3±3.7	6.3±17	-12.4±29	2.1±2	52	3.0	3.1±3	15.6±4	11.4±2	24	4.2																											
400	31	7.3±7.7	-13.9±2	-35.1±2	2.8±1	31	5.1	7.3±6.8	-18.4±2	-31.6±2	2.7±1	31	2.0	7.6	7.0±2.4	7.0±16	16.4±24	-3.0±24	24	10.8	31	6.5±3.7	6.5±17	-12.4±29	2.1±2	52	3.0	3.1±3	15.6±4	11.4±2	24	4.2																											
350	31	8.5±5.7	-26.6±2	-40.4±5	2.7±2	31	6.9	31	8.5±7.2	-25.2±2	-38.9±2	2.7±1	31	2.0	7.9	7.9±3.0	8.1±1.6	11.7±37	-3.0±37	24	12.4	31	8.1±3.7	8.1±23	-27.7±39	2.8±2	58	8.0	3.0	8.4±6.9	21.6±8	-15.2±31	2.6±2	52	3.0	3.1±3	14.0±4	11.4±2	24	4.2																			
300	31	9.6±5.1	-3.4±2	-27.4±2	2.8±1	28	8.4	31	9.6±7.0	-33.6±3	-46.4±4	2.6±1	28	8.5	30	9.1±4.6	-44.0±4	42.2±4	21	12.4	31	9.5±5.9	-36.4±4	-47.1±27	2.7±1	57	11.6	3.0	9.5±4.9	37.5±7	-37.5±49	2.4±1	52	3.0	3.1±3	15.6±4	11.4±2	24	4.2																				
250	31	10.9±0.2	-43.3±9	2.8±1	28	9.4	31	10.9±2.3	-43.5±5	26.6±1	2.6±1	28	10.0	35.9	-47.5±7	22	13.4	31	10.8±3.8	-45.6±4	45.6±22	27	12.1	30	10.7±8.3	-45.6±4	10.3±12	2.7±1	52	3.0	3.1±3	10.7±4	-4.6±9	23	4.2																								
200	31	12.367	-53.6	28	9.1	31	12.388	-54.3	27	9.9	31	11.837	-46.4	22	11.5	31	12.297	-53.8	53.8	27	14.1	30	12.236	-54.1	5.1±1	23	19.7																																
175	31	13.218	-57.7	28	8.0	31	13.235	-59.7	28	8.8	30	12.725	-46.2	22	9.5	31	13.149	-56.6	56.6	28	14.2	30	13.089	-55.9	5.5±1	23	18.6																																
150	31	14.180	-62.1	28	7.8	30	14.192	-62.4	28	7.3	31	13.747	-49.5	23	8.4	31	14.120	-54.9	54.9	28	11.7	30	14.065	-58.0	5.0±1	23	15.0																																
125	31	15.320	-64.5	29	6.4	30	15.306	-66.0	28	5.3	31	14.989	-54.0	23	6.9	31	15.252	-62.4	62.4	28	9.0	30	15.207	-60.6	5.3±1	23	10.4																																
100	31	16.657	-65.7	31	3.0	30	16.656	-66.9	30	2.5	31	16.191	-59.4	23	5.3	31	16.625	-64.0	64.0	28	6.0	30	16.592	-61.7	5.1±1	21	5.0																																
85	31	16.017	-65.7	02	1.6	30	16.014	-63.2	03	1.3	30	17.875	-49.1	22	2.8	30	17.996	-61.6	61.6	29	2.5	29	17.978	-60.9	5.0±1	16	3.0																																
70	31	19.308	-60.3	29	3.0	30	18.308	-60.9	29	2.4	30	18.075	-59.1	22	2.4	30	18.798	-57.4	57.4	31	1.4	30	18.612	-59.1	5.1±1	17	2.7																																
60	31	19.308	-56.0	08	0.8	30	19.305	-58.5	08	0.8	31	19.303	-58.3	09	1.2	30	19.090	-49.4	49.4	03	2.4	29	18.806	-58.1	5.1±1	17	2.7																																
50	30	20.964	-55.2	08	5.9	30	20.895	-58.5	08	6.3	30	20.960	-49.4	02	1.2	30	20.259	-47.4	47.4	03	2.4	29	20.940	-55.6	5.0±1	09	4.9																																
40	30	22.397	-52.0	09	7.4	30	22.399	-53.2	09	8.1	30	22.422	-49.4	04	1.2	30	22.394	-51.9	51.9	09	3.1	29	22.368	-53.7	5.0±1	09	6.5																																
30	20	24.265	-49.0	09	9.5	30	24.258	-49.9	09	9.1	29	24.310	-46.5	05	0.9	23	24.268	-47.0	49.8	08	5.2	29	24.230	-50.4	5.0±1	08	8.7																																
25	27	25.651	-48.1	09	9.5	28	25.557	-49.8	09	10.4	27	25.550	-46.7	06	0.8	23	25.656	-46.7	47.7	08	6.1	28	25.429	-49.0	5.0±1	09	9.2																																
20	23	26.946	-45.8	08	9.9	26	26.935	-45.8	08	12.2	24	27.006	-44.9	09	2.1	26	26.952	-45.1	45.1	08	7.4	27	26.894	-46.8	4.6±1	10	1.0																																
15	20	28.868	-43.6	08	13.3	21	28.860	-43.6	08	14.6	23	28.937	-42.8	09	3.0	25	28.888	-42.4	42.4	09	8.1	23	28.810	-44.6	4.6±1	09	11.4																																
10	13	31.606	-40.0	09	16.3	16	31.632	-39.1	09	16.0	7	31.662	-38.3	09	15	31.646	-38.2	38.2	08	10.5	14	31.527	-42.3	42.3	09	5.5	33.935	-37.9	37.9	09	14.5																												

RAWINSONDE DATA

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Standard pressure surface m.b.	SALEM, OR 1009 MB					SALT LAKE CITY, UT 871 MB					SAN DIEGO, CA 998 MB					SAN JUAN, P. R. 1015 MB							
	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Resultant Wind Speed m.p.s.			
SFC	31	174	19.2	18.3	17	3	31	6.1	17.2	11.2	27	4	31	1.025	12.8	7.9	36	8	3	31	25.3	23.4	11
1000	31	587	21.1	16.2	26	3.2	31	56.9	15.1	12.1	33	5	31	1.028	12.0	8.7	30	16.5	16.8	31	25.3	22.9	11
950	31	1,135	18.6	13.2	26	4.2	31	1.025	10.5	8.7	36	8	31	1.028	12.8	7.9	36	1.6	31	50.3	22.6	20.5	11
850	31	1,543	16.4	6.6	27	4.5	31	1.0504	10.9	3.6	24	1.0	31	1.494	21.2	5.6	16	4.6	31	1.053	18.7	16.7	9.6
800	31	2,058	14.0	2.8	27	5.0	31	2.008	8.9	-7	23	2.4	31	2.017	19.3	3.1	18	4.3	31	2.023	18.1	-3.2	26
750	31	2,599	10.9	-5.5	26	5.5	31	2.1561	6.8	-4.5	22	3.6	31	2.569	15.5	-3	21	3.1	31	2.571	14.6	-5.1	24
650	31	3,172	7.3	-2.0	27	5.8	31	3.104	3.7	-9.2	22	4.7	31	3.149	10.7	-3	20	2.5	31	3.149	10.7	-4.0	22
600	31	3,778	3.8	-7.3	27	6.5	31	3.702	-1	-12.4	21	6.5	31	3.762	5.8	-5.2	23	4.3	31	3.762	6.4	-4.9	7.0
500	31	4,424	-1	-12.2	27	6.8	31	4.339	-3.7	-17.5	21	7.6	31	4.410	-3	-2.8	25	5.9	31	4.413	-16.3	-4.2	11
550	31	5,116	-3.9	-16.2	27	7.2	31	5.021	-7.9	-21.4	21	8.7	31	5.102	-4.8	-12.3	23	6.6	31	5.110	-2.1	-20.4	21
500	31	5,852	-8.4	-21.7	27	8.0	31	5.755	-13.0	-28.0	22	9.7	31	5.845	-9.9	-20.1	24	7.7	30	5.859	-5.8	-24.1	21
450	31	6,673	-13.3	-27.8	27	8.3	31	6,550	-18.3	-32.3	22	11.2	31	6,650	-14.7	-28.3	24	8.6	30	6,670	-13.2	-27.7	23
400	31	7,559	-19.3	-33.2	27	9.2	31	7,419	-24.4	-37.3	22	13.6	31	7,532	-20.8	-34.5	24	9.7	30	7,556	-19.6	-35.9	23
350	31	8,541	-26.5	-39.9	27	9.7	31	8,380	-31.8	-42.4	22	15.7	31	8,507	-28.3	-41.6	25	11.4	30	8,537	-26.9	-42.2	23
300	31	9,633	-34.7	-47.1	27	10.4	31	9,448	-40.2	-49.6	22	18.2	31	9,591	-36.8	-48.2	25	14.7	29	10,871	-44.7	-42.4	23
250	31	10,801	-42.4	-51.7	28	10.5	31	10,601	-46.8	-50.8	23	19.6	30	10,837	-45.8	-51.0	25	16.0	29	12,334	-50.5	-45.2	27
200	31	12,443	-54.7	-59.7	28	13.4	31	12,290	-51.2	-55.7	23	15.7	31	12,192	-57.2	-52.5	25	16.4	29	13,185	-57.7	-51.2	28
175	31	13,188	-58.9	-59.9	28	12.6	31	12,990	-52.0	-55.7	23	18.0	31	12,890	-54.8	-52.0	25	15.2	29	14,222	-55.9	-51.2	28
150	31	14,150	-61.9	-61.9	28	11.8	31	12,984	-58.2	-55.7	23	18.9	30	12,984	-54.8	-52.0	25	15.2	29	15,244	-61.2	-51.2	28
125	31	15,272	-64.2	-64.2	29	8.8	31	15,188	-56.2	-52.3	23	9.6	29	15,245	-62.2	-54.2	24	9.4	29	15,245	-66.5	-52.4	27
100	31	16,631	-65.2	-65.2	28	4.5	31	16,562	-57.3	-53.7	23	5.9	29	16,562	-66.7	-63.1	23	10.0	30	16,600	-70.6	-67.6	11
80	31	17,996	-62.3	-62.3	32	1.7	31	17,972	-57.6	-57.6	22	2.7	29	17,999	-61.1	-61.1	23	4.4	29	17,972	-64.6	-59.6	10
70	31	18,826	-59.8	03	1.1	31	18,816	-57.2	-57.2	21	1.0	29	18,832	-59.5	-59.5	09	8.7	29	18,792	-62.0	-60.3	10	
60	31	19,794	-57.5	03	2.9	31	19,795	-55.7	-55.7	11	6.8	29	19,802	-57.7	-57.7	08	2.3	29	19,749	-60.1	-58.1	10	
50	31	20,955	-55.1	08	4.8	31	20,960	-54.5	-54.5	09	1.7	27	20,957	-55.3	-55.3	09	2.9	27	20,894	-57.6	-57.6	09	
40	31	22,348	-52.7	09	6.4	31	22,397	-52.0	-52.0	08	2.4	27	22,388	-52.9	-52.9	08	4.8	27	22,312	-54.9	-54.9	09	
30	31	24,283	-49.6	09	8.2	31	24,272	-49.2	-49.2	08	3.9	26	24,259	-50.1	-50.1	08	6.4	26	24,163	-52.3	-52.3	09	
25	31	25,461	-47.8	09	8.6	29	25,471	-47.8	-47.8	09	4.5	25	25,456	-48.4	-48.4	09	6.9	29	25,346	-50.4	-50.4	09	
20	31	26,948	-45.3	09	9.7	28	26,953	-45.9	-45.9	09	5.2	24	26,929	-46.2	-46.2	09	8.2	22	26,806	-47.8	-47.8	09	
15	31	28,879	-42.9	09	11.0	28	28,879	-43.3	-43.3	08	6.7	23	28,852	-43.5	-43.5	08	8.8	18	28,722	-45.6	-45.6	09	
10	31	31,646	-39.4	09	15.9	20	31,647	-38.9	-38.9	09	8.0	19	31,596	-39.0	-39.0	09	10.7	12	31,444	-42.9	-42.9	09	
7								7	34,065	-36.0													
* SAULT STE MARIE, MI 989 MB																							
SPOKANE, WA 930 MB																							
TAMPA BAY, FL 1016 MB																							
TOPENA, KS 984 MB																							
* TRIN, CAROLINE 15. 1010 MB																							
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SFC	31	789	22.8	12.9	15	2.7	31	100	12.5	10.8	33	1.2	31	33	23.6	22.3	11	9	31	5	26.2	23.8	10
1000	31	1,033	24.8	11.8	16	2.4	31	1,016	17.0	6.7	35	4.5	31	583	23.2	21.7	12	2.3	31	118	24.7	23.7	29
950	31	1,513	22.7	9.0	18	7.1	31	1,508	18.9	-2.3	33	4.1	31	1,054	21.0	15.3	16	2.9	31	571	21.6	16.4	31
850	31	2,034	19.3	-2.3	22	1.2	31	2,025	19.3	-2.3	33	2.1	31	1,548	18.5	-2.1	16	2.6	31	571	21.6	16.4	31
800	31	2,436	15.3	-6.2	22	1.2	31	2,425	15.3	-6.2	33	1.6	31	1,531	18.6	-2.1	16	2.6	31	571	21.6	16.4	31
750	31	3,150	15.3	-10.9	22	2.7	31	3,144	9.2	-11.4	23	3.1	31	3,188	8.5	-3.5	22	3.1	31	3,170	9.1	-1.9	31
700	31	3,173	10.9	-12.2	22	3.1	31	3,149	4.7	-11.4	23	3.1	31	3,188	8.5	-3.5	22	3.1	31	3,179	7.3	-2.6	31
650	31	3,178	6.4	-4.2	21	3.0	31	3,175	5.6	-15.1	23	4.1	31	3,179	5.1	-4.2	15	2.1	31	3,178	5.7	-1.4	31
600	31	4,436	2.0	-9.7	21	3.5	31	4,424	1.9	-18.2	23	4.5	31	4,445	1.3	-6.5	16	2.4	31	4,432	1.7	-6.0	31
550	31	5,132	-2.7	-14.2	21	4.2	31	5,100	-2.6	-21.4	23	4.7	31	5,141	-2.4	-14.7	14	2.2	31	5,130	-11.1	-21.1	21
500	31	5,880	-8.0	-20.5	23	3.3	31	5,848	-8.1	-25.6	23	5.4	31	5,891	-7.2	-21.5	13	1.6	31	5,881	-16.4	-15.7	23
450	31	6,692	-12.8	-27.1	24	4.3	31	6,658	-13.7	-30.8	23	6.8	31	6,705	-12.3	-26.2	13	1.9	31	6,689	-11.1	-19.7	23
400	31	7,580	-18.8	-12.9	24	4.7	31	7,541	-20.8	-36.8	23	8.2	31	7,595	-18.1	-33.8	14	3.3	31	7,593	-16.8</td		

RAWINSONDE DATA

Average monthly values

AUGUST 1979

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

Al - 1979

Date	Sun's zenith distance								Date	Sun's zenith distance										
	A.M.				•	P.M.				A.M.				•	P.M.					
	78°*	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°		60.0°	70.7°	75.7°	78.7°		60.0°	70.7°	75.7°	78.7°		
MAUNA LOA OBSERVATORY, HI																				
Air mass																				
Average	3.34	2.67	2.01	1.34	*	1.34	2.01	2.67	3.34	4.64	3.71	2.78	1.86	*	1.86	2.78	3.71	4.64		
1-----	1.18	1.27	1.35	1.47	1.60	----	----	----	----	1.64	.76	.90	1.07	1.25	1.11	.94	.81	.71		
2-----	1.14	1.22	1.31	1.42	1.51	----	----	----	----	1.64	.74	.88	1.07	1.30	1.11	.94	.81	.70		
3-----	1.16	1.24	1.32	1.42	1.55	----	----	----	----	1.63	.74	.88	1.07	1.32	1.08	.91	.79	.69		
4-----	1.17	1.26	1.33	1.43	1.58	1.45	1.35	1.26	1.19	1.65	.76	.90	1.09	1.22	----	----	----	----		
5-----	1.15	1.24	1.32	1.43	----	----	----	----	----	1.67	----	----	----	1.34	----	----	----	----		
6-----	1.11	1.20	1.30	1.41	----	----	----	----	----	7-----	----	----	1.73	1.02	----	----	----	----		
7-----	1.11	1.18	1.27	1.39	----	----	----	----	----	8-----	.54	.68	.82	.98	1.25	1.02	.83	.76	.66	
8-----	1.13	1.19	1.29	1.41	1.55	1.30	1.19	1.18	1.12	9-----	1.63	.75	----	1.23	.98	----	----	----	----	
9-----	1.15	1.22	1.32	1.43	1.55	1.30	1.19	1.18	1.12	10-----	1.64	.90	----	1.00	----	1.00	----	1.55	----	
10-----	1.16	1.22	1.31	1.42	1.54	1.40	1.30	1.21	1.14	11-----	1.64	----	1.00	----	1.00	----	1.00	1.55	----	
12-----	1.16	1.23	1.31	1.42	1.55	1.40	1.30	1.21	1.14	13-----	1.64	----	1.00	1.37	1.22	1.05	.92	.81	----	
13-----	1.17	1.24	1.32	1.45	1.55	1.45	1.35	1.26	1.17	14-----	.76	.86	.97	1.14	1.34	----	----	----	----	
14-----	1.18	1.26	1.35	1.45	1.55	1.45	1.35	1.26	1.17	15-----	.82	.92	1.04	1.18	1.34	----	----	----	----	
16-----	1.21	1.28	1.36	1.46	1.54	1.35	1.21	1.11	1.04	16-----	.82	.92	1.04	1.20	1.39	1.17	.99	.86	.77	
17-----	1.18	1.30	1.35	1.48	1.61	1.47	1.36	1.27	1.21	17-----	.81	.91	1.02	1.19	1.39	----	----	----	----	
18-----	1.17	1.24	1.32	1.42	1.57	1.41	1.30	1.20	1.12	18-----	.81	.92	1.04	1.21	1.38	1.22	----	----	----	
19-----	1.16	1.24	1.33	1.45	1.58	1.45	1.33	1.23	1.17	19-----	.81	.90	1.04	1.23	1.41	1.21	1.07	.97	.87	
20-----	1.18	1.26	1.35	1.46	1.60	1.45	1.34	1.26	1.17	20-----	.91	1.00	1.12	1.26	1.42	1.28	1.16	1.06	.98	
21-----	1.21	1.28	1.36	1.46	1.54	1.35	1.21	1.11	1.04	21-----	.95	1.03	1.13	1.27	1.46	1.30	1.15	1.05	.96	
22-----	1.18	1.30	1.35	1.48	1.61	1.47	1.36	1.27	1.21	22-----	.94	1.03	1.14	1.24	1.45	1.27	1.12	1.00	.88	
23-----	1.17	1.24	1.32	1.42	1.57	1.41	1.30	1.20	1.12	24-----	.92	1.00	1.12	1.28	1.48	1.24	1.11	.99	.90	
24-----	1.16	1.23	1.31	1.42	1.54	1.36	1.27	1.21	1.14	25-----	.84	.95	1.07	1.23	1.42	1.22	1.06	.93	.81	
25-----	1.15	1.22	1.30	1.41	1.53	1.35	1.25	1.20	1.13	26-----	.86	1.00	1.08	1.25	1.41	1.24	1.12	----	----	
26-----	1.14	1.21	1.29	1.40	1.52	1.34	1.24	1.19	1.12	27-----	.86	1.00	1.09	1.24	1.40	1.23	1.08	.96	.87	
27-----	1.13	1.20	1.28	1.39	1.51	1.33	1.23	1.18	1.11	28-----	.70	.81	.96	1.14	1.34	1.22	1.05	.93	.79	
28-----	1.12	1.19	1.27	1.38	1.49	1.32	1.22	1.17	1.10	29-----	.74	.85	.97	1.16	1.36	1.24	1.06	1.00	1.00	
29-----	1.11	1.18	1.26	1.37	1.48	1.33	1.23	1.17	1.10	30-----	.79	.89	1.01	1.17	1.35	1.08	.90	.78	.69	
30-----	1.10	1.17	1.25	1.36	1.47	1.32	1.22	1.16	1.09	31-----	.77	.86	1.01	1.19	1.36	1.14	1.00	.86	.76	
Averages										Averages	.78	.89	.98	1.16	1.36	1.17	1.03	.89	.79	

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

Date, . . .	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys, . . .	174	153	181	185	185	166	155	162	148	94	75	148	259	182	99	134	130	158	163	108	175	148	136	133	134	132	124	136	119	124	136	

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES:

Dates in the table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

+ And also on an earlier date or dates.

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch of water equivalent to every 10 inches of snow-fall.

CLIMATOLOGICAL DATA - METRIC UNITS: Data from airport unless otherwise specified.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.

Y Peak Gust.

+ And also on an earlier date or dates.

U Indicates Urban site.

R Indicates Rural site.

Ø Station pressures apply to elevations shown in the "Elevations" table of the annual issue of this publication.

Conversion formulae to English Units are as follows:

$$\begin{aligned} 1 \text{ foot} &= 0.3048 \text{ meters} \\ {}^{\circ}\text{F.} &= \frac{9}{5} \times {}^{\circ}\text{C} + 32 \end{aligned}$$

$$1 \text{ inch} = 25.4 \text{ millimeters}$$

$$1 \text{ mile per hour} = 0.447 \text{ meters per second}$$

HEATING DEGREE DAYS: Data from airport unless otherwise specified.

U Indicates Urban site.

R Indicates Rural site.

COOLING DEGREE DAYS: Data from airport unless otherwise specified.

U Indicates Urban site.

R Indicates Rural site.

STORM SUMMARY:

o Includes crop damage.

C Crop damage.

* No occurrence of storms or unusual weather phenomena reported.

@ Includes heavy sleet storm.

Freezing drizzle and freezing rain, commonly known as glaze.

Ø For breakdown of "All Others," and for detailed listing of other storms, see the Environmental Data and Information Service, NOAA, monthly publication **STORM DATA**.

‡ No Storm Data Report received for this State.

◇ Report Incomplete.

† Storm damages are placed in categories varying from 1 to 9 as follows:

1 Less than \$50

2 \$50 to \$500

3 \$500 to \$5,000

4 \$5,000 to \$50,000

5 \$50,000 to \$500,000

6 \$500,000 to \$5 Million

7 \$5 Million to \$50 Million

8 \$50 Million to \$500 Million

9 \$500 Million to \$5 Billion

RAWINSONDE DATA (Average Monthly Values):

All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon. The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygrometers. These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.C.T.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

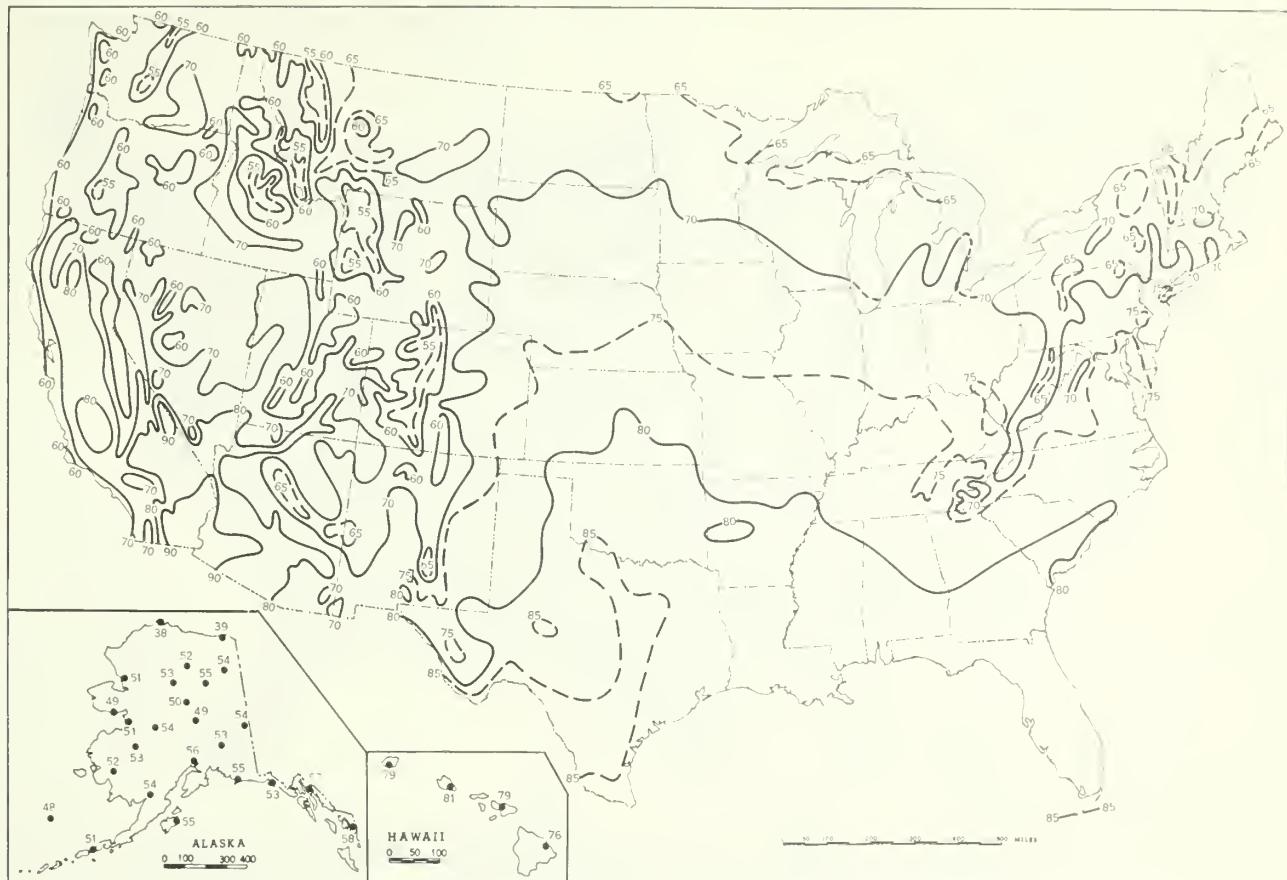
SOLAR RADIATION INTENSITIES: Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

()	Clouds Present	DM	Moderate Dust	HM	Moderate Haze	KS	Slight Smoke
*	Values corresponding to true solar noon	DS	Slight Dust	HS	Slight Haze	M	Moderate Haze-indeterminable
BD	Blowing Dust	F	Fog	I	Intense Haze-indeterminable		
BN	Blowing Sand	GF	Ground Fog	K	Smoke	N	Sand
D	Dust	H	Haze	KI	Intense Smoke	S	Slight Haze-indeterminable
DI	Intense Dust	HI	Intense Haze	KM	Moderate Smoke		

NET RADIATION: The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

Chart 1. A. Normal Daily Average Temperature (°F. 1941-70), August.



B. Temperature Departure from 30 - Year Mean (°F 1941-70), August 1979

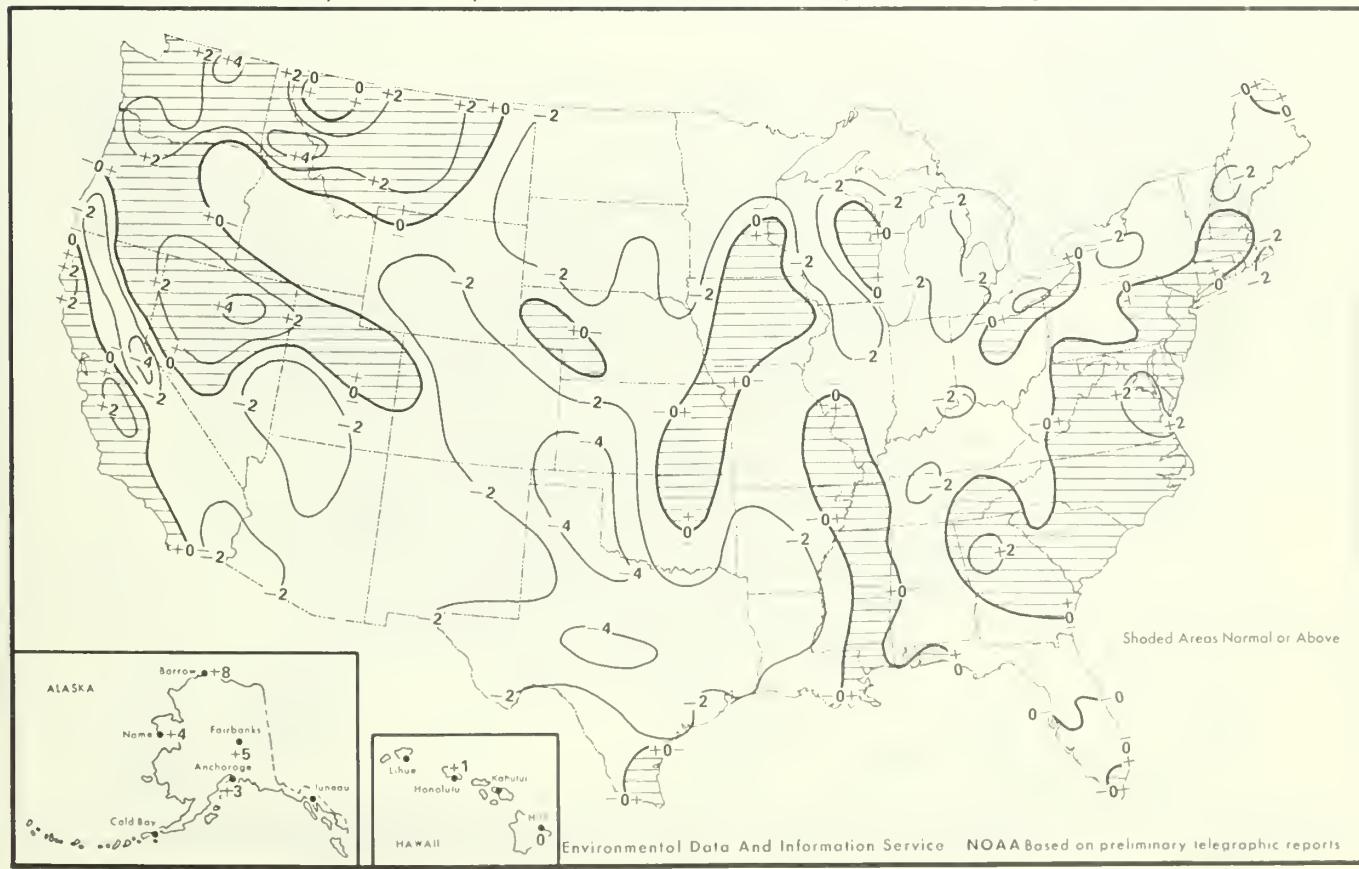
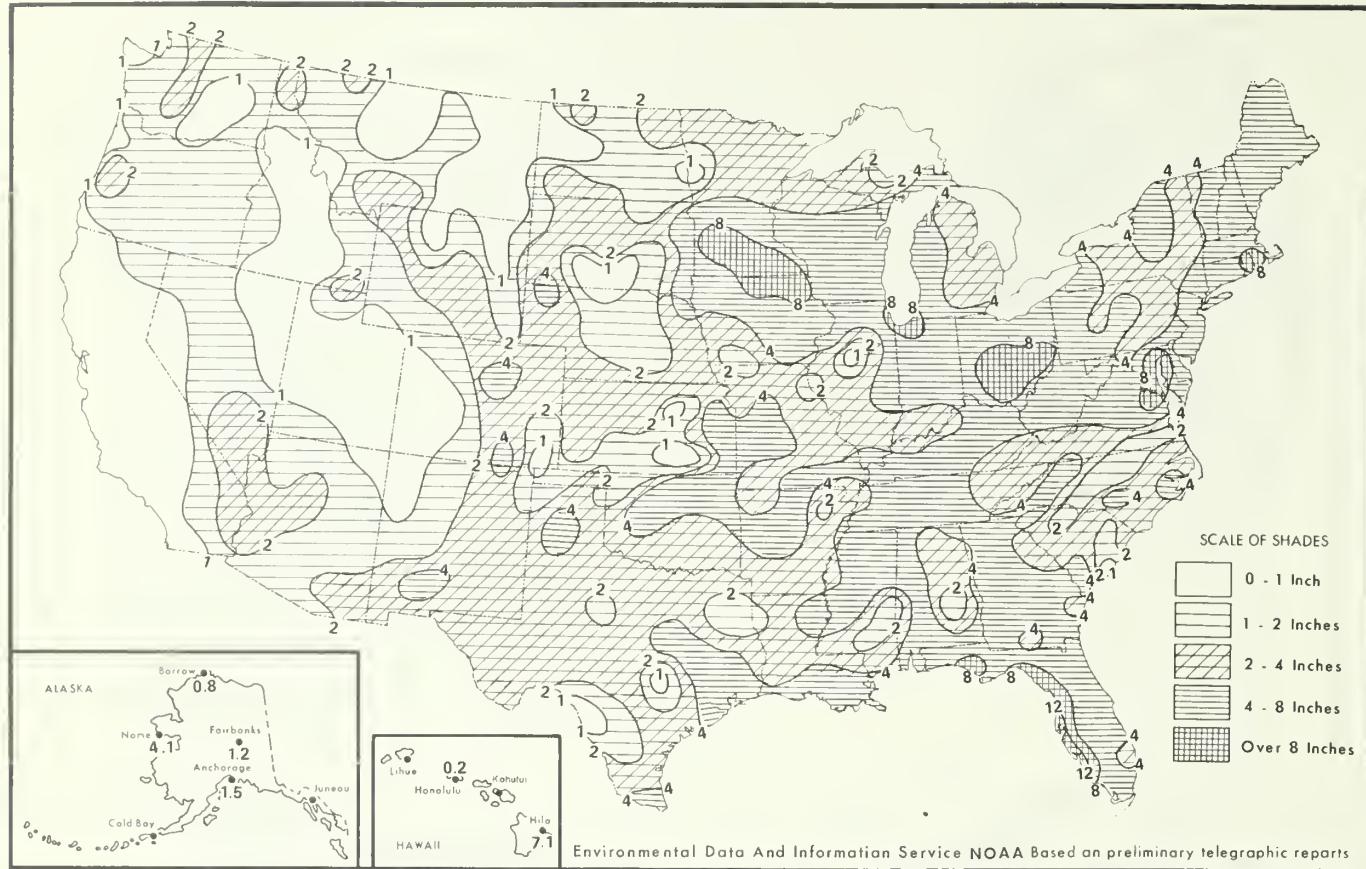


Chart II. A. Total Precipitation (Inches), August 1979



B. Percentage of Normal Precipitation, August 1979

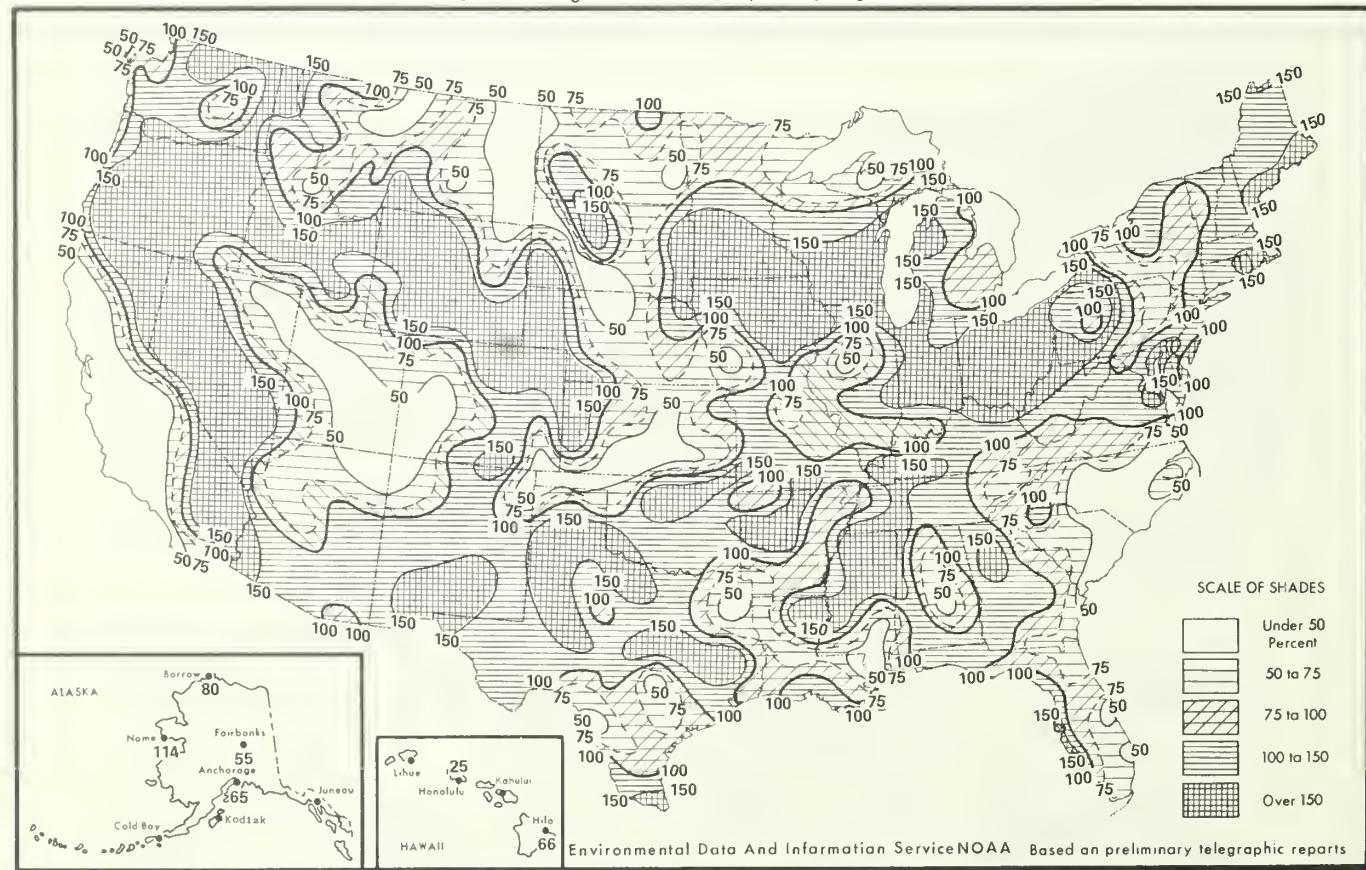
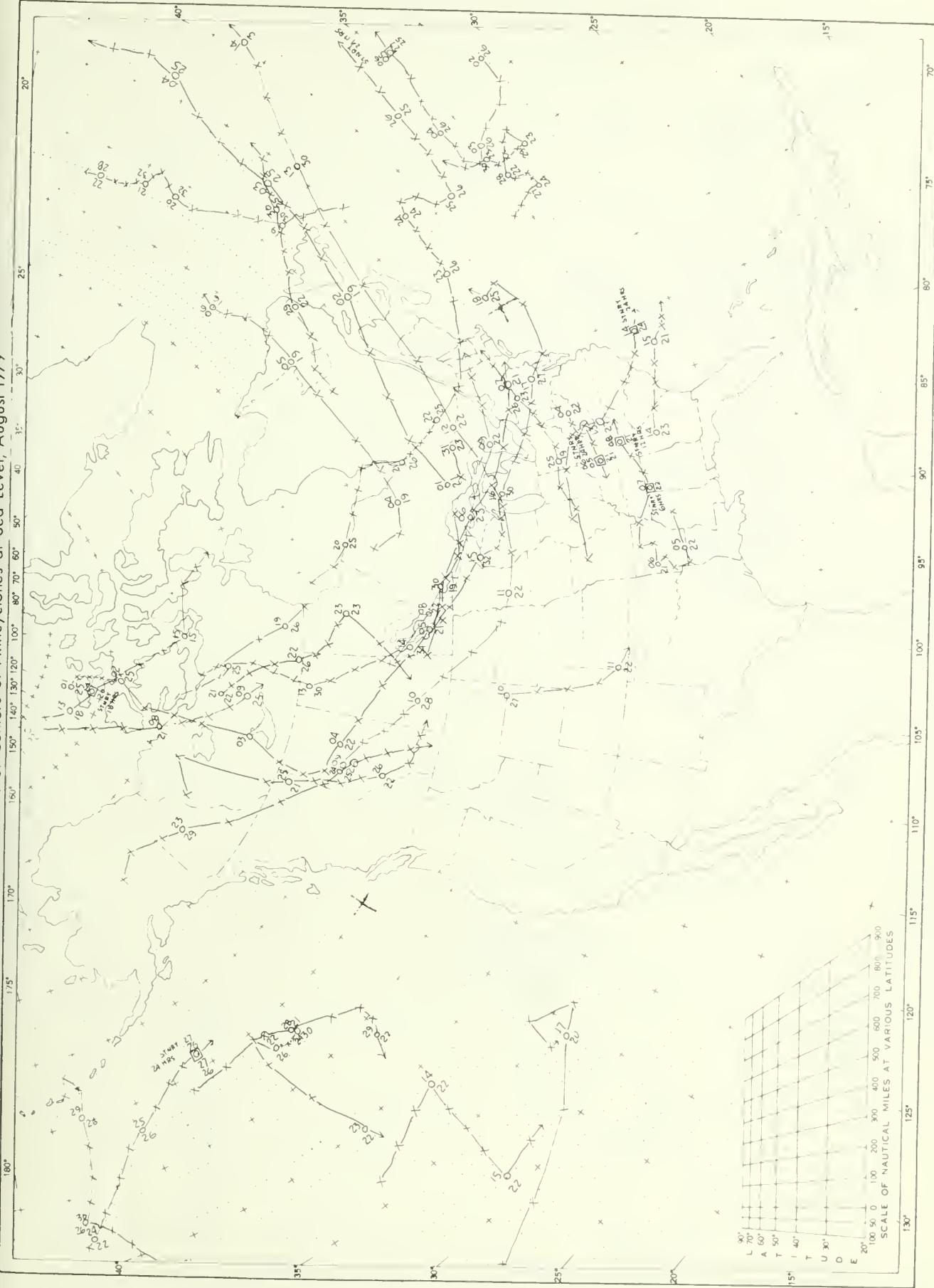
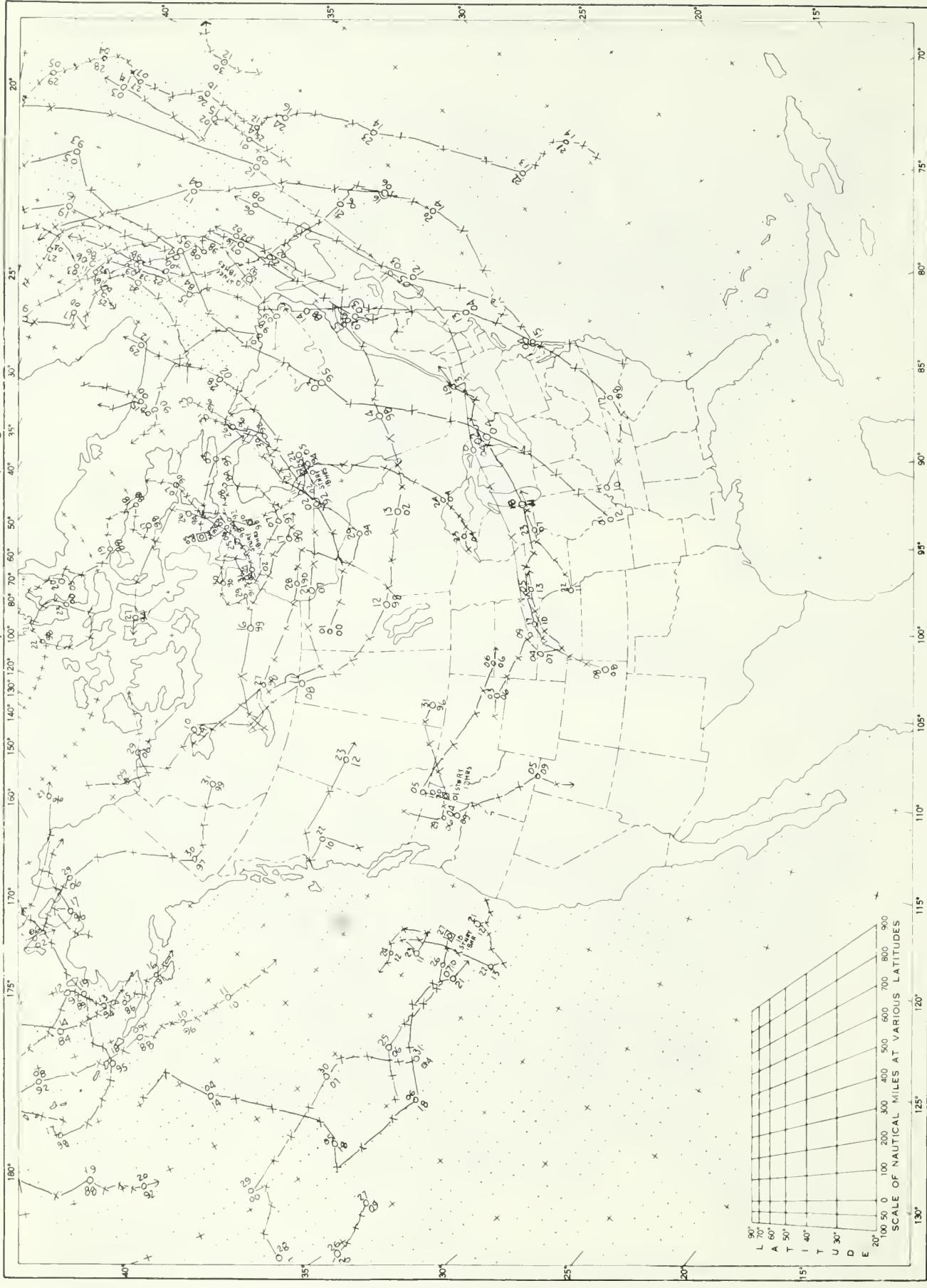


Chart III. Tracks of Centers of Anticyclones at Sea Level, August 1979



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IV. Tracks of Centers of Cyclones at Sea Level, August 1979



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

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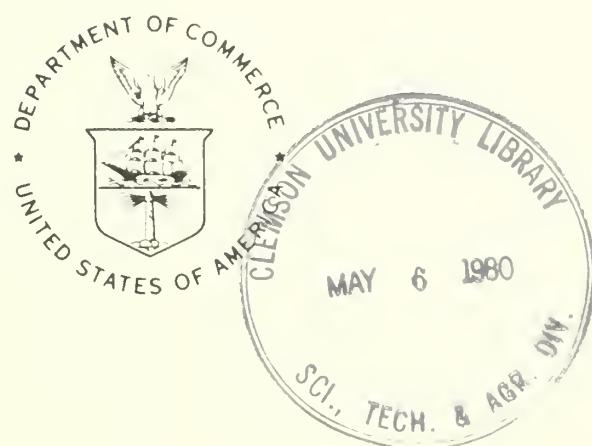
SEPTEMBER 1979

VOLUME 30

NUMBER 9

CLIMATOLOGICAL DATA

NATIONAL SUMMARY



"I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF
THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRA-
TION AND IS COMPILED FROM INFORMATION RECEIVED AT
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CAROLINA 28801."

Daniel B. Mitchell
DIRECTOR
NATIONAL CLIMATIC CENTER

noaa

NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION

ENVIRONMENTAL DATA AND
INFORMATION SERVICE

NATIONAL CLIMATIC CENTER
ASHEVILLE, N.C.

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

SEPTEMBER 1979

GENERAL SUMMARY OF WEATHER CONDITIONS

Lyle Denny, Climatologist
Environmental Data and Information Service, NOAA

HIGHLIGHTS: Wet, cloudy, and humid weather prevailed over the South and East, as two hurricanes and other storm systems moved across those regions during September. Rainfall totaled more than 12 inches along most of the Gulf Coast, Florida, and the southeastern Coastal Plain. Over 23 inches in 2 days drenched Freeport, TX, just southwest of Galveston. Record dryness occurred from Michigan to central Texas and over parts of the West. It was also unseasonably warm in the West, and a prolonged heat wave baked California during the first three weeks. Pleasant, sunny weather was the rule in the Rockies.

Hurricane David, after killing more than 1,000 people in the Dominican Republic on August 31 reached southern Florida three days later. It marched northward and triggered heavy rains, gusty winds, flash floods, and a few tornadoes from Florida to Connecticut. More than 10 inches of rain soaked the eastern Carolinas on the 5th.

Meanwhile, dry weather developed from Michigan to central Texas and over most of the West. Unseasonable warmth settled over the West, with several stations measuring 8 to 10° above normal.

Hurricane Frederic slammed into the central Gulf Coast near Mobile, AL, on the 13th. It brought heavy rains, up to 9 inches along the coast and 4 to 6

inches across its track through Tennessee into western New York.

Dry weather continued from Michigan to central Texas and in the Far West during the week of the 10th-16th.

A heat wave became concentrated over California, with temperatures averaging 9 to 11° above normal during the second week.

A low pressure storm system developed along the Texas coast on the 18th and triggered heavy rains over the southeastern third of the Nation. Torrential amounts fell along most of the Texas and Louisiana coasts. Freeport, TX, just southwest of Galveston, received more than 20 inches. Elsewhere, dry weather was the general rule.

The California heat wave abated during the third week, but it was still unseasonably warm over the West.

Heavy rains fell over the Southeast in association with a stationary front during the last week of September. Three to 6 inches soaked some sections from Florida into Tennessee and Virginia. Light showers heralded the beginning of the fall rain season over parts of the West.

HURRICANE GLORIA

September 4 - 15, 1979

National Hurricane Center, NOAA
Miami, Florida

Gloria began as a well organized African disturbance and became a tropical depression soon after moving off the African coast on 4 September. Instead of a westerly course, as is usual for early September, the eleventh tropical depression of the season turned northwest and passed just northeast of the Cape Verde islands by 5 September. This northwesterly course can be attributed to the influence of a pronounced trough in the westerlies over the east Central North Atlantic.

Based on satellite estimates of wind speeds, the depression was designated Gloria as it attained tropical storm strength on 6 September. It reached hurricane strength early on the following day. During this period Gloria was moving on a steady westnorthwest course around 15 kts.

Soon after becoming a hurricane, Gloria turned more

toward the northwest and slowed to 10 kts. On 10 September, rising pressure north of the storm effectively blocked Gloria and produced a slow westward drift for two days. Gloria temporarily lost hurricane strength on the 20th but regained it on 11 September as the storm recurved toward the northeast.

A rather rapid acceleration toward the northeast developed in the following 48 hours. Satellite classifications indicated Gloria reached maximum strength on 13 September with winds estimated 85 kts. The storm merged with a large low pressure system north of the Azores islands and lost tropical characteristics on 15 September.

Gloria was a threat only to marine interests but there have been no reports of damage sustained by shipping.

HURRICANE GLORIA

September 4-15, 1979

DATE	TIME (GMT)	LATITUDE	LONGITUDE	PRESSURE (MB)	WIND (KT)	STAGE
4	1200	15.5	21.0	1005	25	Tropical depression
	1800	16.5	22.5			
5	0000	17.5	24.0	1002	30	Tropical storm
	0600	18.5	25.5			
6	1200	19.0	27.0	1000	35	Tropical storm
	1800	19.8	28.8			
7	0000	20.5	30.3	998	45	Hurricane
	0600	21.2	32.0			
8	1200	22.0	33.8	995	55	Hurricane
	1800	22.5	35.5			
9	0000	23.2	36.8	992	65	Tropical storm
	0600	24.4	37.2			
10	1200	25.6	38.0	988	70	Tropical storm
	1800	26.4	38.7			
11	0000	27.0	39.2	985	75	Hurricane
	0600	27.5	40.0			
12	1200	28.0	40.3	988	70	Hurricane
	1800	28.6	41.0			
13	0000	29.3	41.7	988	70	Tropical storm
	0600	29.9	42.5			
14	1200	30.4	43.2	992	65	Hurricane
	1800	31.0	44.0			
15	0000	31.5	45.0	994	60	Extratropical
	0600	31.2	45.8			
16	1200	31.0	46.8	995	55	Extratropical
	1800	31.1	47.0			
17	0000	31.3	47.4	994	60	Extratropical
	0600	31.4	47.9			
18	1200	31.6	48.1	992	65	Extratropical
	1800	31.8	48.4			
19	0000	32.2	48.6	988	70	Extratropical
	0600	32.4	48.6			
20	1200	32.8	48.3	985	75	Extratropical
	1800	33.2	47.8			
21	0000	33.9	47.0	980	80	Extratropical
	0600	34.5	46.0			
22	1200	35.0	45.0	985	75	Extratropical
	1800	36.0	43.8			
23	0000	37.0	41.5	988	70	Extratropical
	0600	38.5	39.5			
24	1200	40.2	37.8	992	65	Extratropical
	1800	42.0	35.8			
25	0000	43.4	34.0	994	60	Extratropical
	0600	45.0	32.0			

HURRICANE HENRI

September 14 - 24, 1979

National Hurricane Center, NOAA
Miami, Florida

Henri followed an unusual track in the Gulf of Mexico. At one time or another during its life it headed in each direction of the compass. It was also one of the few storms to reach hurricane strength in the Gulf of Mexico during the heart of the hurricane season and subsequently fail to make landfall.

Henri formed from an African wave which moved into the extreme northwest Caribbean Sea on 14 September. On that day a NOAA reconnaissance flight found that a closed low-level circulation had formed near Cozumel Island. However, during the morning of 15 September satellite pictures indicated that the circulation was centered north of the northeastern tip of the Yucatan Peninsula. This was confirmed by Air Force Reconnaissance data later in the day. It is uncertain whether the original center moved northward over northeast Yucatan during the previous night, or whether a new center formed in the broad envelope of low pressure as the original center dissipated.

During the following twenty-four hours the depression moved westward under the influence of a high pressure ridge to the north. The circulation became somewhat better organized and winds increased to tropical storm strength, due in part to the pressure gradient between the tropical system and the ridge to the north. The building ridge had the additional influence of causing the storm to turn toward the southwest into the Bay of Campeche. A brief period of rather rapid strengthening occurred between 0000 GMT and 1200 GMT, 17 September, as the central pressure fell from 995 to about 983 mbs, and Henri became the

fifth hurricane of 1979. Henri turned toward the northwest as the ridge over the northwest Gulf of Mexico weakened, but the movement became slow and erratic as the hurricane was embedded in a broad area of low pressure with an absence of any established steering current.

Henri maintained hurricane strength for only about twenty-four hours. One factor which may have contributed to its weakening was that some of the low-level inflow came from off the land mass of Mexico, thus restricting the storm's moisture supply. This was evidenced by the steady decrease in convection from 18 September until 20 September, during which time Henri weakened from a hurricane to a tropical depression.

On 20 September the depression turned toward the northeast and headed in that general direction for the next three days until it finally lost identity as it merged with a frontal trough in the northeast Gulf of Mexico on 24 September.

Henri attained its maximum strength during the morning of 17 September, when surface winds were estimated at 75 kts and the central pressure was about 983 mbs. Henri threatened the southwest coastline of the Bay of Campeche for a time but did not make landfall. The hurricane also hampered efforts to control a runaway oil well in the Bay of Campeche. However, no reports of casualties nor monetary losses attributable to Henri have been received.

HURRICANE HENRI

September 14-24, 1979

Date/Time (GMT)	Latitude	Longitude	Min. Pres. (mb)	Max. Winds (kts)	Category
15/00	20.3	86.8	1003	25	Trop Dep
06	21.5	86.9	1003	25	Trop Dep
12	22.5	87.4	1003	30	Trop Dep
18	22.5	88.5	1003	30	Trop Dep
16/00	22.5	89.7	1003	30	Trop Dep
06	22.5	91.0	1002	30	Trop Dep
12	22.1	92.2	1001	35	Trop Stm
18	21.3	93.1	999	45	Trop Stm
17/00	20.2	93.6	995	55	Trop Stm
06	20.2	94.0	990	65	Hurricane
12	20.4	94.3	983	75	Hurricane
18	20.8	94.6	984	70	Hurricane
18/00	20.9	95.0	992	65	Hurricane
06	21.0	95.4	997	60	Trop Stm
12	21.2	95.7	1000	50	Trop Stm
18	21.6	95.7	1000	40	Trop Stm
19/00	21.5	95.7	1000	40	Trop Stm
06	21.3	95.6	1001	40	Trop Stm
12	21.1	95.5	1003	35	Trop Stm
18	21.1	95.3	1005	30	Trop Dep
20/00	21.1	94.9	1005	30	Trop Dep
06	21.1	94.5	1005	30	Trop Dep
12	21.2	94.2	1006	30	Trop Dep
18	21.2	93.7	1006	30	Trop Dep
21/00	21.4	93.4	1006	30	Trop Dep
06	21.7	93.1	1007	30	Trop Dep
12	22.0	92.7	1008	30	Trop Dep
18	22.3	92.3	1009	30	Trop Dep
22/00	22.6	92.1	1010	25	Trop Dep
06	23.0	91.7	1011	20	Trop Dep
12	23.3	91.5	1011	20	Trop Dep
18	23.8	91.0	1011	20	Trop Dep
23/00	24.3	90.5	1011	20	Trop Dep
06	24.8	90.1	1011	20	Trop Dep
12	25.3	89.6	1011	20	Trop Dep
18	25.4	88.8	1011	20	Trop Dep
24/00	25.6	88.0	1011	20	Trop Dep
06	26.0	87.3	1011	20	Trop Dep
12	26.4	86.7	1011	20	Extratropical

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

SEPTEMBER 1979

STATE	Temperature						Precipitation					
	Monthly extremes						Monthly extremes					
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least		
		°F			°F			In.			In.	
Alabama	Martin Dam	96	2	Athens 2	45	23	Fayette	13.07	Georgianna	.293		
Alaska	2 Stations	75	9	Chandalar Lake	-7	18	Little Port Walter	25.88	Tok	.07		
Arizona	Gila Bend	118	7	Alpine	27	26	Walnut Creek	1.94	43 Stations	.00		
Arkansas	2 Stations	96	7+	2 Stations	37	17+	Des Arc	7.68	Gravette	.30		
California	Death Valley	118	9	Bodie	15	23	Gasquet Ranger Station	2.88	127 Stations	.00		
Colorado	2 Stations	103	10+	2 Stations	13	15	Doherty Ranch	2.15	9 Stations	.00		
Connecticut	New Haven	88	5	Coventry	25	20	Danbury	7.02	Hartford WSO AP	2.95		
Delaware	Bridgeville 1 NW	89	4	2 Stations	39	20	Middleton 1 WSW	7.22	Lewes 1 SW	4.48		
Florida	2 Stations	97	5	De Funik Springs	56	24	Jacksonville Beach	24.35	Key West WSO AP	2.84		
Georgia	3 Stations	96	8+	Greenville 2 NNW	44	25	Doctortown 1 WSW	17.88	Hartwell	2.02		
Hawaii	Puukohola Heiau 98.1	95	25+	Mauna Kea Dbs 111.2	23	1	Lanaihan 68.2	17.13	8 Stations	.00		
Idaho	Lucile	103	15	Stanley	16	11	Sandpoint KSPT	1.26	2 Stations	.00		
Illinois	Minonk	94	13	2 Stations	32	23+	Brookport Dam 52	4.72	8 Stations	.00		
Indiana	2 Stations	92	3+	Lagrange Sewage Plant	31	23	Vevay	10.36	7 Stations	.00		
Iowa	Red Dak	94	5	Indiana 2 SSW	28	22	Milford 4 NW	5.26	Wapello	.00		
Kansas	Webster Dam	104	6	3 Station	35	16+	Stilwell	5.19	14 Stations	.00		
Kentucky	Gilbertsville KY Dsm	94	3	Maysville Sewage Plant	39	24	Bernheim Forest	14.72	Middlesboro	3.33		
Louisiana	Logansport 4 ENE	97	1	Red Riv Valley Exp Station	47	16	Dardanelle	18.22	Livingston	1.66		
Maine	5 Stations	88	7+	2 Stations	23	27+	Van Buren 2	5.03	Harris Station	2.00		
Maryland	Baltimore WSD Cl	92	3	2 Stations	32	20	Catoctin Mountain Park	15.47	Cumberland 2	4.46		
Massachusetts	Chester 2	90	3	Chester 2	19	20	Lanesboro	8.10	Edgartown	1.62		
Michigan	2 Stations	89	5+	3 Stations	24	23+	Copper Harbor 3 WSW	6.21	11 Stations	.00		
Minnesota	2 Stations	96	5+	Hibbing Pwr Substation	22	19	Sandy Lake Dam Libby	4.42	Glenwood 2 WNW	.00		
Mississippi	2 Stations	96	8+	Batesville 2 SW	42	25+	Laurel	16.76	Lake Cormorant 1 W	2.70		
Missouri	Wappapello Dam	95	7	Berryman 6 NW	30	15	Caruthersville	6.45	6 Stations	.00		
Montana	3 Stations	101	9+	Wisdom	16	12	Ekalaka	2.35	8 Stations	.00		
Nebraska	3 Stations	102	9	Agate 3 E	26	14	Ellismere 9 ENE	4.84	Raymond	T		
Nevada	Sunrise Mnar Las Vegas	112	8	Mountain City R S	19	12+	Goldfield	.74	25 Stations	.00		
New Hampshire	2 Stations	87	4+	Mount Washington	15	20+	Mount Washington	6.62	Milan 7 NNW	1.97		
New Jersey	4 Stations	90	4+	2 Stations	31	20	Greenwood Lake	9.59	Millville FAA AP	3.04		
New Mexico	3 Stations	102	6+	Red River	25	16	Winston	3.38	6 Stations	.00		
New York	New York Laurel Hill	93	4	2 Stations	22	20	Slide Mountain	12.42	Ellenburg Depot	2.47		
North Carolina	2 Stations	94	6+	Banner Elk	38	11	Blowing Rock	20.73	Murphy 3 SE	2.79		
North Dakota	Fullerton 1 ESE	99	5+	2 Stations	21	21	Upham 3 N	3.87	Laramore	.06		
Ohio	Ironton	90	5	Dorset	30	23	Higginsport	10.05	Stryker	.67		
Oklahoma	Gate 1 NNE	103	24	Zoe 1 E	37	16	Okemah	6.05	5 Stations	.00		
Oregon	Medford WSD AP	103	14	Seneca	23	12	Laurel Mountain	6.30	3 Stations	.00		
Pennsylvania	Warren	93	2	Clermont 4 NW	24	20	Chadds Ford	11.96	Russell	1.74		
Puerto Rico	Magueyes Island	98	1	Cerro Maravilla	53	2	Yabucos 1 NNE	23.63	Rincon Power Plant	4.67		
Rhode Island	3 Stations	85	4	Kingston	30	20	Kingston	5.24	Bloc Island WSO AP	2.66		
South Carolina	3 Stations	96	6+	2 Stations	48	24+	Lake City 1 SE	20.62	Anderson	3.31		
South Dakota	Midland	108	9	Deerfield 4 NW	15	16+	Sioux Falls WSO AP	4.03	10 Stations	.00		
Tennessee	Pulaski Water Plant	95	1	2 Stations	42	24+	North Springs	12.64	Rogersville 1 NE	2.46		
Texas	8 Stations	104	30+	Mount Locke	40	15	Freeport 2 NW	31.61	34 Stations	.00		
Utah	2 Stations	104	9+	2 Stations	22	16+	Allens Ranch	.36	41 Stations	.00		
Vermont	Vernon	87	4	2 Stations	23	24+	Pownal 1 NE	8.73	Gilman	2.27		
Virginia	Colonial Beach	97	7	Burkes Garden	32	10	Woolwine 4 S	21.22	Pemberton Gap	3.05		
Virgin Islands	Truman Field FAA AP	92	27	Alex Hamilton Field FAA	63	5	Estate Rust-Op-Twist	29.00	Truman Field FAA AP	11.43		
Washington	2 Stations	99	15	Glenwood 2	29	29+	Spruce	10.59	Wenatchee	.02		
West Virginia	Ripley 4 NNE	92	4	Canaan Valley	29	20	Camden On Gauley	8.34	East Rainelle 3 NNE	2.51		
Wisconsin	Wisconsin Dells	90	1	2 Stations	25	23+	Gurney	6.33	2 Stations	T		
Wyoming	2 Stations	1D1	9+	Darwin Ranch	14	14	Carpenter 3 E	.88	12 Stations	.00		

CLIMATOLOGICAL DATA
METRIC UNITS

SEPTEMBER 1979

State and Station	Elevation (ground)	Pressure		Temperature		Precipitation		Wind		Passable sunshine	
		Station ID	Sea level	Date	Average minimum	Average maximum	No. of days	No. of days	Snow, ice pellets	Frost/mile (1.6 kilometers)	No. of days (sunrise to sunset)
ALASKA											
PICHLINGHAM U.	207	992.9	26.4	17.7	22.2	5*	3	0	0	0	37
BIRMINGHAM	189	992.9	26.4	17.4	22.2	5*	3	0	0	0	37
HUNTSVILLE	190	992.6	1014.2	20.7	16.7	21.9	3	0	0	0	37
JOELIE	64	1001.1	1012.7	20.5	16.7	21.9	3	0	0	0	37
ONTARIO	59	1001.3	1013.0	20.1	16.6	21.9	3	0	0	0	37
ALASKA											
ANCHORAGE	35	1005.2	1005.2	11.9	7.3	11.1	2.2	20.6	11	9	16
PICHLINGHAM	34	1005.5	1012.4	15.6	10.4	13.0	0.8	20.6	7	0	0
ANCHORAGE	9	1013.3	1013.3	4.1	1.9	3.5	0.4	16.7	7	0	0
PANTHER ISLAND	12	998.6	1004.3	2.8	1.3	1.5	0.6	12.7	5	0	0
RETHM	33	998.6	1014.4	2.8	2.3	7.1	0.1	22.0	10	0	0
PETTIES	196	985.8	1014.1	1.6	1.6	1.6	0.9	11.9	1	0	0
CORDELLS	196	985.8	1014.4	1.6	1.6	1.6	0.9	11.8	1	0	0
COLD SPRINGS	202	990.3	1003.2	12.3	9.4	9.4	0.9	21.1	10	0	0
FARIAHNAK	133	979.5	1070.5	14.6	1.6	8.1	1.2	22.8	6	0	0
KUUKNA	479	979.5	1070.5	14.3	2.1	8.2	1.7	6.7	29	0	0
HOOPER	19	1010.0	1011.5	6.4	6.3	10.4	2.1	18.9	4	0	0
JU-LUU	4	1011.5	1001.5	6.5	6.5	10.6	1.0	21.1	5	0	0
KING SALMON,	15	997.9	1002.6	1.5	1.5	1.5	0.5	21.1	15	0	0
KONIGSL	4	997.9	1002.6	1.5	1.5	1.5	0.5	21.1	15	0	0
KOTZEBUE	3	1007.6	1007.6	8.4	8.1	11.6	1.6	20.6	28	0	0
KUCHATKA	175	997.6	1007.6	11.7	7.2	7.9	1.4	22.9	9	0	0
MURKIN	4	1005.1	1005.7	11.6	3.4	11.2	1.1	21.7	11	0	0
ST. PAUL ISLAND	7	1005.1	1005.7	11.3	6.5	9.9	2.1	16.1	10	0	0
TAIKETN	175	1005.1	1005.7	11.3	3.7	9.6	1.7	22.6	11	0	0
UDALAKLUT	5	1005.8	1007.8	13.6	6.2	9.9	1.6	-0.6	29	0	0
VALCIA	11	1004.8	1007.8	13.6	6.2	9.9	1.6	22.8	8	0	0
YAVIAT	9	1005.1	1007.8	14.3	6.5	10.4	1.3	21.7	8	0	0
ARIZONA								-0.6	29	0	0
FLAGSTAFF	2135	977.5	1008.2	24.6	14.9	21.9	0.7	30.0	1	0	0
PHOENIX	1336	971.5	1008.2	39.9	32.3	31.6	0.7	21.7	28	0	0
TUCSON	748	921.5	1008.8	36.2	21.7	29.0	2.3	40.6	3	0	0
WINSLOW	1492	921.5	1008.8	33.2	21.5	21.6	2.1	21.7	21	0	0
YUMA	59	921.5	1008.8	44.4	24.0	31.2	2.6	46.1	8	0	0
ARKANSAS								-0.6	29	0	0
FORT SMITH	136	1003.7	1016.7	24.8	14.9	21.9	0.7	30.0	1	0	0
LITTLE ROCK	73	1003.9	1016.3	28.1	22.6	33.3	0.7	21.7	28	0	0
NO. LITTLE ROCK	165	1003.9	1016.3	26.9	16.5	21.7	-1.3	32.9	6	0	0
CALIFORNIA								-0.6	29	0	0
BELFAST	1465	996.6	1011.6	35.1	20.2	27.7	2.9	41.7	12	0	0
PICHLINGHAM	1252	973.4	1011.0	33.4	19.1	21.3	1.6	4.4	26	0	0
PIKES PEAK	1609	937.8	1011.0	20.1	12.3	18.2	1.0	31.1	13	0	0
ROSE CANYON	13	1000.0	1011.5	20.1	13.4	18.8	3.2	29.4	12	0	0
FRISCO	100	1000.0	1011.5	33.6	17.2	23.4	3.2	40.6	11*	0	0
LUX BEACH	8	1000.8	1010.6	30.4	17.2	23.8	1.7	38.9	15	0	0
LOS ANGELES	3C	1007.1	1010.8	27.5	18.9	23.2	2.6	38.9	15	0	0
LOS ANGELES U	82	1011.1	1011.8	31.1	19.4	25.2	2.6	16.7	30	0	0
MT SHASTA	1077	892.3	1014.8	26.7	21.9	22.6	0.4	12.0	7	0	0
OAKLAND	1012.2	1013.3	20.1	12.3	18.2	1.0	26.4	21	0	0	0
PICHLINGHAM	5986	1011.1	1015.4	17.4	26.4	24.3	0.7	12.8	18	0	0
REDWOOD CITY	104	1011.5	1011.5	33.1	23.7	24.6	1.4	40.0	14*	0	0
SACRAMENTO	5	1011.5	1011.5	21.1	17.1	20.6	1.7	23.1	28	0	0
SAN DIEGO	4	1010.5	1010.5	21.1	17.1	20.6	1.7	20.6	17	0	0
SAN FRANCISCO	2	1012.5	1012.5	25.4	21.1	24.6	3.6	37.8	15	0	0
SAN FRANCISCO U	16	1012.5	1012.5	23.1	15.1	19.1	2.3	36.7	12	0	0
SANTA MARIA	72	1011.8	1011.8	25.1	11.2	18.7	1.7	33.3	15	0	0
SANTA ROSA	7	1011.8	1011.8	35.1	15.8	25.4	3.2	42.2	12	0	0

CLIMATOLOGICAL DATA
METRIC UNITS

SEPTEMBER 1979

State and Station		Pressure				Temperature				Precipitation				Wind					
		Q	Saturation Q	mb	mb	Average maximum	Average minimum	°C	°C	Highest	Lowest	No. of days	No. of days	Snow, ice pellets	Forest mile (1.6 kilometers)	No. of days (sunrise to sunset)			
1	COLORADO	297	1016.4	24.7	10.8	13.3	0.4	28.9	10*	-2.8	30*	0	9	3.9	12.5	1.9	2.9		
	ALAMOJA	815.4	1016.3	25.8	10.2	18.0	1.9	33.3	9	1.7	15	23	0	0	1.3	1.7	1.1		
	COLORADO SPRINGS	1873	1014.8	27.1	11.0	19.1	1.9	33.9	8	5.0	15	3	0	1.1	17	1.1	2.3		
	DENVER	1610	1013.5	30.4	14.1	22.2	2.7	35.0	7	10.6	16	11	0	0.25	1.1	13	1.9		
	GRAND JUNCTION	1476	1013.5	29.6	9.7	19.7	C.7	37.2	10	2.2	15	10	0	1.6	1.2	1.1	2.4		
	PUFFED	1428																	
2	CONNECTICUT	2	1019.0	1018.5	22.4	14.0	18.2	-0.9	28.3	7*	5.6	20	0	0	15.0	8	1.3	1.5	
	BRIIDGEPORT	52	1011.9	1018.2	23.1	9.8	16.4	-0.7	30.0	3	-1.1	20	0	1	11.1	7.5	9	7	
	HARTFORD																		
3	DELAWARE	23	1015.2	1018.4	25.2	15.1	20.1	0.2	30.6	6	5.0	20	0	0	14.4	7.2	11	2	
	WILMINGTON																		
4	DIST. OF COLUMBIA	88	1006.4	1018.1	24.9	13.8	19.4	0.0	30.6	2	4.4	20	0	0	15.0	8.0	10.9	9.6	
	WASHINGTON DULLES	3	1015.6	1019.0	25.8	18.2	22.0	0.6	30.6	14*	12.2	20	0	0	18.3	8.0	9.9	9.6	
	WASHINGTON NATIONAL																		
5	FLORIDA	6	1012.5	1013.0	29.4	22.0	25.7	-0.2	35.0	4	18.9	30*	6	0	20.0	7.5	16.4	17	
	APALACHICOLA	9	1011.9	1013.4	37.3	13.3	33.3	0.4	33.3	5	28.1	30*	5	0	23.3	7.8	20.6	14	
	DAYTONA BEACH	5	1011.9	1012.2	32.4	24.9	28.1	1.1	35.0	6	23.3	30*	5	0	21.3	8.8	19	17	
	FOOT MYERS	5	1012.9	1013.2	26.3	12.4	26.3	0.6	33.3	7*	20.6	30*	5	0	21.3	7.7	15	16	
	JACKSONVILLE	1	1011.6	1011.9	31.2	14.3	31.2	0.3	34.3	8	25.0	30*	5	0	25.0	8.2	14.3	14	
	KEN WEST.	2	1012.5	1012.5	29.7	14.4	28.7	-0.6	32.8	4	22.8	28*	1	0	22.8	8.0	15	16	
	MAMI	29	1002.0	1012.0	31.6	23.2	27.4	-0.7	33.3	5*	21.1	30	13	0	23.3	8.7	17	16	
	ORLANDO-W.C. COY AFB	34	1013.5	1012.9	29.5	16.6	31.3	-0.6	31.3	5*	16.6	23	6	0	21.1	7.9	17	16	
	PENSACOLA	17	1012.5	1012.9	29.5	21.3	25.1	-0.5	35.0	5	17.2	23	6	0	21.7	7.5	11	11	
	TALLAHASSEE	6	1012.5	1013.1	28.8	21.3	27.7	-0.6	33.3	8	22.2	30	6	0	23.3	8.1	19	18	
	TAMPA	5	1012.7	1012.7	30.7	24.7	24.0	0.2	27.4	-0.1	34.4	4	21.7	30*	5	0	23.9	8.4	22
	WEST PALM BEACH																		
6	GEORGIA	244	085.5	1015.1	25.9	18.5	22.2	-0.3	32.8	6	14.4	24	1	0	18.3	8.2	6.2	7	
	ATMENS	578	079.5	1015.4	26.4	18.7	22.6	0.2	33.2	6*	13.3	23	3	0	18.3	8.0	15.4	14	
	ATLANTA	41	1009.5	1014.7	27.5	19.4	23.5	-0.3	33.3	6	15.6	23*	6	0	18.9	8.1	12.2	14	
	AUSTRIA	136	1009.7	1014.4	27.6	20.1	23.9	-0.2	33.9	6	13.3	23	6	0	19.6	8.6	14.3	14	
	COLUMBUS	108	1010.7	1014.7	27.9	19.2	26.7	-0.3	33.0	5*	14.4	23	5	0	19.4	8.0	15.5	14	
	MACON	194	1012.9	1014.6	28.9	21.5	25.2	0.7	33.3	14*	17.8	25*	6	0	21.1	8.1	17.5	17	
	SAVANNAH																		
7	HAWAII	9	1014.2	1015.2	29.5	19.9	24.7	0.5	31.1	9	18.3	19	0	0	20.0	7.6	9.2	17	
	HONOLULU	2	1014.6	1015.0	31.9	22.6	27.3	0.4	35.3	15*	20.0	18	16	0	20.0	7.6	12.5	16	
	KAUI	15	1012.5	1014.5	22.1	22.1	26.9	0.9	31.1	12*	21.2	19	20	0	22.2	7.6	5	13.4	
	LILIU	31	1017.5	1015.6	30.3	23.6	26.9	0.9	31.1	12*	21.2	19	20	0	22.2	7.6	5	13.4	
8	IDAHO	865	915.3	1014.1	28.6	10.6	19.6	3.2	36.7	7	4.4	12	4	0	2.8	35	5	7	
	LEWISTON	431	914.2	1014.2	28.8	12.3	20.6	3.2	36.7	7	4.4	12	4	0	2.8	35	5	7	
	POCATELLO	1358	28.7	7.6	18.2	2.9	36.1	1.7	14*	6	0	0	0	0	-1.7	5	3	7	
9	ILLINOIS	96	1017.3	1017.3	26.9	17.4	22.2	0.0	32.2	6*	11.7	23	2	0	11.1	6.4	7	13.4	
	CAIRO U.	201	0934.2	1017.3	25.3	12.6	18.9	1.3	30.6	12*	6.4	23	1	0	0	0.7	1	21	
	CHICAGO O HARE	185	995.9	1017.6	24.0	13.5	18.8	-0.1	30.0	2	7.2	23	0	0	0.4	0.4	5	10.7	
	CHICAGO -MDW	177	995.9	1017.5	25.7	10.1	17.9	-0.2	31.7	11	12.2	22	0	0	0.5	0.5	5	10.3	
	MOLINE	199	994.2	1017.0	26.2	11.1	18.7	0.1	32.2	11	11.7	76	1	0	0	0.5	0.5	1	
	PEORIA	221	991.5	1018.4	24.6	9.8	17.2	-0.2	29.4	29*	5.0	23*	1	0	0	0	0	7	
	ROCKFORD	179	995.6	1017.7	27.5	12.2	19.8	0.3	32.8	11	3.9	15	1	0	-8.3	1	0	5	
	SPRINGFIELD																		
10	INDIANA	116	1002.7	1016.9	26.4	13.9	20.2	-0.4	32.2	3	6.7	16	1	0	1.4	0.9	5	3.5	
	EVANSVILLE																		

State and Station		Pressure				Temperature				Precipitation				Wind					
		Q	Saturation Q	mb	mb	Average maximum	Average minimum	°C	°C	Highest	Lowest	No. of days	No. of days	Snow, ice pellets	Forest mile (1.6 kilometers)	No. of days (sunrise to sunset)			
1	COLORADO	297	1016.4	24.7	10.8	13.3	0.4	28.9	10*	-2.8	30*	0	9	3.9	12.5	1.9	2.9		
	ALAMOJA	815.4	1016.3	25.8	10.2	18.0	1.9	33.3	9	1.7	15	23	0	0	1.3	1.7	1.1		
	COLORADO SPRINGS	1873	1014.8	27.1	11.0	19.1	1.9	33.9	8	5.0	15	3	0	1.1	19	1.3	3.3		
	DENVER	1610	1013.5	30.4	14.1	22.2	2.7	35.0	7	10.6	16	11	0	0.25	1.1	13	1.9		
	GRAND JUNCTION	1476	1013.5	29.6	9.7	19.7	C.7	37.2	10	2.2	15	10	0	1.6	1.2	11	2.0		
	PUFFED	1428																	
2	CONNECTICUT	2	1019.0	1018.5	22.4	14.0	18.2	-0.9	28.3	7*	5.6	20	0	0	15.0	8	1.3	1.5	
	BRIIDGEPORT	52	1011.9	1018.2	23.1	9.8	16.4	-0.7	30.0	3	-1.1	20	0	1	11.1	7.5	9	7	
	HARTFORD																		
3	DELAWARE	23	1015.2	1018.4	25.2	15.1	20.1	0.2	30.6	6	5.0	20	0	0	14.4	7.2	11	4.4	
	WILMINGTON																		
4	DIST. OF COLUMBIA	88	1006.4	1018.1	24.9	13.8	19.4	0.0	30.6	2	4.4	20	0	0	15.0	8.0	10.9	6.5	
	WASHINGTON DULLES	3	1015.6	1019.0	25.8	18.2	22.0	0.6	30.6	14*	12.2	20	0	0	18.3	8.0	9.9	6.5	
	WASHINGTON NATIONAL																		
5	FLORIDA	10	1	1012.5	1013.0	29.4	22.0	25.7	-0.2	35.0	4	18.9	30*	6	0	20.0	7.5	16.4	8.4
	APALACHICOLA	9	1011.9	1013.4	37.3	13.3	33.3	0.4	33.3	5	20.0	30*	5	0	21.3	7.8	17	9.4	
	DAYTONA BEACH	5	1011.9	1012.2	32.4	24.9	28.1	1.1	35.0	6	23.3	30*	5	0	21.3	7.7	15	9.4	
	FOOT MYERS	5	1012.9	1013.2	26.3	12.4	26.3	0.6	33.3	7*	20.6	30*	5	0	21.3	7.7	15	9.4	
	JACKSONVILLE	1	1011.6	1011.9	31.2	14.3	31.2	0.3	34.3	8	25.0	30*	5	0	21.3	7.7	15	9.4	
	KEN WEST.	2	1012.5	1012.5	29.7	14.4	27.1	-0.6	32.8	4	22.8	28*	1	0	22.8	8.0	15	9.4	
	MAMI	2	1012.5	1012.5	29.7	14.4	27.1	-0.7	32.8	4*	22.8	28*	1	0	22.8	8.0	15	9.4	
	ORLANDO-W.C. COY AFB	29	1002.0	1012.0	31.6	23.2	29.5	-0.6	31.3	5*	16.6	23	13	0	23.3	8.7	17	9.4	
	PENSACOLA	34	1013.5	1012.9	29.5	21.3	26.7	-0.3	33.0	5	12.2	21	11	0	23.3	8.7	17	9.4	
	TALLAHASSEE	17	1012.5	1013.1	28.8	21.5	25.2	0.7	33.3	14*	17.8	25*	6	0	21.1	8.1	15	9.	

CLIMATOLOGICAL DATA
METRIC UNITS

SEPTEMBER 1979

State and Station	Elevation (ground)	Pressure		Temperature				Precipitation				Wind				Snow				No. of days (sunrise to sunset)				
		Sea level		Highest		Date		Lowest		Total		Resultant speed		Farthest mile (1.6 kilometers)		Ice pellets		Snow		No. of days (sunrise to sunset)				
		mb	mb	°C	°C	°C	°C	°C	°C	mm	mm	m/s	m/s	km	km	mm	mm	mm	mm	mm	mm			
INDIANA																								
FORT WAYNE	241	989.2	1017.9	24.8	10.9	17.9	-0.2	30.0	5	3.3	23	0	11.7	73	9	-56	7	3	0	0	14	11		
INDIANAPOLIS	241	989.8	1017.9	24.2	11.4	18.3	-0.8	30.0	12*	4.4	24*	0	13.3	75	9	-64	5	3	0	0	14.3	11		
SOUTH BEND	236	989.8	1017.4	24.5	12.6	18.6	0.9	28.9	29*	5.0	23	0	13.3	73	1	-78	7	0	0	0	23	10		
LOLA	211	982.4	1016.9	26.1	12.0	19.1	0.5	31.7	11*	5.0	22*	0	12.0	58	1	-95	1	1	0	0	18	1		
BURLINGTON, NEW YORK	286	982.4	1016.9	26.1	12.6	19.3	1.4	32.6	11*	3.3	15	2	10.0	58	2	-53	11	1	0	0	16.5	NE 5		
DEBUEQUE	322	978.7	1016.6	25.3	10.9	17.4	0.9	30.6	12*	3.9	15	0	12.0	66	2	-116	1	2	0	0	15	1.2		
SIOUX CITY	265	986.1	1017.6	25.9	11.6	18.4	2.0	31.1	11*	4.4	21	0	12.2	71	51	-21	24	6	6	0	0	1.2		
WATERLOO	265	977.4	1016.6	25.3	11.6	18.9	2.5	31.7	5	3.3	22	0	10.6	62	19	-73	12	3	0	0	1.1	21.2		
KANSAS	449	964.1	1016.2	29.7	13.3	21.5	1.8	35.0	29*	6.7	14	8	11.1	56	19	-63	13	2	2	0	0	17	14.3	
CONCORDIA	787	926.5	1015.6	29.0	14.0	21.6	1.0	35.0	24*	6.7	13	3	9.4	51	3	-39	3	2	2	0	0	17	13.9	
DODGE CITY	449	905.3	1015.3	28.7	11.0	19.8	1.9	36.1	9	3.3	13	8	0	8.0	55	5	-29	3	4	2	0	0	14.3	
GODDARD	267	985.8	1017.1	2.9	12.1	20.0	-0.1	35.2	8*	4.4	22*	3	13.9	71	55	-53	36	3	3	0	0	1.8	26	
TOPEKA	403	964.5	1016.5	30.7	14.5	22.6	1.2	35.6	5	6.7	15	1.2	0	11.7	55	39	-55	27	3	4	0	0	1.8	14.6
MICHIGAN	111	975.1	1017.1	24.2	14.3	20.5	1.4	30.6	12*	3.2	8	0	13.3	73	219	154	9	2	0	0	0	24	1.2	
KENTUCKY	265	982.1	1017.1	24.2	13.7	18.9	-0.9	30.6	12*	7.2	15	0	15.0	78	246	179	110	8	2	0	0	1.3	1.2	
CANTONTON	294	982.1	1017.1	24.5	14.3	19.4	-0.9	30.6	12*	7.2	23	0	15.0	78	266	192	126	9	0	0	0	1.0	9.8	
LEXINGTON	145	999.3	1016.7	26.2	15.3	20.6	0.2	31.1	12*	8.3	23	0	16.1	78	219	154	9	2	0	0	0	15	7.0	
Louisville																								
LOUISIANA	20	1011.5	1014.0	29.2	19.7	24.4	-0.8	32.8	5	13.3	16	4	19.4	78	56	-56	48	6	5	0	0	1.7	20	
BATON ROUGE	3	1012.5	1013.6	29.3	19.5	24.4	-1.3	32.2	13*	15.0	22*	3	19.4	81	356	-264	70	6	0	0	0	2.1	14	
LAKE CHARLES	1	1011.9	1012.6	30.1	22.4	26.3	0.6	34.4	1*	16.3	28	7	20.6	75	26	-57	60	6	0	0	0	1.9	10.3	
NEW ORLEANS	77	1020.5	1014.7	29.3	17.6	23.4	-1.8	33.9	7*	11.1	25	10	0	17.8	75	110	-32	68	6	1	0	0	1.9	5.0
SHreveport																								
MAINE	190	991.2	1017.5	18.9	5.9	12.4	0.2	31.1	2	-1.1	24	0	10.0	78	119	37	76	11	0	0	0	0	1.2	
CARIBOU	13	1011.2	1017.5	20.2	7.9	14.1	-0.7	28.3	3	-1.7	20	0	10.0	78	83	5	33	10	1	0	0	0	1.2	
PORTLAND																								
MARYLAND	45	1017.2	1017.9	25.2	15.7	20.4	0.2	31.1	6	7.8	20	0	16.1	79	171	92	112	9	0	0	0	0	1.2	
BALTIMORE																								
MASSACHUSETTS	192	1011.6	1014.6	22.4	7.6	15.0	1.5	10.6	21	1.1	24	0	10.0	74	7	-75	4	4	0	0	2	24		
BLUE MOUNTAINS	192	1011.6	1017.7	22.7	13.9	18.3	-0.2	28.3	5	1.1	20	0	11.7	70	120	92	11	44	0	0	0	0		
WORCESTER	171	987.7	1017.7	21.6	10.3	15.6	-0.6	27.8	3	1.1	20	0	11.7	79	97	77	32	6	0	0	0	1.5	27	
WICHIGAN	210	991.5	1014.6	22.4	7.6	15.0	1.5	10.6	21	1.1	24	0	10.0	74	7	-75	4	4	0	0	2	24		
ALPENNA	189	993.6	1017.5	23.6	10.2	17.0	-0.6	29.4	5	1.1	20	0	11.7	70	27	-51	31	24	0	0	0	0		
CERRO GORDO	235	989.5	1017.2	23.6	10.4	17.4	-0.9	28.9	12*	2.2	23*	0	11.7	75	9	-56	6	1	0	0	0	1.5		
FLINT	239	988.8	1017.6	24.7	10.2	17.2	-0.2	22.0	8*	1.5	1.1	2.7	0	12.2	75	T	-84	1	0	0	0	0	10.7	
GRAND RAPIDS	250	986.1	1017.5	24.8	9.7	17.2	0.7	27.8	5	1.2	23*	0	10.6	69	T	-67	1	1	0	0	0	1.5		
HOLSTON LAKE	431	994.2	1017.2	19.6	6.6	13.1	0.9	30.0	12*	0.6	23	0	11.7	53	14	-49	14	4	0	0	0	1.2		
MACKINAW	191	987.5	1016.1	22.1	9.2	15.9	-0.4	27.8	1	2.2	23*	0	11.7	77	4	-81	4	1	0	0	0	1.2		
MUSKEGON	220	987.5	1016.1	19.6	6.1	12.9	-0.1	28.9	1	-2.2	19	0	10.0	83	41	-56	29	6	7	0	0	1.2		
SAILKIT SITE MAGIC																								
MINNESOTA	435	964.8	1016.0	19.2	8.4	13.8	1.4	28.3	4	-0.6	19	0	8.3	72	51	-27	25	1.2	0	0	0	5.0		
INTERNATIONAL FALLS	359	971.2	1014.5	17.9	5.3	11.6	-0.9	29.4	4	-2.8	21	0	5.0	73	13	-56	6	1	0	0	0	4.5		
MINNEAPOLIS	254	985.4	1016.1	23.5	11.4	14.6	1.6	29.4	29*	2.2	23*	0	10.6	67	56	-13	44	4	0	0	0	0	4.6	
POTCHEETEP	295	969.5	1017.2	23.6	10.7	15.7	1.9	33.5	4	5.0	30*	0	10.6	67	56	-62	8	3	0	0	0	4.2		
ST. CLOUD	113	979.0	1016.1	21.6	7.6	14.7	0.4	31.7	4	0.6	30*	0	11.7	75	40	-27	29	6	0	0	0	2.5		
JAR-SUN-15515PP1	94	1020.7	1014.4	26.7	17.7	23.2	-1.2	33.3	7*	12.8	24*	5	0	18.3	80	151	75	10.6	6	4	0	0		

Possible Sunshine
(% of day)

Cloudy, 8-10
(% of day)

Partly cloudy, 4-7
(% of day)

Clear, 0-3
(% of day)

Average relative humidity
(%)

Average dew point
(°C)

Deparature from normal
(mm)

Average minimum maximum
(°C)

Elevation (ground)
(m)

State and Station

No. of days

No. of days (sunrise to sunset)

CLIMATOLOGICAL DATA

SCOTTISH HERITAGE 1979

State and Station		Temperature										Precipitation									
		Pressure					Depotiture from normal					No. of days					Wind				
Elvethorn (ground)	Slope	Min. 0 °C or lower	Average minimum	Max 32 °C or above	Highest	Dofe	Depotiture from normal	No. of days	With thunderstorms	No. of days	Snow, ice pellets	Fastest mile (1.6 kilometers)	Direction	Speed	Total	Reporture from normal	No. of days (sunrise to sunset)	Possible sunshine (%)			
MISSISSIPPI	MERIDIAN	8.8	1001.4	1014.2	29.0	16.9	23.9	-0.1	34.4	5	13.9	16	5	0	16.9	79	207	123	119	11	2
MISSOURI	SPRINGFIELD	27.0	985.8	1017.7	27.2	12.5	19.8	-0.3	31.7	3	6.1	22	0	0	12.8	68	11	-107	11	2	0
COLUMBIA REGIONAL	KANSAS CITY MUN AP	22.6	985.7	1017.1	27.1	13.6	20.3	0.3	31.7	5	5.9	22*	0	0	11.7	60	53	-57	19	2	0
KANSAS CITY MUN AP	ST JOSEPH	24.7	985.9	1017.6	27.8	16.1	22.6	1.2	33.9	5	8.9	22*	5	0	13.9	59	20	-77	15	3	0
ST LOUIS	ST LOUIS	16.3	997.6	1017.6	28.1	12.1	19.9	0.1	32.8	3	3.9	23*	1	0	13.3	62	1	-73	1	0	0
SPRINGFIELD	SPRINGFIELD	38.6	972.6	1017.3	28.1	12.7	20.4	-0.3	32.8	30	4.4	15	4	0	13.3	67	52	-52	47	4	3
MONTANA	BILLINGS	1087	992.3	1016.5	27.3	10.6	19.0	4.1	37.2	8	3.9	14	4	0	2.8	37	4	-31	3	2	0
GLASGOW	GLASGOW	696	933.6	1018.8	25.4	8.5	16.9	2.9	33.9	16	2.2	13	3	0	5.0	50	7	-15	5	3	0
GREAT FALLS	HAVRE	1116	980.9	1010.5	26.2	8.2	17.7	3.1	36.7	8	2.1	11	5	0	1.7	38	8	-21	5	1	0
KANSAS CITY MUN AP	HELENA	738	923.5	1016.2	26.7	7.4	17.1	3.1	36.1	8	1.7	24*	5	0	1.7	42	17	-12	1	4	0
ST JOSEPH	KALISPELL	1167	881.5	1016.2	25.9	6.6	16.3	3.2	32.8	8	1.7	14	2	0	1.7	42	3	-22	2	4	0
ST LOUIS	WILMINGTON	904	915.2	1017.4	24.7	6.8	14.7	4.8	30.6	16	0.6	33*	0	0	6.1	63	10	-19	5	1	0
SPRINGFIELD	WILMINGTON	801	922.5	1014.2	27.3	10.2	18.7	3.2	35.6	8	2.8	14	5	0	5.0	44	1	-29	1	2	0
MISSOURI	MISSOURI	972	905.9	1011.7	26.1	6.5	16.3	3.4	31.7	8+	2.8	14	0	0	4.4	51	1	-26	1	2	0
NEBRASKA	GRAND ISLAND	561	957.9	1016.4	27.7	11.8	19.8	1.8	33.9	5	5.6	21*	5	0	11.1	62	65	7	26	4	0
NORFOLK	NORFOLK	471	974.3	1010.3	28.6	12.1	19.6	2.2	32.2	7	0	12.8	66	10	-72	9	23	3	1.8	0	0
NORTH PLATE	OMAHA (PEPPLE)	846	919.4	1013.9	29.5	9.5	19.5	2.7	34.4	5	4.4	21	4	0	11.1	63	46	-15	6	1.1	0
OMAHA (PEPPLE)	OMAHA (NORTH)	399	926.1	1016.2	26.3	12.2	19.3	0.2	33.9	5	3.9	22*	3	0	8.3	52	11	-40	6	0	0
SCOTTSBLUFF	SCOTTSBLUFF	1209	881.8	1015.6	28.9	13.6	19.9	1.9	33.3	5	6.1	21	2	0	8.5	85	59	-22	4	1	0
VALLEY	VALLEY	739	924.5	1014.7	29.0	9.9	19.4	3.2	37.6	7	3.9	15	7	0	7.2	52	11	-10	5	0	0
NEVADA	ELKO	1539	846.3	1010.5	31.1	6.8	18.9	4.7	36.7	7	3.3	27*	13	0	-6.4	27	6	-14	2	1	0
ELY	ELY	1906	811.4	1011.5	27.8	4.6	16.2	2.4	32.2	6	-1.7	15	1	3	2.2	19	1	-7	1	0	0
LAS VEGAS	LAS VEGAS	659	935.7	1010.2	38.3	20.9	29.6	2.9	34.3	8	18.3	28*	30	0	2.2	19	1	-7	0	1	0
RENO	RENO	1342	865.6	1010.4	30.4	5.3	17.9	2.2	35.6	7	0.0	28	12	0	1.7	38	1	-6	1	0	0
WALNEMUCCA	WALNEMUCCA	1311	865.9	1014.7	30.3	4.3	17.3	2.2	35.6	7	0.0	28	1	-1.1	33	1	-7	1	0	0	
NEW HAMPSHIRE	CONCORD	104	1005.4	1010.1	23.0	7.8	15.4	0.2	30.6	3	-2.2	20	0	2	9.4	71	80	34	9	1	0
MONT. WASHINGTON OBS	MONT. WASHINGTON OBS	1909	8.3	1.6	4.9	-0.2	15.6	2	-9.4	20*	0	12	0	0	0	0	10	1	0	0	0
NEW JERSEY	ATLANTIC CITY	20	1015.2	1017.8	23.6	13.4	18.7	-0.4	29.4	4	1.1	20	0	0	13.3	71	84	8	27	4	0
ATLANTIC CITY	NEW YORK	3	1017.3	1018.3	25.0	16.9	19.7	0.4	31.1	6	6.7	20	0	0	13.9	68	145	53	9	0	0
TRENTON U	TRENTON U	17	1016.7	1013.9	24.0	15.3	19.7	0.1	30.6	4	6.1	20	0	0	10.6	22	13	0	49	2	0
NEW MEXICO	ALBUQUERQUE	1619	847.8	1013.7	30.7	14.1	22.4	1.2	37.8	5	8.3	16*	0	0	5.6	39	10	-9	5	12	0
CLAYTON	ROSWELL	1515	892.0	1013.9	29.8	11.3	19.1	0.8	4.4	4	4.4	15	0	0	9.4	49	33	-34	2	0	0
NEW YORK	ALBANY	1007.8	1018.4	23.1	9.3	16.2	-0.4	30.0	3	-1.1	20	0	1	11.1	73	103	45	9	3	0	
CLAYTON	ROCHESTER	167	997.6	1010.0	22.3	10.2	16.6	0.6	31.2	4	1.1	20	0	1	1.1	73	103	45	9	3	0
NEW YORK LA GUARIA	ROCHESTER	484	96.0	1018.7	20.1	9.6	14.8	0.8	30.6	1	1.1	20	0	0	1.1	73	147	115	68	47	1
NEW YORK U	ROCHESTER	485	99.2	1017.5	21.8	11.4	16.6	0.2	30.6	1	3.3	20	0	0	1.1	74	142	60	125	40	0
NEW YORK KENNEY	ROCHESTER	40	1014.9	1018.6	25.6	21.4	21.4	1.0	32.2	7	2.0	20	1	0	0.1	74	139	64	123	40	0
NEW YORK LA GUARIA	ROCHESTER	3	1018.0	1018.8	23.6	15.4	19.5	0.1	30.0	4	5.0	20	0	0	14.9	74	105	21	41	1	0
NEW YORK LA GUARIA	ROCHESTER	167	997.6	1010.0	22.3	16.6	20.1	0.1	29.4	4	7.8	20	0	0	13.9	68	103	51	9	1	0

CLIMATOLOGICAL DATA

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State and Station	Pressure		Temperature						Precipitation						Wind						No. of days (sunrise to sunset)		
	Elevation (ground) m	Station Q	Average maximum Sea level °C			Average minimum Sea level °C			Departure from normal Date			No. of days Min. 0°C or lower Max 32.2°C or above			Average dew point Min. 0°C or lower Max 32.2°C or above			With inundershorts 25.0 m. or more			No. of days (sunrise to sunset)		
			Highsi	Lowest	Date	Highsi	Lowest	Date	No. of days	Snow ice pellets	Total	Maximun depth on ground	Resultant direction	Speed m/s	No. of days (sunrise to sunset)	Possible sunshine (surface to zenith)	%						
NEW YORK	125	1003.1	1014.0	22.7	1014.0	16.3	-0.8	30.6	1	1.7	20	0	12.2	78	133	65	59	8	11	11	5.5	59	
NORTH CAROLINA	652	941.8	1017.2	23.5	14.7	19.2	-0.1	29.4	11*	10.0	1.2	0	16.7	88	142	52	52	3	4	21	7.6	29	
ASHEVILLE	2	1011.3	1016.6	20.5	21.5	24.0	0.8	30.6	3*	16.7	1.9	0	21.1	85	325	178	139	0	0	0.8	36	10.3	
CAPE HATTERAS	224	981.8	1016.2	25.2	25.2	17.9	-0.9	32.2	6	12.8	24	1	0	17.2	82	246	158	113	4	1.4	8	13.4	20
CHARLOTTE	273	985.8	1017.1	25.2	16.1	20.6	-0.3	31.7	6	10.6	17*	0	0	17.2	84	332	242	144	0	1.5	4	1.5	47
GREERSBORO	132	1004.0	1016.3	26.4	17.1	21.8	0.3	31.7	7*	11.1	1.7	0	18.3	87	172	65	14	0	1.1	6	9	15	
RALEIGH	9	1015.9	1017.2	27.1	20.1	23.6	-0.1	32.2	3*	15.6	16	2	20.6	86	305	242	161	19	5	1	5	24	8.6
WASHINGTON																							
NORTH DAKOTA	502	956.0	1015.4	23.8	6.6	15.2	1.3	33.3	16	-1.1	21	1	6.7	61	21	-1.3	17	3	4	0	0.8	30	
BISMARCK	273	981.4	1014.6	24.4	8.9	16.7	2.4	33.6	7	1.7	21	3	7.2	58	3	-3.9	6	0	0	0.7	20		
FARGO	579	981.9	1014.6	24.6	7.5	16.2	2.4	35.0	16	5.6	55	10	5.6	55	10	-21	8	3	0	0	1.0		
ILLINOIS																							
OHIO	358	973.9	1014.2	22.6	11.9	17.3	-0.3	30.0	4	4.4	23	0	11.7	73	194	133	164	7	2	0	0	0.2	
MARION	232	989.2	1018.0	23.9	12.9	18.3	-0.7	31.1	12	7.2	23	0	12.8	72	193	126	8	1	0	0	0.6	24	
CINCINNATI ABC	237	989.2	1018.0	23.8	12.9	18.3	-0.6	31.1	5	6.4	23*	0	14.4	81	172	112	123	0	0	0	0	0.2	
CLEVELAND	303	981.3	1018.0	23.8	12.9	18.4	-0.1	30.4	4	4.4	23	0	13.8	76	131	60	81	0	0	0	0	0.2	
COLUMBUS	395	981.7	1017.7	24.3	11.9	18.2	-0.9	29.4	12	4.4	23	0	13.8	76	131	60	81	0	0	0	0	0.2	
DAYTON	303	981.9	1017.7	24.3	11.9	18.2	-0.9	29.4	12	4.4	23	0	13.8	76	131	60	81	0	0	0	0	0.2	
MANSFIELD	204	992.9	1017.9	22.4	11.8	17.1	-1.4	27.8	5*	5.0	24	0	12.8	79	143	71	104	8	3	0	0.6	24	
TOLEDO	359	976.0	1018.5	22.8	10.5	16.7	-0.4	29.4	6	3.3	23	0	12.8	77	141	74	102	6	1	0	0	0.2	
YONKERS, N.Y.																							
OKLAHOMA	392	973.5	1016.3	22.9	15.8	22.8	0.1	35.0	30	8.3	16	7	0	13.9	62	19	4	1	1	12.1	23		
OKLAHOMA CITY	198	992.6	1014.4	31.0	16.4	23.7	0.8	37.2	30	9.4	16	6	0	15.0	62	7	-96	5	4	0.9	15		
TULSA																							
OREGON	2	1015.6	1016.2	22.0	10.7	16.3	1.7	31.1	13	6.1	29	0	13.3	83	117	30	46	9	2	0	0.9	18	
ASTORIA	1265	1002.5	20.1	7.6	16.8	2.3	31.7	15	3.3	10	0	0	13.3	83	14	3	13	1	0	0	0	0.2	
BURNS, U.	109	1002.5	20.1	10.5	17.6	0.9	33.3	14	4.4	29	1	0	7.8	53	27	5	59	0	0	0	0	0.2	
EUREKA	196	967.5	1014.7	30.6	9.7	20.6	2.2	39.4	10	5.6	10	1	0	7.8	53	5	-6	5	0	0	0	0.2	
ENDEWTON	452	962.1	1014.6	28.6	10.6	18.6	0.8	34.4	14	7.2	29*	3	0	8	5	2	0	0	0	0	0	0.2	
PONTIAC	666	1014.6	1015.0	23.2	12.9	21.3	0.6	34.4	14	7.2	29*	1	0	8	5	2	0	0	0	0	0	0.2	
SALEM	1167	1004.1	1014.6	23.2	12.9	21.3	0.6	34.4	14	7.2	29*	1	0	8	5	2	0	0	0	0	0	0.2	
SEXTON SUMMIT R.																							
PACIFIC AREA	110	1012.9	30.3	21.8	26.1	-0.1	31.7	15*	19.4	5*	0	0	23.9	79	212	-146	42	24	0	0	11.6	32	
JUNIPER	2	1012.5	1012.9	31.5	24.2	27.8	0.9	33.3	5	22.2	23	12	0	23.9	79	212	-146	42	24	0	0	11.6	
KOPOR R.	29	1005.4	31.1	24.8	28.3	0.3	32.2	22*	23.9	26	5	0	23.9	79	212	-146	42	24	0	0	11.6		
YAJALEI*, R.	2	1003.8	31.1	24.8	27.8	0.3	31.1	24	22.8	26	5	0	23.9	79	212	-146	42	24	0	0	11.6		
MALIBU, R.	103	1009.5	30.7	24.4	26.9	0.8	31.1	24	22.8	26	5	0	23.9	84	216	-146	42	24	0	0	11.6		
PRO. PACIFIC	34	1012.2	29.4	24.4	26.9	0.8	31.1	24	22.8	26	5	0	23.9	84	216	-146	42	24	0	0	11.6		
PU. ARAK	37	97.5	1012.3	32.5	22.8	27	0.7	33.9	22*	21.7	13	2	0	22.8	23	167	-259	38	0	0	11.6		
TRUCKEE ISLAND	2	1013.9	31.4	24.4	27.0	0.8	32.9	17	22.3	4	13	0	0	24.4	81	265	-67	62	23	0	11.6		
YAC R.	13	1012.9	31.4	24.4	27.4	0.1	33.3	5	22.7	24	7	0	24.4	81	265	-23	35	21	0	11.6			
PENNSYLVANIA	110	1004.7	23.7	13.2	18.5	0.5	30.0	4	3.1	20	0	0	12.2	69	192	85	11	2	0	0	11.7		
ALLENTOWN	223	991.8	23.1	12.6	17.9	1.6	31.7	1	6.1	20.8	0	0	12.2	71	214	155	11	2	0	0	11.7		
ELGINBURG	103	1005.1	1018.9	24.2	13.0	18.6	-0.9	30.6	2	2.8	20	0	0	15.0	80	162	11	1	0	0	11.7		
PILLCESPHIA	12	1017.4	1016.2	24.8	13.7	20.3	1.6	31.7	1	6.1	20	0	0	15.6	87	162	11	1	0	0	11.7		
PITTSBURGH	14	97.6	1018.5	24.9	12.0	17.4	-0.2	28.9	4	3.3	20	0	0	12.2	73	27	49	6	1	0	0	11.7	
SPRINGFIELD	293	98.8	1018.7	22.6	11.7	17.1	-0.7	29.4	3	4.0	4*	0	0	11.1	69	71	42	12	0	0	0	11.7	
WILLIAMSPORT	160	993.7	1018.7	22.6	11.7	17.1	-0.7	29.4	3	4.0	4*	0	0	12.2	76	143	71	12	0	0	0	11.7	
HOCE ISLAND	34	21.6	15.3	18.4	0.8	27.0	4	7.6	20	0	0	0	0	0	0	0	0	0	0	0	0		
BLUFF ISLAND																							

CLIMATOLOGICAL DATA METRIC UNITS

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State and Station	Elevation (feet)	Sea level	Pressure			Temperature			Precipitation			Wind			Clouds			Possibility of sunsets											
			Average maximum			Depature from normal			Average dew point			Max 32.2°C or above			No. of days			No. of days (sunrise to sunset)											
			Date	Highest	Lowest	No. of days	Min. 0°C or lower	No. of days	Total	With thunderstorms	Maximum depth on ground	Snow, ice pellets	Frosty mile (1.6 kilometers)	Cloudy, 8-10	Pretty cloudy, 4-7	Sunny, 1-6	Cloudless	Partly cloudy, 4-7	Cloudy - tacoma	Seattle - tacoma	Washington								
WASHINGTON	4500	999.7	1016.0	21.6	12.4	17.0	1.7	33.9	14	8.9	29	1	0	11.1	72	5.3	2	20	6	10	12	6.1	50						
SEATTLE - TACOMA	4500	932.3	1015.3	25.2	9.3	17.3	1.9	33.3	15	4.4	10	1	0	5.0	50	-1	15	3	16	18	14	4.3	69						
SPokane	718	88.1	1206	7.4	12.1	1.3	25.7	18	2.8	28	0	0	0	0	0	0	0	0	0	10	7	13	5.6						
STANHEDGE PASS R	289	27.9	13.3	20.6	1.9	36.3	15	10.0	29	*29*	0	0	0	0	0	0	0	0	0	19	6	5	3.0						
WALLA WALLA U	321	97.7	1015.0	26.9	8.6	17.8	1.5	33.3	15	3.9	29	1	0	6.7	54	9	1	4	3	27	25	1	10	4					
YAKIMA	2470	1014.9	30.9	24.4	27.7	0.4	33.9	19	22.8	29	7	0	23.9	84	257	1	101	18	6	0	340	9	19.2	2					
SAN JUAN P.R.	4	1011.9	1014.9	30.9	24.4	27.7	0.4	33.9	19	22.8	29	7	0	23.9	84	257	1	101	18	6	0	340	9	19.2	2				
EST. VIRGINIA	763	930.2	1017.5	21.4	12.1	16.8	-0.3	27.2	2	3.9	16	0	0	14.4	90	11.7	37	49	12	1	0	1.3	10.3	16.4	4	22	8.1		
BUCKLEY	310	98.1	1018.0	24.8	14.1	19.4	-0.3	31.1	4	4.4	24	*24*	0	0	15.0	80	10.0	26	50	9	0	0	0.4	8	7.2	21	15	6.7	
CHARLESTON	594	94.5	22.0	10.9	16.4	0.1	27.8	4	4.4	24	*24*	0	0	15.6	79	11.7	36	33	12	0	0	0	0	0	0	17	4	9	
ELKINS	252	987.5	1017.3	24.7	14.6	19.7	-0.2	30.6	4	8.9	16	0	0	15.6	79	13.4	62	55	8	0	0	0	0	0	0	15	6.7	7.3	
HUNTINGTON	187	24.2	13.7	19.0	-0.7	30.6	4	8.3	23*	0	0	0	0	101	37	45	7	8.9	N	21	0	0	0	0	0	0	17	7	7.3
PARKERSBURG U	208	991.2	1016.9	21.7	9.4	15.6	0.6	28.3	5*	1.7	19	0	0	11.1	77	19	-63	19	3	2	0	0	1.2	25	11.6	54	17*	14	
GREENSBORO N.C.	198	99.2	1017.4	23.0	10.4	17.1	0.6	30.6	5	2.8	22	0	0	12.8	79	13	-72	3	2	0	0	0	0.6	20	10.3	54	27	15	
LA CHOSSE	262	986.1	1017.6	23.9	8.4	16.2	0.8	30.6	11	0.6	22	0	0	11.1	77	3	-83	4	3	1	0	0	1.2	24	10.3	54	27	11	
MILWAUKIE	205	992.2	1017.4	23.8	12.5	18.2	2.0	29.1	12	6.1	23	0	0	12.8	74	1	-76	1	2	0	0	0	1.3	25	12.1	54	10	7	
CASPER	1627	840.5	1016.1	27.4	6.1	16.7	1.9	33.3	8	-1.1	14	3	1	-0.6	38	5	-18	4	4	0	1.8	25	13.4	22	26	17	9		
CHEYENNE	1867	815.4	1015.7	25.8	9.7	17.2	2.6	32.8	8	2.2	14	2	0	0.6	38	8	-13	5	6	0	1.8	27	24.1	22	17	9	4		
LAWRENCE	1696	832.4	1015.6	26.8	8.6	17.7	3.0	33.1	9*	2.2	14	3	0	0.6	35	1	-26	1	1	1	0	1.1	24	21.0	26	20	8		
SHERIDAN	1208	880.5	1015.9	27.3	6.4	16.9	2.5	37.2	8	-2.2	14	6	1	3.3	46	14	-23	3	4	0	1.1	31	13.0	10	17	9	4		

HEATING DEGREE DAYS

(Base 65° F.)

SERTEMBER 1979

COOLING DEGREE DAYS

(Base 65°F_a)

SEPTEMBER 1979

STORM SUMMARY

SEPTEMBER 1979

STATE	TORNADOES				HAILSTORMS			WINDSTORMS			LIGHTNING			@HEAVY SNOWSTORMS AND BLIZZARDS			# ICE STORMS			φ ALL OTHER						
	NUMBER	DEATHS	INJURIES	† DAMAGE	DEATHS	INJURIES	PROP- ERTY CROPS	† DAMAGE	DEATHS	INJURIES	PROP- ERTY CROPS	† DAMAGE	DEATHS	INJURIES	PROP- ERTY CROPS	† DAMAGE	DEATHS	INJURIES	PROP- ERTY CROPS	† DAMAGE	DEATHS	INJURIES	PROP- ERTY CROPS	† DAMAGE		
Alabama	2	2																								
Alaska	1	1																								
Arizona																										
Arkansas																										
California																										
Colorado																										
Connecticut																										
Delaware																										
Florida																										
Georgia																										
Hawaii	*																									
Idaho																										
Illinois																										
Indiana																										
Iowa	*	1	1																							
Kansas																										
Kentucky																										
Louisiana																										
Maine																										
Maryland & DC	7	1																								
Massachusetts																										
Michigan																										
Minnesota																										
Mississippi																										
Missouri	*																									
Montana	*																									
Nebraska	*																									
Nevada	*																									
New Hampshire																										
New Jersey	1	1																								
New Mexico	*																									
New York	?	?	?	?	?	?	?	?																		
North Carolina	1	1																								
North Dakota																										
Ohio																										
Oklahoma	1	1																								
Oregon																										
Pacific																										
Pennsylvania	2	1	1	4	6																					
Puerto Rico																										
Rhode Island																										
South Carolina	5	1																								
South Dakota	1	1																								
Tennessee																										
Texas	4	2		1	6																					
Utah	*																									
Vermont																										
Virginia	8	1	1	19	6																					
Virgin Islands	*																									
Washington	*																									
West Virginia																										
Wisconsin	1	1																								
Wyoming	2	1																								

RAWINSONDE DATA

Average monthly values

SEPTEMBER 1979

Standard pressure surface mb.	ALBANY, NY 1009 MB						ALBUQUERQUE, NM 841 MB						AMARILLO, TX 894 MB						ANCHORAGE, AK 1001 MB						ANNETTE, AK 1009 MB										
	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction lens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction lens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction lens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction lens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction lens of deg.	Resultant Wind Speed m.p.s.					
SFC	30	86	11.2	10.0	29	4.5	29	1,619	15.8	5.7	06	1.5	30	1,095	14.7	9.6	20	1.9	30	45	9.4	7.5	18	.5	30	37	11.8	10.2	11	1.7					
1000	26	172	11.5	10.2	29	4.5	29	1,619	15.8	5.7	06	1.5	30	1,095	14.7	9.6	20	1.9	30	99	10.3	7.5	18	1.0	30	138	10.1	20	2.1						
950	30	590	13.3	9.3	24	2.1	29	1,619	15.8	5.7	06	1.5	30	1,095	14.7	9.6	20	1.9	30	477	9.4	3.0	12	1.2	30	536	10.5	5.5	5.8						
900	30	1,044	11.4	4.8	27	3.9	29	1,619	15.8	5.7	06	1.5	30	1,095	14.7	9.6	20	1.9	30	924	6.9	8.2	12	2.8	30	985	7.9	4.6	17	6.9					
850	30	1,150	9.5	-6.6	28	5.6	29	2,062	16.7	4.4	18	2.2	30	2,043	15.8	4.0	24	1.0	30	1,528	12.1	2.6	27	2.7	30	1,455	1.1	1.2	4.3	30	1,455	1.0	1.0	18	7.5
800	30	2,022	8.1	-3.4	27	6.8	29	2,062	16.7	4.4	18	2.2	30	2,043	15.8	4.0	24	1.0	30	2,588	12.1	2.6	27	2.7	30	1,948	2.3	-1.4	19	8.2					
750	30	2,554	6.4	-7.5	26	2.9	29	2,589	15.8	1.6	22	1.7	30	2,588	15.8	2.6	27	2.0	30	2,395	-3.1	-6.4	15	6.0	30	2,467	-4.4	-6.6	19	8.7					
700	30	3,118	4.2	-11.5	27	9.3	29	3,167	9.1	-3.1	25	1.3	30	3,162	8.2	-2	26	3.0	30	2,936	-6.3	-11.1	15	6.1	30	3,016	-3.1	-9.9	20	9.2					
650	30	3,718	-9.1	-14.2	26	12.0	29	3,777	5.2	-4.4	27	9.0	30	3,777	4.1	-1	7.3	35	20	3,515	-9.6	-16.1	16	6.0	30	3,600	-6.2	-12.6	20	9.3					
600	30	4,357	-2.6	-18.0	26	13.6	29	4,425	2.4	-8.4	26	13.0	30	4,416	-3	-11.9	02	3.1	30	4,129	-13.1	-21.1	16	5.7	30	4,223	-9.6	-16.6	20	10.3					
550	30	5,021	-8.8	-22.7	27	14.8	29	5,177	2.4	-9.6	20	10.0	30	5,106	-3	-11.9	02	3.1	30	4,887	-14.1	-21.9	20	10.3	30	4,887	-14.1	-21.9	20	10.3					
500	30	5,779	-13.6	-26.4	26	17.0	29	5,860	-9.5	-19.6	24	6.7	30	5,849	-9.5	-19.6	24	6.7	30	5,787	-17.5	-25.5	16	5.6	30	4,889	-14.1	-21.9	20	10.3					
450	29	6,570	-17.1	-32.5	27	19.9	28	6,668	-14.8	-24.8	28	2.9	30	6,655	-15.0	-24.8	28	2.9	30	6,626	-22.3	-35.1	17	5.9	30	5,630	-18.0	-28.1	21	10.6					
400	29	7,451	-23.3	-38.3	26	21.6	29	7,551	-20.4	-34.3	30	3.7	30	7,535	-21.3	-34.2	30	3.7	30	7,099	-33.8	-40.1	17	6.2	30	6,383	-22.0	-38.2	22	10.7					
350	28	8,428	-29.9	-42.9	26	23.9	28	8,528	-27.8	-41.3	29	5.9	30	8,509	-28.6	-42.5	31	6.3	30	8,026	-40.1	-46.2	17	5.9	30	8,163	-37.8	-42.5	22	11.4					
300	28	9,506	-37.8	-48.0	26	26.5	28	9,615	-36.0	-48.5	30	10.0	30	9,592	-36.7	-48.9	31	9.6	30	9,058	-47.7	18	5.5	29	9,204	-46.0	22	14.6							
250	28	10,740	-46.2	26	31.7	28	10,858	-44.7	26	30	13.8	30	10,832	-45.1	26	30	12.4	30	10,746	-52.6	21	4.9	28	10,399	-51.6	23	12.3								
200	28	12,197	-54.0	27	33.8	28	12,324	-52.8	27	29	17.2	30	12,299	-53.0	27	30	15.2	30	11,695	-50.2	23	4.7	28	11,845	-51.9	20	10.7								
175	28	13,040	-57.4	27	32.5	27	13,174	-57.5	27	29	16.9	30	13,149	-57.1	27	30	15.0	30	12,569	-99.4	23	4.9	28	12,710	-51.9	24	10.9								
150	28	14,015	-60.3	27	27.5	27	14,137	-62.4	27	29	14.7	30	14,114	-61.6	27	30	14.3	30	13,578	-50.2	23	5.5	28	13,709	-52.3	23	10.2								
125	27	15,175	-62.5	27	23.5	27	15,248	-67.2	27	29	11.5	30	15,232	-65.8	27	30	10.6	30	14,768	-50.4	23	4.7	28	14,887	-53.1	24	8.7								
100	27	16,519	-63.1	27	16.2	27	16,585	-69.5	27	30	6.5	29	16,577	-68.2	27	30	5.4	30	16,223	-50.7	23	4.8	28	16,324	-53.1	24	7.9								
80	26	17,901	-61.0	28	10.2	26	17,923	-67.0	28	32	2.5	29	17,919	-65.7	28	33	1.7	30	17,675	-51.1	23	4.6	28	17,762	-53.0	24	7.2								
70	25	18,734	-59.4	28	7.7	28	18,735	-64.5	28	34	1.6	28	18,742	-64.0	28	35	1.2	30	18,544	-51.1	23	4.4	28	18,623	-52.8	24	6.6								
60	24	19,701	-58.0	28	5.0	26	19,684	-61.6	28	34	2.6	27	19,692	-61.2	28	35	2.0	30	19,547	-51.3	23	4.7	28	19,618	-53.1	24	6.1								
50	24	20,856	-55.9	28	2.6	26	20,822	-58.8	28	34	3.2	27	20,833	-58.3	28	35	2.7	30	20,731	-51.5	24	4.3	28	20,793	-53.1	24	5.2								
40	23	21,228	-53.8	25	2.1	26	21,232	-56.3	25	34	2.4	26	21,224	-56.0	25	35	2.0	28	20,294	-51.6	24	4.9	28	22,229	-53.8	26	4.6								
30	20	24,154	-51.0	26	1.6	25	24,073	-53.0	26	34	4.3	25	24,095	-52.0	26	35	4.4	28	24,051	-51.5	25	4.9	28	24,081	-52.9	28	4.8								
25	25	25,346	-49.3	02	4.4	25	25,255	-50.9	02	39	4.5	25	25,281	-50.0	02	40	5.2	27	25,242	-51.0	25	4.8	28	25,259	-52.6	29	5.5								
20	17	26,830	-47.1	06	2.5	24	26,720	-48.9	06	39	4.6	25	26,746	-48.2	06	40	5.1	27	26,696	-50.5	26	6.0	26	26,713	-52.3	30	6.3								
15	12	28,755	-44.9	08	1.3	20	28,619	-47.0	08	39	7.1	22	28,645	-45.7	08	37	6.0	20	28,565	-49.2	28	6.2	21	28,591	-50.4	31	7.0								
10	7	31,374	-42.1	02	5	31,337	-42.7	02	39	7.8	22	30,370	-42.1	02	40	6.9	17	31,270	-46.1	28	7.0	15	31,235	-47.5	31	7.5									
5	4	33,780	-40.4	02	5	33,780	-40.0	02	39	8.6	22	33,819	-38.1	02	40	6.3	15	33,796	-40.3	28	7.0	15	31,235	-47.5	31	7.5									

ATHENS, GA 987 MB	BARRON, AK 1013 MB						BARTER ISLAND, AK 1011 MB						BETHEL, AK 1000 MB						BISMARCK, ND 956 MB												
	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction lens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction lens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction lens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction lens of deg.	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction lens of deg.	Resultant Wind Speed m.p.s.	
SFC	30	871	14.3	2.1	14	2.2	29	1	24.8	21.9	3.0	4	31	30	7	21.9	20.0	3.3	1.2	30	218	12.8	10.4	18	1.0	30	503	9.1	5.7	06	+3
1000	26	124	1.7	-8.7	28	1.9	29	104	24.7	1.1	-5.0	3.0	45	30	151	8.0	3.2	2.2	2.2	30	519	8.0	2.0	2.2	2.2	30	593	20.6	18.1	13	2.1
950	30	571	18.8	16.1	07	5.7	28	526	-1	-4.4	10	4.5	30	516	1.8	-2.7	10	3.1	30	458	6.5	2.0	09	3.7	30	574	10.4	6.1	32	.5	
900	30	1,015	16.9	14.3	09	4.5	28	580	-1.4	-6.7	11	3.5	30	551	1.6	-0.6	8.8	1.0	30	509	3.0	1.2	06	1.7	30	1,013	15.0	4.7	2.6	3.0	
850	30	1,522	14.7	10.7	12	2.3																									

RAWINSONDE DATA

Average monthly values

SEPTEMBER 1979

CARIBOU, ME 992 MB												CENTREVILLE, AL 998 MB												CHARLESTON, SC 1013 MB												CHATHAM, MA 1017 MB												CHIHUAHUA, MEXICO 859 MB											
Standard pressure surface mb	No. of observations	Resultant Wind			Dew Point °C +			Resultant Wind			Dew Point °C +			Resultant Wind			Dew Point °C +			Resultant Wind			Dew Point °C +			Resultant Wind			Dew Point °C +																														
SFC		Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.																												
1000	30	191	8.5	5.7	23	1.8	30	140	18.3	17.4	0.3	2.3	30	13	21.9	20.2	16	15.6	13.8	2.6	30	16	15.6	13.8	2.6	30	1,517	16.2	8.9	0.7	.4																												
950	35	550	9.9	5.5	28	6.4	30	156	16.5	16.0	0.8	5.2	30	575	20.7	18.0	11.7	2.1	30	595	15.2	9.3	2.7	3.1	30	1,502	12.6	4.4	2.7	1.4																													
900	39	999	8.1	3.6	29	8.6	30	1,029	17.5	15.3	0.9	3.4	30	1,029	18.5	15.6	7.7	2.4	30	1,029	16.7	12.8	4.4	4.5	30	1,026	11.7	6.4	2.7	1.4																													
850	37	1,459	5.9	-6.2	29	9.1	30	1,510	15.4	13.7	1.0	3.0	30	1,510	16.0	12.4	19	2.1	30	1,511	11.1	7.7	2.7	6.4	30	1,502	16.7	8.9	0.7	.4																													
800	37	1,794	4.2	-4.2	30	10.8	30	2,029	13.4	3.8	1.1	7.0	30	2,029	14.0	5.0	20	4.0	30	2,037	9.9	-8.2	2.7	6.4	30	2,036	16.4	6.2	1.1	2.4																													
750	32	2,484	1.8	-8.0	27	12.7	30	2,570	11.3	-2.4	1.3	7.0	2,589	11.0	5.0	20	4.0	30	2,572	7.8	-6.9	2.7	6.4	30	2,582	12.7	3.7	1.2	4.4																														
700	33	3,442	-1.5	-12.3	27	13.4	30	2,143	4.3	-2.2	1.9	1.1	30	3,162	8.2	-1.1	21	2.3	30	3,137	4.9	-10.8	2.7	9.4	30	3,158	8.6	1.1	1.1	3.9																													
650	30	3,671	-3.6	-16.0	27	15.6	30	2,751	4.7	-8.9	2.0	2.6	30	3,772	5.2	-5.1	21	2.1	30	3,778	4.8	-13.5	2.6	11.7	30	3,767	4.8	-4.2	0.9	3.4																													
600	30	4,260	-5.6	-21.6	27	18.1	30	3,999	6.6	-12.2	21	3.2	30	4,422	1.6	-8.4	22	5.7	30	4,378	-1.7	-18.1	2.6	13.3	30	4,415	-1.0	-11.5	1.1	3.2																													
550	30	4,915	-10.3	-26.2	27	20.0	30	5,093	-3.3	-15.9	22	3.9	30	5,118	-2.3	-12.4	23	5.5	30	5,067	-5.6	-21.1	2.6	14.5	30	5,110	-2.6	-17.1	0.8	2.3																													
500	30	5,663	-14.8	-31.3	27	21.8	30	5,841	-7.8	-20.8	23	5.5	30	5,869	-6.5	-17.1	23	6.3	30	5,807	-10.3	-25.3	2.6	16.5	30	5,861	-6.7	-22.7	0.1	1.0																													
450	30	6,452	-20.1	-35.5	27	24.6	30	6,653	-12.8	-25.5	23	6.5	30	6,686	-11.5	-22.3	23	7.4	30	6,612	-15.6	-23.9	2.6	18.5	30	6,676	-11.6	-26.8	3.3	2.3																													
400	30	7,315	-26.1	-39.6	27	27.5	30	7,541	-18.6	-32.3	23	8.3	30	7,579	-17.3	-27.0	23	8.0	30	7,484	-22.0	-34.8	2.6	19.9	30	7,569	-17.7	-32.6	3.0	4.3																													
350	30	8,271	-32.8	-45.4	27	30.1	30	8,527	-25.2	-38.6	24	11.3	30	8,570	-24.1	-33.5	24	9.3	30	8,462	-28.4	-39.6	2.6	23.2	30	8,559	-15.5	-39.5	3.0	7.6																													
300	34	9,337	-40.1	-46.3	27	32.0	30	9,627	-33.1	-45.0	25	14.1	29	9,673	-32.4	-43.4	25	11.7	30	9,597	-36.2	-46.9	2.6	26.7	30	9,661	-32.3	-46.2	3.0	11.3																													
250	30	10,562	-47.2	-52.7	27	33.9	30	10,884	-42.2	-42.2	27	17.2	29	10,933	-51.2	-52.7	27	13.0	30	10,787	-45.4	-46.9	2.6	29.1	30	10,922	-41.4	-52.9	2.9	13.9																													
200	32	12,021	-52.7	-57.2	27	34.2	30	12,361	-52.1	-52.1	27	19.5	29	12,406	-53.3	-53.3	25	15.2	30	12,245	-54.6	-54.6	2.6	30.1	30	12,402	-52.5	-53.0	3.0	13.8																													
175	30	12,890	-54.3	-57.4	27	31.5	30	13,215	-57.4	-57.4	24	18.9	27	13,252	-59.1	-59.1	26	16.1	30	13,093	-58.4	-58.4	2.6	28.3	30	13,254	-58.3	-58.3	3.0	13.6																													
150	29	13,856	-55.9	-59.4	27	28.1	30	14,177	-62.8	-62.8	25	15.3	27	14,204	-65.2	-65.2	27	12.5	30	14,053	-61.9	-61.9	2.6	25.1	29	14,208	-65.0	-65.0	3.0	12.1																													
125	27	15,022	-57.3	-60.4	27	23.8	30	15,286	-67.6	-67.6	25	10.4	27	15,302	-69.8	-69.8	27	8.0	30	15,175	-64.2	-64.2	2.6	21.4	26	15,302	-71.2	-71.2	3.0	8.7																													
120	26	16,429	-57.2	-60.4	27	17.6	30	16,619	-69.4	-69.4	26	3.8	26	16,624	-71.0	-71.0	27	3.0	30	16,539	-64.2	-64.2	2.6	14.2	26	16,615	-73.9	-73.9	3.0	3.0																													
85	28	17,842	-56.6	-60.4	27	12.1	30	17,960	-66.3	-66.3	08	.8	26	17,958	-66.3	-66.3	04	1.9	30	17,909	-62.2	-62.2	2.6	9.0	25	17,928	-69.5	-69.5	07	4.4																													
75	28	18,651	-55.6	-60.4	27	10.3	30	18,773	-63.2	-63.2	07	2.4	26	18,774	-62.8	-62.8	07	2.5	30	18,739	-60.1	-60.1	2.6	6.7	24	18,731	-66.2	-66.2	08	7.1																													
50	28	20,844	-53.6	-60.4	26	5.9	29	20,870	-57.9	-57.9	08	4.8	26	20,876	-57.2	-57.2	08	5.0	30	20,864	-56.2	-56.2	2.6	27	29	20,864	-58.9	-58.9	09	9.2																													
40	23	22,285	-51.8	-60.4	26	5.3	29	22,287	-55.0	-55.0	09	4.8	26	22,297	-54.5	-54.5	09	5.6	30	22,287	-53.9	-53.9	2.6	2.8	23	22,224	-55.6	-55.6	09	9.7																													
35	28	24,10	-49.3	-60.4	25	3.7	28	24,157	-51.8	-51.8	09	6.2	25	24,157	-50.8	-50.8	09	6.6	30	24,149	-51.0	-51.0	2.6	2.9	25	24,071	-52.8	-52.8	09	11.9																													
25	25	25,351	-47.4	-60.4	25	2.5	27	25,325	-49.9	-49.9	09	7.4	25	25,349	-49.2	-49.2	09	6.7	29	25,337	-49.0	-49.0	2.6	1.1	22	25,252	-51.3	-51.3	09	11.9																													
20	26	26,879	-45.4	-60.4	25	2.0	26	26,794	-47.7	-47.7	09	6.9	26	26,818	-46.5	-46.5	09	7.5	26	26,794	-47.3	-47.3	2.6	1.1	22	26,713	-48.7	-48.7	09	12.1																													
15	28	28,768	-42.7	-60.4	25	1.5	26	28,760	-45.4	-45.4	08	8.3	27	28,752	-44.3	-44.3	08	8.7	23	28,688	-45.3	-45.3	2.6	0.2	10	28,602	-45.9	-45.9	02	5.7																													
10	7	31,209	-44.1	-60.4	26	6.9	14	31,454	-41.6	-41.6	08	8.7	23	31,451	-40.6	-40.6	08	8.7	30	33,706	-39.5	-39.5	2.6	0.2	10	31,326	-44.0	-44.0	09	2.5																													

COLO BAY, AK 901 MB												DAYTON, OH 983 MB												DEL RIO, TX 978 MB												DENVER, CO 841 MB												DESERT ROCK, NV 900 MB											
Standard pressure surface mb	No. of observations	Resultant Wind			Dew Point °C +			Resultant Wind			Dew Point °C +			Resultant Wind			Dew Point °C +			Resultant Wind			Dew Point °C +			Resultant Wind			Dew Point °C +			Resultant Wind			Dew Point °C +			Resultant Wind			Dew Point °C +			Resultant Wind			Dew Point °C +												
SFC		Dynamic height meters	Temperature °C																																																								

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FLINT, MI 990 MB		GLASGOW, MT 934 MB										GRAND JUNCTION, CO 854 MB										GREAT FALLS, MT 890 MB										GREEN BAY, WI 991 MB									
Standard pressure surface mb	No. of observations	Dynamic height meters		Temperature °C		Dew Point °C		Resultant Wind		Speed m/s		Dynamic height meters		Temperature °C		Dew Point °C		Resultant Wind		Speed m/s		Dynamic height meters		Temperature °C		Dew Point °C		Resultant Wind		Speed m/s		Dynamic height meters		Temperature °C		Dew Point °C		Resultant Wind		Speed m/s	
SFC	30	236	11.6	10.1	20	1.1	30	696	10.7	5.1	0.7	1.3	30	1,472	16.0	-1.6	1.1	13	4.1	30	1,118	11.1	1.1	21	2.1	30	3210	11.3	9.7	27	4.9	30	568	14.0	7.1	26	4.4				
1000	30	583	14.5	8.7	25	3.9	30	1,014	15.9	3.7	31	2.1	30	4,26	2.9	1,516	17.2	-1.5	13	4.2	30	1,503	15.2	-8.8	25	4.1	30	1,024	12.5	5.01	27	6.4									
950	30	1,039	12.7	5.3	28	4.4	30	1,496	14.7	2.1	30	4.6	30	2,034	17.9	-2.5	13	3.5	30	2,013	12.1	-3.1	27	4.2	30	2,003	7.7	-3.1	28	7.2											
850	30	1,517	10.6	1.0	29	5.8	30	2,006	11.6	-1.1	29	5.6	30	2,583	15.4	-4.7	20	1.0	30	2,550	8.4	-5.1	27	5.3	30	2,533	5.7	-9.2	28	9.4											
870	29	2,021	8.9	-4.9	28	5.8	30	2,006	11.6	-1.1	29	5.6	30	2,583	15.4	-4.7	20	1.0	30	2,550	8.4	-5.1	27	5.3	30	2,533	5.7	-9.2	28	9.4											
750	29	2,553	7.0	-9.5	26	6.9	30	2,542	7.7	-3.3	29	7.2	30	2,583	15.4	-4.7	20	1.0	30	2,550	8.4	-5.1	27	5.3	30	2,533	5.7	-9.2	28	9.4											
700	29	3,118	4.9	-12.4	27	7.8	30	3,107	3.9	-6.8	29	9.2	30	3,163	10.9	-7.2	26	2.8	30	3,116	4.6	-8.3	27	7.2	30	3,095	3.3	-12.0	28	11.0											
650	29	3,717	1.0	-15.7	28	9.3	30	3,705	6.6	-11.7	28	11.2	30	3,775	5.8	-9.1	26	3.6	30	3,716	1.1	-12.1	27	9.2	30	3,692	-1.1	-15.4	28	12.0											
600	29	4,356	-2.8	-18.9	28	10.5	30	4,344	-3.3	-15.8	28	12.5	30	4,424	-2	-11.2	26	4.6	30	4,354	-3.5	-16.7	26	11.1	30	4,329	-1.6	-19.4	28	13.6											
550	29	5,040	-7.1	-23.4	28	12.1	30	5,026	-8.0	-19.8	28	13.7	30	5,114	-5.2	-17.1	26	5.6	30	5,037	-8.1	-21.7	27	12.5	30	5,011	-7.9	-23.9	28	14.4											
500	29	5,777	-11.9	-26.5	28	12.6	30	5,759	-13.3	-25.8	28	14.6	30	5,855	-10.4	-23.3	26	6.0	30	5,770	-13.1	-26.1	27	13.2	30	5,745	-1.0	-28.1	29	14.9											
450	29	6,574	-17.6	-32.6	28	13.8	30	6,553	-18.4	-32.0	28	15.6	30	6,659	-15.2	-30.9	27	5.7	30	6,566	-18.5	-31.7	27	13.9	30	6,540	-1.7	-32.2	29	15.5											
400	29	7,445	-24.0	-38.3	27	15.5	30	7,419	-25.5	-37.7	29	17.3	30	7,538	-21.8	-37.7	28	6.6	30	7,432	-25.0	-38.8	27	15.0	30	7,407	-2.4	-40.6	29	16.6											
350	29	8,409	-31.1	-44.1	27	17.1	30	8,377	-32.8	-44.3	28	19.9	30	8,509	-29.3	-44.1	27	8.9	30	8,391	-32.4	-44.9	27	17.1	30	8,366	-3.2	-46.2	29	17.8											
300	29	9,481	-39.1	-54.0	26	19.7	30	9,440	-41.3	-51.2	29	21.3	30	9,588	-37.7	-50.1	29	10.3	30	9,543	-40.9	-52.1	27	18.3	30	9,443	-4.0	-52.6	29	19.7											
250	28	10,708	-47.0	-62.0	26	22.0	30	10,655	-49.3	-62.0	28	23.2	30	10,824	-55.8	-62.0	26	13.9	30	10,670	-49.1	-62.0	27	19.1	30	10,652	-4.8	-62.0	29	21.4											
200	28	12,165	-53.0	-68.0	26	25.8	30	12,101	-53.8	-68.0	28	23.1	30	12,282	-53.6	-68.0	26	16.9	30	12,111	-54.0	-68.0	27	20.1	30	12,101	-5.3	-68.0	28	22.6											
175	28	13,020	-55.8	-68.0	26	25.8	30	12,957	-55.2	-68.0	28	21.9	30	13,134	-57.1	-68.0	27	17.5	30	12,956	-55.6	-68.0	28	22.5	30	12,956	-5.6	-68.0	28	22.5											
150	28	13,995	-58.8	-68.0	26	22.5	30	13,937	-57.0	-68.0	28	20.3	30	14,101	-60.7	-68.0	27	16.8	30	13,949	-57.4	-68.0	28	19.9	30	13,932	-5.8	-68.0	28	20.9											
125	28	15,134	-61.0	-68.0	26	20.5	30	15,087	-58.5	-68.0	28	17.8	30	15,225	-64.3	-68.0	27	13.6	30	15,097	-58.6	-68.0	28	15.8	30	15,075	-6.0	-68.0	28	17.2											
100	27	16,511	-62.1	-68.0	27	16.3	30	16,490	-59.0	-68.0	29	12.4	30	16,584	-66.0	-68.0	27	8.2	30	16,497	-59.3	-68.0	28	11.9	30	16,465	-6.6	-68.0	28	13.2											
80	27	18,890	-60.8	-68.0	27	10.9	30	18,793	-58.1	-68.0	29	8.8	30	18,791	-64.3	-68.0	27	3.3	30	18,787	-58.7	-68.0	28	7.8	30	17,855	-6.0	-68.0	28	10.3											
60	27	18,728	-59.9	-68.0	27	8.3	30	18,728	-58.2	-68.0	29	7.2	30	18,763	-62.0	-68.0	27	1.9	30	18,737	-58.1	-68.0	28	5.8	30	19,660	-5.9	-68.0	28	7.6											
50	24	19,692	-58.5	-68.0	27	8.7	30	19,692	-57.9	-68.0	29	8.1	30	19,720	-60.2	-68.0	27	0.1	30	19,719	-57.5	-68.0	28	4.5	30	19,660	-5.8	-68.0	28	5.5											
40	24	22,485	-5.3	-68.0	27	4.3	30	22,485	-5.9	-68.0	29	5.6	30	22,500	-5.9	-68.0	27	0.4	30	22,485	-5.6	-68.0	28	2.9	30	22,485	-5.3	-68.0	28	3.5											
30	23	24,122	-51.4	-68.0	27	4.5	30	24,110	-53.9	-68.0	29	3.6	30	24,112	-53.1	-68.0	27	0.8	30	24,114	-53.8	-68.0	28	3.8	30	24,089	-51.7	-68.0	28	3.5											
25	23	25,310	-49.7	-68.0	27	4.2	30	25,301	-52.1	-68.0	29	3.7	30	25,297	-51.0	-68.0	27	0.2	30	25,292	-52.3	-68.0	28	3.7	30	25,273	-4.7	-68.0	28	4.9											
20	21	26,786	-47.4	-68.0	28	2.8	30	26,783	-49.9	-68.0	30	3.4	24	26,742	-48.7	-68.0	28	1.6	24	26,734	-50.2	-68.0	29	3.0	30	26,694	-4.8	-68.0	28	5.0											
15	19	28,705	-45.0	-68.0	27	1.9	30	28,681	-47.5	-68.0	29	2.7	22	28,639	-46.5	-68.0	27	0.7	24	28,632	-46.7	-68.0	28	1.9	30	28,666	-4.6	-68.0	28	4.4											
10	13	31,492	-41.6	-68.0	16	31,367	-42.9	-68.0	28	6.4	9	31,397	-42.4	-68.0	16	1.6	30	31,363	-41.8	-68.0	27	0.1	30	31,426	-41.0	-68.0	28	1.0													

GREENSBORO, NC 985 MB										GUADALUPE IS., MEXICO 1008 MB										GUAM, MARIANA IS. 998 MB										HILDE, HI 1015 MB										HUNTINGTON, WV 988 MB									
SFC	30	275	16.9	15.6	05	1.7	27	23	20.0	16.5	31	5.7	30	111	25.4	23.8	08	1.0	30	130	17.5	21.5	08	1.4	30	246	15.5	13.0	07	0.4	30	581	17.5	13.0	11	1.5													
1000	30	588	17.9	14.6	06	1.7	27	93	19.8	16.3	31	7.9	30	541	24.1	22.3	09	2.0	30	580	20.6	16.1	08	0.8	30	581	17.5	13.0	11	1.5																			
900	30	1,050	16.0	11.9	09	2.7	30	1,009	24.2	4.8	34	3.0	30	1,014	21.1	18.8	09	2.0	30	1,050	17.3	15.2	08	2.5	30	1,043	15.5	10.3	15	1.8																			
800	29	2,071	12.3	5.8	16	1.7	30	1,507	22.3	1.9	35	1.3	30	1,509	19.3	15.3	09	2.0	30	1,507	17.3	14.2	08	3.6	30	1,506	13.3	6.8	24	1.6																			
750	29	2,586	9.8	1.1	22	2.2	30	2,572	15.3	-4.2	32	6.0	30	2,029	16.2	12.0	09	0.9	30	2,029	15.5	12.0	08	0.9	30	2,029	12.5	9.5	22	1.2																			
700	29	3,158	7.5	-3.1	23	4.6	30	3,146	10.8	-5.3	32	1.3	30	3,156	9.8	-10.0	09	0.9	30	3,156	7.5	-10.0	08	0.9	30																								

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KEY WEST, FL 1011 MB												KING SALMON, AK 1004 MB												KOROR, CAROLINE IS. 1007 MB												KOTZEBUE, AK 1008 MB												LAKE CHARLES, LA 1013 MB											
SFC	Standard pressure surface mb	No. of observations	Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind																				
			Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.																				
30	9.8	3	27.2	24.6	13	3.8	19	15	7.8	24.3	21.8	30	3.0	30	24.3	24.8	32	.6	30	5	4.8	1.9	0.2	2.0	30	20.1	18.9	0.2	1.7	30	11.5	10.5	0.2	3.6																									
1000	26.9	30	24.1	21.3	13	4.7	13	19	8.9	24.3	21.8	30	1.4	30	27.5	22.1	29	.7	30	91	7.3	6.6	3.5	2.4	30	18.6	18.5	0.2	5.5	30	56.1	20.7	0.2	5.5																									
950	23.6	30	21.3	19.3	13	6.6	19	46.9	7.2	28	0.4	2.9	30	5.2	23.9	21.1	18.5	2.5	30	489	3.7	2.4	1.1	0.2	30	15.9	15.7	0.2	2.7	30	51.7	20.7	0.2	2.5																									
900	20.9	30	19.4	16.4	13	6.4	19	9.13	4.9	1.1	0.4	2.3	30	1.015	21.1	18.5	12.5	.7	30	926	1.1	0.4	0.4	0.2	30	18.1	13.2	0.2	3.0	30	1,028	1.1	0.2	3.0																									
850	18.1	30	17.4	13.7	14	5.9	19	1.377	2.2	-3.3	0.9	1.1	30	1.509	18.3	16.3	15	.7	30	1,384	3.6	6.6	1.7	0.2	30	16.1	5.9	0.2	2.5	30	1,517	16.1	0.2	2.5																									
800	15.6	30	14.9	9.4	14	5.7	19	1.865	-.3	-7.8	1.1	.8	30	2.028	15.8	11.2	12	1.3	30	1,865	3.7	3.7	1.0	0.2	30	14.0	1.9	0.2	2.7	30	1,056	1.9	0.2	2.7																									
750	12.8	30	5.9	5.9	14	5.0	19	2.379	2.2	-11.7	1.8	.8	30	2.575	13.2	7.0	1.1	2.0	30	2,372	3.6	15.0	1.7	0.2	30	12.8	3.0	0.2	2.5	30	11.3	1.6	0.2	2.3																									
700	9.7	30	3.2	1.4	14	4.5	19	2.923	-6.1	-14.4	2.4	.9	30	3.154	10.4	2.8	1.1	2.5	30	2,910	8.8	19.6	1.9	0.2	30	10.3	3.0	0.2	2.5	30	1,027	1.1	0.2	3.0																									
650	9.7	30	3.159	9.7	14	3.9	19	3.500	-9.2	-19.9	1.9	.1	30	3.768	6.9	-9.1	-10.0	3.2	30	3,481	11.8	22.6	20	0.2	30	11.3	-1.6	0.2	2.3	30	1,040	1.1	0.2	2.1																									
600	6.4	30	2.46	6.3	14	3.7	19	4.116	-12.2	-23.4	2.7	.1	30	4.422	3.2	-5.3	-10.0	3.4	30	4,090	15.5	26.5	21	0.2	30	11.1	-1.1	0.2	2.2	30	1,113	1.1	0.2	2.2																									
550	5.2	30	5.125	-1.4	13	3.0	19	4.741	-6.4	-16.4	2.4	.2	30	5.247	4.7	-10.2	-10.2	3.4	30	4,741	14.7	24.4	21	0.2	30	11.0	-1.1	0.2	2.2	30	1,126	1.1	0.2	2.2																									
500	3.0	30	5.159	-10.4	13	3.0	19	5.487	-21.1	-30.0	2.6	.5	30	5.879	4.7	-15.3	-20.7	3.8	30	5,443	14.4	24.4	21	0.2	30	10.9	-1.1	0.2	2.2	30	1,126	1.1	0.2	2.2																									
450	2.6	30	6.59	-10.4	13	3.0	19	5.487	-21.1	-30.0	2.6	.5	30	7.02	4.7	-20.7	-20.7	3.8	30	6,203	29.9	3.0	0.2	2.2	30	10.9	-1.1	0.2	2.2	30	1,126	1.1	0.2	2.2																									
400	2.9	30	6.59	-10.4	13	3.0	19	5.487	-21.1	-30.0	2.6	.5	30	7.603	15.0	-20.4	-20.4	3.5	30	7,033	4.5	-41.6	-1.6	0.2	30	10.8	-1.1	0.2	2.2	30	1,126	1.1	0.2	2.2																									
350	2.8	30	6.59	-22.7	13	3.0	19	8.033	-38.9	-41.3	2.6	.6	30	8,603	21.4	-19.9	-19.9	3.8	30	7,953	-1.9	-42.4	2.2	0.2	30	10.8	-1.1	0.2	2.2	30	1,126	1.1	0.2	2.2																									
300	2.9	30	9.703	-10.7	13	3.0	19	8.033	-38.9	-41.3	2.6	.6	30	10.92	-30.0	-41.3	-41.3	3.9	30	9,978	-48.5	-1.2	-42.4	2.2	0.2	30	10.8	-1.1	0.2	2.2	30	1,126	1.1	0.2	2.2																								
250	2.9	30	10.971	-10.7	13	3.0	19	8.033	-38.9	-41.3	2.6	.6	30	10.92	-30.0	-41.3	-41.3	3.9	30	10,167	-52.2	-1.2	-42.4	2.2	0.2	30	10.8	-1.1	0.2	2.2	30	1,126	1.1	0.2	2.2																								
200	2.9	30	12.45	-53.0	13	3.0	18	10.286	-50.7	-50.7	2.6	.7	30	10.989	-40.0	-50.7	-50.7	3.0	30	12,470	-52.8	-1.2	-42.4	2.2	0.2	30	10.8	-1.1	0.2	2.2	30	1,126	1.1	0.2	2.2																								
175	2.9	30	11.298	-53.9	13	3.0	18	12.617	-50.0	-50.0	2.6	.7	30	11.94	-13.8	-53.9	-53.9	3.0	30	12,485	-50.2	-1.2	-42.4	2.2	0.2	30	10.8	-1.1	0.2	2.2	30	1,126	1.1	0.2	2.2																								
150	2.9	30	14.24	-66.9	13	3.0	18	13.624	-50.3	-50.3	2.6	.7	30	14.263	-68.0	-1.2	-42.4	2.2	0.2	30	13,494	-49.6	-1.2	-42.4	2.2	0.2	30	10.8	-1.1	0.2	2.2	30	1,126	1.1	0.2	2.2																							
125	2.9	30	15.329	-7.3	13	3.0	18	14.811	-50.9	-50.9	2.6	.7	30	15.339	-75.2	-1.2	-42.4	2.2	0.2	30	14,687	-50.0	-1.2	-42.4	2.2	0.2	30	10.8	-1.1	0.2	2.2	30	1,126	1.1	0.2	2.2																							
100	2.9	30	16.626	-7.4	13	3.0	18	16.262	-51.1	-51.1	2.6	.7	30	16.621	-77.2	-1.2	-42.4	2.2	0.2	30	16,145	-50.4	-1.2	-42.4	2.2	0.2	30	10.8	-1.1	0.2	2.2	30	1,126	1.1	0.2	2.2																							
80	2.9	30	17.936	-6.9	13	3.0	18	17.713	-51.6	-51.6	2.6	.7	30	17.915	-72.2	-1.2	-42.4	2.2	0.2	30	17,600	-50.6	-1.2	-42.4	2.2	0.2	30	10.8	-1.1	0.2	2.2	30	1,126	1.1	0.2	2.2																							
70	2.9	30	18.739	-6.5	13	3.0	18	18.581	-51.1	-51.1	2.6	.7	30	18.709	-68.6	-1.2	-42.4	2.2	0.2	30	18,470	-50.8	-1.2	-42.4	2.2	0.2	30	10.8	-1.1	0.2	2.2	30	1,126	1.1	0.2	2.2																							
60	2.9	30	19.681	-6.3	13	3.0	18	19.583	-51.6	-51.6	2.6	.7	30	19,639	-69.6	-1.2	-42.4	2.2	0.2	30	19,472	-51.2	-1.2	-42.4	2.2	0.2	30	10.8	-1.1	0.2	2.2	30	1,126	1.1	0.2	2.2																							
550	30	5.090	-5.9	-19.7	27	3.0	18	5.123	-2.8	-22.1	27	.1	30	5,082	-5.1	-21.1	-33	2.4	30	5,091	-4.4	-1.2	-20.0	2.2	0.2	30	4,775	-16.7	-22.2	17	1.7	30	5.090	-1.1	-1.1	2.8																							
500	30	5,830	-11.0	-29.8	27	30	18	5.872	-7.5	-25.5	23	.8	30	5,824	-9.7	-25.9	-32	2.4	30	5,835	-9.1	-22.9	3.6	2.7	30	5,848	-21.8	-31.4	16	5.7	30	5,848	-1.1	-1.1	5.7																								
450	30	5,276	-12.5	-4.3	28	30	18	5.258	-10.7	-1.7	8	.1	30	5,256	9.6	-4.5	-0.5	3.3	30	5,256	15.4	4.9	4.9	3.7	30	1,381	5.6	1.1	2.6	30	1,381	5.6	1.1	2.6																									
400	30	7,505	-23.1	-36.9	27	30	18	7,507	-19.4	-35.9	27	.4	30	7,509	-21.4	-35.4	-32	3.0	30	7,038	-1.0	-0.3	-0.3	-0.3	30	1,869	-4.7	-7.3	17	3.2	30	1,869	-1.1	-1.1	17	3.2																							
350	30	8,471	-30.6	-43.5	28	30	18	8,482	-26.6	-42.4	26	.6	30	8,483	-28.1	-41.2	-27	3.7	30	8,283	-2.3	-10.3	-10.3	-10.3	30	8,383	-3.3	-10.8	17	3.7	30	8,383	-1.1	-1.1	17	3.7																							
300	30	9,544	-39.3	-50.8	28	30	18	9,643	-35.0	-49.6	29	.1	30	9,568	-36.3	-47.4	-47.4	3.6	30	9,593	-5.2	-46.5	-46.5	-46.5	30	9,593	-9.5	-46.7	18	5.2	30	9,593	-1.1	-1.1	5.2	5.2																							
250	30	10,764	-48.3	-55.1	28	30	18	10,764	-53.9	-55.1	28	.1	30	10,764	-50.6	-55.1	-55.1	3.6	30	10,764	-5.6	-46.5	-46.5	-46.5	30	10,764	-11.2	-46.7	22	4.5	30	10,764	-1.1	-1.1	4.5	4.5																							
200	30	10,764	-24.8	-33.7	28	30	18	10,764	-24.8	-33.7	28	.1	30	10,764	-24.8	-33.7	-33.7	3.6	30	10,764	-2.7	-27.1	-27.1	-27.1	30	10,764	-11.2	-27.1</																															

RAWINSONDE DATA

Average monthly values

BAWINSONDE DATA

Average monthly values

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SALEM, IL 997 MB				SALEM, OR 1008 MB				SALT LAKE CITY, UT 872 MB				SAN DIEGO, CA 996 MB				SAN JUAN, P. R. 1013 MB						
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C			
5.5 C	30	1.7	13.7	12.7	5	.9	30	6.1	12.2	10.3	21	1.3	30	1,288	15.6	4	4	30	19.4	.6		
1,000	9	18.9	11.9	17.6	26	1.0	30	136	14.8	11.1	21	1.3	30	1,000	20.3	3	3	30	22.5	.8		
9.5	30	1.0	14.5	10.9	15.0	1.0	30	54.6	15.2	8.9	21	1.3	30	1,509	20.3	3	3	30	1,502	22.4		
90.0	30	1.1	15.6	6.6	1.6	1.5	30	1,024	14.3	5.6	22	2.0	30	3,020	18.6	-2.4	19	4.6	30	2,025	19.0	
85.0	30	1.2	15.8	13.3	8.4	2.3	30	1,505	12.5	-1.3	23	3.3	30	2,580	14.7	-5.5	22	2.4	30	1,531	17.1	
80.0	30	2.0	11.4	-0.3	3.3	2.3	30	2,013	11.1	-5.5	23	4.8	30	2,024	19.0	-2.5	19	4.6	30	2,048	14.7	
75.3	30	2.1	14.3	9.1	-8.1	3.2	2-2	30	2,546	8.2	-8.9	23	6.4	30	2,510	14.8	-5.5	22	2.4	30	2,592	12.2
70.0	30	3.0	14.3	6.3	-11.7	3.1	2-2	30	3,114	6.6	-10.1	23	7.6	30	3,158	10.1	-8.3	24	4.7	30	3,157	9.0
65.0	30	3.1	7.6	2.9	-15.3	3.2	2-2	30	3,714	1.0	-13.2	23	8.5	30	3,768	5.3	-11.2	25	5.8	30	3,764	-5.1
60.0	30	4.4	3.0	-1.2	-19.7	3.1	2-2	30	4,353	-2.9	-17.1	23	9.3	30	4,416	-0.3	-13.9	25	6.0	30	4,414	1.3
55.0	30	5.7	0.8	-5.5	-23.8	2.9	3.3	30	5,037	-7.1	-21.5	25	10.5	30	5,106	-5.3	-17.7	25	6.4	30	5,108	-2.5
50.0	30	5.8	1.1	-5.5	-28.5	2.8	4.2	30	5,773	-11.8	-25.8	24	12.2	30	5,847	-10.1	-25.5	26	7.6	30	5,858	-7.2
45.0	29	6.1	16.1	-33.1	2.8	4.9	30	6,572	-17.2	-31.6	24	13.4	30	6,651	-15.5	-31.3	26	8.1	30	6,670	-12.6	
40.0	29	7.4	4.5	-22.4	-37.7	2.7	6.1	30	7,444	-23.7	-38.2	24	15.5	30	7,529	-22.0	-37.3	26	9.5	30	7,560	-18.5
35.0	29	8.6	4.5	-29.3	-43.0	2.7	7.8	30	8,049	-30.8	-45.3	25	16.9	30	8,500	-29.6	-43.3	26	10.0	30	8,546	-25.1
30.0	29	9.5	-54	-37.6	-48.6	2.6	10.0	30	9,481	-39.5	-52.3	25	17.0	30	9,577	-38.5	-50.7	26	11.5	30	9,668	-33.3
25.0	29	10.7	0.0	-45.7	-52.9	2.6	13.4	30	10,704	-48.5	-55.6	25	17.6	30	10,800	-46.6	-57.7	26	15.5	30	10,905	-42.1
20.0	29	12.2	4.3	-52.9	-52.9	2.6	17.0	30	12,152	-54.7	-59.7	25	19.7	30	12,262	-54.2	-60.4	27	19.6	30	12,381	-52.4
17.5	29	13.0	0.9	-56.4	-56.4	2.6	18.5	30	13,003	-56.5	-59.7	25	19.4	30	13,112	-57.2	-60.4	27	19.5	30	13,234	-57.9
15.0	29	14.0	0.6	-60.3	-59.6	2.6	16.1	30	13,977	-58.6	-60.4	26	17.3	30	14,084	-60.4	-64.7	28	18.1	30	14,193	-63.8
12.5	29	15.5	1.5	-63.6	-63.6	2.6	13.0	30	15,120	-59.9	-63.7	26	15.4	30	15,208	-63.7	-67.0	28	14.7	30	15,296	-69.4
10.0	29	16.5	5.5	-65.3	-65.3	2.7	8.7	30	16,514	-59.5	-64.5	25	11.4	29	16,570	-64.5	-68.7	28	8.1	30	16,617	-71.3
9.0	28	17.1	9.9	-64.1	-28	4.1	28	17,912	-59.1	-63.4	26	7.6	29	17,935	-63.4	-67.9	28	4.4	30	17,946	-67.9	
7.0	28	18.7	7.1	-62.0	-29	3.1	28	18,752	-57.9	-60.9	26	4.4	29	18,765	-60.9	-65.1	31	2.5	30	18,755	-65.1	
6.0	28	19.6	6.9	-60.1	-33	2.1	27	19,723	-57.7	-61.9	27	2.2	29	19,721	-59.6	-65.1	35	1.4	29	19,699	-62.4	
5.0	28	20.8	8.4	-57.3	-36	1.0	25	20,874	-56.8	-58.3	31	1.1	28	20,862	-58.3	-60.4	01	1.6	29	20,835	-58.8	
4.0	28	22.2	6.3	-54.7	-34	.0	25	22,291	-56.0	-56.5	01	1.5	27	22,272	-56.5	-59.2	03	2.1	29	22,245	-56.2	
3.0	28	24.1	1.8	-51.5	.06	.6	25	24,130	-53.7	-53.1	02	2.3	26	24,114	-53.1	-53.1	03	1.0	29	24,086	-53.3	
2.5	28	25.3	8.9	-49.3	04	1.1	25	25,305	-52.6	-51.5	36	.9	28	25,294	-51.5	-51.5	09	7.4	28	25,157	-51.6	
2.0	26	26.7	4.7	-47.3	08	2.0	24	26,754	-50.6	-49.2	31	1.5	28	26,707	-49.6	-49.6	09	7.4	27	26,613	-49.5	
1.5	28	28.7	1.1	-44.6	07	2.9	21	28,636	-48.3	-46.7	33	2.5	28	28,649	-46.7	-46.7	09	7.9	24	28,505	-46.7	
1.0	31	4.4	-41.2	16	31,358	-43.1	30	4.4	2.1	18	31,359	-43.7	24	1.8	31,294	-40.1	-44.2	08	7.5	13	31,223	-42.5

RAWINSONDE DATA

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Standard pressure surface mb.	WASHINGTON DULLES INT. AP 1008 MB										WAYCROSS, GA 1008 MB										WEST PALM BEACH, FL 1013 MB										WINNEMUCCA, NV 870 MB										WINSLOW, AZ 853 MB																																		
	No. of observations					Dynamic height meters					Temperature °C					Dew Point °C + Direction tens of deg.					Resultant Wind					No. of observations					Dynamic height meters					Temperature °C					Dew Point °C + Direction tens of deg.					Resultant Wind					No. of observations					Dynamic height meters					Temperature °C					Dew Point °C + Direction tens of deg.					Resultant Wind				
	SFC	30	85	14.8	13.9	31	1.4	21.9	20.2	03	1.6	29	7	25.3	23.3	13	2.2	29	1.1	520	17.5	-1.0	05	.9	27	1,520	16.4	2.6	17	1.0	30	1,487	14.2	2.6	18	.8	30	1,487	14.2	2.6	18	.8																																	
1000	26	94	10.5	8.3	11	2.2	30	86	27.5	24.2	32	3.6	10	25.3	23.6	14	3.4	11	1.5	520	12.8	-5.3	23	2.4	30	2,037	19.4	3.3	23	2.1	30	2,588	15.6	0.0	24	1.6	30	3,169	10.9	8.7	23	4.6	30	3,782	5.9	-5.7	19	.6																											
950	30	507	9.9	5.6	14	4.0	30	540	24.0	22.2	28	5.5	10	31	29	1,039	20.2	17	6.6	15	5.8	10	25.3	23.6	14	3.4	11	1.5	520	12.8	-5.3	23	2.4	30	3,169	10.9	8.7	23	4.6	30	3,782	5.9	-5.7	19	.6																														
900	30	1,049	14.1	9.3	30	8.8	1,028	1,039	19.0	16.1	13	2.9	13	29	1,059	20.2	17	6.6	15	5.8	10	25.3	23.6	14	3.4	11	1.5	520	12.8	-5.3	23	2.4	30	3,169	10.9	8.7	23	4.6	30	3,782	5.9	-5.7	19	.6																															
850	30	1,530	12.4	3.5	28	2.5	30	1,519	16.5	12.9	16	2.5	29	1,531	17.6	13.5	16	5.1	29	1,507	17.5	-1.0	05	.9	27	1,520	16.4	2.6	17	1.0	30	2,037	19.4	3.3	23	2.1	30	2,588	15.6	0.0	24	1.6	30	3,169	10.9	8.7	23	4.6	30	3,782	5.9	-5.7	19	.6																					
800	30	2,038	10.8	7	26	3.7	30	2,034	14.1	9.4	18	2.7	29	2,049	15.3	9.0	16	4.9	29	2,024	16.5	-3.0	31	.5	27	1,520	16.4	2.6	17	1.0	30	2,037	19.4	3.3	23	2.1	30	2,588	15.6	0.0	24	1.6	30	3,169	10.9	8.7	23	4.6	30	3,782	5.9	-5.7	19	.6																					
750	30	2,575	8.9	-3.1	25	4.7	30	2,578	11.4	9.1	19	3.1	29	2,594	12.4	4.6	16	4.6	29	2,570	12.8	-5.3	23	2.4	30	2,588	15.6	0.0	24	1.6	30	3,169	10.9	8.7	23	4.6	30	3,782	5.9	-5.7	19	.6																																	
700	30	3,144	6.1	-5.7	25	6.5	30	3,152	8.6	-5.1	19	3.0	29	3,170	9.2	1.6	15	4.4	29	3,144	8.7	-8.2	23	4.6	30	3,169	10.9	8.7	23	4.6	30	3,782	5.9	-5.7	19	.6																																							
650	30	3,748	3.2	-10.6	25	3.2	30	3,762	5.0	-1.6	19	3.0	29	3,782	6.0	-2.7	16	3.9	29	3,753	4.7	-11.6	23	7.5	30	3,782	5.9	-5.7	19	.6																																													
600	30	4,393	-1.1	-15.0	25	8.6	30	4,412	1.0	-5.5	20	3.8	29	4,434	2.4	-7.3	16	3.5	29	4,399	-1	-14.8	23	8.9	30	4,393	-0.2	-7.9	16	1.8	30	4,393	-0.2	-7.9	16	1.8																																							
550	30	5,085	-9.4	-20.8	25	9.4	30	5,108	-2.4	-10.1	21	4.6	29	5,133	-1.5	-12.3	16	2.0	29	5,087	-4.9	-20.8	23	8.6	30	5,121	-5.0	-14.0	23	2.6	30	5,121	-5.0	-14.0	23	2.6																																							
500	30	5,830	-8.8	-23.6	25	11.0	30	5,860	-6.6	-14.6	21	4.6	29	5,887	-5.9	-16.2	18	1.5	29	5,832	-9.5	-27.0	24	8.7	30	5,865	-9.0	-22.5	21	1.3	30	5,865	-9.0	-22.5	21	1.3																																							
450	30	6,612	-4.2	-19.1	25	11.0	30	6,642	-11.3	-20.6	21	6.2	29	6,672	-12.6	-11.3	15	1.2	29	6,638	-14.9	-9.5	25	8.8	30	6,657	-13.8	-30.6	20	1.1	30	6,657	-13.8	-30.6	20	1.1																																							
400	30	7,521	-2.0	-20.1	25	14.6	30	7,549	-17.2	-26.1	24	6.2	29	7,580	-15.6	-26.0	20	1.5	29	7,557	-21.1	-38.0	25	9.4	30	7,557	-20.1	-36.3	20	1.4	30	7,557	-20.1	-36.3	20	1.4																																							
350	30	8,400	-2.1	-19.1	25	17.7	30	8,561	-23.9	-24.5	24	6.6	29	8,599	-22.6	-33.0	20	1.6	29	8,566	-24.4	-44.6	25	10.7	30	8,536	-27.2	-42.3	20	1.7	30	8,536	-27.2	-42.3	20	1.7																																							
300	30	9,591	-3.9	-46.7	25	20.4	30	9,665	-32.1	-43.0	24	10.2	29	9,708	-30.9	-41.1	10	4.6	29	9,567	-38.2	-51.3	23	12.9	30	9,626	-35.2	-49.4	29	11.6	30	9,626	-35.2	-49.4	29	11.6																																							
250	30	10,878	-44.1	-46.7	25	21.1	30	10,926	-42.0	-51.8	24	12.6	29	10,975	-41.1	-50.3	36	3.6	29	10,798	-46.5	-56.5	26	20.3	30	10,874	-43.6	-56.5	29	16.2	30	10,874	-43.6	-56.5	29	16.2																																							
200	30	12,375	-4.0	-19.9	26	26.3	30	12,399	-51.3	-59.9	25	13.7	29	12,452	-53.4	-60.0	30	3.3	29	12,299	-51.3	-57.4	26	20.7	30	13,195	-58.0	-68.0	29	18.5	30	13,195	-58.0	-68.0	29	18.5																																							
175	30	13,156	-57.6	26	25.1	29	13,297	-59.9	-60.0	25	13.2	29	13,299	-60.0	-60.0	33	5.3	29	13,101	-57.4	-60.0	26	20.7	30	12,344	-53.0	-68.1	29	19.5	30	12,344	-53.0	-68.1	29	19.5																																								
150	30	14,118	-62.2	26	21.3	29	14,198	-65.5	-66.5	26	10.3	29	14,245	-66.5	-66.5	36	4.6	29	14,068	-60.4	-60.4	26	18.8	30	14,154	-61.2	-68.2	29	17.2	30	14,154	-61.2	-68.2	29	17.2																																								
125	30	15,233	-66.1	26	16.9	29	15,290	-71.6	-71.6	27	6.9	29	15,333	-72.3	-72.3	32	4.6	29	15,195	-63.6	-63.6	26	15.9	30	15,263	-68.1	-68.1	29	11.9	30	15,263	-68.1	-68.1	29	11.9																																								
100	30	16,584	-66.2	27	10.4	29	16,602	-72.1	-72.1	26	1.1	29	16,639	-73.4	-73.4	36	5.3	29	16,561	-64.4	-64.4	26	9.7	30	16,593	-69.9	-69.9	29	6.2	30	16,593	-69.9	-69.9	29	6.2																																								
80	30	17,794	-63.6	28	6.8	29	17,925	-68.4	-68.4	07	3.3	29	17,956	-68.8	-68.8	36	5.8	29	17,931	-62.9	-62.9	27	3.7	30	17,927	-67.5	-67.5	32	2.1	30	18,738	-64.4	-64.4	05	1.7																																								
70	30	18,767	-61.8	29	3.9	29	18,735	-64.2	-64.2	08	4.3	29	18,764	-64.8	-64.8	36	6.7	29	18,758	-61.2	-61.2	28	2.1	30	18,738	-64.4	-64.4	05	1.7	30	18,738	-64.4	-64.4	05	1.7																																								
60	30	19,549	-9.2	-16.4	17	4.7	30	19,684	6.9	-7.0	07	3.6	29	19,710	-62.4	-62.4	36	8.7	29	19,719	-59.5	-59.5	35	1.2	30	19,687	-61.6	-61.6	07	2.6	30	20,825	-59.0	-59.0	08	3.0																																							
50	30	4,185	-12.3	-19.8	18	5.2	30	4,420	3.2	-4.1	07	4.1	29	4,600	0	6.0	07	6.0	29	4,587	-58.2	-58.2	04	1.8	30	4,393	-58.2	-58.2	04	1.8	30	4,393	-58.2	-58.2	04	1.8																																							
550	30	4,824	-16.5	-25.6	19	5.8	30	5,122	-4.1	-9.6	09	3.1	29	5,122	-4.1	-9.6	09	3.1	29	5,087	-4.7	-14.1	09	2.7	30	5,087	-4.7	-14.1	09	2.7																																													
500	30	5,535	-21.3	-32.0	19	6.0	30	5,879	-4.7	-14.1	09	3.1	29	5,879	-4.7	-14.1	09	3.1	29	5,830	-4.7	-14.1	09	2.7	30	5,830	-4.7	-14.1	09	2.7																																													
450	30	6,373	-26.9	-36.9	20	5.9	30	6,701	-9.4	-18.7	08	2.8	29	6,701	-9.4	-18.7	08	2.8	29	6,657	-9.4	-18.7	08	2.8	30	6,657	-9.4	-18.7	08	2.8																																													
400	30	7,142	-33.1	-42.1	21	7.3	30	7,603	-15.0	-25.7	10	2.7	29	7,603	-15.0	-25.7	10	2.7	29	7,557	-15.0	-25.7	10	2.7	30	7,557	-15.0	-25.7	10	2.7																																													
350	30	8,071	-39.8	-46.0	21	8.7	30	8,603	-21.																																																																		

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

SEPTEMBER 1979

Date	Sun's zenith distance								Date	Sun's zenith distance										
	A.M.				•	P.M.				A.M.				•	P.M.					
	78°*	75°*	70°*	60°*		60°*	70°*	75°*		60°*	70°*	75°*	78°*		60°*	70°*	75°*	78°*		
MAUNA LOA OBSERVATORY, HI																				
Air mass																				
	3.34	2.67	2.01	1.34	*	1.34	2.01	2.67	3.34		4.64	3.71	2.78	1.86	*	1.86	2.78	3.71	4.64	
1-----	1.21	1.27	1.36	1.46	1.56	1.42	1.31	1.22	1.14	1-----	.68	.78	.92	----	1.24	1.06	.90	.73	.64	
2-----	1.18	1.25	1.33	1.45	1.58	1.42	1.31	1.22	1.16	2-----	—	.84	1.06	—	1.08	.91	.77	.66		
3-----	1.17	1.25	1.32	1.44	—	—	—	—	—	3-----	.51	.64	.80	.99	.92	.74	.59	.50		
4-----	1.16	1.29	1.26	1.42	—	—	—	—	—	4-----	.71	.81	.98	1.16	1.41	1.22	1.04	.91	.80	
5-----	1.18	1.26	1.34	1.45	1.55	1.44	1.33	1.22	1.16	5-----	.68	.79	.90	1.07	1.31	1.12	.92	.81	.67	
6-----	1.22	1.20	1.31	1.44	1.59	1.42	1.31	1.30	1.16	6-----	.63	.73	.87	1.03	1.27	.86	.65	.59	.59	
8-----	1.17	1.24	1.30	1.44	1.52	—	—	—	—	7-----	.71	.82	.97	1.14	1.40	1.15	.97	.84	.74	
9-----	1.15	1.21	1.31	1.41	—	—	—	—	—	8-----	.80	.90	1.03	1.21	1.38	1.15	.96	.84	.76	
10-----	1.18	1.26	1.34	1.45	1.55	—	—	—	—	9-----	.85	.95	1.04	1.17	1.38	1.18	.98	.85	.71	
11-----	1.16	1.23	1.34	1.45	1.55	—	—	—	—	10-----	.71	.80	.93	1.09	1.30	—	—	.70	.57	
12-----	1.18	1.26	1.35	1.45	1.57	—	—	—	—	11-----	.58	.67	.82	.99	1.21	.85	.69	.57	—	
13-----	1.21	1.30	1.37	1.49	1.60	1.49	1.37	1.30	1.20	12-----	—	—	—	—	1.17	.95	.73	.60	.47	
14-----	1.21	1.28	1.36	1.47	1.59	1.46	1.35	1.27	1.18	13-----	—	.60	.71	—	1.17	.87	—	—	—	
15-----	1.18	1.25	1.35	1.46	1.56	1.46	1.37	1.30	1.21	14-----	—	—	.71	—	1.17	.94	.74	.61	—	
16-----	1.22	1.30	1.40	1.51	—	—	—	—	—	15-----	.56	.66	.79	.98	1.16	—	—	—	—	
17-----	1.21	1.29	1.37	1.48	—	—	—	—	—	16-----	—	—	—	1.11	1.27	1.11	.96	.83	.74	
18-----	1.23	1.30	1.36	1.46	1.55	—	—	—	—	17-----	.88	.98	1.09	1.25	1.38	1.14	.96	.83	.72	
19-----	1.13	1.23	1.32	1.43	1.55	—	—	—	—	18-----	.77	.87	.98	1.14	—	1.10	.88	—	.65	
20-----	1.17	1.24	1.33	1.43	1.55	1.39	1.29	1.18	1.10	19-----	.79	.89	1.02	1.19	1.37	1.16	.97	.81	.72	
26-----	1.18	1.27	1.35	1.46	—	—	—	—	—	20-----	.78	.88	.99	1.17	1.36	1.10	—	—	.64	
Aver-	ages	1.18	1.26	1.34	1.45	1.56	1.44	1.33	1.25	1.16	21-----	.69	.78	.90	1.09	1.24	.94	.83	.70	.58
22-----	—	—	—	—	—	—	—	—	—	22-----	—	—	—	1.13	.82	—	—	.41	—	
23-----	—	—	—	—	—	—	—	—	—	23-----	.55	.66	.80	1.02	1.17	.89	.65	—	—	
24-----	—	—	—	—	—	—	—	—	—	24-----	.65	.74	.80	1.08	—	1.04	.86	—	.60	
25-----	—	—	—	—	—	—	—	—	—	25-----	.83	.93	1.04	1.22	1.37	1.16	.95	.83	.70	
26-----	—	—	—	—	—	—	—	—	—	26-----	.75	.85	.97	—	1.24	—	—	—	—	
27-----	—	—	—	—	—	—	—	—	—	27-----	—	—	—	—	—	.91	—	—	—	
29-----	—	—	—	—	—	—	—	—	—	29-----	.56	.66	.80	—	1.20	—	—	—	—	
Aver-	ages	—	—	—	—	—	—	—	—	—	—	.70	.79	.90	1.11	1.27	1.04	.88	.75	.64

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

Date, . . .	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langley, . . .	94	78	115	55	82	106	77	95	66	96	59	93	1	-2	-7	-1	5	11	-11	7	9	-3	-17	11	6	-8	3	-30	3	33		

REF E R E N C E N O T E S

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES: Dates in the table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

- + And also on an earlier date or dates.
- D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch of water equivalent to every 10 inches of snow-fall.

CLIMATOLOGICAL DATA - METRIC UNITS: Data from airport unless otherwise specified.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

- B Number of days maximum 21.1°C. or above for Alaskan Stations.
- Y Peak Gust.
- + And also on an earlier date or dates.
- U Indicates Urban site.
- R Indicates Rural site.
- Ø Station pressures apply to elevations shown in the "Elevations" table of the annual issue of this publication.

Conversion formulae to English Units are as follows:

$$\begin{aligned} 1 \text{ foot} &= 0.3048 \text{ meters} \\ {}^{\circ}\text{F.} &= \frac{9}{5} \times {}^{\circ}\text{C} + 32 \\ 1 \text{ inch} &= 25.4 \text{ millimeters} \\ 1 \text{ mile per hour} &= 0.447 \text{ meters per second} \end{aligned}$$

HEATING DEGREE DAYS: Data from airport unless otherwise specified.

- U Indicates Urban site.
- R Indicates Rural site.

COOLING DEGREE DAYS: Data from airport unless otherwise specified.

- U Indicates Urban site.
- R Indicates Rural site.

STORM SUMMARY:

- o Includes crop damage.
- C Crop damage.
- * No occurrence of storms or unusual weather phenomena reported.
- @ Includes heavy sleet storm.
- # Freezing drizzle and freezing rain, commonly known as glaze.
- Ø For breakdown of "All Others," and for detailed listing of other storms, see the Environmental Data and Information Service, NOAA, monthly publication STORM DATA.
- † No Storm Data Report received for this State.
- ◇ Report incomplete.
- † Storm damages are placed in categories varying from 1 to 9 as follows:
 - 1 Less than \$50
 - 2 \$50 to \$500
 - 3 \$500 to \$5,000
 - 4 \$5,000 to \$50,000
 - 5 \$50,000 to \$500,000
 - 6 \$500,000 to \$5 Million
 - 7 \$5 Million to \$50 Million
 - 8 \$50 Million to \$500 Million
 - 9 \$500 Million to \$5 Billion

RAWINSONDE DATA (Average Monthly Values):

All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 60° above the horizon, or any obstruction above the horizon. The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygrometers. These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

- * Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.
- + Observations for these stations are scheduled at 0000 G.C.T.
- + Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

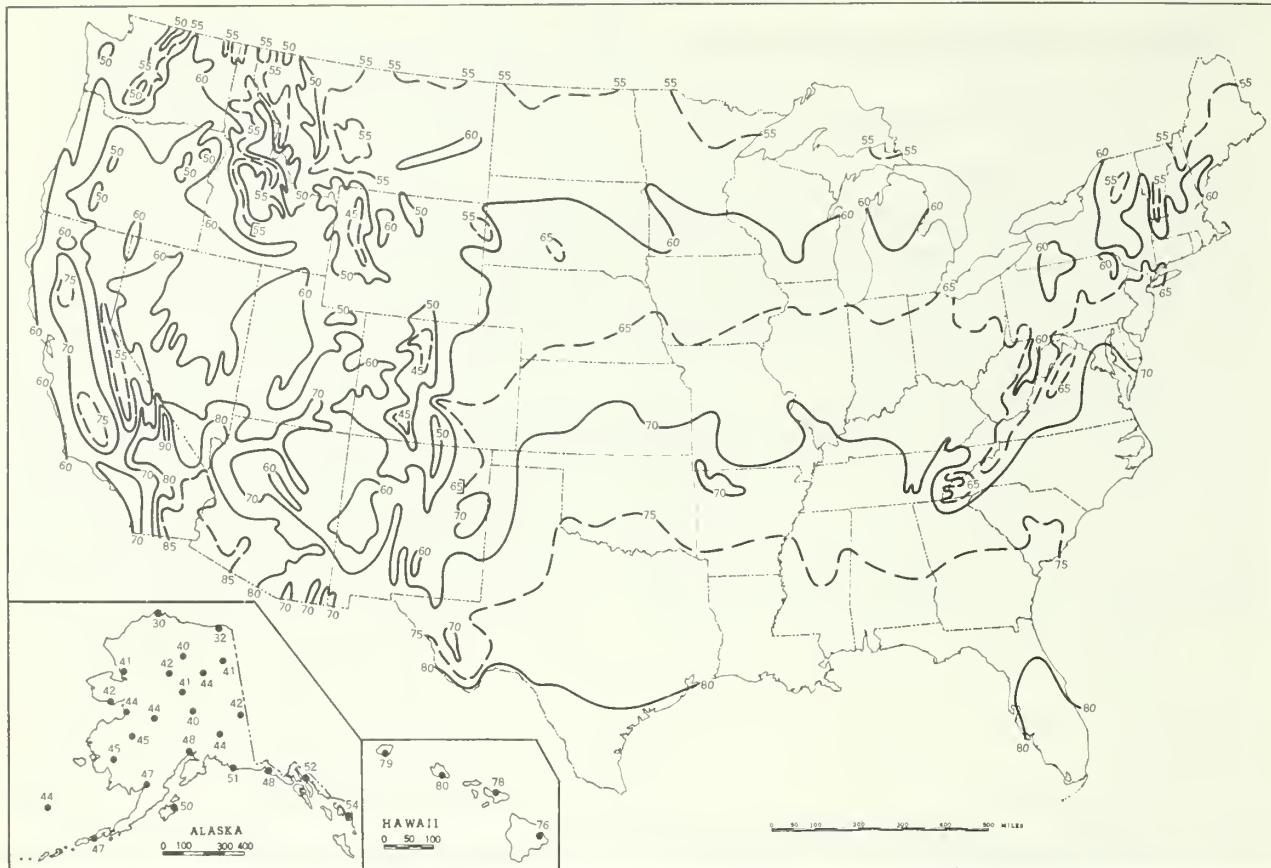
SOLAR RADIATION INTENSITIES: Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

()	Clouds Present	DM	Moderate Dust	HM	Moderate Haze	KS	Slight Smoke
*	Values corresponding to true solar noon	DS	Slight Dust	HS	Slight Haze	M	Moderate Haze-indeterminate
BD	Blowing Dust	F	Fog	I	Intense Haze-indeterminable		minable
BN	Blowing Sand	GF	Ground Fog	K	Smoke	N	Sand
D	Dust	H	Haze	KI	Intense Smoke	S	Slight Haze-indeterminate
D1	Intense Dust	HI	Intense Haze	RM	Moderate Smoke		minable

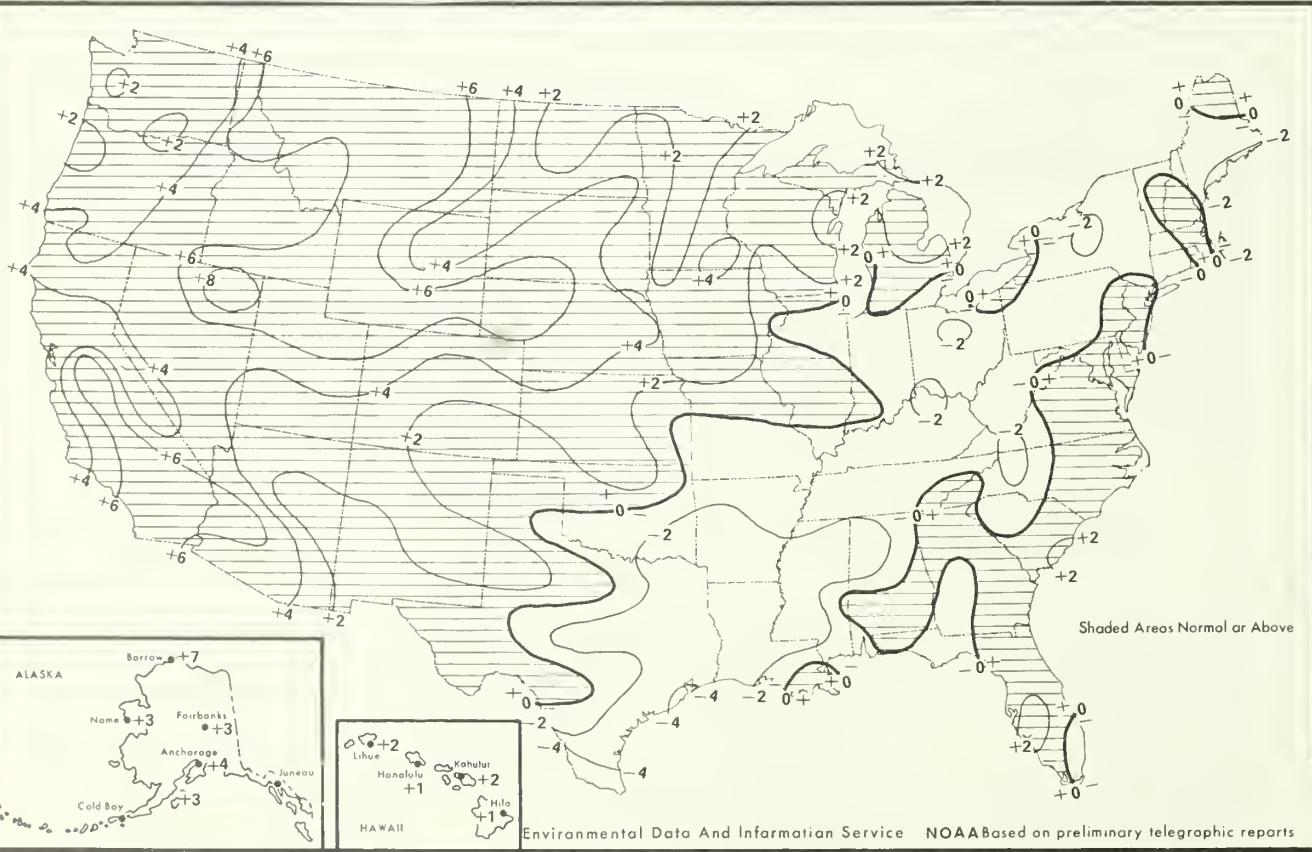
NET RADIATION: The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

Chart 1. A. Normal Daily Average Temperature (°F. 1941-70), September.

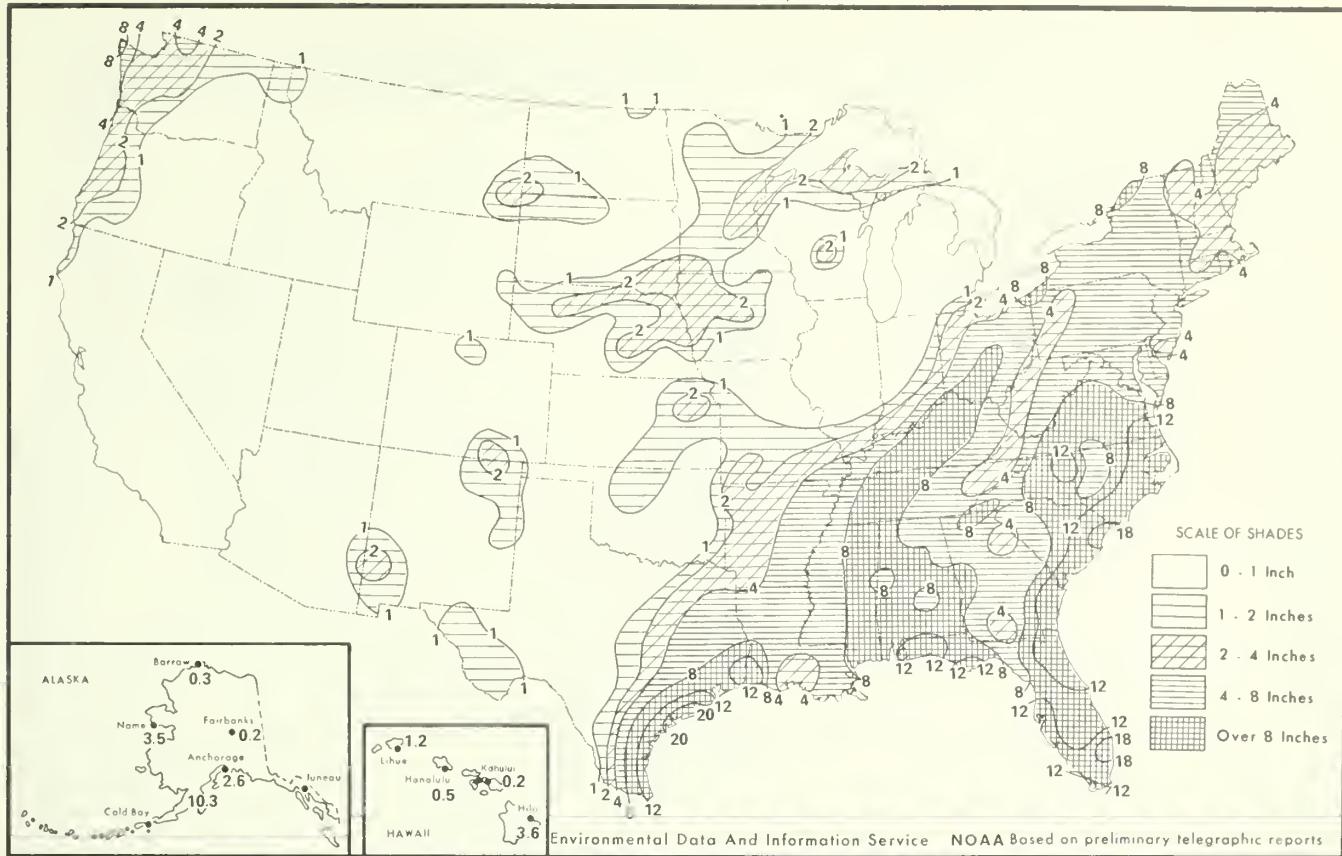


B. Temperature Departure from 30 - Year Mean (°F 1941-70), September 1979



Environmental Data And Information Service NOAA Based on preliminary telegraphic reports

Chart II. A. Total Precipitation (Inches), September 1979



B. Percentage of Normal Precipitation, September 1979

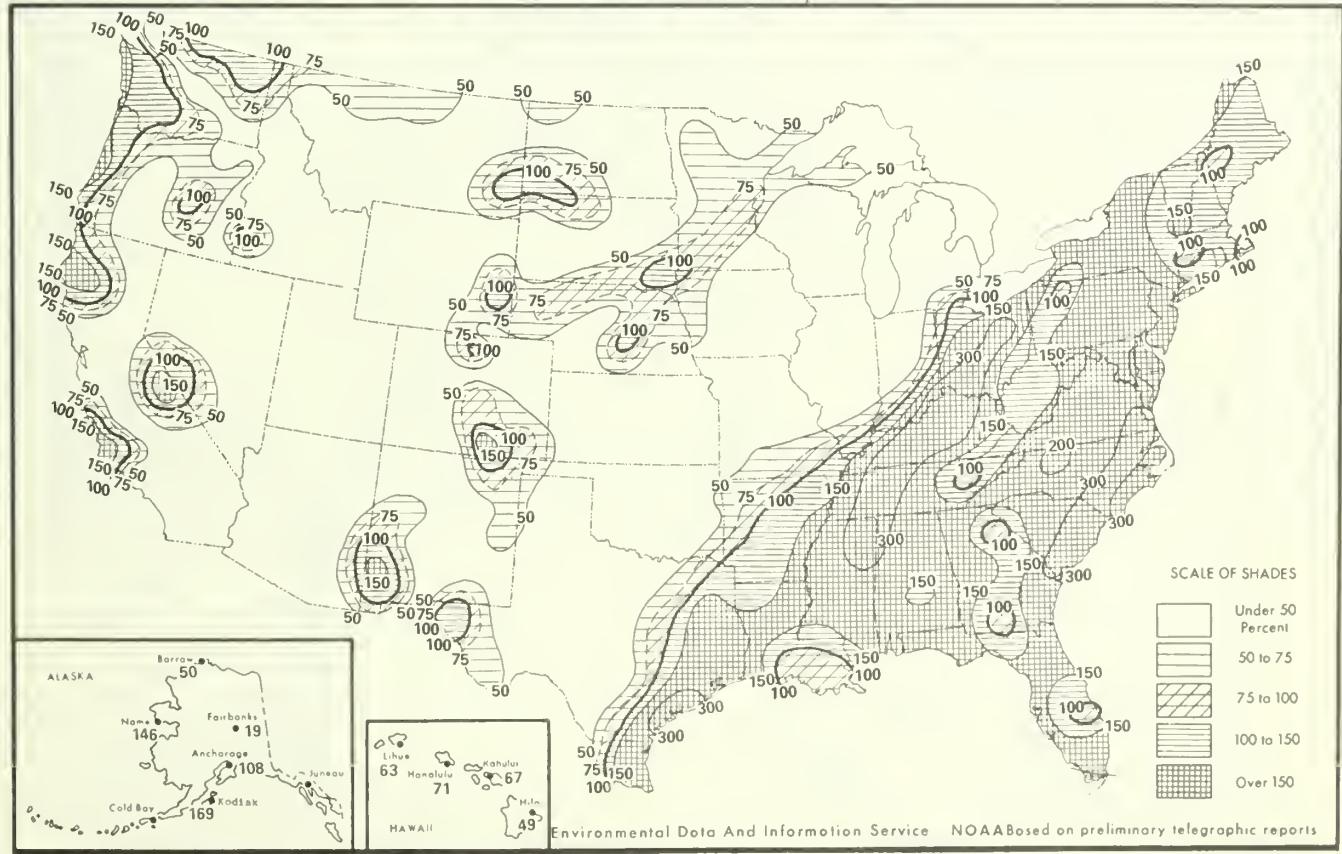
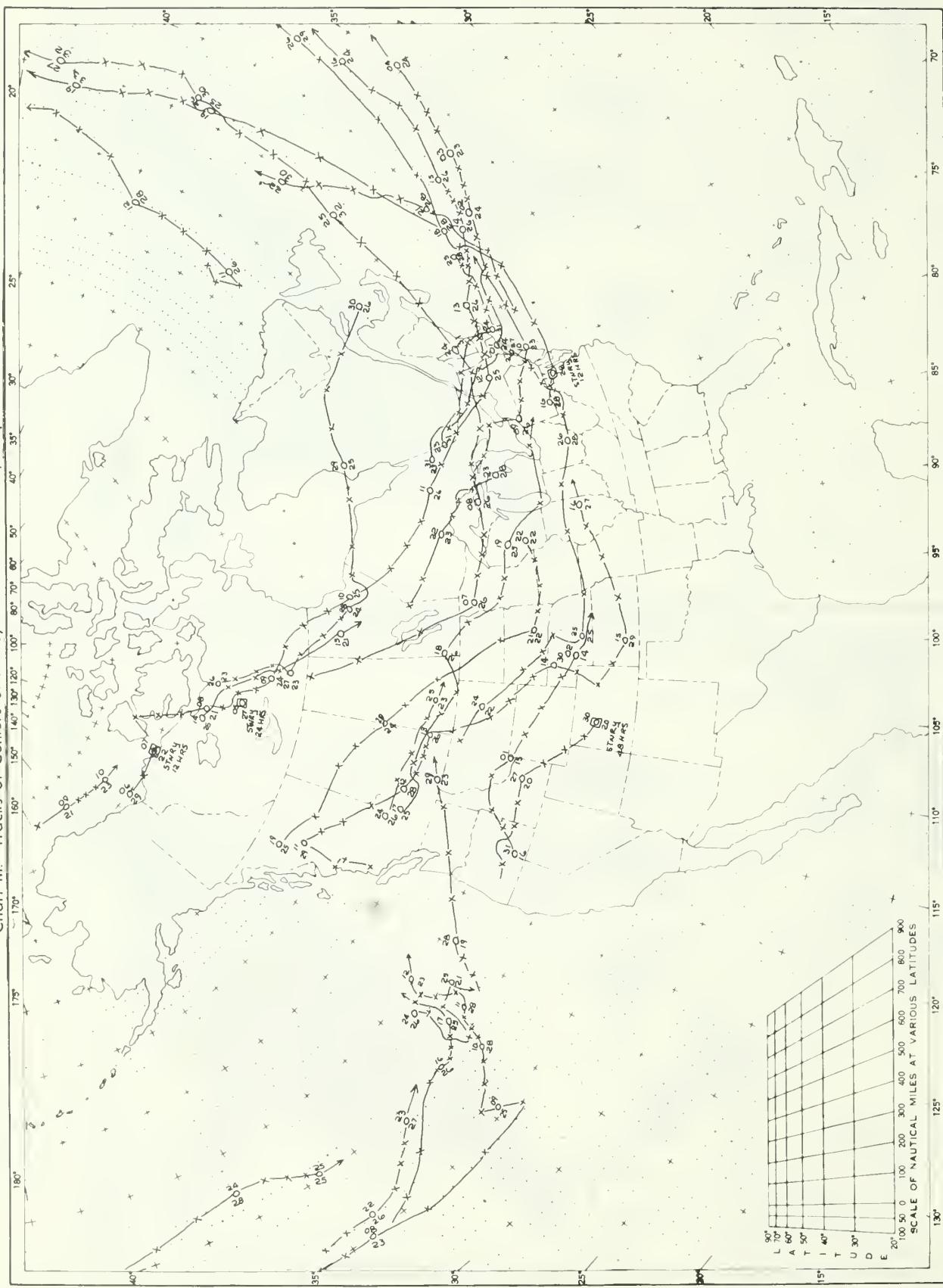
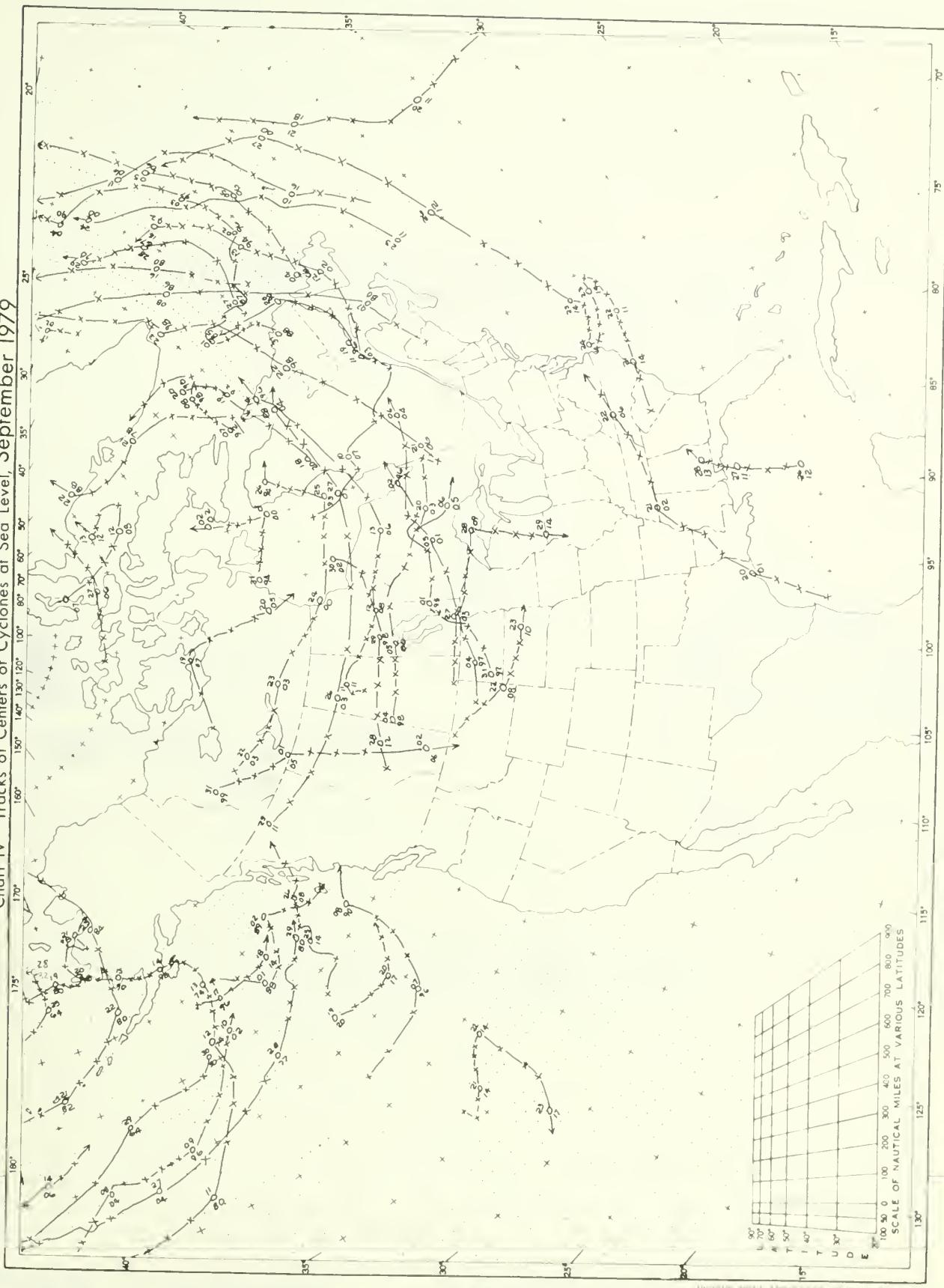


Chart III. Tracks of Centers of Anticyclones at Sea Level, September 1979



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IV Tracks of Centers of Cyclones at Sea Level, September 1979



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track
 indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

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OCTOBER 1979

VOLUME 30

NUMBER 10

CLIMATOLOGICAL DATA

NATIONAL SUMMARY



"I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF
THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRA-
TION AND IS COMPILED FROM INFORMATION RECEIVED AT
THE NATIONAL CLIMATIC CENTER, ASHEVILLE, NORTH
CAROLINA 28801."

Daniel B. Mitchell

DIRECTOR
NATIONAL CLIMATIC CENTER

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

OCTOBER 1979

GENERAL SUMMARY OF WEATHER CONDITIONS

Lyle Denny, Climatologist
Environmental Data and Information Service, NOAA

HIGHLIGHTS: Early in October, rain was generally confined to the eastern United States. The already too wet mid-Atlantic States and eastern New England continued to accumulate surplus moisture. By the end of October, nearly twice the normal amount of rain had fallen.

Seasonal precipitation began in the West at mid-month. Rain or snow in some amount fell nearly everywhere in the West. Well above normal amounts were recorded in all but the Southwest. Near the end of the month, a severe storm brought blizzard conditions to the western Plains and heavy rain to the eastern Plains. Goodland, KS, measured a record 17.6 inches of snow during October.

Average temperatures for the month were above normal in the West and colder than normal in the East.

Rainfall was confined to the area from the eastern Plains to the east Coast in the first week of October. The area of heaviest rain extended from the New England Coast into central Virginia where more than 2 inches were recorded. Moderate rain fell in the Great Lakes area and from the central Mississippi Delta through South Carolina. Average temperatures for the week were very warm in the west and generally cool in the east except for New England.

Rainfall was generally sparse over the Nation for the week of the 8th-14th, except in West Virginia, Virginia, and Maryland. A freak snowstorm hit the western portion of this area and deposited as much as a foot of snow in some parts. Fully foliated trees toppled under the unusual weight. Temperatures warmed west of the Rockies and got colder in the east. The freeze line plunged as far south as Tennessee in the Mississippi River Valley. Average temperatures for the week ranged from 9 to 12° colder than normal in the upper Mississippi Valley.

Seasonal rains began in the west during the week of the 15th-21st. Heavy amounts accumulated in the coastal area of the Pacific Northwest, and lesser amounts fell through the entire west. Snow fell on the higher elevations. Elsewhere, moderate to heavy rain fell from north central Texas to the western Lakes area. The winter grain area in the central Plains got some much-needed rain, but the western portion needed more. Average temperatures for the week were near normal in most of the west but well above normal in the east.

Rain continued in the northwest during the week of the 22d-28th. The coastal area from northern California through Washington recorded heavy amounts. The southwest, most of the Rockies, and the western Plains had little or no precipitation. A series of low pressure centers deepened in the western Great Lakes area and moved northeastward. Lines of weather from the low centers southward brought rain to most of the east. Heavy snow blanketed northern Michigan. One to 2 inches of rain fell in Iowa, and severe weather, with several tornadoes, moved through the lower Mississippi Valley. Cold air moved into the east and plunged temperatures. Average temperatures for the week in parts of the Midwest were about 6° colder than normal.

The last days of the month, the 29th-31st, brought some significant weather. A severe autumn storm formed in the southern Rockies and moved northeastward and eastward. Blizzard conditions ensued throughout the western Plains. Heavy snow and winds to 60 mph stressed livestock in the southwestern Plains. Heavy rain through the winter grain area brought soil moisture levels up. Cold weather moved in behind the storm and some record cold temperatures were noted.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

OCTOBER 1979

STATE	Temperature						Precipitation					
	Monthly extremes						Monthly extremes					
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least		
		°F			°F			In.			In.	
Alabama	Chatom 4 N	91	2	Hamilton 3 S	28	25+	Coden	7.79	Newton	.20		
Alaska	3 Stations	64	2+	Calbraith	-31	29	Pelican	32.91	Tok	.04		
Arizona	Cila Bend	108	4+	Hawley Lake	-8	31	Bright Angel Ranger Station	2.60	18 Stations	.00		
Arkansas	3 Stations	95	12+	Bentonville	25	11+	De Queen	6.41	Saint Francis	1.50		
California	3 Stations	106	6+	White Mountain 2	2	29	Occidental	14.91	11 Stations	.00		
Colorado	John Martin Dam	98	8	Independence Pass 5 SW	-10	31	Wolf Creek Pass 1 E	7.58	Saguache	.13		
Connecticut	Bulls Bridge Dam	87	22	Falls Village	21	31	Weat Hartford	7.55	Brooklyn	2.58		
Delaware	Middletown 1 WSW	86	21	3 Stations	30	27+	Dover	5.20	Lewes 1 SW	3.01		
Florida	Mountain Lake	95	22	Fountain 3 SSE	31	26	Fort Lauderdale	7.91	2 Stations	.00		
Georgia	2 Stations	91	34	Blairsville Exp Station	25	27+	Winder 1 SSE	4.98	Plains SW GA Exp Station	.04		
Hawaii	Puukohola Heiau 98.1	95	27	Mauna Kea Obs 111.2	20	3	Kukui 380	24.00	Campbell Ind Pk 702.5	.13		
Idaho	Lucile	93	5	Tetonics Exp Station	4	30	Pierce	4.12	Gibbonsville	.16		
Illinois	3 Stations	90	9+	2 Stations	19	26	Peotone	4.64	Piper City 3 SE	.77		
Indiana	Crane Naval Depot	90	1	Rockville	20	27	La Porte	4.88	Edwardsport Power Plant	1.02		
Iowa	Sidney	88	20	Corning	15	14+	Onawa	6.96	Fort Madison	1.98		
Kansas	Kingman	100	8	2 Stations	22	13	Hutchinson Exp Field	11.52	Wellington 2 S	1.01		
Kentucky	3 Stations	88	23+	5 Stations	24	28+	Frenchburg 2 W	4.01	Lovelandville	1.17		
Louisiana	6 Stations	94	2+	4 Stations	35	25+	Vinton	9.32	Saint Bernard	.52		
Maine	3 Stations	85	23+	2 Stations	16	18+	West Rockport 1 NNW	8.16	Caribou WSO AP	1.68		
Maryland	2 Stations	88	22+	Oakland 1 SE	15	27	Damascus 2 SW	8.64	Asaateague State Park	2.13		
Massachusetts	Chester 2	91	22	Chester 2	15	27	New Salem	8.66	Boston WSO AP	3.14		
Michigan	Washington 2 NNW	84	1	Ironwood	12	26	Chatham Exp Farm	7.95	Port Huron	1.08		
Minnesota	Browns Valley	84	1	3 Stations	9	26+	Beaver	6.44	Caribou 2 S	.63		
Mississippi	5 Stations	92	21+	2 Stations	29	14	Leakesville	5.45	Gholson 8 W	.42		
Missouri	Appleton City	95	8	Berryman 6 NW	18	14	Bolivar 1 NE	8.01	Zalma 4 E	.79		
Montana	6 Stations	89	10+	West Yellowstone	1	31	Hungry Horse Dam	3.04	Moccasin Exp Station	.07		
Nebraska	2 Stations	93	3	Atkinson	12	13	Lyons	6.96	Stockville	.70		
Nevada	Sunrise Manr Las Vegas	103	7	Rand Ranch Palisade	9	30	Metropolis	3.43	10 Stations	.00		
New Hampshire	3 Stations	86	22	Mount Washington	8	27	South Lyndeboro	6.80	Jefferson 4 S	2.10		
New Jersey	3 Stations	88	23+	Long Valley	22	27	Pottersville 2 NNW	6.40	Atlantic City	2.07		
New Mexico	2 Stations	99	8+	Wolf Canyon	6	31	San Jon	2.21	25 Stations	.00		
New York	New York Laurel Hill	90	22	2 Stations	19	31+	Hooker 4 N	7.64	Ticonderoga 3 NE	1.53		
North Carolina	Louisburg	89	2	Henderson 2 NNW	20	28+	Casar	6.23	Wilmington WSO AP	.38		
North Dakota	Wilton	86	1	5 Stations	9	13	Fargo WSO AP	2.60	2 Stations	.06		
Ohio	Newark Waterworks	87	22	3 Stations	18	27+	Chardon	6.45	Akron	1.03		
Oklahoma	Walters	103	8	Boise City 2 E	24	30	Broke Bow 1 N	6.36	Grandfield	.24		
Oregon	Lost Creek Dam	98	4	2 Stations	13	31+	Otis 2 NE	13.47	Drewsey	.17		
Pennsylvania	Phoenixville 1 E	90	23	Slippery Rock 1 SSW	15	27	York 3 SSW Pump Station	7.60	Weedville 1 N	1.52		
Puerto Rico	Magueyes Island	106	25	Adjuntas Substation	51	31	Coloso	15.77	2 Stations	1.17		
Rhode Island	Providence WSO AP	86	22	Kingston	24	27	Kingston	4.63	Woonsocket	3.21		
South Carolina	Sandhill Exp Station	92	1	Longcreek	27	14	Hogback Mountain	4.90	Little Mountain	.22		
South Dakota	2 Stations	92	7+	2 Stations	9	13	Bonesteel	4.25	Maurine 10 SW	.15		
Tennessee	2 Stations	89	22+	Tazewell	23	27	Monterey	6.55	Dresden	1.60		
Texas	2 Stations	106	3+	Dell City 5 SSW	23	31	Port Arthur WSO AP	6.62	54 Stations	.00		
Utah	La Verkin	96	1	Uintalands	4	31	Alta	5.16	Boulder	.00		
Vermont	4 Stations	84	23+	Mount Mansfield	16	27	Mount Mansfield	5.70	Bristol 5 NNW	1.31		
Virginia	Charlotte Court House	88	23	Monterey	16	27	Sterling (RCS)	10.58	Williamsburg 2 N	1.57		
Virgin Islands	Truman Field FAA AP	94	22	2 Stations	67	23+	Fountain	6.62	Laueshr Bay	1.25		
Washington	Glennoma 1 W	91	4	2 Stations	20	31	Spruce	13.08	Smyrna	.58		
West Virginia	3 Stations	88	22+	Seneca State Forest	10	27	Thomas	8.12	New Cumberland	1.83		
Wisconsin	Arboretum-Univ of WI	82	22	3 Stations	12	26	Owen	7.47	Burlington	1.56		
Wyoming	Whalen Dam	89	8	Old Faithful	- 6	30	Seminole Dam	2.69	Thermopolis 25 WNW	.04		

CLIMATOLOGICAL DATA
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State and Station	Pressure				Temperature				Precipitation				Wind						
	Elevation (ground)		Sea Level		Average maximum		Average minimum		Depature from normal		Depature from normal		No. of days		No. of days				
	ft	mb	mb	mb	°C	°C	°C	°C	°C	°C	°C	mm	mm	mm	mm	mm			
COLORADO					19.0	7.6	0.9	27.2	7	-13.3	22	0	27	1	2.1	1			
ALBUQUERQUE	2297	1014.6	1014.6	1014.6	18.6	10.9	0.7	30.0	7	-7.8	31	0	14	0	16.1	33			
COLORADO SPRINGS	1873	1013.4	1013.4	1013.4	19.8	12.1	1.0	29.0	7	-5.0	31	0	14	1	10.3	10			
DENVER	1610	1014.2	1014.2	1014.2	22.4	7.5	14.9	2.5	29.4	-6.7	31	0	14	1	10.5	10			
GARFIELD JUNCTION	1476	1014.7	1014.7	1014.7	22.9	12.9	0.4	33.3	7	-3.9	31	2	17	1	12	12			
PUEBLO	1429																		
CONNECTICUT																			
ANAGRAF PORT	2	1014.6	1015.1	1015.4	8.1	11.6	-2.0	27.9	22	U+0.27	0	1	6.1	70	20	1.6	33		
HARTFORD	52	1014.5	1014.5	1014.5	15.5	5.3	10.4	-1.1	29.4	-2.6	31	0	8	5.0	72	55	1.2	33	
WILMINGTON	23	1017.2	1016.2	1016.2	13.0	7.5	12.6	-1.2	27.8	21	0.6	26	0	7.2	71	68	1.2	22	
DIST. OF COLUMBIA																			
WASHINGTON DULLES	68	1014.4	1016.7	1016.9	6.1	12.6	-0.7	30.0	21	-4.4	27	0	4	7.2	74	220	1.1	29	
WASHINGTON NATIONAL	3	1013.9	1016.3	1014.4	19.4	10.1	14.8	-0.7	28.9	22	2.2	21	0	10.0	77	141	42	7	
FLORIDA																			
APALACHICOLA	6	1015.6	1016.7	1016.7	26.4	14.7	20.6	-0.9	30.0	2	8.9	25	0	15.0	74	10	-6.3	3	
DAYTONA BEACH	9	1014.6	1016.5	1016.5	27.7	17.7	22.7	0.5	31.1	4	12.6	26	0	7.0	76	86	5	31	
FOOT MYERS	5	1015.6	1016.7	1016.7	26.7	14.2	20.7	-0.7	30.6	4	16.1	26	0	19.4	72	10	-10.9	18	
JACKSONVILLE	8	1015.6	1016.7	1016.7	27.2	14.2	20.7	-0.7	27.8	0	24.6	28	0	16.1	80	128	9	14	
KEY WEST	1	1013.2	1013.5	1013.5	24.9	7.2	14.9	0.7	23.7	12	20.6	25	0	13.7	72	10.7	10.7	10	
MIAMI	2	1011.8	1014.4	1014.4	28.7	22.0	25.5	0.1	31.1	25	18.3	8	0	20.6	76	13	1.5	30	
ORLANDO/M.C. COY AFB	2.9	1011.9	1015.6	1015.6	27.6	14.6	20.8	-0.3	31.2	3	12.8	25	0	14.4	70	14	-6.5	15	
PENSACOLA	3.4	1011.9	1016.3	1016.3	27.1	14.1	20.8	-0.3	31.7	2	7.2	25	0	19.1	72	13	1.5	26	
TALLAHASSEE	1.7	1011.9	1016.1	1016.1	27.0	11.1	19.1	-1.7	31.7	2	12.7	25	0	19.0	74	9	-6.6	9	
TAMPA	6	1011.6	1015.6	1015.6	28.7	14.0	0.3	30.6	22	12.2	26	0	18.3	72	4	-6.0	13		
WEST PALM BEACH	5	1014.2	1014.8	1014.8	29.4	21.2	25.3	0.2	32.2	11	17.2	28	1	20.6	77	121	69	15	
GEORGIA																			
ATLANTA	24.4	987.5	1016.4	1016.4	23.1	9.8	16.5	-0.5	27.8	21	3.9	27	0	10.0	70	65	5	40	
ATLANTA	30.8	980.0	1016.7	1016.7	24.9	10.8	16.9	-0.9	28.1	21	3.3	24	0	10.6	71	55	10	40	
ATLANTA	4.1	1011.2	1016.5	1016.5	24.7	9.8	16.9	-0.9	30.6	2	23.7	28	0	14.1	76	11.6	8	33	
COLUMBUS	13.6	1020.7	1016.7	1016.7	25.8	11.9	18.9	-0.3	30.0	21	6.1	25	0	14.2	73	11.6	11	32	
VALENCIA	1.9	1020.7	1016.5	1016.5	26.1	14.7	18.4	-0.3	30.4	21	2.8	27	0	14.1	72	10.7	11	32	
SAVANNAH	1.4	1015.6	1017.2	1017.2	25.0	13.4	19.7	0.2	30.6	2	6.1	27	0	12.8	69	11	-54	4	
HAWAII	3	1014.2	1015.4	1015.4	28.9	20.1	24.5	0.6	32.8	6	18.3	27	1	20.6	81	120	-151	24	
HONOLULU	2	1011.6	1014.6	1014.6	31.1	23.3	27.2	1.2	33.3	11	19.4	24	1	20.6	68	13	-25	14	
MĀHALI	1.5	1011.2	1014.6	1014.6	31.3	22.5	26.9	1.6	33.3	11	16.7	24	1	20.6	68	13	-16	14	
LĪHUʻE	31	1011.2	1015.3	1015.3	29.0	22.5	0.7	31.7	7	19.0	23	0	21.7	80	95	-2	22	0	
IDAHO																			
BUTTE	665	916.0	1016.1	1016.1	19.4	5.4	12.4	1.3	28.3	8	-2.8	30	0	1.1	51	18	0	0	
LEWISTON	431	1016.2	1017.2	1017.2	19.1	7.5	13.3	2.3	28.3	6	1.7	31	0	4.0	50	40	0	0	
POCATELLO	1358	964.2	1017.2	1017.2	19.0	2.2	10.6	1.5	31.1	7	-5.0	30	0	7	-1.1	50	20	1	
ILLINOIS																			
CAIRO U	96	987.5	1011.6	1011.6	22.5	11.4	16.9	0.4	30.6	21	3.9	14	0	0	4	43	25	15.2	
CHICAGO O' HARE	201	987.5	1012.2	1012.2	17.1	6.6	11.8	-0.3	26.9	21	-2.8	26	0	4.0	50	4	11	16	
CHICAGO MIDWAY	165	989.5	1012.2	1012.2	16.7	12.1	-0.9	-1.1	26.2	0	5.6	27	0	1.2	51	31	4	10	
MELINE	177	990.5	1012.2	1012.2	17.7	4.6	11.2	+0.3	28.9	21	-3.9	26	0	1.2	52	11.6	5	14	
PEORIA	139	989.2	1013.1	1013.1	17.8	5.1	11.4	+0.3	30.7	21	-0.7	26	0	1.2	53	6	10	14	
ROCKFORD	221	985.6	1012.6	1012.6	16.0	4.7	10.2	-0.7	26.7	21	-5.6	26	0	5	5.6	76	16.1	5	14
SPRINGFIELD	177	991.2	1013.3	1013.3	19.9	6.4	13.2	-0.5	31.1	72	-2.8	14	0	5.7	67	22	17.0	5	14
INDIANA																			
EVANSVILLE	116	1010.7	1014.6	1014.6	20.2	7.1	13.6	-0.9	30.0	21	-1.7	14	0	4.0	6.7	65	68	1	13

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State and Station		Temperature				Precipitation				Wind				Clouds				Visibility							
		Pressure		Slope level		Average maximum		Departure from normal		No. of days		Snow, ice pellets		Fog/mist (1.6 kilometers)		Sky cover (tenths sunrise to sunset)		PDSI/dust/sunshine (%)							
Altitude (feet)	Elevation (ground)	mb	mb	°C	°C	°C	°C	°C	°C	°C	°C	mm	mm	mm	mm	%	%	%							
INDIANA FORT WAYNE	1013.4	15.9	5.3	10.6	-1.4	27.2	21*	-4.4	26	0	5.6	74	5.5	-1.7	2.6	11	2	2.5	23	13.4	3.0	7.6	59		
INDIANA INDIANAPOLIS	1016.1	17.7	5.8	11.7	-1.4	27.8	21*	-4.4	14	0	7	61	71	5.9	-5	21	14	2.2	21	15.6	3.1	6.7	45		
SOUTH DAKOTA BURLINGTON	1012.3	16.6	6.0	12.3	0.4	26.7	21	0.0	14	1	7.8	76	12.2	4.3	4.3	1.7	1	1.7	22	11.2	1.6	9	24		
10.6																									
PURLINGTON DES MOINES	1012.0	18.6	5.8	12.1	-0.8	29.4	21*	-3.3	13	0	5	3.3	55	5.5	-2.2	2.3	7	0	1.4	23	13.0	3.1	8.6	65	
CURVING SIOUX CITY	972.9	15.7	4.0	10.3	-0.6	26.1	20	-4.2	13	0	4.4	62	8.2	5.5	2	7	0	0.8	2.7	22.4	w	10	9	12	5.9
SIOUX CITY WATERLOO	1017.7	16.7	3.3	10.1	-1.7	24.4	20	-5.0	13	0	6	3.3	59	7.1	-1.9	2.3	10	0	0.8	3.5	14.6	3.1	11	6	
KANSAS CORCORAN	1010.4	16.6	4.7	10.7	0.7	27.2	20	-2.2	13	0	6	3.3	64	10.6	5.7	8	3	0	0.8	27	1.1	9	15	5.8	
ODDIE CITY GODULYU	1012.8	22.9	6.4	14.7	0.3	31.7	8	-0.6	23*	0	3	1.1	47	12.5	7.6	4	15	1	0.4	1.3	15.2	1.1	10	10	5.4
TOKIA WICHITA	984.0	21.6	6.2	12.3	0.6	31.4	8	-4.4	31	0	3	1.1	53	5.1	2.6	7.3	4	0	0.8	229	2.1	3.1	14	6.5	
4.03	961.8	24.7	6.6	16.6	-0.3	31.1	8	-1.7	13	0	5	5.6	59	10.5	4.7	5	4	0	0.9	1.8	1.9	5.6	12	11	8
KANSAS CELVINGTON	1012.2	22.3	6.4	14.5	0.6	31.7	8	-0.6	23*	0	3	1.1	47	12.5	7.6	4	15	1	0.4	1.3	15.2	1.1	10	10	5.4
LEXINGTON LOUISVILLE	1012.7	20.7	6.5	14.6	0.1	34.4	8	0.0	31	0	3	1.1	47	8.4	4.2	7.0	7	1	0.8	3.2	2.1	1.1	6	4.4	7.8
Louisiana FATUM RIVER	1016.4	26.9	11.1	20.0	-0.3	31.1	1	5.6	24	0	3	1.1	47	7.5	2.1	15	9	3	0	0.9	22	14.3	5.6	9	5.9
LAKE CHARLES NEW ORLEANS SHREVEPORT	1015.5	27.5	14.5	21.0	-0.1	31.1	1	6.7	24	0	3	1.1	53	5.1	2.6	7.3	9	3	0	0.9	22	14.3	3.1	9	5.5
MONTANA CAPITOL PORTLAND	1014.2	11.6	3.1	7.3	0.9	25.0	23*	-3.9	27	0	1.6	4.3	41	1.1	17	16	1.2	0	0.9	1.8	1.9	16	17	7	4.0
4.05	987.8	1013.0	13.6	3.6	6.6	-0.9	27.0	22	-2.8	27	0	1.3	5.6	82	1.3	6.6	12	3	1.3	1.7	16	1.2	16	17	7.4
RALSTON	1013.2	19.7	7.6	13.2	-0.9	29.4	22*	0.6	27*	0	0	8.3	76	14.0	6.9	46	11	3	0	1	1.6	25	13.4	5.4	5.1
MASSACHUSETTS ALICE HILL OBS.	1012.9	14.8	1.0	10.4	0.6	29.4	22	-1.7	27*	0	0	11.1	0	7.2	7.8	104	1.2	4.5	1.0	1.0	2.1	27	14.6	5.6	4.6
GOOTSONES ADOCETTES	97.6	13.7	5.2	9.9	-1.4	28.3	22	-0.8	11	0	8	5.0	77	11.1	2.1	5.0	6	1	0	0.9	1.6	1.6	17	6.5	
MICHIGAN ALBION	1011.4	11.3	2.8	10.2	-1.4	25.0	21	-3.9	11	0	1	3.9	82	6.6	1	15	14	1	1.2	2	1.7	22	0	7	24
DETROIT	1012.6	13.4	6.8	10.2	-0.2	22.0	22	-4.2	27*	0	4	6.1	76	6.1	1.7	2.7	1	1	1.1	2	1.1	2.1	22	2.1	
DETROIT METRO	1012.4	14.8	5.2	10.1	-1.7	27.7	22	-3.9	27*	0	6	6.1	76	3.1	-3.1	12	11	1	1.0	1.1	1	1.0	2.1	22	
FLATIRON PLAINS	1012.1	14.2	5.7	9.9	-0.7	25.8	22	-2.0	29	0	3	6.7	80	4.3	-2	11	16	2	1.0	2.0	2.3	13.0	5.9	22	
5.4.0 PLAINS	1012.2	15.4	6.2	10.8	-0.2	25.7	22	-1.0	14	0	2	7.2	83	6.2	-1	23	16	2	1.0	2.0	2.3	13.0	5.9	22	
WASHINGTON STATE LAWSON	1012.2	11.6	3.3	7.6	-1.1	25.6	22	-3.9	11	0	9	6.1	78	6.2	-4	24	16	2	1.0	1.1	1	1.0	2.2		
WAJUETTE	1012.2	14.6	4.8	9.7	-1.2	26.7	22	-3.3	29	0	6	5.6	78	5.1	21	1.1	16	1	1.0	1.1	1	1.0	2.2		
WAJUETTE SALT SPRINGS	1012.3	13.8	3.2	8.1	-0.2	24.7	20	-5.6	20	0	3	5.6	77	11.3	1.2	24	16	2	1.0	1.1	1	1.0	2.2		
WAJUETTE SALT SPRINGS	1012.3	10.2	1.3	5.8	-2.1	16.9	21*	-2.0	14	0	15	3.3	86	6.2	6.2	14	3	85	25	C.6	4	12.5	26		
MINNESOTA DULUTH	961.4	1012.4	11.4	6.1	5.1	-1.3	20.0	20	-3.9	26	0	0.6	70	7.6	1.0	27	13	1	0.6	3.4	3.1	3	3.3		
MINNESOTA TWIN CITIES FALLS	955.9	1012.4	7.7	2.7	2.7	-1.7	15.6	20	-3.3	26	0	2.5	73	1.1	-1.1	79	9.0	1	0.6	3.4	3.1	3	3.3		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.4	8.1	8.1	-1.9	24.8	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0	8.0	8.0	8.0	8.0	8.0	1	0.9	1.3	1.3	1.3	4.0		
MINNESOTA TWIN CITIES SPRING	959.5	1012.4	13.7	8.3	8.3	-1.6	24.7	20	-2.6	25	0	1.0													

CLIMATOLOGICAL DATA
METRIC UNITS

OCTOBER 1979

State and Station		Pressure		Temperature				Precipitation				Wind				Cloudiness to Sunset						
		Elevation (ground)	Sea level	Average maximum	Average minimum	Average	Depature from normal	Highest	Lowest	Total	No. of days	Snow	Ice pellets	No. of days	Wind direction	Speed	Date	Cloudy, 8-10	Partly cloudy, 4-7	Sky cover, tenth's sunset	Possible sunshine %	
MISSISSIPPI	HEDJOLIN	88	1005.4	1016.4	25.9	9.4	17.7	-0.6	31.1	1	2.2	24	0	0	11.7	73	81	26	6	20	5	30.3
MISSOURI	COLUMBIA REGIONAL	270	981.0	1013.3	20.7	7.6	14.2	-0.3	31.7	8	-3.3	13	0	1	5.6	60	11.2	26	42	5.30	9	13 50.7
KANSAS CITY MUN AP	297	976.0	1012.4	20.7	7.9	14.3	0.1	30.6	8	-2.8	13	0	1	3.9	54	19.0	8	31	16.1	5.20	9	10 50.7
ST. JOSEPH	247	226	1000.0	1015.0	22.5	10.0	16.3	-0.6	32.8	8	-3.0	13	1	1	6.7	56	28	5.4	20	20	9	10 50.7
ST. LOUIS	163	247	993.6	1012.7	21.6	6.3	13.9	-0.3	33.3	8	-3.9	13	1	4	5.0	47	9.7	34	40	5.0	0	0
SPRINGFIELD	386	968.5	1013.6	23.4	8.6	16.1	1.1	33.7	8	-0.1	10	1	2	6.1	56	8.3	-2.5	33	8	3	16.5	
MONTANA	PILLINGS	1087	891.0	1014.9	18.1	4.8	11.4	1.8	29.4	7	-3.3	31	0	0	0.0	53	1.9	6	0	20.1	5.30	6 12 6.2
CLARK GO	6596	932.3	1014.6	16.3	2.5	9.7	0.6	30.0	9	-6.0	31	0	0	0.6	59	14.6	0	11	4.0	2.0	7.0	14 6.2
CRAIG FALLS	1116	688.3	1016.0	16.6	1.6	9.4	1.2	30.1	9	-6.1	31	0	1	11.1	51	2.4	4	11	5.0	0	18	6 12 6.2
HAVE	788	922.1	1012.8	16.7	1.2	9.4	1.3	31.3	9	-8.3	30	0	12	-1.7	54	10.0	-5	8	0	0	0	2.4
HELENA	1167	881.1	1016.9	16.6	0.9	8.8	1.4	27.2	11	-9.4	31	0	12	1.7	72	3.7	15	11	0	10	0	2.4
KALISPELL	904	912.6	1018.2	15.5	0.4	7.6	1.7	27.8	7	-5.6	18	0	22	0.7	7	1.1	0	0	0	1.4	8	6 12 6.2
WILM CITY	801	921.4	1014.4	17.4	3.4	10.4	1.0	28.3	4	-7.2	31	0	7	0.6	58	8.0	-1.0	1	0	0	0	1.7
MISSOURI	972	905.5	1018.0	15.8	2.1	8.9	2.2	27.2	5	-5.6	31	0	9	1.1	66	2.5	1	1	0	30	10.7	8 12 6.2
NEBRASKA	GRAND ISLAND	561	946.8	1013.0	19.8	3.4	11.7	-0.4	27.6	11	-4.4	13	0	6	1.7	55	7.7	4.9	57	5	15	31 50.5
LINCOLN	359	969.5	1012.3	20.6	4.4	12.5	-0.2	27.8	11	-5.6	13	0	4	5.0	65	13.4	9.1	10.6	4.4	10	12 6 12 50.5	
NORFOLK	411	957.0	1012.6	17.9	3.2	10.6	-0.8	27.2	7	-6.7	13	0	6	2.2	60	10.8	7.4	5.6	7	3	18.8	
NORTH PLATTE	846	916.0	1013.3	21.6	2.6	12.1	1.0	27.2	2	-2.7	28	1	7	0.6	51	3.4	8	0	0	0	2.4	31 50.5
OMAHA (REPPLEY)	298	18.2	1018.2	15.5	0.4	7.6	1.7	27.2	20	-5.0	13	0	4	7.3	79	6.3	5.1	1.0	1	0	10 50.5	
OMAHA (NORTH)	399	18.2	1014.4	16.2	5.5	11.8	-0.6	25.6	20	-5.0	13	0	4	11.3	6.9	6.5	4.8	48	51	1.0	10 50.5	
SCOTTSBLUFF	1206	878.8	1014.5	20.2	3.3	11.7	1.6	30.3	0	-2.3	31	0	1	1.1	56	2.1	22	6	0	2.2	33 50.5	
VALENTINE	789	922.5	1017.9	17.9	0.4	9.6	-0.4	28.3	15	-5.6	23	0	12	4.1	41	18	21	4	48	51	2.1	31 50.5
NEVADA	ELKO	1539	845.6	1015.7	21.4	3.7	12.6	4.3	28.1	5*	-6.1	30	0	4	-1.7	45	11	-6	6	17	0	2.4
ELY	1909	809.7	1015.1	19.6	0.2	9.9	2.2	28.3	6	-10.6	30	0	15	-5.0	41	1.9	4	1.9	0	0	2.4	
LAS VEGAS	659	937.4	1012.7	29.1	1.9	21.5	2.0	36.7	3*	-3.3	31	0	9	-0.6	24	0	6	0	0	0	2.4	
RENO	1342	666.6	1015.7	21.8	2.8	12.6	2.1	31.7	5	-6.7	30	0	9	0.6	50	6.5	1.7	3	0	0	2.4	
WINNEBUCCA	1311	669.3	1015.9	22.0	1.4	9.7	2.7	32.2	6	-8.9	30	1	10	-1.1	47	4.5	-1	10	4	0	0	
NEW HAMPSHIRE	CONCORD	104	1001.4	1014.3	16.4	2.6	8.6	-1.0	30.0	22	-6.7	31	0	17	*4.4	75	9.6	28	13	2.0	33	0.9
MT. WASHINGTON OBS	1509	1001.4	1014.3	16.1	-4.2	-1.3	-1.0	12.8	22	-13.3	27	0	22	0	45	17.1	16	39	24	0	292	7.6
NEW JERSEY	ATLANTIC CITY	20	1013.2	1015.5	17.8	7.0	12.4	-1.3	28.3	22	-1.1	15	0	4	7.2	72	5.6	-32	8	1	1	0
NEWARK	2	1014.2	1015.4	16.8	9.4	13.6	-0.6	30.0	22	1.7	10	0	0	0	7.2	68	1.6	45.5	35	6	21 50.5	
TRENTON U	17	16.7	8.6	12.7	-1.3	28.3	22	0.6	10	0	0	0	0	37	9	2.9	1.7	0	0	0	2.4	
NEW MEXICO	ALBUQUERQUE	1619	838.1	1012.4	25.6	7.1	16.4	1.8	32.8	5	-3.3	31	3	2	-1.7	33	7	1	23	7	0.1	19 50.5
CLAYTON	1112	888.9	1011.9	22.9	8.3	17.7	2.3	35.0	13*	0.0	1	0.6	35	5	10	-1.8	5	3	0	25	15.6	
ROSELL	1112	888.9	1011.9	22.9	8.3	17.7	2.3	35.0	13*	0.0	1	0.6	35	5	10	0	0	0	0	21	1.6	
NEW YORK	ALBANY	84	1003.7	1014.5	15.3	4.9	10.1	-0.7	30.2	22	-3.9	31	0	11	4.4	69	87	4.4	1.6	1	0	15.2
BINGHAMTON	485	955.3	1014.2	13.0	5.2	9.1	-1.1	27.2	22	-2.2	31	0	5	4.4	76	6.2	1.5	2.3	2.1	0	2.4	
RUFALDO	215	1087.1	1012.9	13.9	6.6	10.4	-0.4	27.2	22	-0.6	10	0	2	2.2	27	0	2.6	2.4	2.1	0	2.4	
NEW YORK U	40	1011.9	1015.2	16.7	8.6	11.8	1.0	30.3	22	3.1	22	0	0	2.1	22	9.3	2.2	9.9	23	1	4	
NEW YORK KENNEDY	4	1014.6	1015.9	16.3	9.4	12.5	1.4	30.1	22	-0.8	23.3	0	0	2.1	27	0	2.6	1.3	2.4	2.1	4.5	
NEW YORK LA GUARDA	3	1014.9	1015.8	14.7	10.7	9.9	1.3	13.3	-0.2	28.3	22	2.7	0	0	2.2	68	97	2.2	8	1	0	6.2
ROCHESTER	167	992.9	1013.4	14.2	6.1	10.2	-1.1	27.8	22	-0.6	31	0	4	6.7	83	6.6	-1	2.1	17	1	5.2	

CLIMATOLOGICAL DATA
METRIC UNITS

OCTOBER 1979

State and Station	Elevation (ground) m	Pressure		Temperature				Precipitation				Wind				Possible sunshine				
		Station Q		Average maximum °C	Average minimum °C	Departure from normal °C	Highst. °C	Lowest. °C	Date of recor.	Min. 0°C or below Max 32°F or above °C	No. of days	Snow, ice pellets	Maximum depth on ground mm	Resultant speed Total mm	Direction Date	Cloudy, 8-10 Partly cloudy, 4-7 Clear, 0-3 Sky cover, tenths (sunrise to sunset)	No. of days (sunrise to sunset)	Fodest mile (1.6 kilometers)	No. of days (sunrise to sunset)	
		m	mb	m	mb	m	mb	m	mm	m	mm	m	mm	m	%	mm	mm	mm		
NEW YORK	125	998.6	1013.5	14.7	6.3	10.5	-0.9	28.9	22	-1.7	31	0	2	6.7	7.9	7.4	-5	31	16	0
NORTH CAROLINA	652	980.7	1017.2	19.6	6.0	12.9	-0.8	27.2	9	-2.2	27	0	3	8.1	8.0	3.6	-47	13	6	1
ASHVILLE	2	1018.6	1017.1	22.6	12.5	17.4	-1.0	27.2	23	0.0	28	0	1	12.8	7.3	5.2	-77	25	6	0
CAPT HATTERAS R	224	988.5	1010.8	21.6	6.7	15.2	-0.7	27.8	22	1.7	27*	0	1	9.4	7.4	4.6	-27	21	12	10.7
CHARLOTTE	273	985.1	1010.9	21.1	7.8	14.4	-0.7	27.2	22	-1.7	27	0	1	8.9	7.4	6.7	-6	29	6	2.1
GLENNSBORO	132	1001.7	1017.1	20.9	8.1	15.5	-0.2	26.9	21	-1.1	27	0	1	10.6	7.9	4.8	-24	20	3	2.1
PALM BEACH	132	1001.5	1017.1	22.9	8.0	17.4	-1.1	29.4	13*	-2.8	27	0	1	11.1	7.1	1.0	-74	26	3	1.1
WILMINGTON	579	985.1	1017.1	24.2	10.6	17.4	-1.1	27.8	21	-1.1	27	0	0	11.1	7.1	1.0	-74	21	5	1.1
NORTH DAKOTA	523	954.3	1017.3	14.1	-0.2	1.2	-2.4	22.0	4	-10.6	13	0	15	-0.6	6.0	3	-18	45	1	0
BISMARCK	273	979.3	1012.4	11.9	-0.1	5.9	-2.4	20.6	15	-8.3	13	0	14	0.0	6.6	6.6	-38	45	1	0
FARGO	273	979.3	1012.4	11.9	-0.1	5.9	-2.4	20.6	15	-8.3	13	0	14	0.0	6.6	6.6	-38	45	1	0
LILLISTON,	579	945.1	1014.0	15.1	1.2	8.2	0.6	25.6	10	-7.8	31*	0	12	0.0	6.0	6	-10	4	0	0
OHIO	368	969.9	1014.6	14.8	6.1	10.4	-1.4	25.6	22*	-3.9	27	0	2	5.0	7.0	3.9	-22	12	15	0
CINCINNATI ARGE OB	232	983.9	1014.0	18.2	7.3	15.3	-0.6	28.3	22*	-2.8	26	0	4	7.2	7.7	4.5	-15	19	17	1.3
CLEVELAND	237	983.9	1014.0	18.0	6.8	15.6	-0.5	26.7	21	-2.8	27	0	4	7.2	7.7	3.2	-15	13	13	1.3
COLUMBUS	247	988.0	1014.3	18.5	7.8	15.8	-0.5	27.8	22	-1.1	27*	0	4	7.2	7.7	5.2	-20	22	5	1.3
MAYTON	303	978.0	1014.3	17.1	5.6	11.4	-1.6	27.2	21	-2.8	14	0	6	6.1	7.3	5.2	-15	15	15	0.4
MANSFIELD	395	978.0	1014.3	15.1	5.6	10.4	-2.2	26.1	21	-3.9	21	0	4	6.1	7.8	3.5	-15	13	11	0
TOLEDO	204	988.2	1013.2	15.6	5.8	10.7	-0.9	27.2	22*	-3.3	26	0	3	6.6	7.9	5.1	-6	12	15	1.1
YOUNGSTOWN	159	971.6	1014.6	14.6	6.1	10.5	-0.9	26.7	22*	-5.6	27	0	3	5.6	7.6	4.1	-33	9	16	1.1
OKLAHOMA CITY	392	966.8	1012.6	26.3	11.2	18.7	1.8	34.4	11*	1.7	10	4	0	6.1	4.8	4.0	-25	21	4	0
TULSA	198	988.8	1012.9	26.4	11.6	19.0	1.8	36.7	7	2.8	10	6	0	6.3	5.3	5.6	-26	27	4	0
OREGON	2	1014.9	1015.6	16.9	8.6	12.8	1.2	25.6	9	2.2	21	0	0	10.6	8.7	2.15	42	15	15	0
ASTORIA	1265	1002.0	1015.7	17.8	3.3	10.6	2.1	29.4	6*	-1.9	28	0	9	8.9	7.8	2.06	11	11	10.5	0
BURNS U	109	1002.0	1015.7	19.7	7.4	13.6	1.8	31.1	9	2.8	31	0	0	10.1	9.0	10.5	83	14	14	2.4
EUGENE	396	968.5	1016.5	22.2	7.9	15.1	1.4	35.6	3	1.1	29	0	4	7.8	6.9	10.1	25	14	14	2.4
MCLEOD	452	962.4	1016.5	18.3	6.8	12.4	0.9	30.6	3	0.6	31	0	0	10.9	6.0	10.4	25	14	14	2.4
PEDERSON	566	1016.4	1016.1	19.3	9.7	14.5	0.5	33.3	31	0	0	0	10.0	7.9	12.3	0	0	10	10.3	
PORTLAND	566	1016.4	1016.1	19.3	9.7	14.5	0.5	30.0	3	2.4	30	0	1	10.0	7.9	12.4	0	0	0	0
SALEM	601	1016.1	1015.8	18.6	6.8	12.6	0.8	30.0	3	0.6	31	0	1	10.3	8.2	15.4	53	12	12	0
SEATTLE SEATT R	1163	883.5	1014.8	15.3	7.6	11.4	1.2	27.8	5	1.1	29	0	0	11.4	7.5	7.5	-52	14	13	0
PACIFIC AREA	1112	1011.0	1012.5	29.6	22.7	26.2	0.2	31.7	22*	20.6	21*	0	0	24.4	82	6.62	296	27	19	1.1
JOHNSTON	2	1011.0	1012.5	30.1	25.4	27.8	0.8	31.0	22*	22.8	31*	0	0	24.4	82	5.8	31	19	16	1.1
KOOG R	209	1009.5	1011.5	30.6	31.0	25.5	0.3	31.7	31*	23.3	31*	0	0	24.4	82	3.16	16	22	14	0
MALIBU	2	1009.5	1011.5	29.7	24.6	27.8	0.9	31.7	29*	22.8	18*	0	0	23.3	80	1.16	24	20	14	0
PAN PAGO	37	1009.5	1011.6	32.3	24.2	27.6	0.6	33.9	23*	21.1	31*	24	0	24.4	80	4.96	87	25	14	0
COKE R	37	1009.5	1011.6	31.6	24.2	27.6	0.1	32.2	22*	22.2	10	0	0	24.4	81	6.28	28.8	13	15	0
TRUK MOEN ISLAND	35	1011.2	1011.6	31.3	25.7	28.6	1.0	33.3	18	23.9	22*	6	0	24.4	81	1.03	60	17	15	0
WAC R	13	1010.6	1011.6	30.6	23.8	27.2	-0.2	31.7	26*	22	26*	0	0	24.4	81	3.09	-5	73	22	5.0
PENNSYLVANIA	1118	1016.0	1016.0	16.0	6.8	11.4	-0.9	28.9	22	-0.6	31*	0	1	7.2	7.8	11.1	4.1	26	12	2.5
ALLIANCE	223	986.8	1016.3	16.7	5.0	11.3	-1.1	24.5	22	-1.1	27	0	0	6.1	6.9	1.6	1.6	22	12	1.1
HARRISBURG	103	1013.4	1016.3	17.0	5.0	11.3	-1.0	24.5	21	-0.6	28	0	0	5.7	7.5	3.4	3.5	22	12	1.1
PHILADELPHIA	24	1011.4	1015.3	17.5	7.9	12.7	-1.4	27.8	21	-0.6	28	0	0	8.0	8.9	9.8	3.3	22	12	1.1
PIXTURSH	34	971.2	1015.3	15.1	5.0	10.5	-1.3	26.1	22*	-5.6	27	0	2	4.4	6.8	6.7	-2	13	15	0
SCAMON	263	887.1	1015.1	15.2	6.7	11.0	-0.4	28.3	22	-2.2	31	0	2	5.6	7.1	9.3	2.5	25	13	1.1
WILLIMSPORT	160	955.9	1015.1	14.6	6.1	10.4	-1.4	27.2	21	-1.7	31	0	2	6.1	7.7	10.4	1.7	24	13	1.1
ROHOC ISLAND	34	15.4	9.9	12.6	-0.3	22.2	22*	22	22	22	22	0	0	7	7	8.6	3.2	26	3	2
ALBION ISLAND	34	15.4	9.9	12.6	-0.3	22.2	22*	22	22	22	22	0	0	7	7	8.6	3.2	26	3	2

CLIMATOLOGICAL DATA
METRIC UNITS

OCTOBER 1979

State and Station	Elevation (ground)	Pressure		Temperature				Precipitation				Wind				No. of days (sunrise to sunset)			
		Sed. level	mb	Average maximum	°C	Lowest	°C	Average minimum	°C	No. of days	With thunderstorms	Total	Resultant speed	Speed	Date	Cloudy, 8-10	Partly cloudy, 4-7	Sky cover, zeniths	Possible sunshine (%)
PROVIDENCE	16	1712.9	1015.1	16.4	6.9	11.7	-0.4	30.0	22	-1.1	27	0	5	6.7	74	100	1.7	76	1.6
SOUTH CAROLINA	12	1015.2	1017.3	25.0	12.2	18.9	-0.1	30.0	1	3.3	27	0	0	13.3	76	98	21	57	5
CHARLESTON U	3	24.7	15.8	20.2	0.2	29.4	1	9.4	11	0	0	2	11.1	74	7	-70	5	4	
COLUMBIA SPRINGS	65	1008.8	1016.8	8.6	16.7	-1.2	30.0	2	-0.6	27	0	0	0.6	45	45	19	6	3	
GRANVILLE SPRINGS	292	1012.1	1016.6	21.5	8.7	15.1	-1.4	26.7	23*	0.6	14	0	0	9.4	75	85	4	49	1
SOUTH DAKOTA	395	985.8	1013.1	15.0	0.4	7.7	-1.1	22.2	15	-10.6	13	0	13	1.1	64	1.1	19	6	1
ABERDEEN	390	986.1	1015.0	17.0	-1.9	5.1	0.7	29.4	7	-1.7	13	0	11	0.0	56	1.1	25	6	1
KURON	964	984.2	1015.2	15.6	2.3	9.0	-1.1	25.9	7	-2.8	22	0	8	0.6	55	2.2	1.1	18	1
RAPID CITY	432	981.7	1013.4	15.6	0.7	7.7	-1.1	23.9	7	-6.1	13	0	7	2.2	68	8.4	4.6	65	6
SIOUX FALLS																0	1.4	33	13.0
TENNESSEE	459	982.8	1017.2	19.8	5.3	12.6	-1.6	28.9	21	-2.8	15*	0	4	6.7	73	56	-7	18	11
BRISTOL	203	991.0	1016.6	22.3	8.9	15.3	-0.3	28.9	12*	1.7	14	0	0	10.0	62	18	-13	22	5
CHATTANOOGA	299	981.1	1016.1	21.1	8.2	14.6	-1.4	28.3	22*	1.1	25	0	0	9.4	73	50	-18	22	9
KNOKVILLE	79	1005.4	1015.6	24.9	12.6	18.8	1.6	31.7	21	3.9	14	0	0	10.0	60	66	1	26	7
MEMPHIS	180	984.2	1015.8	21.2	9.2	15.7	-0.3	28.4	21	0.0	14	0	1	9.4	71	104	55	7	4
NASHVILLE	216	981.7	1015.8	21.0	6.2	13.6	0	28.3	1	-0.7	14	0	5	2.0	4.6	4.6	-2.0	19	10
OAK RIDGE R																0	0	0	0
TEXAS	544	950.6	1012.4	29.8	14.2	22.0	3.1	39.4	1	4.4	23*	12	0	5.6	39	13	-53	13	2
ABILENE	1096	889.9	1012.1	24.4	6.8	15.6	0.3	34.4	8*	-0.6	31	3	1	1.7	44	33	-14	31	3
AUSTIN	182	991.0	1013.8	30.0	16.1	23.1	1.9	36.1	3	6.1	31	12	12	12.8	57	11	-65	30	6
ERINSONVILLE	6	1113.2	1013.6	31.1	16.5	20.5	1.9	35.0	22	10.6	24	14	0	18.9	72	30	-30	30	6
CORPUS CHRISTI	12	1012.5	1014.2	30.6	17.6	24.1	0.8	33.3	9*	6.1	24	13	0	18.3	73	10	-63	6	0
DALLAS - FORT WORTH	166	982.6	1013.5	29.6	14.0	19.0	1.0	21.6	1.8	3.8	9	1	0	10.6	54	60	3	31	0
DALE RIO	313	976.6	1012.2	31.9	16.2	24.1	2.3	41.1	3	6.1	31	15	0	19.4	45	60	0	2.7	0
EL PASO	114	881.5	1011.7	29.5	8.4	19.0	1.2	35.6	11	-1.1	31	11	1	-0.6	29	7	-29	0	0
GALVESTON	2	1001.5	1014.9	25.5	20.3	22.9	0.1	28.9	7	0	0	12.8	23	0	0	70	-2	67	2
HURST	29	982.5	1012.3	27.1	9.1	18.1	0.1	32.8	6*	5.0	24	6	0	16.1	71	16	-37	59	1
LUBBOCK	869	914.7	1011.8	28.6	11.2	20.1	1.3	36.7	8	2.2	31	11	0	1.7	77	15	0	32	31*
MIDLAND	5	1014.6	1012.8	27.8	15.0	21.4	0.4	31.7	1	5.6	21	0	0	16.7	75	7	10	14	0
PORT ARTHUR	564	986.1	1013.7	30.7	12.7	21.7	1.5	37.2	8	5.6	24	12	0	6.1	42	57	-24	21	0
SAN ANGELO	240	986.1	1013.7	29.4	15.8	22.6	0.3	36.7	3	5.6	24	13	0	13.3	57	69	3	21	0
SAN ANTONIO	132	1010.5	1013.7	29.4	13.8	21.3	0.7	38.3	3	4.4	24	7	0	16.7	73	42	-15	50	1
VICTORIA	303	976.6	1012.6	28.4	12.3	20.3	1.4	38.9	7	2.8	31	9	0	12.8	63	29	-39	24	3
WACO																0	0	0	0
WICHITA FALLS																0	0	0	0
UTAH	1533	886.9	1012.8	21.8	1.6	11.7	1.5	30.6	1	-8.3	31	0	8	12	-8	3	1	0	0
MILFORD	1287	872.0	1015.3	21.6	5.9	13.7	2.4	31.1	7*	-2.2	31	0	2	3.3	57	3	27	5	1
SALT LAKE CITY																0	0	0	0
VERMONT	101	1001.0	1013.6	12.6	5.3	8.9	-0.4	27.2	22	-3.3	31	0	13	3.9	72	59	-11	26	1
BURLINGTON																0	0	0	0
VIRGINIA	279	982.7	1017.2	19.5	6.2	12.9	-1.6	27.8	22	-6.4	27	0	5	10.0	71	96	30	49	12
NORFOLK	271	1016.2	1017.2	21.4	10.2	15.8	-0.7	28.5	22	-3.9	55	0	0	10.0	71	44	-34	19	2
RICHMOND	50	1016.2	1016.6	21.1	8.1	14.6	-0.6	28.9	22	-6.6	27	0	1	10.6	80	98	24	56	7
ROANOKE	30	974.3	1016.5	18.7	6.2	12.6	-1.8	28.3	22	-9.9	27	0	3	7.8	76	90	44	44	4
WALLOPS ISLAND	3	19.7	1017.2	10.8	15.3	15.3	-0.4	28.9	1	1.7	27	0	0	1.7	27	50	-23	15	9
WASHINGTON	59	1007.8	1015.2	16.7	5.1	10.9	0.6	26.1	10	-1.1	31	0	2	8.3	89	157	23	34	15
OLYMPIA	55	1007.1	16.4	6.3	11.4	1.0	0.4	25.0	3	-0.6	31	0	1	5.0	31	225	-6.9	52	16
QUILLAYUTE																0	0	0	0
SEATTLE U																35	31	12	26

CLIMATOLOGICAL DATA
METRIC UNITS

OCTOBER 1979

State and Station	Elevation (ground)	Station Q	Sea level	Pressure		Temperature		Precipitation		Wind		Clouds, 0-10		No. of days (sunrise to sunset)		Possible sunshine (%)	
				mb	in	°C	°F	mm	in	mm	in	km/h	mph	km/h	mph	km/h	mph
WASHINGTON	122	999.3	1011.6	8.7	12.3	1.1	31	5.0	29	0	0	7.2	73	-1.3	20	1.3	18
SEATTLE-TACOMA	716	933.9	1016.1	16.8	4.4	10.6	52	2.4	6	2.2	31	8	0.0	1.3	17	10.7	5.1
SPokane	1236	875.4	1015.9	7.4	2.0	2.0	34	-2.2	28	0	0	12.6	14	0	0.0	22.9	19
SPokane Pass R	289	809.0	1018.8	8.8	14.4	2.0	52	-2.8	31	0	0	6.8	3.0	3.2	10.0	13.0	10
WALLA WALLA U	321	977.3	1015.9	11.6	1.6	1.6	52	-2.2	31	0	0	1.9	4	1.2	5	0	3
YAKIMA																	
WEST INDIES		1010.8	32.3	24.4	28.3	1.3	53	23.3	1	16	0	24.4	82	30	-11.4	20	10
SAN JUAN P.R.	4															0	0
WEST VIRGINIA		927.9	1016.7	15.6	4.9	10.3	-1.3	26.1	21	0	6	6.7	83	6.6	1.8	15	3
BECKLEY	763	988.4	1015.5	18.6	5.4	12.6	-1.3	-3.3	27	0	4	6.7	73	9.3	3.1	41	13
CHARLESTON	313	945.5	1015.9	18.7	5.4	9.4	-1.4	26.1	22	0	8	13.1	62	3.9	17	76	18
ELKINS	594	985.8	1015.9	17.3	7.2	13.0	-0.9	29.4	22	0	4	6.7	70	6.2	1.4	12	3
HUNTINGTON	252	985.8	1015.9	17.3	7.3	12.3	-1.3	28.3	22	0	2	7.5	22	2.2	11	0	0
PARKERSBURG U	187																
WISCONSIN		985.8	1011.8	12.2	5.1	7.7	-1.9	23.9	21	0	7	5.0	83	6.9	3.0	14	3
GREEN BAY	208	988.8	1011.6	13.6	5.8	8.7	-2.3	23.3	20	-4.4	26	0	9	8.2	11.2	6.0	1.7
LA CROSSE	262	987.4	1011.0	14.6	6.6	8.6	-1.3	27.2	21	-7.2	26	0	9	4.4	7.9	4.3	1.0
MILWAUKEE	205	986.5	1011.8	14.9	6.2	10.6	0.1	26.1	21	-2.8	26	0	3	6.7	79	4.5	1.0
WYOMING		1014.8	17.2	0.3	8.8	0.1	26.3	7	0	15	-3.3	49	1.2	-11.1	6	0	9.1
CASPER	1627	1014.2	17.2	2.5	9.9	1.1	27.2	7	-8.3	31	0	9	4.1	12	-12	6	102
CYPRUS	1867	1014.2	17.2	1.5	9.9	1.1	27.2	7	-5.0	31	0	11	4.2	19.9	-2.2	6	19.3
LINDEN	1696	1015.5	17.4	1.2	9.3	0.6	24.3	7	-2.5	31	0	11	4.2	12	-19	6	1.6
SHERIDAN	1208	1016.2	17.4	1.2	9.3	0.6	24.3	7	-5.0	31	0	13	0.0	5.9	5.6	2.5	14.3

HEATING DEGREE DAYS

(Base 65° F.)

OCTOBER 1979

COOLING DEGREE DAYS

(Base 65°F.)

OCTOBER 1979

State and station	Current season			Current season			Current season			Current season			Current season		
	This month	Period January through this month	Normals January through this month	This month	Period January through this month	Normals January through this month	This month	Period January through this month	Normals January through this month	This month	Period January through this month	Normals January through this month	This month	Period January through this month	Normals January through this month
ALABAMA BIRMINGHAM U	49	1720	2217	HAWAII HILO	350	2695	2606	GRAND ISLAND	2	978	1036	SOUTH CAROLINA CHARLESTON	105	2164	2068
BIRMINGHAM	74	1711	1928	HONOLULU	504	3765	3606	LINCOLN	4	1098	1148	CHARLESTON U	144	2121	2325
HUNTSVILLE	36	1436	1808	KAHULUI	467	3515	3187	NORFOLK	0	946	925	COLUMBIA	50	1671	2082
MONTGOMERY	140	2421	2551	LIHUE	426	3398	3180	NORTH PLATTE	0	862	802	GRANVILLE-SPRTNBVRG	20	1295	1573
MISSISSIPPI MONTGOMERY	79	2024	2232	IDAHO POISE	3	752	714	OMAHA (ERPLEY)	2	1002	949	SOUTH DAKOTA ABERDEEN	0	502	566
ALASKA ANCHORAGE	0	4	n	LEWISTON	7	968	657	OMAHA (NORTH)	1	853	666	HURON	0	783	711
ANNEETTE	0	9	14	POCATELLO	0	479	437	SCOTTSBLUFF	0	777	736	RAPID CITY	2	550	661
BAKER ISLAND	0	0	0	ILLINOIS CAIRO U	66	1762	1816	VALENTINE	0	777	736	SIOUX FALLS	0	724	719
RETHEL	0	0	0	CHICAGO O HARE	26	806	664	NEVADA FLK	4	694	342	SOUTH DAKOTA TENNESSEE			
PETTLES	0	12	17	CHICAGO MIDWAY	25	812	925	FLY	0	208	207	ABILENE	253	2501	2457
PIG DELTA	0	26	34	MOLINE	22	907	893	LAS VEGAS	229	3387	2940	AMARILLO	41	1168	1433
COLD BAY	0	0	0	PEORIA	23	913	968	RENO	3	404	329	BRISTOL	285	2594	2875
FAIRBANKS	0	23	52	ROCKFORD	16	679	714	WINNEMUCCA	3	593	407	CHATTANOOGA	24	1432	1636
GULANA	0	0	0	SPRINGFIELD	41	1201	1116	NEW HAMPSHIRE CONCORD	6	519	349	KNOXVILLE	23	1351	1569
HOMED	0	0	0	MT WASHINGTON OBS	0	0	0	MT WASHINGTON OBS	0	0	0	MEMPHIS	108	2084	2029
JUNEAU	1	0	0	INDIANA EVANSVILLE	35	1238	1364	TEXAS NEW JERSEY				NASHVILLE	44	1376	1694
KING SALMON	0	0	0	FORT WAYN	16	677	748	ATLANTIC CITY	15	650	864	OAK RIDGE	0	1044	1367
KODIAK	0	8	13	INDIANAPOLIS	24	882	974	ATLANTIC CITY U	8	713	835	ROBERTS	0	720	1107
KOTZEBUE	1	0	0	SOUTH BEND	21	801	695	NEWARK	34	1153	1024	CHATTANOOGA	24	1432	1636
MC CRATH	2	14	14	IOWA IOWA CITY	19	931	994	TRENTON U	19	935	968	KNOXVILLE	23	1351	1569
NUKE	0	0	0	WATERLOO	15	984	928	NEW MEXICO ALBUQUERQUE	45	1508	1316	MEMPHIS	108	2084	2029
ST. PAUL ISLAND	0	0	0	DUBUQUE	8	600	606	CLAYTON	17	742	767	NASHVILLE	44	1376	1694
TALKFETNA	1	0	6	SIOUX CITY	0	865	932	ROSWELL	84	1694	1560	OAK RIDGE	0	1044	1367
UNALAKLEET	0	0	0	WATERLOO	9	770	675	NEW YORK ROCHESTER	18	597	531	ROBERTS	0	720	1107
VALDFZ	0	0	0	NEW YORK SYRACUSE	22	1049	1048	NEW YORK SYRACUSE	22	595	551	CHATTANOOGA	24	1432	1636
YAKUTAT	0	0	0	NEW YORK ALBANY	17	636	574	NEW YORK BINGHAMTON	14	371	369	KNOXVILLE	23	1351	1569
APIZONA FLAGSTAFF	0	85	140	KANSAS CONCORDIA	27	1280	1302	NEW YORK BUFFALO	20	570	437	MEMPHIS	108	2084	2029
PHOENIX	377	4179	3882	DODGE CITY	40	1316	1411	NEW YORK NEW YORK	43	1213	1068	NASHVILLE	44	1376	1694
TUCSON	282	3046	2788	GOODLAND	11	939	925	NEW YORK KENNEDY	7	824	861	OAK RIDGE	0	1044	1367
WINSLOW	13	1185	1203	TOREMA	27	1275	1361	NEW YORK LA GUARDIA	22	1049	1048	ROBERTS	0	720	1107
YUMA	416	4357	4126	WICHITA	67	1663	1673	NEW YORK ROCHESTER	18	597	531	CHATTANOOGA	24	1432	1636
APKANSAS FORT SMITH	85	1642	2022	KENTUCKY COVINGTON	22	845	1870	NEW YORK SYRACUSE	22	595	551	KNOXVILLE	23	1351	1569
LITTLE ROCK	95	1925	1925	LEXINGTON	21	968	1197	NEW YORK ALBANY	17	636	574	MEMPHIS	108	2084	2029
NO. LITTLE ROCK	59	1702	1951	LOUISVILLE	39	1236	1260	NEW YORK BINGHAMTON	14	371	369	SALT LAKE CITY	21	1274	927
CALIFORNIA PAKERSFIELD	205	2729	2173	LOUISIANA FATON POUCE	144	2359	2563	NEW YORK BUFFALO	20	570	437	VERMONT BURLINGTON	13	531	396
PISHOP	17	1054	1037	LAKE CHARLES	163	2426	2699	NEW YORK GREENSBORO	28	1176	131	VERMONT BURLINGTON	13	531	396
BLUE CANYON	14	0	0	NEW ORLEANS	206	2854	2663	NEW YORK RALEIGH	46	1265	1394	VERMONT BURLINGTON	13	531	396
EUREKA U	0	15	0	SHREVEPORT	124	2106	2524	NEW YORK WILMINGTTON	65	1938	1958	VERMONT BURLINGTON	13	531	396
FRESNO	149	2267	1671	MAINE CARIBOU	6	290	128	NEW YORK BISMARCK	0	365	487	VERMONT BURLINGTON	13	531	396
LONG BEACH	72	1186	962	PORTLAND	3	316	252	NEW YORK FARGO	0	504	473	VERMONT BURLINGTON	13	531	396
LOS ANTELES	60	813	592	DETROIT METRO	12	522	654	NEW YORK WILLISTON	0	415	422	VERMONT BURLINGTON	13	531	396
LOS ANTELES U	12	1291	1141	SHREVEPORT	124	2106	2524	NEW YORK OHIO	10	564	634	VERMONT BURLINGTON	13	531	396
LOS ANTELES	5	235	128	MAINE CARIBOU	6	290	128	NEW YORK AKRON	23	930	1188	VERMONT BURLINGTON	13	531	396
MT SHASTA R	28	252	128	PORTLAND	3	316	252	NEW YORK CLEVELAND	21	715	613	VERMONT BURLINGTON	13	531	396
OAKLAND	28	252	128	DETROIT METRO	16	522	654	NEW YORK COLUMBUS	22	808	809	VERMONT BURLINGTON	13	531	396
PEO BLUFF	132	2208	1904	SHREVEPORT	19	614	575	NEW YORK DAYTON	18	854	936	VERMONT BURLINGTON	13	531	396
SACRAMENTO	72	1294	1159	DETROIT METRO	28	1136	1108	NEW YORK MANSFIELD	17	531	818	VERMONT BURLINGTON	13	531	396
SAN DIEGO	124	1202	708	DETROIT METRO	12	522	654	NEW YORK TOLEDO	22	602	685	VERMONT BURLINGTON	13	531	396
SAN FRANCISCO	18	182	108	DETROIT METRO	16	522	654	NEW YORK YOUNGSTOWN	14	501	518	VERMONT BURLINGTON	13	531	396
SAN FRANCISCO U	16	125	39	DETROIT METRO	17	578	535	NEW YORK CINCINNATI ABBE 08	10	564	634	VERMONT BURLINGTON	13	531	396
SANTA MARIA	12	113	84	DETROIT METRO	7	379	469	NEW YORK CINCINNATI ABBE 08	23	930	1188	VERMONT BURLINGTON	13	531	396
STOCKTON	104	1793	1259	DETROIT METRO	0	145	139	NEW YORK ASTORIA	1	27	19	VERMONT BURLINGTON	13	531	396
COLORADO ALAMOSA	0	34	88	DETROIT METRO	19	614	575	NEW YORK BURNS U	6	367	289	VERMONT BURLINGTON	13	531	396
COLORADO SPRINGS	2	473	461	DETROIT METRO	20	570	438	NEW YORK EUGENE	0	182	219	VERMONT BURLINGTON	13	531	396
DENVER	7	661	625	DETROIT METRO	21	578	535	NEW YORK FEDORO	30	658	562	VERMONT BURLINGTON	13	531	396
GRAND JUNCTION	27	1263	1140	DETROIT METRO	17	578	535	NEW YORK PENOLETON	3	650	656	VERMONT BURLINGTON	13	531	396
PUEBLO	1	904	981	DETROIT METRO	17	578	535	NEW YORK ROPTLAND	7	462	300	VERMONT BURLINGTON	13	531	396
CONNECTICUT RIGGEPONT	4	731	735	DETROIT METRO	19	614	575	NEW YORK SALEM	1	219	232	VERMONT BURLINGTON	13	531	396
HARTFORD	6	811	594	DETROIT METRO	7	379	469	NEW YORK SEXION SUMMIT R	26	228	137	VERMONT BURLINGTON	13	531	396
DELAWARE	0	990	992	DETROIT METRO	0	145	139	NEW YORK YAF P	505	4909	4925	VERMONT BURLINGTON	13	531	396
WILMINGTON	16	990	992	MINNESOTA DULUTH	0	169	176	NEW YORK GUAM TAGUAC R	447	4100	4166	VERMONT BURLINGTON	13	531	396
DIST. OF COLUMBIA WASHINGTON DULLES	21	976	940	MINNESOTA INTERNATIONAL FALLS	0	131	176	NEW YORK JOHNSTON	514	4401	4266	VERMONT BURLINGTON	13	531	396
WASHINGTON NATIONAL	39	1477	1415	MINNESOTA ST. JOSEPH	0	651	585	NEW YORK KOROD R	533	5105	4996	VERMONT BURLINGTON	13	531	396
FLOIDA APPALACHICOLA U	147	2381	2618	MISSISSIPPI JACKSON	76	1941	2306	NEW YORK KWAJALEIN	559	5292	5148	VERMONT BURLINGTON	13	531	396
DAYTONA PEACH	252	2627	2774	MISSISSIPPI MERIDIAN	63	1936	2224	NEW YORK MAJURO	537	5001	4919	VERMONT BURLINGTON	13	531	396
FORT MYERS	442	3836	3429	MISSISSIPPI MERIDIAN	29	1174	1285	NEW YORK PAGO PAGO	502	4792	4113	VERMONT BURLINGTON	13	531	396
JACKSVILLE	158	2419	2530	MISSISSIPPI ST. JOSEPH	28	1097	1334	NEW YORK ROHARE R	524	5063	4709	VERMONT BURLINGTON	13	531	396
KEY WEST	52	440	4365	MISSISSIPPI ST. JOSEPH	50	1578	1475	NEW YORK TRUK MOEN ISLAND	513	5207	4894	VERMONT BURLINGTON	13	531	396
MIAAMI	37	3716	3650	MISSISSIPPI COLUMBIA REGIONAL	39	1165	1269	NEW YORK WAKE	576	5006	4571	VERMONT BURLINGTON	13	531	396
ORLANDO	299	3109	3041	MISSISSIPPI HELENA	29	1174	1285	NEW YORK YAF P	505	4909	4925	VERMONT BURLINGTON	13	531	396
PENSACOLA	162	2543	2659	MISSISSIPPI KALISRELL	0	322	254	NEW YORK PITTSGRUGH	7	810	772	VERMONT BURLINGTON	13	531	396
TALLAHASSEF	102	2161	2532	MISSISSIPPI ST. LOUIS	0	258	117	NEW YORK SCRANTON	15	634	608	VERMONT BURLINGTON	13	531	396
TAMPA	322	3218	3177	MISSISSIPPI SPRINGFIELD	65	1122	1397	NEW YORK WILLIAMSPORT	4	707	698	VERMONT BURLINGTON	13	531	396
WEST PALM BEACH	396	3362	3450	MISSISSIPPI MISSOURI	0	324	426	NEW YORK RENNSSVLA	7	810	772	VERMONT BURLINGTON	13	531	396
GEORGIA ATHENS	40	1608	1722	MISSISSIPPI PILLINGS	6	716	698	NEW YORK FRIE	32	492	373	VERMONT BURLINGTON	13	531	396
ATLANTA	49	1757	1589	MISSISSIPPI WAFAT FALLS	1	533	438	NEW YORK HARRISBURG	7	828	1025	VERMONT BURLINGTON	13	531	396
AUGUSTA	52	1809	1970	MISSISSIPPI MAYRC	5	396	739	NEW YORK PHILADELPHIA	16	1096	1104	VERMONT BURLINGTON	13	531	396
COLDREUS	99	2217	2137	MISSISSIPPI HELENA	0	322	254	NEW YORK ROCK ISLAND	7	828	1025	VERMONT BURLINGTON	13	531	396
MACIN	86	2076	2264	MISSISSIPPI MILES CITY	0	258	117	NEW YORK PROVIDENCE	12	509	359	VERMONT BURLINGTON	13	531	396
ROME	17	0	0	MISSISSIPPI MISSOULA	0	397	188	NEW YORK RHODE ISLAND	12	640	532	VERMONT BURLINGTON	13	53	

STORM SUMMARY

OCTOBER 1979

STATE	TORNADOES				HAILSTORMS				WINDSTORMS				LIGHTNING				@HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				φ ALL OTHER					
	NUMBER	DAYS	DEATHS	INJURIES	DEATHS	INJURIES	PROB- ERTY	†DAMAGE	DEATHS	INJURIES	PROB- ERTY	†DAMAGE	CROPS	DEATHS	INJURIES	PROB- ERTY	†DAMAGE	CROPS	DEATHS	INJURIES	PROB- ERTY	†DAMAGE	CROPS	DEATHS	INJURIES	PROB- ERTY	†DAMAGE	CROPS		
Alabama																														
Alaska	1	1	1	2	4					2	2	2	2	?																
Arizona																														
Arkansas																														
California																														
Colorado	1	1	3	500	8																									
Connecticut																														
Delaware																														
Florida	1	1																												
Georgia																														
Hawaii																														
Idaho																														
Illinois	1	1	2																											
Indiana																														
Iowa	1	1																												
Kansas	3	2																												
Kentucky																														
Louisiana																														
Maine																														
Maryland & DC																														
Massachusetts																														
Michigan	*	1	1																											
Minnesota																														
Mississippi																														
Missouri	2	2																												
Montana																														
Nebraska																														
Nevada																														
New Hampshire																														
New Jersey																														
New Mexico																														
New York																														
North Carolina																														
North Dakota																														
Ohio	*	1	1																											
Oklahoma																														
Oregon	*	2	2	3	2	5				5	5																			
Pacific																														
Pennsylvania	*	6	2	1	1	5																								
Puerto Rico	*																													
Rhode Island																														
South Carolina																														
South Dakota																														
Tennessee	*																													
Texas	15	4								6	1																			
Utah	*																													
Vermont	*																													
Virginia	2	1								4	4																			
Virgin Islands	*																													
Washington	*																													
West Virginia	1	1	1	1	5	4																								
Wisconsin																														
Wyoming	*																													

RAWINSONDE DATA

Average monthly values

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RAWINSONDE DATA

Average monthly values

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CARIBOU, ME 988 MB												CENTREVILLE, AL 1000 MB												CHAPLESTON, SC 1016 MB												CHATHAM, MA 1013 MB												CHIHUAHUA, MEXICO 858 MB																								
Standard pressure surface mb.	No. of observations	Resultant Wind				Resultant Wind				Resultant Wind				Resultant Wind				Resultant Wind				Resultant Wind				Resultant Wind																																														
		Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.	Direction tens of deg.	Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.	Direction tens of deg.																																									
SFC	31	191	5.3	3.2	25	1.2	31	14.0	10.4	0.2	1.4	31	13	14.2	12.6	35	1.1	31	16	10.1	7.3	25	1.6	30	1,428	10.6	3.6	24	6																																											
950	31	507	5.1	2.4	26	3.6	31	5.7	15.3	6.0	2.1	2.0	31	5.8	16.4	7.4	26	0.5	31	5.9	10.9	6.4	26	1.2	26	7.1	1,513	14.5	4.6	24	.9																																									
900	31	946	3.2	-3.2	3	5.1	31	1,032	13.4	4.1	24	3.0	31	1,044	13.9	2.9	1.5	2.1	31	5.5	5.5	5.0	2.6	1.2	26	7.1	1,513	14.5	4.6	24	.9																																									
850	31	1,140	6.8	-2.2	26	6.4	31	1,512	11.2	2.6	26	4.0	31	1,512	11.4	2.6	1.5	2.1	31	5.5	5.5	5.0	2.6	1.2	26	7.1	1,513	14.5	4.6	24	.9																																									
800	31	1,896	-6.6	-6.2	27	7.1	31	1,017	5.6	-5.6	27	5.7	31	1,017	5.8	-5.6	1.5	2.1	31	5.5	5.5	5.0	2.6	1.2	26	7.1	1,513	14.5	4.6	24	.9																																									
750	31	2,020	-5.4	-15.2	26	1.0	31	9.7	31	2,551	7.5	27	2.2	31	2,561	7.4	7.8	2.5	2.1	31	2,480	1.0	-9.8	26	12.4	29	2,573	13.9	4.5	23	3.3																																									
700	31	2,952	-5.4	-15.2	26	1.0	31	11.7	4.7	-10.6	27	8.3	31	1,126	4.7	-11.7	2.5	8.3	31	3,033	-1.3	-14.6	26	14.4	29	3,150	10.2	-7.8	26	3.3																																										
650	31	3,531	-19.4	-19.3	26	12.4	31	3,717	1.4	-15.0	26	9.1	31	3,726	1.4	-15.0	2.5	9.2	31	3,621	-3.9	-17.0	26	16.0	29	3,762	5.8	-10.5	25	3.3																																										
600	31	4,148	-11.8	-24.1	26	14.3	31	4,357	-2.2	-18.3	26	12.8	31	4,366	-2.2	-19.5	2.5	10.7	31	4,249	-7.3	-19.9	25	17.9	29	4,411	1.2	-14.4	27	4.1																																										
550	31	4,610	-15.8	-28.1	26	15.3	31	5,043	-6.6	-23.1	26	12.4	31	5,051	-6.5	-23.8	2.5	8.6	31	4,922	-11.2	-24.5	26	19.8	29	5,106	-2.8	-21.2	27	5.7																																										
500	31	5,523	-20.0	-32.3	26	17.2	31	5,781	-11.2	-27.7	26	13.9	31	5,789	-11.4	-28.0	2.5	14.3	31	5,647	-16.0	-29.2	25	21.1	29	5,854	-7.6	-26.1	27	7.4																																										
450	31	6,297	-25.0	-36.4	25	19.8	31	6,580	-17.0	-34.0	26	14.7	31	6,589	-16.9	-33.8	2.5	14.9	31	6,433	-20.9	-33.9	26	23.1	29	6,666	-13.4	-31.0	28	8.2																																										
400	31	7,143	-30.9	-41.5	25	23.0	31	7,453	-23.5	-39.7	26	16.8	31	7,463	-23.2	-36.8	2.5	16.6	31	7,293	-27.2	-39.4	25	24.5	29	7,550	-20.2	-36.5	29	9.1																																										
350	31	8,086	-37.1	-46.6	25	26.7	31	8,418	-30.7	-44.6	26	17.8	31	8,429	-30.4	-44.5	2.5	17.7	31	8,244	-34.2	-45.9	25	26.6	29	8,528	-27.8	-40.9	29	10.0																																										
300	31	9,134	-43.7	-51.3	25	27.4	31	9,492	-38.5	-50.3	26	19.3	31	9,503	-38.7	-51.1	2.5	19.0	31	9,303	-41.5	-51.1	25	27.3	29	9,613	-36.4	-47.7	30	12.7																																										
250	28	10,351	-49.0	-50.0	25	29.8	31	10,722	-47.0	-50.0	26	20.4	31	10,733	-47.1	-50.0	2.5	21.2	31	10,521	-48.5	-50.0	25	27.7	29	10,853	-45.5	29	15.9																																											
200	28	11,803	-52.5	-52.5	25	27.1	31	12,176	-55.2	-52.5	26	21.1	31	12,185	-54.5	-52.5	2.5	24.7	31	11,970	-54.0	-52.5	25	28.0	29	12,308	-55.8	29	18.5																																											
175	28	12,666	-53.6	-53.6	25	26.3	31	13,021	-59.0	-53.6	26	21.5	31	13,032	-58.5	-53.6	2.5	24.8	31	12,824	-55.8	-53.6	25	27.0	29	13,147	-61.0	29	18.3																																											
150	28	13,654	-54.5	-54.5	25	24.0	31	9,980	-62.8	-54.5	26	20.6	31	13,992	-62.5	-54.5	2.5	23.3	31	13,801	-58.0	-54.5	25	24.0	29	14,093	-66.3	29	15.0																																											
125	28	14,818	-55.9	-55.9	26	20.6	31	15,093	-65.9	-55.9	26	18.6	31	15,109	-65.6	-55.9	2.5	19.3	31	14,942	-60.7	-55.9	25	21.9	29	15,186	-70.5	29	13.4																																											
100	28	16,236	-56.9	-56.9	25	17.6	31	16,441	-67.9	-56.9	26	13.6	31	16,460	-67.1	-56.9	2.5	13.8	31	16,328	-61.2	-56.9	25	16.8	28	16,501	-73.1	29	10.0																																											
80	27	17,650	-57.1	-57.1	25	13.8	31	17,785	-66.2	-57.1	26	8.2	31	17,809	-65.5	-57.1	2.5	8.8	31	17,715	-60.5	-57.1	25	12.6	26	17,814	-70.8	31	4.7																																											
70	27	18,499	-57.1	-57.1	26	11.5	31	18,599	-64.3	-57.1	27	4.8	31	18,626	-63.5	-57.1	2.5	5.9	31	18,548	-60.3	-57.1	25	10.0	24	18,613	-67.3	31	2.3																																											
60	27	19,476	-57.1	-57.1	26	10.1	31	19,548	-61.7	-57.1	26	4.2	31	19,579	-60.6	-57.1	2.5	5.3	30	19,514	-59.6	-57.1	25	8.7	24	19,553	-63.4	35	1.0																																											
50	27	20,623	-56.8	-56.8	25	8.5	31	20,684	-59.3	-56.8	26	3.8	30	20,720	-58.5	-56.8	2.5	3.4	29	20,659	-58.5	-56.8	25	7.2	23	20,688	-60.2	07	1.5																																											
40	27	22,039	-56.3	-56.3	26	7.0	31	22,089	-57.2	-56.3	27	2.8	30	22,133	-56.0	-56.3	2.5	1.7	29	22,066	-57.3	-56.3	25	7.4	23	22,090	-57.7	09	0.9																																											
30	23	23,876	-54.5	-54.5	26	7.4	31	23,921	-54.5	-54.5	30	1.3	29	23,970	-53.7	-54.5	2.5	1.2	29	23,891	-54.9	-54.5	25	7.4	23	23,896	-54.5	10	4.5																																											
25	23	25,046	-53.5	-53.5	26	9.1	31	25,093	-53.2	-53.5	30	1.3	29	25,156	-52.0	-53.2	2.5	1.2	29	25,056	-54.5	-53.5	25	8.6	20	25,082	-52.7	09	3.8																																											
20	21	26,491	-52.1	-52.1	27	10.3	31	26,539	-51.1	-52.1	30	0.1	29	26,579	-50.3	-52.1	2.5	0.9	30	26,495	-52.2	-52.1	25	7.7	20	26,520	-50.7	07	3.6																																											
15	16	28,370	-49.6	-49.6	26	14.4	31	28,425	-48.5	-49.6	27	0.1	29	28,470	-47.6	-49.6	2.5	0.9	30	28,384	-50.7	-49.6	25	11.8	27	28,394	-48.7	27	4.8																																											
10	7	31,390	-47.5	-47.5	26	1.6	31	31,068	-45.8	-47.5	27	15.4	31	31,020	-43.9	-47.5	2.5	14.6	31	30,994	-46.3	-47.5	25	16.0	27	31,055	-46.1	28	7.9																																											
7	7	33,390	-47.5	-47.5	26	5.3	31,507	-41.0	-47.5	27	3.0	31	31,450	-39.5	-47.5	2.5	3.4	30	33,478	-42.6	-47.5	25	2.8	27	31,505	-46.1	28	7.9																																												
•	COLD BAY, AK 923 MB												DAYTON, OH 979 MB												DEL RIO, TX 882 MB												ELY, NV 810 MB												EMPALME, MEXICO 1009 MB												FAIRBANKS, AK 986 MB											
SFC	31	791	8.4	.4	33	1.8	31	1,193	12.1	-1.7	30	.6	31	1,908	3.9	-5.8	20	2.9	30	12	21.0	12.0	34	1.2	31	135	-.8	-4.1	03	1.3																																										
1000	950	31	996	13.3	1.2	33	1.9	31	1,503	18.1	-.6	27	2.3	31	1,503	17.6	-.6	2.5	1.9	30	90	24.5	13.5	34	1.0	31	4,067	1.2	-3.8	09	2.3																																									
900	31	1,477	13.0	-.5	31	3.9	31	1,513	15.8	-2.5	27	5.0	29	2,018	8.6	-2.9	19	2.2	30	543	26.6	7.6	34	3.1	31	4,322	1.6	-3.8	09	2.3																																										
850	31	1,986	11.3	-2.7	31	5.3	31	2,019	15.8	-2.5	27	5.2	31	2,024	8.4	-4.7	21	2.0	31	2,527	2.5	7.1	34	3.1	31	4,547	0.9	-6.9	20	2.6																																										
750	31	2,522	8.4	-5.7	31	6.4	31	2,056	12.5	-																																																														

RAWINSONDE DATA

Average monthly values

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FLINT, MI 924 MB				GLASCOW, MT 933 MB				GRAND JUNCTION, CO 853 MB				GREAT FALLS, MT 888 MB				GREEN BAY, WI 966 MB									
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	Dew Point °C	Direction tens of deg	Speed m.p.s.	Resultant Wind	Dew Point °C	Direction tens of deg	Speed m.p.s.	Resultant Wind	Dew Point °C	Direction tens of deg	Speed m.p.s.	Resultant Wind	Dew Point °C	Direction tens of deg	Speed m.p.s.	Resultant Wind	Dew Point °C	Direction tens of deg	Speed m.p.s.		
5FC	31	236	7.6	5+7	22	1+6	31	696	5+0	+0	34	5	31	1,472	9+5	-3+4	13	2+2	31	1,118	6+2	-1+9	22	2+7	
1000	31	529	7.6	3+4	24	4+4	31																		
950	31	513	5.6	1+7	26	6+6	31	994	9+2	+2	31	4+2	25	1,519	11+4	-4+0	13	3+3	31	1,480	8+5	-2+3	25	5+0	
900	31	503	3.3	-5+2	7	6+6	31	1,467	7+1	-1+6	31	6+9	31	2,005	11+4	-4+2	14	2+3	31	1,979	5+3	-4+5	27	5+7	
850	31	493	-1.3	-7+	-4+5	27	8+1	1,963	3+1	-4+3	31	8+9	31	2,051	11+4	-7+1	25	7+1	2,503	1+8	-7+4	28	6+6		
750	31	2+446	-1.7	-8+2	26	6+6	31	2,134	-0.7	-6+2	31	10.9	31	2,581	5+5	-7+1	25	7+1	2,503	1+8	-7+4	28	6+6		
700	31	2+993	-3+9	-8+2	10.7	-1+5	31	1,036	-2.5	-10+4	31	12.3	31	3,107	4+7	-9+7	27	4+0	31	3,056	-1+8	-11+2	28	8+1	
650	31	3+575	-7+1	-16.9	26	1+1	31	3,620	-6+8	-15+0	31	3,171	31	3,642	-7+2	-12+2	28	6+0	31	3,642	-9+4	-14+9	29	10+1	
600	31	4+195	-10+6	-22+5	27	12+4	31	4,243	-19.7	-30	14+7	31	4,345	-7+3	-16+3	28	7+5	31	4,266	-8+3	-20+0	29	12+3		
550	31	4+860	-16+6	-27+5	27	12+4	31	4,910	-13.7	-21	30	15+4	31	5,027	-7+7	-17+1	28	7+1	31	4,920	-8+3	-21+1	29	14+6	
500	31	5+576	-18+9	-32+6	27	16+6	31	5,628	-18+5	-28+1	30	17+3	31	5,762	-12+0	-16+2	28	6+6	31	4,935	-12+2	-24+5	29	13+0	
450	31	6+352	-24+3	-36+3	27	16+7	31	6,407	-23+6	-34+3	30	19+5	31	6,560	-17+8	-31+1	28	6+0	31	5,652	-12+6	-28+6	29	13+7	
400	31	7+201	-30+2	-41+3	27	18+0	31	7,258	-29+5	-39+6	30	20+7	31	7,410	-24+2	-35+5	28	6+8	31	6,292	-28+7	-37+3	29	19+1	
350	31	8+141	-36+8	-46+3	27	21+9	31	8,200	-36+4	-44+4	30	21+6	31	8,393	-11+4	-41+6	28	15+1	31	8,273	-36+0	-46+0	29	21+0	
300	31	9+190	-43+3	-52+5	27	23+7	31	9,250	-43+4	-52+5	30	23+2	31	9,463	-39+2	-48+9	28	17+2	27	9,276	-46+1	-52+9	29	23+0	
250	31	10+403	-48+4	-58+2	28	23+4	31	11,460	-49+5	-58+2	30	25+7	31	10,699	-47+5	-28+6	27	18+6	31	10,482	-50+6	-52+2	29	25+3	
200	31	11,848	-52+1	-58+2	28	24+2	31	11,907	-53+7	-58+2	30	26+6	31	12,144	-54+6	-28+9	27	19+4	31	11,919	-55+0	-52+2	29	26+1	
175	30	12+710	-53+1	-58+2	28	22+2	31	12,753	-54+8	-58+2	30	23+7	31	12,990	-57+4	-28+9	27	19+1	27	12,771	-58+0	-52+2	29	22+2	
150	30	13,699	-55+3	-58+2	28	20+6	31	13,745	-56+9	-58+2	30	22+5	31	13,955	-61+1	-28+6	27	16+6	26	13,756	-57+5	-52+2	29	20+1	
125	30	14,858	-57+4	-58+2	28	18+2	31	14,896	-58+3	-58+2	30	19+6	31	15,080	-63+8	-28+6	27	14+1	26	14,902	-59+4	-52+2	29	17+3	
100	30	16,260	-59+1	-58+2	28	13+3	31	16,295	-59+6	-58+2	30	14+2	31	16,441	-66+5	-29+1	27	11+0	26	16,294	-60+5	-52+2	29	13+6	
80	30	17,660	-58+8	-58+2	27	10+7	31	17,693	-58+9	-58+2	30	10+9	30	17,793	-65+2	-30+0	27	8+0	26	17,685	-60+0	-52+2	29	10+2	
70	30	18,500	-58+4	-58+2	27	8+3	31	18,532	-58+4	-58+2	31	9+2	30	18,610	-63+5	-31+5	27	5+0	25	18,516	-60+0	-52+2	29	6+7	
60	30	19,470	-56+4	-58+2	28	7+6	31	19,502	-58+2	-58+2	31	6+6	30	19,560	-62+6	-31+2	27	2+5	25	19,482	-58+7	-52+2	29	5+4	
50	30	20,618	-57+8	-58+2	27	6+6	31	20,652	-57+8	-58+2	33	4+9	30	20,690	-60+6	-31+2	27	2+5	25	20,628	-58+7	-52+2	29	2+9	
40	29	22,034	-57+0	-57+0	27	6+7	28	22,054	-57+7	-58+2	34	3+7	29	22,088	-58+9	-31+2	27	2+1	25	22,031	-58+5	-52+2	29	2+9	
30	26,336	-86+1	-55+4	-58+2	28	6+7	27	23,880	-57+1	-58+2	35	2+9	26	23,907	-55+9	-30+2	28	2+8	24	23,848	-57+9	-52+2	29	3+4	
25	25,028	-84+5	-54+4	-58+2	29	6+5	24	25,042	-56+2	-58+2	34	3+1	26	25,071	-54+7	-30+3	28	2+0	24	24,996	-56+7	-52+2	29	3+1	
20	24,266	-85+5	-52+6	-58+2	28	7+9	23	26,464	-55+0	-58+2	35	3+7	26	26,505	-52+5	-28+6	28	6+0	19	26,425	-55+7	-52+2	29	0+1	
15	21,880	-83+0	-50+9	-58+2	28	9+4	19	25,314	-53+4	-58+2	32	3+7	19	26,372	-50+2	-28+6	28	6+3	16	26,288	-54+4	-52+2	29	3+8	
10	8	31,620	-46+9	-58+2	10	31,021	-49+0	12	30,993	-46+5	-58+2	26	11+2	7	30,893	-52+2	-28+6	28	11+2	21	29,211	-51+8	-52+2	29	1+2

GREENSBORO, NC 985 MB			GUADALUPE IS., MEXICO 1012 MB										GUAM, MARIANA IS. 997 MB							HILO, HI 1015 MB					HUNTINGTON, WV 987 MB					
SFC	31	275	9.2	6.7	28	*.4	27	23	19.8	15.1	32	6.4	31	111	25.4	24.3	10	2.7	31	10	21.5	19.3	24	1.5	31	246	9.1	5.9	22	1.2
1000	31	275	9.2	6.7	28	*.4	27	23	19.8	15.1	32	6.4	31	111	25.4	24.3	10	2.7	31	10	23.4	20.0	23	.9	31	135	23.4	20.0	23	5.6
950	31	574	12.3	6.5	26	3.1	27	56.8	16.4	9.5	32	7.0	9	112	25.6	24.3	31	537	20.7	18.3	12	1.7	31	561	11.3	5.2	24	5.6		
900	31	1,027	10.4	3.7	27	5.3	27	1,029	17.7	-2.1	32	4.0	31	1,009	21.2	18.7	12	5.6	31	1,049	17.7	15.9	10	2.7	31	1,012	9.1	2.4	25	8.4
850	31	1,022	8.7	-1.2	27	6.8	27	1,517	17.1	-5.4	30	4.1	31	1,504	18.5	15.4	13	5.6	31	1,537	14.7	12.8	11	2.2	31	1,483	6.4	-1.0	26	9.3
800	31	2,002	6.8	-4.3	26	8.3	27	2,032	15.1	-7.3	28	5.1	31	2,024	16.1	12.4	13	5.2	31	2,049	12.4	7.9	11	2.3	31	1,979	4.3	-3.2	26	9.4
750	31	2,530	4.6	-8.9	26	9.6	27	2,575	12.5	-9.4	27	6.3	31	2,571	13.5	9.2	13	5.7	31	2,590	11.2	-0.1	10	2.7	31	2,503	2.3	-6.9	27	10.1
700	31	3,089	1.6	-12.0	26	10.6	27	3,150	9.3	-12.0	26	6.2	31	3,151	10.5	5.2	12	6.5	31	3,164	8.8	-5.2	08	2.7	31	3,058	-4.4	-11.0	27	11.7
650	31	3,686	-1.3	-13.4	26	12.5	27	3,760	6.0	-14.5	26	7.7	31	3,766	7.2	1.2	2	6.0	31	3,774	5.5	-7.9	08	2.1	31	3,694	-3.3	-14.5	27	13.0
600	31	4,318	-4.5	-17.1	27	14.2	27	4,411	2.0	-17.5	25	7.8	31	4,421	3.6	-2.4	12	5.8	31	4,424	1.9	-11.8	09	1.4	31	4,277	-6.8	-16.3	27	13.7
550	31	4,999	-8.4	-21.5	26	16.5	27	5,107	-2.5	-21.8	25	8.1	31	5,123	-4	-7.6	12	6.2	31	5,121	-2.2	-15.6	09	1.2	31	4,951	-10.7	-21.3	27	15.6
500	31	5,731	-13.4	-25.6	26	17.4	27	5,855	-7.7	-25.5	25	10.2	31	5,880	-4.5	-13.5	11	7.3	31	5,871	-7.0	-20.4	07	1.0	31	5,679	-15.0	-27.2	27	17.3
450	31	6,525	-18.8	-29.9	26	18.6	27	6,667	-13.2	-30.0	26	10.9	31	6,700	-9.2	-18.8	11	7.0	31	6,665	-12.3	-25.1	27	.6	31	6,467	-20.3	-33.3	27	18.5
400	31	7,392	-25.4	-36.4	27	20.5	27	7,553	-19.6	-35.3	26	13.4	31	7,605	-14.8	-22.5	11	6.8	31	7,575	-18.4	-30.7	26	2.2	31	7,329	-26.6	-39.6	27	19.7
350	31	8,350	-32.5	-44.6	27	22.0	27	8,533	-27.2	-40.8	26	15.3	31	8,600	-21.3	-29.4	11	6.7	31	8,561	-25.5	-37.1	26	3.7	31	8,283	-33.5	-44.7	27	22.0
300	31	9,316	-40.1	-50.7	26	23.1	27	9,620	-36.0	-48.4	24	17.1	31	9,722	-29.9	-37.7	11	5.5	31	9,658	-33.8	-44.3	27	6.7	31	9,341	-41.1	-53.1	27	24.6
250	31	10,331	-47.6	-57.0	26	25.2	27	10,863	-44.8	-54.8	24	20.2	29	10,994	-40.1	-43.0	11	5.2	31	10,910	-33.6	-43.6	26	10.9	31	10,565	-44.3	-54.3	27	23.0
200	31	12,092	-52.0	-62.4	26	26.0	27	12,424	-51.4	-54.6	24	21.8	29	12,475	-45.4	-48.4	10	5.0	31	12,411	-34.4	-44.4	26	12.0	31	12,049	-52.9	-62.5	27	25.5
175	31	13,046	-56.7	-67.7	26	27.2	27	13,166	-59.7	-62.7	25	20.4	29	13,204	-52.4	-59.7	09	4.6	31	13,119	-60.2	-70.2	27	14.6	30	12,998	-55.2	-67.7	27	27.4
150	31	13,914	-61.0	-71.4	26	21.6	27	14,120	-62.5	-71.4	25	16.0	29	14,270	-57.5	-67.5	06	4.1	31	14,167	-61.7	-71.7	27	9.7	31	13,856	-58.4	-70.4	27	22.1
125	31	15,046	-62.3	-72.3	26	18.4	27	16,225	-67.9	-76.9	25	12.8	29	15,442	-75.4	-75.4	07	8.9	31	15,257	-72.1	-72.1	27	5.1	30	14,998	-60.6	-72.7	27	18.8
100	31	16,417	-64.3	-74.3	26	13.8	24	16,550	-71.4	-74.4	26	7.7	22	16,607	-82.1	-82.1	07	11.9	31	16,556	-76.2	-76.2	02	1.2	30	16,181	-62.0	-72.0	27	15.3
80	31	17,787	-62.6	-74.6	26	9.2	25	17,870	-70.7	-74.7	28	2.8	17	17,863	-80.4	-80.4	08	14.1	31	17,865	-74.4	-74.4	08	4.7	29	17,760	-61.8	-71.8	27	10.9
70	31	18,614	-61.3	-73.3	26	7.3	24	18,667	-67.7	-73.7	30	1.3	15	18,621	-74.7	-74.7	09	13.5	30	18,630	-72.0	-72.0	08	6.8	29	18,589	-60.7	-70.7	27	8.4
60	31	19,574	-59.8	-70.8	26	6.5	23	19,605	-66.4	-70.4	03	1.0	19	19,527	-70.8	-70.8	09	11.6	30	19,567	-66.4	-66.4	09	9.0	29	19,551	-59.6	-69.6	26	7.4
50	31	20,718	-58.3	-69.3	26	4.5	22	20,729	-60.5	-69.5	03	1.4	19	20,625	-66.2	-66.2	09	17.7	30	20,653	-64.1	-64.1	09	10.8	29	20,695	-58.0	-68.0	26	6.8
40	28	22,122	-56.3	-67.3	26	4.0	22	22,129	-57.3	-67.3	08	2.0	19	21,993	-62.3	-62.3	09	21.6	30	22,030	-60.8	-60.8	09	13.9	28	22,107	-56.6	-66.6	27	5.8
30	28	23,960	-53.9	-64.9	27	3.9	21	23,971	-53.5	-64.5	07	3.4	19	23,789	-58.1	-58.1	09	27.3	30	23,838	-56.6	-56.6	09	16.2	28	23,942	-54.2	-64.2	27	5.6
25	25	25,141	-52.1	-65.1	27	3.7	15	25,194	-52.0	-65.0	06	5.6	14	24,948	-54.1	-54.1	09	29.0	29	25,002	-54.6	-54.6	09	17.0	25	21,115	-52.9	-64.9	27	6.4
20	25	26,591	-50.7	-65.3	27	3.5	14	26,581	-50.3	-65.3	07	2.6	16	26,393	-49.6	-49.6	09	27.6	28	26,438	-52.1	-52.1	09	17.3	26	26,565	-51.1	-65.1	27	7.3
15	24	28,473	-48.1	-64.1	27	4.4	7	28,426	-48.0	-64.0	13	28,292	-47.4	09	22.2	26	28,310	-49.7	-49.7	09	16.7	22	28,441	-49.2	-64.2	26	8.6			
10	18	31,147	-45.5	-64.5	27	7.9	7	31,091	-33.0	-64.0	8	31,001	-33.0	09	15.3	30	31,004	-44.6	-44.6	09	10.5	28	31,150	-45.9	-64.9	26	8.6			
7																				5	33,378	-42.7								

INTERNATIONAL FALLS, MN 969 M8				ISLE OEL CISNE 1009 M8				JACKSON, MS 1005 M8				JOHN F. KENNEDY INT. AP NY 1015 M8				JOHNSTON IS., PACIFIC AREA 1013 M8														
SFC 31	359	.7	-1.4	35	.6	31	10	26.6	23.8	06	1.8	31	100	11.8	10.5	14	.3	31	5	11.1	7.1	24	1.5	31	3	27.2	24.6	09	4.8	
1000	31	90	-2.6	25.8	3.9	07	21	30	138	14.0	08	10.8	15	.4	31	134	7.2	2.6	31	114	26.3	21.0	09	5.6						
950	30	523	2.3	-5.3	32	1.0	31	542	23.1	20.9	08	2.7	31	572	16.2	5.8	23	2.3	31	561	9.3	5.3	26	4.8	31	566	22.5	20.7	09	6.7
900	31	954	1.5	-3.2	30	3.2	31	1,014	20.3	17.0	09	2.9	31	1,031	14.4	1.5	27	3.1	31	1,008	6.9	2.5	26	6.0	31	1,036	19.8	16.3	09	7.0
850	31	1,414	4.5	-8.6	32	5.0	31	1,506	17.4	13.3	09	2.9	31	1,513	13.2	-1.7	27	4.3	31	1,476	4.5	.4	26	6.8	31	1,528	16.8	12.6	09	6.6
800	31	1,899	-1.3	-9.5	31	6.1	31	2,023	15.0	9.4	16	2.7	31	2,020	11.0	-4.0	28	5.5	31	1,969	2.6	-3.4	25	8.3	31	2,043	14.4	9.9	09	5.7
750	31	2,412	-3.1	-11.9	31	8.1	31	2,568	12.3	6.4	12	2.2	31	2,556	8.6	-6.0	28	6.0	31	2,490	.7	-8.2	25	10.3	31	2,587	11.9	6.6	10	4.7
700	31	2,955	-5.8	-15.5	31	9.7	31	3,145	9.1	1.6	14	2.1	31	3,124	5.7	-10.9	29	7.5	31	3,024	-1.7	-12.5	25	12.3	31	3,162	8.8	-0.9	09	3.9
650	31	3,533	-8.9	-16.3	30	10.5	31	3,756	6.2	-3.0	16	2.0	31	3,726	2.0	-15.9	29	8.0	31	3,629	-4.6	-16.8	25	13.5	31	3,773	5.7	-6.4	09	3.5
600	31	4,149	-12.4	-21.7	31	11.5	31	4,049	2.8	-7.6	16	2.0	31	4,367	-1.5	-19.0	29	9.2	31	4,255	-7.9	-21.7	25	14.8	31	4,423	-2.2	-11.1	08	3.3
550	31	4,809	-16.4	-26.7	30	12.5	31	5,109	-1.1	-12.6	16	1.6	31	5,055	-5.7	-22.8	28	10.3	31	4,926	-12.0	-24.5	25	16.7	31	5,121	-1.5	-16.1	07	3.2
500	31	5,519	-20.6	-30.9	30	14*	31	5,853	-5.5	-16.6	18	1.4	31	5,795	-10.6	-27.0	28	11.2	31	5,649	-16.4	-28.9	25	17.3	31	5,875	-5.6	-21.4	07	3.4
450	31	6,291	-25.7	-37.4	30	16.1	31	6,683	-10.3	-21.5	24	1.0	31	6,597	-16.1	-32.3	29	12.1	31	6,434	-21.7	-33.8	25	18.7	31	6,693	-10.6	-26.7	06	2.3
400	31	7,135	-31.5	-40.3	30	18.0	31	7,581	-15.7	-27.0	28	2.4	31	7,471	-23.1	-37.9	29	13.9	31	7,291	-28.0	-39.1	25	19.9	30	7,589	-16.8	-33.3	04	1.1
350	31	8,070	-38.3	-43.7	30	21.0	30	8,578	-22.7	-32.9	27	3.9	31	8,438	-30.2	-43.8	28	15.0	30	8,243	-34.9	-43.7	24	20.9	30	8,580	-24.3	-38.6	32	1.3
300	31	9,111	-45.0	-50.5	29	24.0	30	9,688	-31.0	-40.9	27	5.4	31	9,511	-38.4	-51.2	29	15.0	30	9,259	-42.3	-47.6	24	23.5	29	9,680	-32.9	-46.6	28	3.6
250	31	10,316	-50.2	-59.2	29	26.6	30	10,953	-41.5	-65.5	26	6.5	31	10,743	-47.0	-70.0	28	18.1	30	10,514	-54.8	-68.8	24	25.0	29	10,938	-42.5	-57.7	27	7.8
200	31	11,762	-52.5	-59.5	29	26.5	30	12,426	-54.1	-75.5	3.5	7.3	31	12,193	-55.7	-78.0	28	20.2	29	11,966	-53.7	-68.7	24	24.0	29	12,408	-53.8	-68.7	27	9.6
175	31	12,625	-53.0	-59.0	29	23.8	30	13,269	-61.4	-81.1	25	8.1	31	13,035	-59.6	-82.7	28	20.3	29	12,822	-55.2	-82.7	25	23.1	29	13,254	-60.0	-82.8	28	9.4
150	31	13,617	-54.1	-59.1	30	21.1	30	14,208	-69.1	-95.3	25	9.6	31	13,999	-63.5	-98.0	28	18.0	29	13,824	-57.3	-98.0	24	21.7	29	14,201	-67.0	-98.0	28	8.0
125	31	14,782	-56.1	-59.1	30	17.8	30	15,279	-75.7	-95.7	26	7.3	31	15,102	-66.9	-98.9	28	17.0	29	14,997	-59.9	-98.9	24	18.0	29	15,268	-73.7	-98.9	28	5.6
100	31	16,196	-57.1	-59.1	30	12.2	31	16,560	-77.5	-95.7	30	3.0	30	16,443	-68.5	-98.5	28	18.4	29	16,335	-61.1	-98.5	25	15.3	30	16,572	-77.9	-98.5	02	1.6
80	31	17,608	-57.3	-59.1	30	11.0	22	17,842	-74.7	-95.7	07	3.4	31	17,783	-67.3	-98.7	28	7.0	27	17,725	-60.0	-98.7	25	11.4	27	18,752	-75.3	-98.7	08	6.5
70	31	18,452	-57.5	-59.1	30	9.8	22	19,625	-70.9	-95.7	09	6.6	31	18,593	-64.9	-98.7	28	4.7	27	18,560	-59.6	-98.7	25	9.5	26	18,632	-72.3	-98.7	08	9.2
60	31	19,426	-57.6	-59.1	31	8.5	21	19,553	-66.4	-95.7	09	9.1	30	19,533	-62.7	-98.7	27	3.7	26	19,531	-66.6	-98.6	26	7.5	26	19,531	-68.3	-98.6	09	11.5
50	30	20,579	-57.2	-59.1	31	7.0	21	20,669	-62.5	-95.7	09	12.3	30	20,670	-59.8	-98.7	27	2.9	26	20,661	-57.3	-98.7	26	7.7	26	20,654	-64.3	-98.7	09	13.4
40	29	21,991	-56.9	-59.1	32	5.8	21	22,059	-54.5	-95.7	09	14.6	30	22,072	-57.8	-98.7	28	2.1	26	22,075	-56.5	-98.7	26	6.0	28	22,030	-60.9	-98.7	09	16.9
30	26	23,817	-56.0	-59.1	33	4.9	21	23,887	-54.2	-95.7	09	19.3	29	23,901	-54.5	-98.7	33	.6	21	23,924	-54.1	-98.7	26	7.3	28	23,886	-58.4	-98.7	09	20.6
25	25	24,980	-55.1	-59.1	32	4.6	21	25,062	-52.0	-95.7	09	19.9	29	25,073	-53.4	-98.7	32	.6	25	25,092	-53.2	-98.7	27	8.5	26	24,996	-54.1	-98.7	09	22.3
20	24	26,007	-54.8	-59.1	31	6.6	21	26,51*	-46.4	-95.7	09	19.0	28	26,521	-50.9	-98.7	01	1.1	15	26,536	-51.5	-98.7	26	11.5	26	26,438	-51.4	-98.4	09	22.0
15	24	26,256	-52.7	-59.1	32	7.2	15	24,942	-45.1	-95.7	09	15.1	26	24,900	-48.9	-98.7	06	.5	112	26,438	-48.3	-98.7	24	28,318	-48.4	-98.4	09	22.0		
10	11	30,923	-50.0	-59.1	29	9.1	5	31,194	-39.2	-95.7	21	31,073	-45.0	-98.7	26	2.3	21	31,021	-41.8	-98.7	26	31,021	-41.8	-98.7	09	11.0				
7													5	33,458	-41.2									6	33,450	-39.2				

BAWINSONDE DATA

Average monthly values

OCTOBER 1979

KEY WEST, FL 1013 MB		KING SALMON, AK 692 MB		KODR, CAROLINE IS. 1006 MB		KOTZEBUE, AK 1003 MB		LAKE CHARLES, LA 1015 MB	
Standard pressure surface mb.	No. of observations	Resultant Wind	Temperature °C	Resultant Wind	Temperature °C	Resultant Wind	Temperature °C	Resultant Wind	Temperature °C
Dynamic height meters	Temperature °C +	Direction tens of deg.	Dew Point °C +	Dynamic height meters	Temperature °C	Direction tens of deg.	Dew Point °C +	Dynamic height meters	Temperature °C
No. of observations	Speed m.p.s.	No. of observations	Speed m.p.s.	No. of observations	Speed m.p.s.	No. of observations	Speed m.p.s.	No. of observations	Speed m.p.s.
SFC 21	3	25.3	22.4	07	2.7	6	3.2	31	30
1000 21	17L	25.1	21.9	07	3.5	5	1.5	31	28.3
950 31	21	21.9	19.1	07	3.5	5	1.0	31	24.6
900 31	1	19.2	14.9	1	3.3	28	-1.4	31	21.2
850 31	1	16.6	9.6	2	2.0	26	-1.1	31	17.2
800 31	2	13.9	0.2	1	1.3	26	-1.7	31	13.5
750 31	2	10.8	1.1	1	1.7	26	-4.0	31	10.5
700 31	2	7.6	1.5	1	1.7	26	-5.5	31	7.1
650 31	3	4.6	1.3	1	1.7	26	-10.0	31	4.3
600 31	4	1.3	-11.9	28	3.1	26	-13.6	31	1.3
550 31	5	-2.6	-16.7	28	3.7	26	-17.4	31	-5.7
500 31	5	-6.1	-7.3	-2.2	28	5.8	-26.1	31	-29.7
450 31	6	-12.5	-28.2	27	7.7	25	-32.8	31	-60.1
400 31	7	18.7	-33.4	27	10.7	25	-38.0	31	-70.1
350 30	8	54.7	-25.4	-37.4	26	13.2	-25	31	-81.5
300 30	9	6.45	-33.4	-45.2	26	16.2	-25	31	-91.7
250 30	10	16.901	-9.2	-6.6	26	20.4	-25	31	-101.9
270 30	12	37.2	-53.8	-53.8	26	24.3	-25	31	-112.2
175 30	13	216	-60.0	-60.0	26	24.6	-25	31	-123.0
150 30	14	16.5	-6.6	-6.6	26	23.4	-25	31	-131.6
125 29	15	25.3	-71.6	-71.6	27	18.9	25	31	-145.1
100 29	16	56.2	-73.8	-73.8	28	10.6	24	31	-154.9
P0 29	17	67.0	-71.7	-71.7	29	3.3	23	31	-174.6
70 29	16	64.4	-68.8	-68.8	06	1.6	23	31	-206.1
65 29	17	62.9	-64.9	-64.9	10	4.2	22	31	-237.0
50 27	20	71.8	-62.2	-62.2	10	2.7	23	31	-240.3
40 27	21	11.0	-58.4	-58.4	08	2.2	21	31	-247.0
33 26	23	93.4	-55.1	-55.1	08	8.2	21	31	-251.2
25 25	25	10.2	-53.2	-53.2	08	8.9	21	31	-257.9
20 24	26	54.0	-51.2	-51.2	09	8.9	20	31	-264.2
15 20	28	4.2	-49.0	-49.0	09	8.3	19	31	-278.6
10 6	31	11.7	-44.4	-44.4	7	30.9	9.8	31	-281.7
					7	30.9	9.8	31	-36.7
					6	31.177	-49.4	31	-53.6
					8	30.784	-53.6	31	-45.8

LANDER, WY 830 MB			LIHUE KAUAI, HI 1012 MB												LITTLE ROCK, AR 999 MB												MCGRATH, AK 987 MB			
SFC	31	1,697	5.7	-2.4	24	1.8	31	36	24.9	21.6	0.5	2.5	31	79	14.0	9.7	24	1.4	30	124	15.4	12.1	19	1.3	31	103	-1	-2.3	28	+2
1000	31	1,697	5.7	-2.4	24	1.8	31	137	24.4	20.9	0.6	3.1	31	79	14.0	9.7	24	1.4	16	155	15.4	10.3	16	-3	31	103	-1	-2.3	11	1.6
950	31	1,697	5.7	-2.4	24	1.8	31	585	20.9	19.1	0.7	4.3	31	560	16.1	5.7	25	4.8	30	565	17.7	7.4	22	5.5	31	413	1.0	-2.3	11	1.6
900	31	1,697	5.7	-2.4	24	1.8	31	1,052	18.1	15.6	0.8	4.8	31	1,018	14.6	2.4	26	5.8	30	1,027	17.5	5.2	23	4.6	31	847	-2	-4.4	14	3.3
850	31	1,697	5.7	-2.4	24	1.8	31	1,561	15.3	12.6	0.6	4.1	31	1,500	12.2	7	27	6.7	30	1,512	14.2	0	24	3.9	31	1,303	-2	-1	6.6	1.6
800	31	1,998	8.0	-0.4	25	1.5	31	2,054	13.3	5.6	0.9	3.8	31	2,006	9.8	-3.0	28	7.0	30	2,022	12.3	-3.2	26	4.7	31	1,783	-4.4	-10.2	17	3.7
750	31	2,528	5.2	-7.1	30	2.7	31	2,597	12.0	-1.5	0.8	3.2	31	2,539	7.2	-6.0	28	7.8	30	2,561	9.9	-6.2	27	5.7	31	2,289	-7.5	-13.7	17	4.3
700	31	3,088	1.9	-11.4	30	5.5	31	3,172	9.2	-7.5	0.9	2.9	31	3,104	4.3	-9.1	29	9.3	30	3,131	6.7	-10.9	28	6.8	31	2,823	-10.7	-17.9	18	5.0
650	31	3,682	-1.7	-13.3	30	8.3	31	3,782	5.8	-9.4	0.8	2.7	31	3,704	-7	-13.0	29	10.4	30	3,735	2.9	-14.8	29	8.0	31	3,389	-14.4	-20.9	18	5.9
600	31	4,315	-5.7	-16.1	30	11.0	31	4,433	1.8	-12.3	0.9	2.5	31	4,342	-3.1	-17.7	29	11.9	30	4,378	-9.1	-18.4	29	9.5	31	3,991	-18.3	-26.1	16	5.7
550	31	4,992	-9.7	-22.6	30	12.4	31	5,129	-2.2	-16.0	0.8	2.2	31	5,026	-7.0	-21.5	29	15.0	30	5,067	-5.3	-22.5	29	10.4	31	4,635	-22.8	-30.7	18	7.0
500	31	5,722	-14.2	-26.6	29	13.0	31	5,880	-7.0	-21.5	0.8	1.8	31	5,763	-12.0	-26.4	28	15.1	30	5,808	-10.5	-27.7	29	11.3	31	5,327	-27.8	-35.2	18	8.7
450	31	6,512	-19.9	-31.0	29	15.2	31	6,694	-12.0	-26.8	0.7	1.7	31	6,561	-17.6	-32.3	29	16.0	30	6,610	-15.9	-31.3	29	12.6	31	6,076	-33.2	-40.4	18	9.7
400	31	7,375	-26.5	-36.2	29	15.8	31	7,585	-19.5	-31.7	0.3	1.2	31	7,411	-24.1	-37.5	29	16.3	30	7,486	-22.7	-38.1	29	14.4	31	6,894	-39.3	-43.5	19	11.1
350	31	6,326	-33.7	-41.7	28	18.2	31	8,570	25.7	-39.4	3.2	6.6	31	8,394	-31.6	-44.8	29	17.0	30	8,455	-30.0	-43.6	29	16.1	31	7,799	-45.8	-52.0	19	11.1
300	31	9,389	-11.3	-49.8	26	21.2	29	9,662	-34.4	-34.3	-6.4	27	31	9,464	-39.6	-51.3	29	18.6	30	9,531	-38.3	-51.0	29	17.8	31	8,808	-52.0	-59.1	19	11.1
250	31	10,606	-49.2	26	23.3	29	10,912	-4.3	-9.9	-27	6.7	31	10,687	-8.5	29	19.9	30	10,762	-47.0	29	19.0	31	9,982	-53.4	20	9.8				
200	31	12,048	-55.4	29	22.9	29	12,377	-53.7	28	8.8	21	12,131	-55.6	29	22.4	30	12,205	-56.2	29	19.3	31	11,429	-50.3	21	9.6					
175	31	12,896	-57.5	29	22.3	28	13,224	-58.9	29	7.9	31	12,975	-58.8	28	22.6	30	13,046	-60.0	28	18.9	31	12,303	-49.6	21	8.7					
150	31	13,664	-60.1	29	21.1	26	14,178	-64.5	29	6.4	31	13,935	-62.7	29	19.4	30	14,003	-64.2	28	17.2	31	13,513	-49.6	21	9.2					
125	31	14,996	-62.4	29	18.4	28	15,278	-70.0	30	2.9	31	15,050	-65.8	29	16.8	30	15,109	-67.4	28	15.8	31	14,506	-50.0	22	10.0					
100	31	16,365	-64.6	29	15.3	26	16,588	-74.7	30	1.3	31	16,398	-70.5	29	13.0	30	16,446	-69.8	28	13.6	31	15,961	-50.3	23	9.7					
80	31	17,640	-63.5	28	13.7	26	17,870	-73.4	30	0.8	31	17,870	-65.6	29	8.5	30	17,824	-76.7	28	8.6	31	17,265	-50.8	23	9.7					
70	31	18,554	-62.1	31	12.9	26	18,770	-76.4	29	5.9	31	18,564	-65.6	28	5.9	30	18,516	-66.5	29	4.0	31	18,016	-50.9	23	9.7					
60	31	19,507	-61.6	32	12.8	26	19,598	-76.4	29	7.8	31	19,511	-61.6	28	4.4	30	19,537	-77.7	27	2.6	31	19,289	-51.1	23	10.1					
50	29	20,644	-60.5	32	12.8	28	20,709	-63.3	30	9.1	30	20,694	-59.5	28	3.7	30	20,668	-60.1	27	2.5	29	20,470	-51.6	24	10.0					
40	20	22,436	-59.3	34	1.8	27	22,094	-60.2	30	11.1	30	22,055	-57.1	27	3.7	30	22,068	-57.8	26	1.6	28	21,919	-51.9	24	9.6					
30	24	23,853	-57.2	34	0.1	24	26	23,904	-56.1	30	13.7	30	23,882	-54.6	28	3.9	29	23,889	-54.6	31	5.7	27	23,780	-51.8	25	8.8				
25	28	25,010	-55.6	34	2.0	26	25,069	-54.1	30	14.5	30	25,053	-53.4	29	4.1	29	25,069	-53.2	35	9.2	27	24,962	-51.8	25	7.3					
20	27	26,431	-54.9	29	3.5	25	26,509	-51.4	30	15.1	29	26,498	-51.6	28	2.2	28	26,514	-51.5	33	1.3	26	26,409	-52.3	26	8.4					
15	19	28,293	-52.5	28	5.5	24	28,385	-49.1	29	12.8	28	28,375	-46.7	26	2.8	27	28,389	-49.2	16	4.2	26	28,265	-53.3	26	8.9					
10	7	30,942	-49.2	17	31,068	-45.2	27	7.7	18	31,058	-44.9	27	5.1	18	31,078	-44.8	31	2.5	25	30,887	-52.0	28	10.0							
7					5	37,517	-40.2												13	33,226	-50.0	27	11.6							

RAWINSONDE DATA

Average monthly values

OCTOBER 1979

MONETT, MO 963 MB				NASHVILLE, TN 995 MB				NOME, AK 999 MB				NORTH PLATTE, NE 916 MB				OAKLAND, CA 1015 MB				
Standard pressure Surface mb.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind
5FC	31	43.8	11.4	6.0	18	1.9	31	18.0	10.8	6	31	5	31	2.4	9	31	84.7	5.9	31	6
1000																				
950	31	1,006	14.1	5.1	21	2.5	31	5.6	12.7	6	22	4.7	31	4.2	7	31	5.6	14.2	5.9	26
900	31	1,006	13.5	2.5	24	6.4	31	1,019	10.4	1	25	5.9	31	8.8	-2.6	31	5.6	14.2	5.9	26
850	31	1,486	11.5	5.2	21	6.2	31	1,494	10.7	1	26	7.0	31	1,202	-5.5	31	1,025	14.1	5.9	26
800	31	1,199	9.2	-2.2	28	9.3	31	1,195	6.9	-2	27	8.4	31	1,164	-7.3	31	9.3	12.9	5.3	23
750	31	2,524	6.9	-6.8	28	10.4	31	2,524	4.8	-6	28	9.2	31	2,264	-9.8	31	1,853	12.9	5.3	23
700	31	3,087	3.5	-9.0	29	11.2	31	3,084	2.0	-9	27	11.0	31	2,794	-12.9	31	21.3	16	3.4	24
650	31	3,686	-7	-14.0	29	12.7	31	3,679	-9	-13.4	28	12.6	31	3,355	-16.3	31	24.7	17	4.7	25
600	31	4,324	-3.4	-16.2	29	13.7	31	4,314	-4.5	-16.9	28	14.6	31	3,935	-20.3	31	28.7	18	4.3	25
550	31	5,006	-7.8	-20.6	29	14.7	31	4,994	-8.6	-21.4	28	15.9	31	4,593	-29.1	31	32.8	19	4.3	25
500	31	5,791	-12.6	-26.5	28	15.4	31	5,726	-13.5	-27.2	26	17.9	31	5,281	-29.1	31	-18.0	10	4.3	25
450	31	6,537	-18.0	-30.4	28	16.2	31	6,520	-18.7	-33.0	28	19.4	31	6,026	-34.6	31	21.4	20	4.3	25
400	31	7,407	-24.4	-37.2	28	17.4	31	7,386	-25.6	-38.7	27	21.7	31	6,818	-40.9	31	44.8	19	4.3	25
350	31	8,368	-31.7	-43.9	28	19.2	31	8,344	-32.5	-44.7	28	23.0	31	7,737	-97.2	31	41.1	31	4.3	25
300	31	9,437	-39.6	-50.6	29	21.1	31	9,411	-39.9	-51.9	28	23.3	31	8,741	-52.8	31	45.5	30	4.3	25
250	31	10,661	-46.3	-57.9	29	21.7	31	10,636	-47.3	-58.7	28	24.5	31	9,912	-59.2	31	5.7	30	4.3	25
200	31	12,104	-55.5	-67.9	29	23.6	31	12,088	-54.5	-68.7	28	24.5	31	11,355	-59.9	31	6.0	30	12.0	25
175	31	12,951	-58.1	-79	22.4	31	12,937	-57.7	-79	27	23.9	31	12,225	-59.5	22	6.4	30	12,891	-58.0	29
150	31	13,916	-61.1	-79	20.6	30	13,909	-60.3	-79	28	21.8	31	13,231	-50.7	21	7.0	30	13,857	-60.8	29
125	30	15,045	-64.6	-79	17.6	30	15,038	-63.2	-79	28	17.5	30	14,421	-50.6	22	7.2	30	13,986	-62.8	29
100	30	16,401	-66.2	-79	12.8	30	16,401	-65.1	-79	28	13.8	28	15,867	-50.8	23	8.0	30	16,357	-64.1	29
80	30	17,756	-64.7	-79	9.5	30	17,765	-63.5	-79	27	8.9	28	17,320	-50.8	23	9.1	30	17,722	-63.4	30
70	30	18,574	-63.2	-79	6.9	30	18,588	-62.2	-79	27	7.5	27	18,193	-51.0	23	8.6	30	18,548	-62.4	31
60	30	19,526	-61.6	-79	5.3	30	19,544	-60.7	-79	27	6.2	27	19,196	-51.1	23	9.5	30	19,502	-61.2	31
50	30	20,661	-59.9	-79	4.3	29	20,687	-59.1	-79	26	4.9	27	20,381	-51.3	24	9.5	29	20,637	-60.3	30
40	30	22,061	-57.9	-79	4.6	28	22,093	-57.0	-79	26	5.4	26	21,629	-51.8	24	8.9	28	22,037	-58.2	31
30	30	23,887	-55.2	-79	5.7	28	23,927	-54.2	-79	27	4.9	25	23,695	-51.8	25	10.1	29	23,853	-56.8	29
25	30	25,055	-53.5	-79	5.9	28	25,100	-52.8	-79	27	5.6	23	24,880	-51.8	25	10.6	28	25,017	-55.2	28
20	30	26,498	-51.7	-79	5.7	27	26,550	-50.9	-79	27	5.3	22	26,328	-51.8	25	10.0	26	26,457	-53.2	28
15	29	28,370	-49.6	-79	6.9	23	28,435	-48.5	-79	26	5.9	16	28,208	-51.8	25	10.2	24	28,318	-50.9	27
10	29	31,050	-45.6	-79	10.1	24	31,123	-45.0	-79	27	10.2	22	30,985	-46.6	22	8.9	18	28,360	-50.0	27
7	10	33,428	-43.9	-79	7	23	33,501	-43.7	-79	7	33,357	7	33,357	-44.9	9	31,035	-46.5	0	1.5	

OMAHA, NE 965 MB				PAGO PAGO, AMERICAN SAMOA 1012 MB				PEORIA, IL 989 MB				PIUTTSBURGH, PA 972 MB				PONAPE, CAROLINE 15. 1005 MB															
SFC	31	403	7.7	3.4	33	.8	30	5	28.7	23.6	10	4.2	31	200	7.6	5.0	19	1.2	31	359	8.3	5.5	22	2.0	31	39	29.1	24.8	.08	.9	
1000	29	538	9.4	1.7	32	1.9	30	562	22.5	20.0	10	4.8	30	110	26.3	21.8	10	4.8	31	537	10.0	3.1	23	3.4	31	551	9.1	5.5	24	4.9	
950	29	798	10.0	.5	33	2.4	30	1,031	19.3	16.6	9	4.8	31	985	8.5	.7	26	5.6	31	996	7.3	2.9	26	8.1	31	535	21.7	10	2.3	1.0	
850	31	1,452	8.4	-2.9	31	6.6	30	1,522	16.7	12.6	0.9	4.0	31	1,457	6.7	-1.8	27	7.5	31	1,467	5.0	-	7	27	8.8	31	1,503	19.0	15.1	11	2.5
800	31	1,952	6.4	-6.8	31	7.8	30	2,038	14.7	9.1	0.6	2.4	31	1,953	4.5	-5.5	29	9.2	31	1,960	2.2	-3	7	27	9.8	31	2,024	16.0	11.1	12	1.9
750	31	2,479	3.9	-0.4	31	7.7	30	2,583	12.5	2.3	0.1	2.0	31	2,476	1.5	-8.2	28	9.9	31	2,477	-1.1	-10	2	27	11.1	31	2,571	13.6	7.7	11	2.5
700	31	3,037	1.2	-13.2	30	9.4	30	3,159	9.5	-3.0	3.5	1.6	31	3,029	-1.3	-12.0	29	11.0	30	3,027	-2.5	-11.9	12	27	11.1	31	3,150	10.4	4.6	11	2.8
650	31	3,630	-9.1	-16.0	30	11.1	30	3,771	6.3	-5.9	31	1.7	31	3,617	-4.2	-16.7	29	12.0	30	3,613	-5.5	-15.6	26	27	12.0	31	3,765	7.1	-5	10	3.1
600	31	4,262	-5.7	-17.6	30	13.0	30	4,423	2.8	-9.0	30	2.6	31	4,244	-7.7	-19.6	28	14.1	30	4,237	-8.8	-20.2	26	27	14.5	31	4,420	3.5	-3	6	3.6
550	31	4,939	-9.7	-21.1	29	14.9	30	5,123	-1.2	-14.7	29	3.4	31	4,916	-11.6	-23.7	29	15.8	30	4,906	-12.7	-24.9	26	27	15.9	31	5,122	-3	-7	10	4.1
500	31	5,668	-14.5	-25.4	29	15.6	30	5,877	-5.4	-19.4	28	4.9	31	5,641	-16.2	-27.9	29	17.1	30	5,627	-17.1	-28.2	27	27	17.7	31	5,880	-4.2	-13.0	10	4.5
450	31	6,459	-19.5	-29.6	30	17.3	29	6,695	-10.4	-23.3	28	6.5	31	6,462	-21.6	-34.4	29	19.0	30	6,410	-22.5	-33.4	27	27	19.6	31	6,703	-9.1	-17.5	11	4.6
400	31	7,324	-25.6	-35.0	30	18.0	29	7,592	-16.3	-29.2	27	7.5	31	7,284	-27.6	-40.0	29	21.7	30	7,266	-28.7	-40.0	26	27	21.8	31	7,607	-14.2	-24.9	11	4.0
350	31	8,280	-33.0	-41.1	29	18.9	29	6,587	-23.0	-35.8	27	9.0	31	8,234	-34.5	-44.7	29	24.4	30	8,210	-35.3	-45.2	27	27	20.5	31	8,610	-20.8	-31.8	10	3.6
300	31	9,241	-40.9	-49.3	29	20.1	29	9,695	-31.2	-43.9	26	12.0	31	9,292	-41.7	-51.2	29	27.4	30	9,269	-42.6	-51.4	27	27	21.5	31	9,629	-28.9	-40.8	8	2.6
250	31	10,562	-49.3	-57.3	29	23.4	29	10,948	-41.4	-50.9	25	15.4	31	10,500	-46.7	-56.2	29	27.5	29	10,482	-49.4	-58.2	27	27	23.8	31	11,000	-51.7	-57	7	1.9
200	31	12,005	-55.0	-63.0	29	27.0	29	11,339	-56.0	-63.0	25	17.5	31	11,156	-53.9	-63.9	29	27.9	29	11,335	-52.6	-62.6	27	27	22.3	31	11,493	-51.9	15	3.1	
175	31	12,854	-57.2	-67.2	29	25.5	28	13,290	-56.0	-63.0	25	18.7	31	12,812	-55.6	-63.0	29	28.2	29	12,799	-55.9	-63.0	27	27	22.2	31	13,346	-56.7	26	2.8	
150	31	13,826	-58.7	-67.2	29	22.9	28	14,236	-67.2	-72.7	25	18.4	31	13,788	-58.1	-67.2	29	24.1	27	13,776	-57.2	-67.2	27	27	19.6	31	14,296	-66.4	33	1.0	
125	30	14,945	-61.5	-71.5	30	20.8	28	15,319	-73.7	-73.7	26	13.7	30	14,910	-61.0	-60.0	29	19.8	27	14,922	-59.8	-68.8	27	27	16.4	31	15,376	-74.8	3.0	1.7	
100	29	14,361	-63.0	-73.0	30	16.8	28	16,601	-79.9	-79.9	26	9.1	30	14,312	-61.0	-60.0	29	14.6	28	14,307	-60.4	-69.4	27	27	15.0	31	16,619	-81.5	0.7	5.3	
80	29	17,716	-62.0	-73.0	30	10.1	28	17,867	-77.2	-77.2	23	2.4	30	17,695	-61.3	-61.3	28	9.8	26	17,699	-59.9	-59.9	27	27	11.7	31	17,911	-77.3	0.8	9.0	
70	29	18,564	-61.0	-70.4	30	8.5	28	18,647	-70.4	-70.4	11	2.2	30	18,525	-60.6	-60.6	28	8.6	26	18,655	-59.2	-59.2	27	27	9.3	31	18,686	-72.8	0.9	9.8	
60	29	19,505	-60.1	-70.4	30	6.6	27	19,575	-65.9	-65.9	08	6.0	30	19,487	-59.9	-59.9	28	7.2	25	19,503	-58.7	-58.7	27	27	7.0	30	19,559	-68.9	0.9	13.4	
50	29	20,645	-59.1	-68.3	28	5.5	27	20,689	-63.0	-63.0	09	10.3	29	20,630	-58.4	-58.4	28	5.5	25	20,651	-57.6	-57.6	27	27	6.7	30	20,701	-65.0	0.9	20.3	
40	27	22,045	-58.1	-68.1	30	4.9	27	22,071	-60.1	-60.1	09	14.6	28	22,034	-57.3	-57.3	28	5.1	25	22,065	-56.4	-56.4	27	27	6.9	29	22,072	-60.9	0.9	27.0	
30	23,866	-56.3	-63.3	30	4.2	26	23,860	-56.0	-56.0	08	17.7	28	23,863	-55.3	-55.3	28	5.9	24	23,903	-54.2	-54.2	27	27	6.5	24	23,885	-55.0	0.9	32.4		
25	26,255	-52.6	-54.6	29	2.8	25	25,049	-53.7	-53.7	08	17.6	27	25,031	-53.6	-53.6	27	7.0	21	25,084	-53.2	-53.2	27	27	7.6	22	25,057	-52.0	0.9	35.3		
20	25,657	-52.6	-54.6	28	5.1	23	26,499	-49.4	-49.4	08	15.4	26	26,471	-52.0	-52.0	27	7.5	16	26,541	-50.9	-50.9	27	27	9.3	19	26,517	-47.7	0.9	31.3		
15	23,281	-51.3	-51.3	27	8.5	16	26,386	-45.3	-45.3	07	9.3	24	28,345	-49.8	-49.8	28	10.8	10	28,470	-47.6	-47.6	27	27	17	28,443	-41.7	0.9	12.7			
10	17	30,990	-46.5	-51.3	28	14.7	5	31,111	-42.0	-42.0	10	31,055	-46.4	-46.4								8	31,210	-37.5							

PORTLAND, ME 1012 MB			#	OUILLAGUAYE, WA 1006 MB			PAPIO CITY, SD 904 MB			57 CLOUD, MN 975 MB			#	57 PAUL ISLAND, AK 993 MB																				
SFC	31	20	6-2	4.0	25	1-2	31	58	8-6	7-7	11	9	31	966	6-4	-4	33	2-6	31	316	3-1	.8	34	.5	30	10	5-9	2-0	04	1-4				
1000	28	128	8.0	4.5-2	26	1-2	25	153	10-4	9-3	12	1	31	966	5-6	15	4-0	31	31	527	5-7	.7	32	1-7	30	369	3-2	1-1	04	2-4				
950	31	538	7-3	2-5	27	4-4	1	548	10-6	5-6	1	1	31	966	4-5	25	1,022	7-3	-1	3	32	3-4	31	970	4-7	-2	0	31	3-3	005	-2	-1-8	05	2-4
900	31	1,482	4-2	8-8	27	4-2	31	998	9-1	8-1	1	1	31	966	4-5	25	1,022	7-3	-1	3	32	3-4	31	970	4-7	-2	0	31	3-3	005	-2	-1-8	05	2-4
850	31	1,446	2-6	-3-1	27	4-2	31	1,470	7-1	-2-5	20	5-1	31	947	4-5	25	1,476	9-3	-2	8	32	6-4	31	1,435	3-5	-5-0	31	4-9	0	1,259	-3-4	-5-2	05	2-0
800	31	1,376	1-6	-1-7	27	8-1	31	1,967	4-5	-6-4	22	5-1	31	1,977	6-9	-4	4-2	32	8-3	31	1,926	1-9	-9	2	30	6-4	30	1,737	-6-0	-11-3	05	1-7		
750	31	2,453	-7	-12	7-6	9-5	31	2,490	1-7	-11	2-4	5-6	31	2,504	3-4	7-3	32	9-8	31	2,444	-7	-10	4-3	30	7-6	30	2,240	-8-9	-16-4	06	1-7			
700	31	3,002	-3-3	-16-2	26	11-0	31	3,049	-1-4	-15	2-5	6-0	31	3,046	-1	-1	9-4	31	10-7	31	2,992	-3-7	-13	2-2	30	9-2	30	2,771	-12-3	-23	06	1-6		
650	31	3,585	-6-6	-14-4	7-6	13-2	31	3,632	-5-1	-17	6-5	6-8	31	3,651	-3-0	-12-1	31	12-2	31	3,575	-6-8	-15-7	7-0	30	10-5	30	3,334	-15-5	-26-6	05	1-2			
600	31	4,207	-9-6	-22-2	26	15-5	31	4,254	-8-8	-21	2-0	7-5	31	4,281	-6-6	-15-3	30	13-5	31	4,195	-10-5	-18-9	7-0	30	12-2	30	3,934	-19-1	-31-3	04	-7			
550	31	4,874	-13-4	-25-3	26	17-7	31	4,925	-13-4	-26-1	25	9-3	31	4,956	-10-8	-20-0	30	14-4	31	4,861	-13-2	-25-0	3-0	30	14-5	30	4,576	-23-4	-34-4	26	-7			
500	31	5,594	-17-8	-29-6	26	19-8	31	5,643	-18-3	-29-8	25	9-8	31	5,682	-15-5	-25-1	30	15-6	31	5,578	-18-5	-29-8	3-0	30	16-1	30	5,266	-28-3	-39-4	26	1-2			
450	31	6,374	-23-1	-35-5	25	22-5	31	6,422	-23-5	-35-4	25	10-5	31	6,499	-20-7	-29-1	29	16-7	30	6,356	-24-0	-34-1	3-0	30	18-2	30	6,014	-33-5	-42-6	26	1-5			
400	31	7,226	-29-2	-40-9	25	24-7	31	7,273	-29-4	-40-0	25	12-0	31	7,330	-26-9	-36-6	29	18-9	30	7,205	-30-0	-0-3	30	30	22-1	30	6,831	-39-3	-46-6	25	3-2			
350	31	8,170	-36-0	-44-9	25	27-1	31	8,216	-36-4	-45-1	25	12-9	31	8,282	-32-1	-42-2	29	21-2	29	8,145	-36-7	-44-6	8-1	30	24-7	30	7,736	-45-6	-56	26	4-2			
300	31	9,221	-42-2	-49-7	25	29-5	31	9,266	-43-5	-51-1	25	15-6	31	9,340	-42-0	-47-2	29	23-9	29	9,198	-43-4	-50-4	8-1	30	27-8	30	8,748	-50-4	-54	27	5-4			
250	31	10,478	-48-1	25	30-6	31	10,477	-49-2	26	16-7	31	10,554	-49-3	29	24-9	29	10,404	-49-6	30	29-3	29	9,927	-50-8	25	5-2	29	24-9	30	8,523	-52-1	-58	25	5-2	
200	31	11,892	-53-0	25	28-4	31	11,926	-53-6	26	16-7	31	11,995	-55-0	29	24-7	29	11,852	-53-2	30	27-5	29	11,391	-48-2	25	7-0	30	27-5	29	11,391	-48-2	25	7-0		
175	30	12,751	-54-6	25	26-7	31	12,781	-55-4	27	16-7	31	12,644	-57-2	29	23-5	29	12,710	-54-6	29	26-8	29	12,271	-48-5	25	7-0	30	26-8	29	12,271	-48-5	25	7-0		
150	30	13,733	-56-4	25	24-7	31	13,760	-57-0	27	16-5	31	13,814	-59-0	29	22-7	29	13,693	-65-5	30	23-8	29	13,284	-49-1	25	9-6	30	23-8	29	13,284	-49-1	25	9-6		
125	30	14,887	-58-3	25	21-5	31	14,919	-58-4	27	15-1	31	14,952	-61-0	29	18-6	29	14,846	-58-2	30	19-8	29	14,480	-49-5	25	8-8	30	19-8	29	14,480	-49-5	25	8-8		
100	30	16,287	-59-3	25	17-4	29	16,310	-59-5	27	12-1	31	16,333	-62-2	30	15-3	29	16,245	-59-7	30	15-3	29	15,940	-50-0	24	8-8	30	15-3	29	15,940	-50-0	24	8-8		
90	30	17,686	-58-7	25	12-7	29	17,709	-59-0	27	8-3	29	17,711	-62-2	30	10-8	29	17,640	-59-0	30	10-8	29	17,400	-50-7	24	7-9	30	10-8	29	17,400	-50-7	24	7-9		
70	30	18,525	-58-8	25	11-0	29	18,546	-59-3	27	6-6	28	18,538	-61-0	30	8-0	28	18,476	-59-1	30	8-7	28	18,266	-51-2	24	7-9	30	8-7	28	18,266	-51-2	24	7-9		
60	30	19,494	-58-4	25	9-7	28	19,519	-59-1	29	4-9	29	19,503	-60-1	31	6-6	28	19,445	-58-6	31	5-5	28	19,171	-56-5	24	6-9	30	5-5	28	19,171	-56-5	24	6-9		
50	30	20,643	-57-9	26	7-9	28	20,663	-58-9	31	2-9	28	20,642	-59-5	32	4-4	28	20,592	-58-1	32	3-3	28	20,220	-57-5	31	2-6	30	3-3	28	20,220	-57-5	31	2-6		
40	31	22,253	-57-2	26	7-0	28	22,067	-58-2	33	1-6	22	22,044	-58-8	32	3-4	27	22,020	-57-5	31	2-6	28	21,899	-53-2	31	2-6	30	3-4	28	21,899	-53-2	31	2-6		
30	30	23,878	-55-8	27	7-5	28	23,882	-57-3	03	2-1	25	23,854	-57-2	32	3-3	27	23,823	-56-0	30	3-6	28	23,765	-51-6	30	3-6	30	3-6	28	23,765	-51-6	30	3-6		
25	29	25,616	-54-2	27	8-1	28	25,036	-56-7	04	1-9	24	25,007	-57-0	30	2-6	26	24,983	-56-8	30	4-6	28	24,969	-51-3	22	4-9	30	4-6	28	24,969	-51-3	22	4-9		
20	28	26,481	-52-7	27	10-1	24	26,471	-55-2	07	2-7	21	26,443	-54-2	30	3-2	26	26,415	-53-7	29	4-9	27	26,401	-50-7	22	3-1	30	4-9	27	26,401	-50-7	22	3-1		
15	27	28,347	-50-6	27	12-1	13	28,337	-53-7	03	2-0	18	28,302	-52-6	29	5-4	25	28,272	-51-6	28	7-6	28	28,204	-50-5	25	2-1	30	7-6	28	28,204	-50-5	25	2-1		
10	22	31,017	-46-9	27	19-3	03	31	1,017	-46-9	04	2-8	21	3,017	-46-9	28	18	3,089	-49-1	28	15-0	20	30,943	-49-6	28	3-9	30	15-0	20	30,943	-49-6	28	3-9		

RAWINSONDE DATA

Average monthly values

OCTOBER 1878

SALEM, IL 993 MB				SALEM, OR 1009 MB				SALT LAKE CITY, UT 872 MB				SAN DIEGO, CA 1000 MB				SAN JUAN, P. R. 1013 MB				
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C †	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C †	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C †	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C †	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C †	Resultant Wind
SFC	31	17.4	9.7	6.3	3	1.9	1.2	31	6.1	9.1	7.9	1.1	31	1	2.8	2.0	8.2	1.5	1.0	1.1
1000	31	54.5	12.1	4.0	2.3	4.0	3.1	31	15.1	12.2	8.8	1.9	31	1	2.8	2.0	2.4	1.5	1.0	1.1
950	31	54.5	12.1	4.0	2.3	4.0	3.1	31	14.5	10.7	6.5	2.0	31	1	2.8	2.0	2.4	1.5	1.0	1.1
900	31	54.5	12.1	4.0	2.3	4.0	3.1	31	14.5	10.7	6.5	2.0	31	1	2.8	2.0	2.4	1.5	1.0	1.1
850	31	54.5	12.1	4.0	2.3	4.0	3.1	31	14.6	10.8	6.6	2.1	31	1	2.8	2.0	2.4	1.5	1.0	1.1
800	31	54.5	12.1	4.0	2.3	4.0	3.1	31	14.9	11.1	6.9	2.4	31	1	2.8	2.0	2.4	1.5	1.0	1.1
750	31	54.5	12.1	4.0	2.3	4.0	3.1	31	2.517	3.8	-7.7	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1
700	31	54.5	12.1	4.0	2.3	4.0	3.1	31	3.074	-7	-11.0	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1
650	31	54.5	12.1	4.0	2.3	4.0	3.1	31	3.665	-2.9	-14.1	2.4	31	1	2.8	2.0	2.4	1.5	1.0	1.1
600	31	54.5	12.1	4.0	2.3	4.0	3.1	31	4.295	-6.9	-19.7	2.2	31	1	2.8	2.0	2.4	1.5	1.0	1.1
550	31	54.5	12.1	4.0	2.3	4.0	3.1	31	4.846	-2.7	-15.2	2.0	31	1	2.8	2.0	2.4	1.5	1.0	1.1
500	31	54.5	12.1	4.0	2.3	4.0	3.1	31	5.496	-16.0	-21.7	1.8	31	1	2.8	2.0	2.4	1.5	1.0	1.1
450	31	54.5	12.1	4.0	2.3	4.0	3.1	31	6.149	-16.1	-21.8	1.6	31	1	2.8	2.0	2.4	1.5	1.0	1.1
400	31	54.5	12.1	4.0	2.3	4.0	3.1	31	6.791	-15.5	-21.3	1.4	31	1	2.8	2.0	2.4	1.5	1.0	1.1
350	31	54.5	12.1	4.0	2.3	4.0	3.1	31	7.336	-26.9	-34.8	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1
300	31	54.5	12.1	4.0	2.3	4.0	3.1	31	7.886	-26.4	-34.3	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1
250	31	54.5	12.1	4.0	2.3	4.0	3.1	31	8.436	-26.0	-34.0	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1
200	31	54.5	12.1	4.0	2.3	4.0	3.1	31	8.984	-25.6	-33.6	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1
175	31	54.5	12.1	4.0	2.3	4.0	3.1	31	9.532	-24.9	-33.0	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1
150	31	54.5	12.1	4.0	2.3	4.0	3.1	31	10.080	-24.4	-32.5	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1
125	31	54.5	12.1	4.0	2.3	4.0	3.1	31	10.628	-23.9	-32.0	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1
100	31	54.5	12.1	4.0	2.3	4.0	3.1	31	11.176	-23.4	-31.5	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1
80	31	54.5	12.1	4.0	2.3	4.0	3.1	31	11.725	-22.9	-31.0	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1
70	31	54.5	12.1	4.0	2.3	4.0	3.1	31	12.273	-22.4	-30.5	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1
60	31	54.5	12.1	4.0	2.3	4.0	3.1	31	12.821	-21.9	-30.0	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1
50	31	54.5	12.1	4.0	2.3	4.0	3.1	31	13.369	-21.4	-29.5	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1
40	31	54.5	12.1	4.0	2.3	4.0	3.1	31	13.917	-20.9	-29.0	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1
30	29	54.5	12.1	4.0	2.3	4.0	3.1	31	14.465	-20.4	-28.5	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1
25	26	54.5	12.1	4.0	2.3	4.0	3.1	31	14.913	-19.9	-28.0	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1
20	26	54.5	12.1	4.0	2.3	4.0	3.1	31	15.361	-19.4	-27.5	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1
15	21	54.5	12.1	4.0	2.3	4.0	3.1	31	15.809	-18.9	-27.0	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1
10	18	54.5	12.1	4.0	2.3	4.0	3.1	31	16.257	-18.4	-26.5	2.5	31	1	2.8	2.0	2.4	1.5	1.0	1.1

RAWINSONDE DATA

Average monthly values

OCTOBER 1979

WASHINGTON DULLES INT. AP 1006 MB				WAYCROSS, GA 1011 MB				WEST PALM BEACH, FL 1014 MB				INNEMUCCA, NV 869 MB				INSLAWA, AZ 852 MB					
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	
SFC	31	85	6.0	6.6	26	1.8	31	4.6	31	14.0	12.6	01	31	7	22.2	19.7	31	1.312	5.6	14.87	
1000	23	157	9.0	3.3	27	1.2	31	13.9	15.6	9.0	2.0	31	128	23.9	19.9	08	1.8	25	1.521	10.8	
950	31	68.0	10.2	3.8	27	1.4	31	5.77	14.9	9.0	1.1	31	576	21.5	17.7	08	1.8	28	2.014	14.0	
900	31	1,008	8.0	2.0	28	6.1	31	1,037	14.9	4.8	2.0	1,044	18.2	14.2	11	2.0	28	3.1	2.8	3.1	
850	31	1,747	5.5	-1.2	28	7.2	31	1,519	12.8	7	27	3.3	1,532	15.7	8.6	15	31	2,005	10.6	-2.6	
800	31	1,972	3.7	-4.3	28	7.6	31	2,026	11.0	-4.7	26	4.8	2,045	13.2	3.7	15	31	2,539	5.7	-5.7	
750	31	2,495	1.8	-9.0	27	9.1	31	2,562	8.7	-8.2	26	6.4	2,586	10.5	-2.1	22	1.2	31	3,125	10.5	-5.5
700	31	3,049	-5.5	-12.6	26	11.2	31	3,130	5.8	-12.6	26	7.2	3,158	7.8	-7.2	25	1.7	31	3,125	6.6	-9.2
650	31	3,633	-3.7	-15.3	26	13.2	31	3,732	2.1	-16.4	26	8.0	3,765	4.2	-10.4	27	2.5	31	3,730	3.1	-12.8
600	31	4,266	-7.2	-19.2	26	13.9	31	4,374	-1.5	-19.2	27	9.0	4,412	-7	-15.7	27	3.2	31	4,374	-1.0	-17.3
550	31	4,940	-11.2	-23.6	26	15.9	31	5,061	-5.8	-24.1	26	10.9	5,106	-3.3	-21.3	27	4.0	31	5,062	-5.6	-20.9
500	31	5,665	-15.8	-27.0	26	17.5	31	5,801	-10.4	-28.7	27	12.4	5,846	-8.4	-25.2	27	5.1	31	5,803	-10.4	-26.5
450	31	6,451	-21.1	-32.6	26	18.6	31	6,603	-16.1	-33.6	27	13.3	6,661	-13.7	-30.6	26	7.5	31	6,606	-16.1	-31.4
400	31	7,310	-27.2	-38.6	26	21.0	31	7,479	-22.9	-39.3	27	14.3	7,546	-19.9	-34.1	26	9.7	30	7,388	-26.1	-37.5
350	31	8,261	-34.0	-44.6	26	23.6	31	8,446	-30.3	-45.2	27	15.8	8,526	-26.8	-40.6	26	14.1	30	8,445	-32.4	-42.5
300	31	9,322	-41.1	-50.0	25	24.9	31	9,521	-38.4	-51.7	27	18.0	9,618	-34.9	-47.9	26	18.5	29	9,522	-37.9	-48.0
250	31	10,542	-48.4	25	25.3	31	10,752	-46.9	26	20.5	31	10,871	-3.0	23.5	29	10,638	-48.0	27	15.0	10,755	
200	31	11,993	-53.3	26	27.0	31	12,205	-54.8	26	24.4	31	12,340	-53.7	26	26.6	29	12,287	-53.7	27	16.7	12,424
175	31	12,880	-55.0	26	24.4	31	13,051	-59.4	26	25.4	31	13,187	-59.7	26	27.7	29	12,941	-56.2	27	16.7	13,053
150	31	13,781	-57.8	26	22.2	31	14,005	-64.0	26	23.5	31	14,136	-65.7	26	24.9	29	13,986	-58.9	27	16.0	14,012
125	31	14,910	-60.9	26	19.4	31	15,152	-67.2	26	19.2	31	15,283	-67.9	27	16.0	29	15,050	-61.7	27	13.5	15,125
100	31	16,350	-62.4	26	14.6	31	16,453	-69.9	26	13.8	31	16,553	-71.5	27	11.0	29	17,024	-64.6	27	10.6	16,467
80	31	17,733	-61.0	26	10.4	31	17,789	-67.9	26	11.7	31	17,875	-69.0	28	4.1	29	17,782	-64.7	28	3.2	17,800
70	31	18,564	-60.4	26	9.4	31	18,597	-65.1	25	5.1	30	18,679	-66.6	25	4.9	28	18,599	-63.5	30	4.0	18,606
60	31	19,524	-59.5	26	7.7	30	19,542	-62.8	25	4.7	29	19,617	-63.3	10	1.8	28	19,546	-62.6	33	3.0	19,544
50	30	20,668	-58.1	26	7.7	30	20,674	-59.7	25	2.3	29	20,746	-59.9	10	2.4	26	20,677	-61.2	34	1.4	20,668
40	30	22,677	-56.9	26	6.1	30	22,079	-57.2	30	5.5	29	22,150	-57.7	08	5.8	26	22,067	-59.4	36	1.3	22,052
30	30	23,910	-54.2	27	6.2	30	23,904	-54.8	10	2.4	27	23,985	-54.3	09	5.8	22	23,882	-56.7	35	1.3	23,885
25	29	25,084	-52.9	27	6.9	30	25,076	-53.3	09	1.7	25	25,157	-52.5	09	5.7	22	25,041	-55.3	33	1.9	25,049
20	28	26,530	-50.9	27	8.1	30	26,520	-51.6	05	2.4	24	26,605	-50.2	07	5.6	22	26,471	-53.6	29	3.7	26,485
15	24	28,419	-48.5	27	9.5	30	28,398	-49.2	09	1.7	22	28,490	-48.1	08	6.5	14	28,297	-51.9	28	6.5	28,362
10	17	31,078	-46.7	27	13.8	26	31,082	-44.2	31	1.9	21	31,193	-42.7	10	4.9	5	30,960	-49.3	14	31,017	-47.4
7																					
5																					
4																					
3																					
2																					

YAKUTAT, AK 1004 MB				YAP, CAROLINE IS. 1007 MB				YUKON DELTA, AK 1008 MB				KODIAK, AK 1010 MB				KETCHUM, ID 1012 MB				SEASIDE, OR 1014 MB					
SFC	31	12	6.6	5.4	12	2.4	31	14	28.5	25.2	26	1.3	31	14	28.5	25.2	26	1.3	31	14	28.5	25.2	26	1.3	
1000	31	6	7.3	1.1	14	2.4	31	76	27.3	24.0	26	1.6	31	76	27.3	24.0	26	1.6	31	76	27.3	24.0	26	1.6	
950	31	6.6	6.4	2.1	14	4.3	31	530	20.0	22.1	25	3.9	31	530	20.0	22.1	25	3.9	31	530	20.0	22.1	25	3.9	
900	31	910	3.1	1.5	15	4.8	31	1,003	21.2	18.4	24	4.9	31	1,003	21.2	18.4	24	4.9	31	1,003	21.2	18.4	24	4.9	
850	31	1,371	-1	-6.7	17	5.9	31	1,498	18.5	14.6	27	5.5	31	1,697	-9.1	-18.6	18	2.1	31	1,697	-9.1	-18.6	18	2.1	
800	31	1,654	-2.7	-3	17	6.9	31	2,017	-16.3	11.4	27	4.6	31	2,017	-16.3	11.4	27	4.6	31	2,017	-16.3	11.4	27	4.6	
750	31	2,134	-5.6	-11.0	18	6.9	30	2,565	13.7	7.4	27	3.7	31	2,565	13.7	7.4	27	3.7	31	2,565	13.7	7.4	27	3.7	
700	31	2,902	-9.1	-15.6	19	7.3	31	3,145	10.5	4.0	27	3.2	31	3,145	10.5	4.0	27	3.2	31	3,145	10.5	4.0	27	3.2	
650	31	3,473	-12.0	-19.5	19	7.5	31	3,759	7.2	-4	27	2.7	31	3,759	7.2	-4	27	2.7	31	3,759	7.2	-4	27	2.7	
600	31	4,081	-15.9	-23.5	20	7.3	31	4,419	3.5	-3.4	25	1.9	31	4,419	3.5	-3.4	25	1.9	31	4,419	3.5	-3.4	25	1.9	
550	31	4,731	-20.1	-27.5	21	9.0	31	5,118	-1.4	-9.3	22	1.2	31	5,118	-1.4	-9.3	22	1.2	31	5,118	-1.4	-9.3	22	1.2	
500	31	5,431	-25.1	-31.5	21	10.6	31	5,874	-4.7	-13.0	19	1.7	31	5,874	-4.7	-13.0	19	1.7	31	5,874	-4.7	-13.0	19	1.7	
450	31	6,189	-30.3	-36.4	22	12.1	31	6,697	-9.1	-18.6	18	2.1	31	6,697	-9.1	-18.6	18	2.1	31	6,697	-9.1	-18.6	18	2.1	
400	31	7,016	-36.3	-40.6	22	13.1	31	7,599	-14.5	-24.9	18	3.0	31	7,599	-14.5	-24.9	18	3.0	31	7,599	-14.5	-24.9	18	3.0	
350	31	7,933	-42.6	-47.0	23	14.6	31	8,601	-21.3	-31.3	16	2.4	31	8,601	-21.3	-31.3	16	2.4	31	8,601	-21.3	-31.3	16	2.4	
300	31	8,957	-48.8	24	16.1	31	9,717	-29.5	-39.6	11	3.1	31	9,717	-29.5	-39.6	11	3.1	31	9,717	-29.5	-39.6	11	3.1		
250	31	10,140	-53.6	24	17.5	31	10,990	-39.8	-48.0	06	3.1	31	10,990	-39.8	-48.0	06	3.1	31	10,990	-39.8	-48.0	06	3.1		
200	31	11,578	-52.3	24	15.5	31	12,475	-52.4	05	5.1	31	12,475	-52.4	05	6.7	31	12,475	-52.4	05	6.7	31	12,475	-52.4	05	6.7
175	31	12,442	-52.0	24	14.5	31	13,325	-59.2	05	6.7	31	13,325	-59.2	05	6.7	31	13,325	-59.2	05	6.7	31	13,325	-59.2	05	6.7
150	31	13,441	-52.1	24	14.0	31	14,273	-67.1	06	9.6	31	14,273	-67.1	06	12.3	31									

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

OCTOBER 1979

Date	Sun's zenith distance								Date	Sun's zenith distance									
	A.M.				*	P.M.					A.M.				*	P.M.			
	78°	75°	70°	60°		60.°	70.°	75.°	78.°	78.°	75.°	70.°	60.°		60.°	70.°	75.°	78.°	
MAUNA LOA OBSERVATORY, HI																			
Air mass																			
	3.34	2.67	2.01	1.34	*	1.34	2.01	2.67	3.34		4.64	3.71	2.78	1.86	*	1.86	2.78	3.71	4.64
11-----	1.07	1.16	1.26	1.37	----	----	----	----	----	3-----	----	----	1.22	----	----	----	----	----	
14-----	1.15	1.21	1.33	1.43	----	----	----	----	----	6-----	.84	.94	1.07	1.24	1.38	1.19	1.01	.86	.75
15-----	1.21	1.28	1.38	1.48	----	----	----	----	----	7-----	.80	.92	1.05	1.21	1.34	1.13	.97	.87	.78
16-----	1.16	1.23	1.35	1.45	----	----	----	----	----	8-----	.82	----	1.04	----	1.32	1.20	----	----	----
20-----	1.16	1.24	1.34	1.46	1.58	----	----	----	----	9-----	----	----	----	----	----	1.03	.89	.80	
21-----	1.17	1.24	1.33	1.46	1.57	----	----	----	----	10-----	.76	.87	.99	1.16	1.34	1.14	.98	.89	.76
23-----	1.20	1.29	1.37	1.51	1.59	----	----	----	----	11-----	.85	.96	----	1.27	1.42	1.10	----	----	----
24-----	1.22	1.31	1.39	1.50	1.55	1.47	1.36	1.28	1.20	12-----	.85	.95	1.10	1.27	1.39	1.26	1.07	.94	.85
25-----	1.18	1.27	1.35	1.47	1.58	1.48	1.38	1.30	1.21	14-----	.97	1.07	1.18	1.33	1.45	1.32	1.16	1.04	.92
26-----	1.20	1.29	1.37	1.48	1.56	1.44	1.34	1.26	1.19	15-----	.88	1.00	1.13	1.30	1.44	1.26	1.07	.93	.82
29-----	1.14	1.22	1.34	1.43	----	----	----	----	----	16-----	.86	.99	1.09	1.25	1.43	1.25	1.06	.92	.82
Aver-ages	1.17	1.25	1.35	1.46	1.57	1.46	1.36	1.28	1.20	17-----	.87	----	1.27	1.44	1.28	1.09	.96	.86	
										18-----	----	----	1.26	1.40	1.28	1.15	----	.91	
										19-----	.96	1.05	1.16	1.31	1.40	1.26	1.07	.99	.90
										20-----	.92	1.02	1.14	1.30	1.40	1.27	1.12	1.01	.88
										21-----	.97	1.06	1.16	1.32	1.43	1.30	1.14	1.01	----
										22-----	.97	1.06	1.21	1.34	1.46	1.31	1.21	1.08	.97
										23-----	1.02	1.12	1.24	1.38	1.44	1.30	1.22	1.10	----
										24-----	.99	1.09	1.20	1.34	1.48	1.33	1.22	1.04	.96
										25-----	.95	1.06	1.18	1.35	1.47	1.28	1.15	1.03	.95
										26-----	.91	1.00	1.13	1.32	1.44	1.30	1.04	.87	.75
										27-----	.91	1.01	1.15	1.31	1.46	1.29	1.15	1.00	.90
										28-----	.98	1.09	1.19	1.34	1.46	1.33	1.16	1.04	.95
										29-----	.84	.91	1.03	1.16	1.38	1.27	.97	.83	.63
										30-----	.94	1.04	1.17	1.35	1.48	1.32	1.17	1.01	.91
										31-----	.97	1.04	1.21	1.36	1.47	1.35	1.23	1.12	1.02
Aver-ages										Aver-ages	.91	1.01	1.13	1.29	1.41	1.27	1.10	.97	.86

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langley	16	- 57	-21	M	649	- 53	48	99	117	122	122	91	- 20	- 23	96	143	147	143	147	138	139	149	146	137	136	128	- 7	6	- 10	- 12	- 15	90

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES: Data in the table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

- + And also on an earlier date or dates.
- D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch of water equivalent to every 10 inches of snow-fall.

CLIMATOLOGICAL DATA - METRIC UNITS: Data from airport unless otherwise specified.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

- B Number of days maximum 21.1°C. or above for Alaskan Stations.
- Y Peak Gust.
- + And also on an earlier date or dates.
- U Indicates Urban site.
- R Indicates Rural site.
- Ø Station pressures apply to elevations shown in the "Elevations" table of the annual issue of this publication.

Conversion formulae to English Units are as follows:

$$\begin{aligned} 1 \text{ foot} &= 0.3048 \text{ meters} \\ {}^{\circ}\text{F.} &= \frac{9}{5} \times {}^{\circ}\text{C} + 32 \\ 1 \text{ inch} &= 25.4 \text{ millimeters} \\ 1 \text{ mile per hour} &= 0.447 \text{ meters per second} \end{aligned}$$

HEATING DEGREE DAYS: Data from airport unless otherwise specified.

- U Indicates Urban site.
- R Indicates Rural site.

COOLING DEGREE DAYS: Data from airport unless otherwise specified.

- U Indicates Urban site.
- R Indicates Rural site.

STORM SUMMARY:

- o Includes crop damage.
- C Crop damage.
- * No occurrence of storms or unusual weather phenomena reported.
- @ Includes heavy sleet storm.
- # Freezing drizzle and freezing rain, commonly known as glaze.
- Ø For breakdown of "All Others," and for detailed listing of other storms, see the Environmental Data and Information Service, NOAA, monthly publication STORM DATA.
- + No Storm Data Report received for this State.
- ◇ Report Incomplete.
- † Storm damages are placed in categories varying from 1 to 9 as follows:
 - 1 Less than \$50
 - 2 \$50 to \$500
 - 3 \$500 to \$5,000
 - 4 \$5,000 to \$50,000
 - 5 \$50,000 to \$500,000
 - 6 \$500,000 to \$5 Million
 - 7 \$5 Million to \$50 Million
 - 8 \$50 Million to \$500 Million
 - 9 \$500 Million to \$5 Billion

RAWINSONDE DATA (Average Monthly Values):

All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 60° above the horizon, or any obstruction above the horizon. The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygrometers. These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

- * Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.
- + Observations for these stations are scheduled at 0000 G.C.T.
- † Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

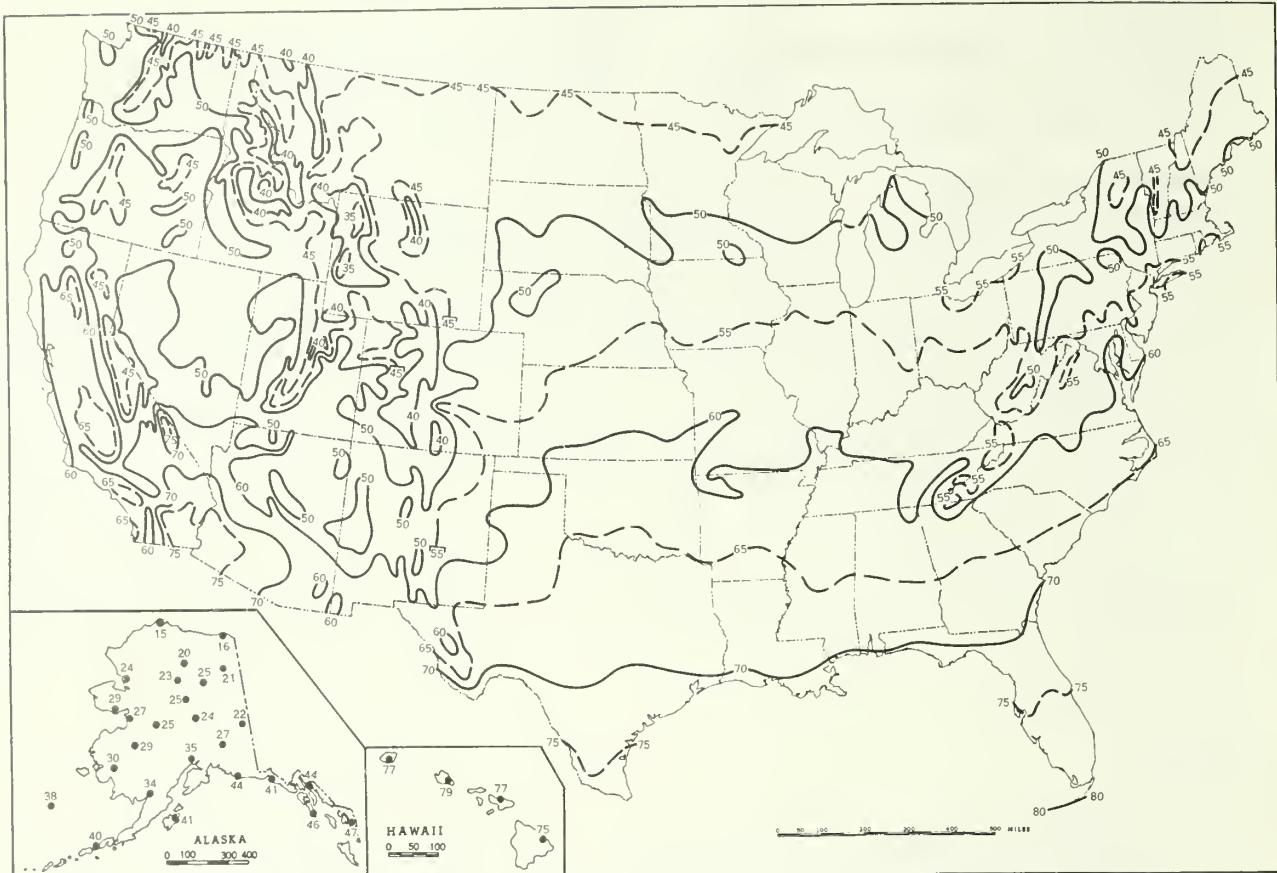
SOLAR RADIATION INTENSITIES: Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station appear in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

()	Clouds Present	DM	Moderate Dust	HM	Moderate Haze	KS	Slight Smoke
*	Values corresponding to true solar noon	DS	Slight Dust	HS	Slight Haze	M	Moderate Haze-indeterminate
BD	Blowing Dust	F	Fog	I	Intense Haze-indeterminable		
BN	Blowing Sand	GF	Ground Fog	K	Smoke	N	Sand
D	Dust	H	Haze	KI	Intense Smoke	S	Slight Haze-indeterminable
DI	Intense Dust	HI	Intense Haze	KM	Moderate Smoke		

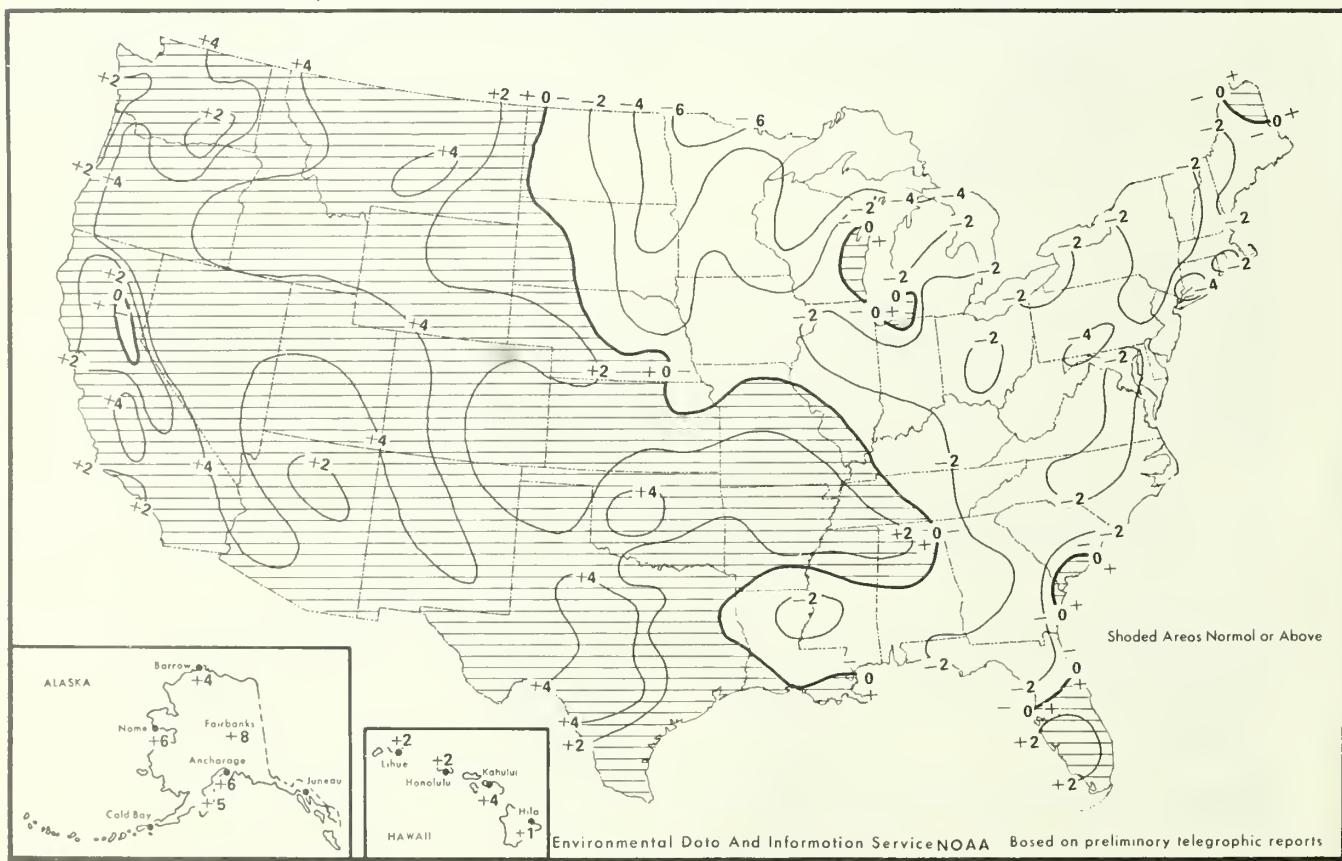
NET RADIATION: The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

The data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

Chart 1. A. Normal Daily Average Temperature (°F. 1941-70), October.

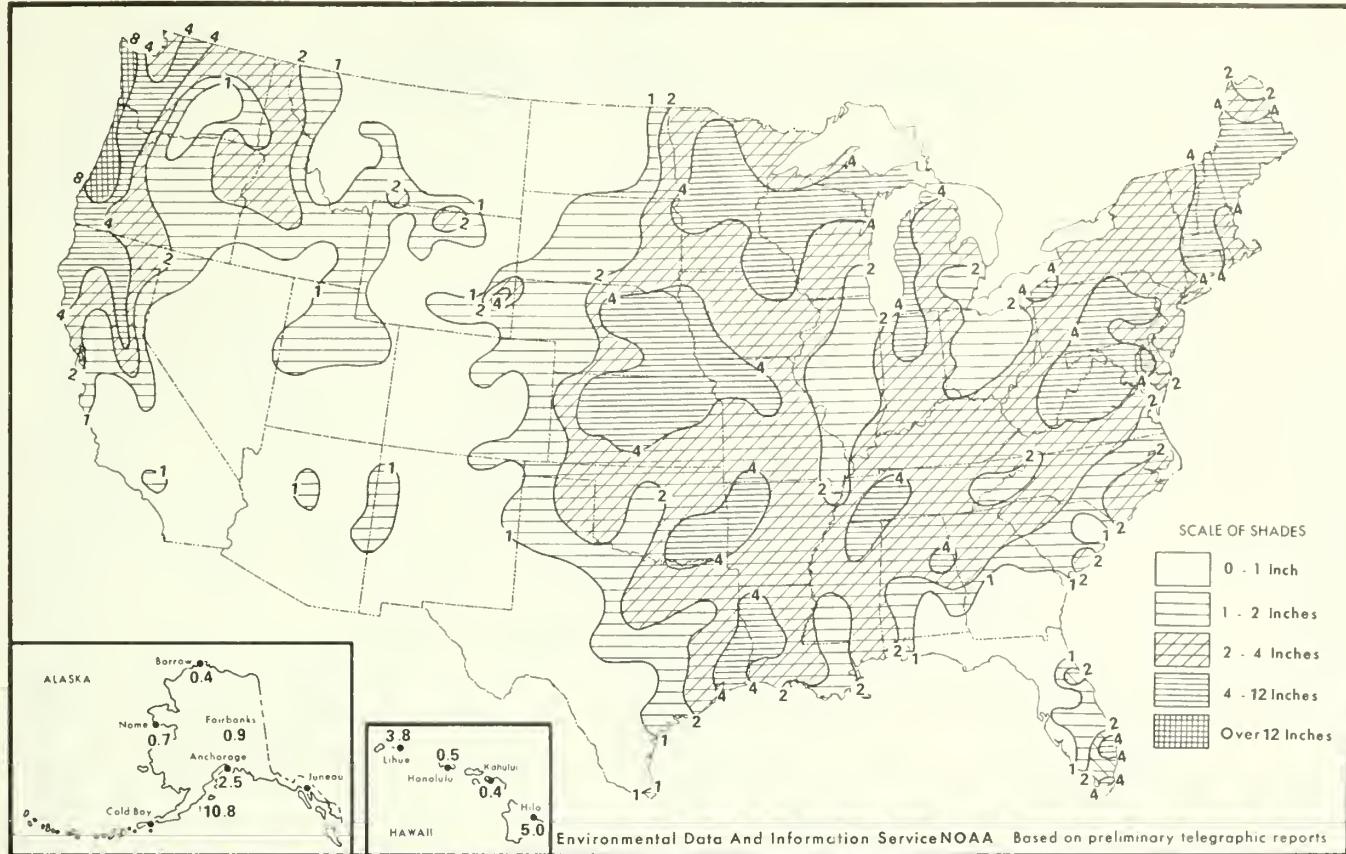


B. Temperature Departure from 30 - Year Mean (°F 1941-70), October 1979



Environmental Data And Information Service NOAA Based on preliminary telegraphic reports

Chart II. A. Total Precipitation (Inches), October 1979



B Percentage of Normal Precipitation, October 1979

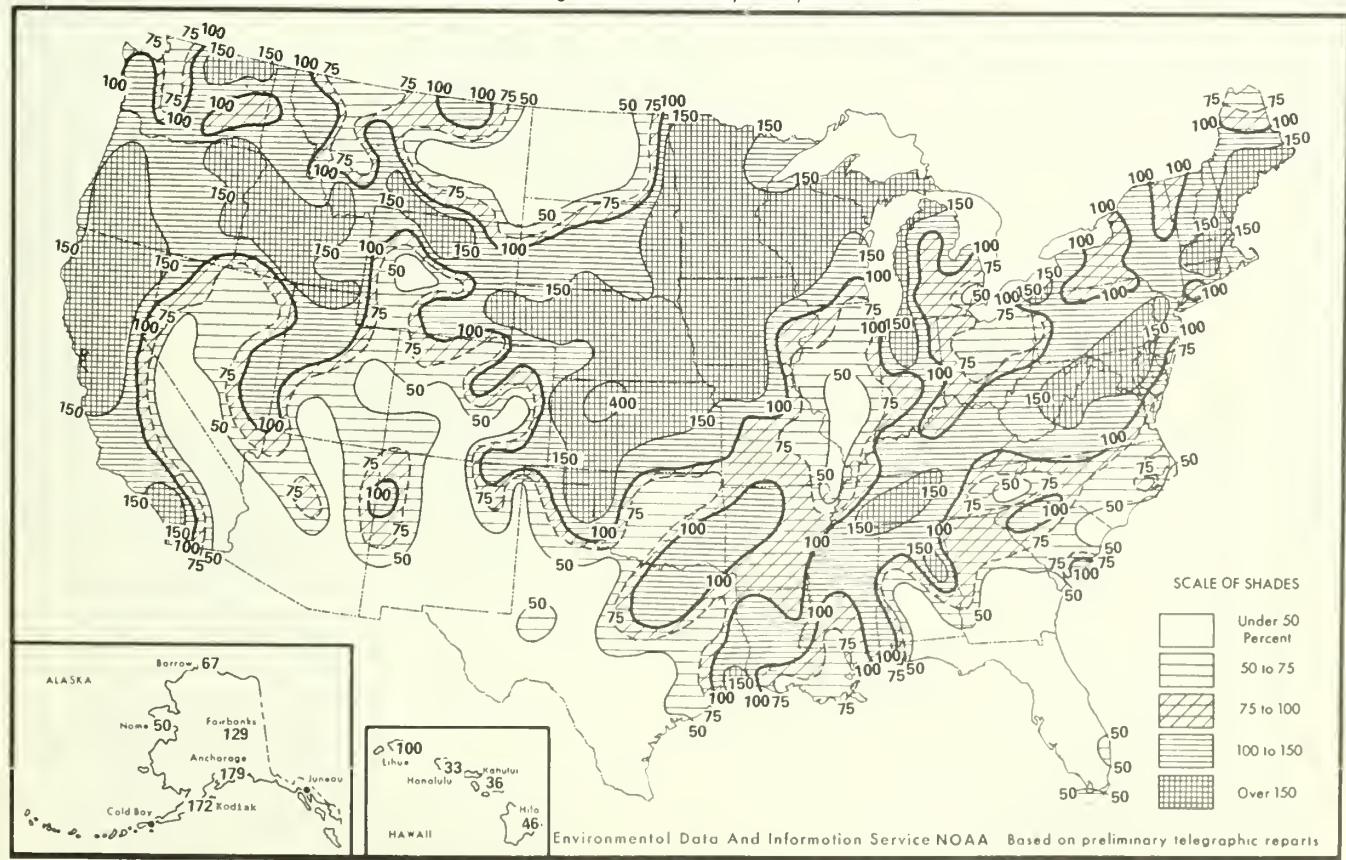
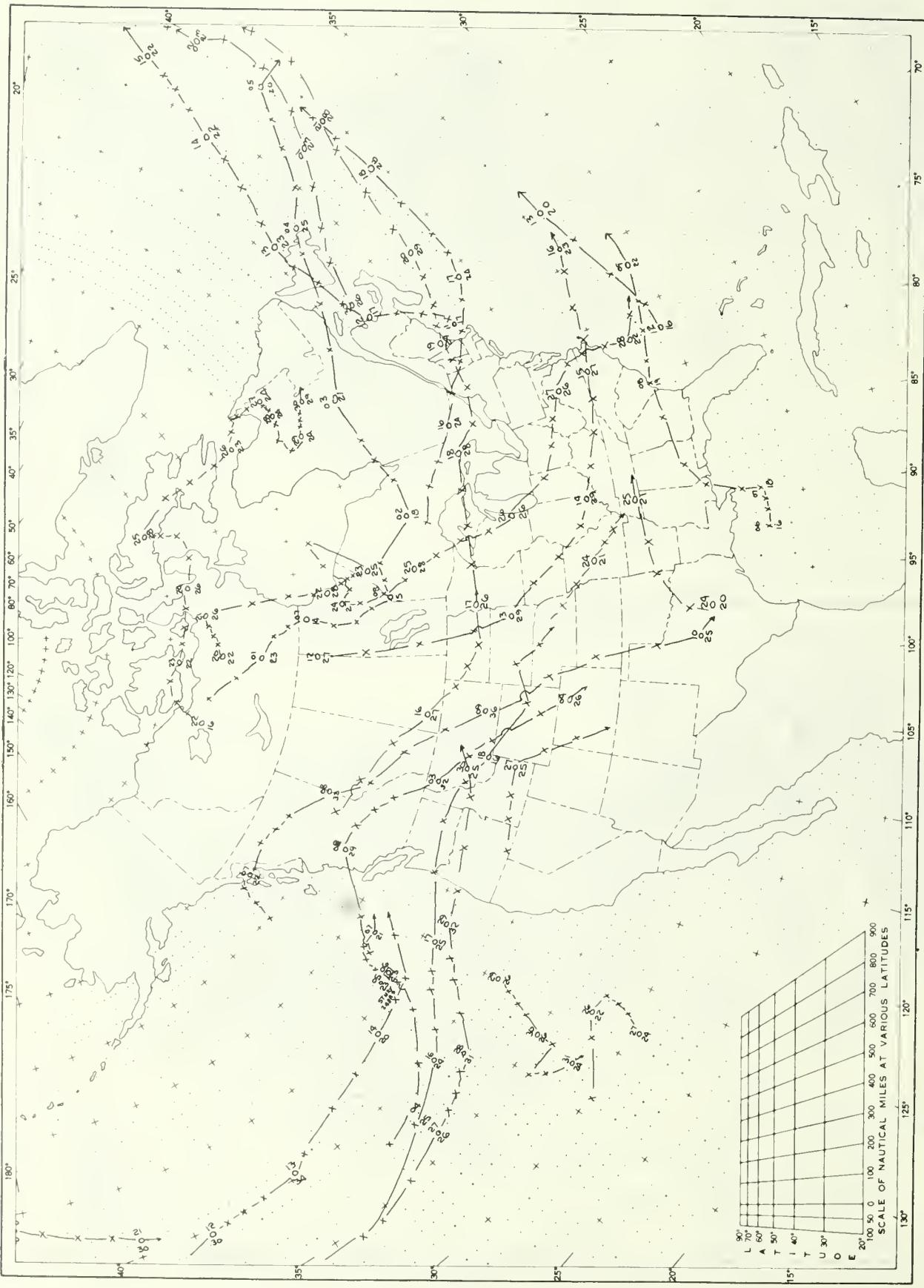
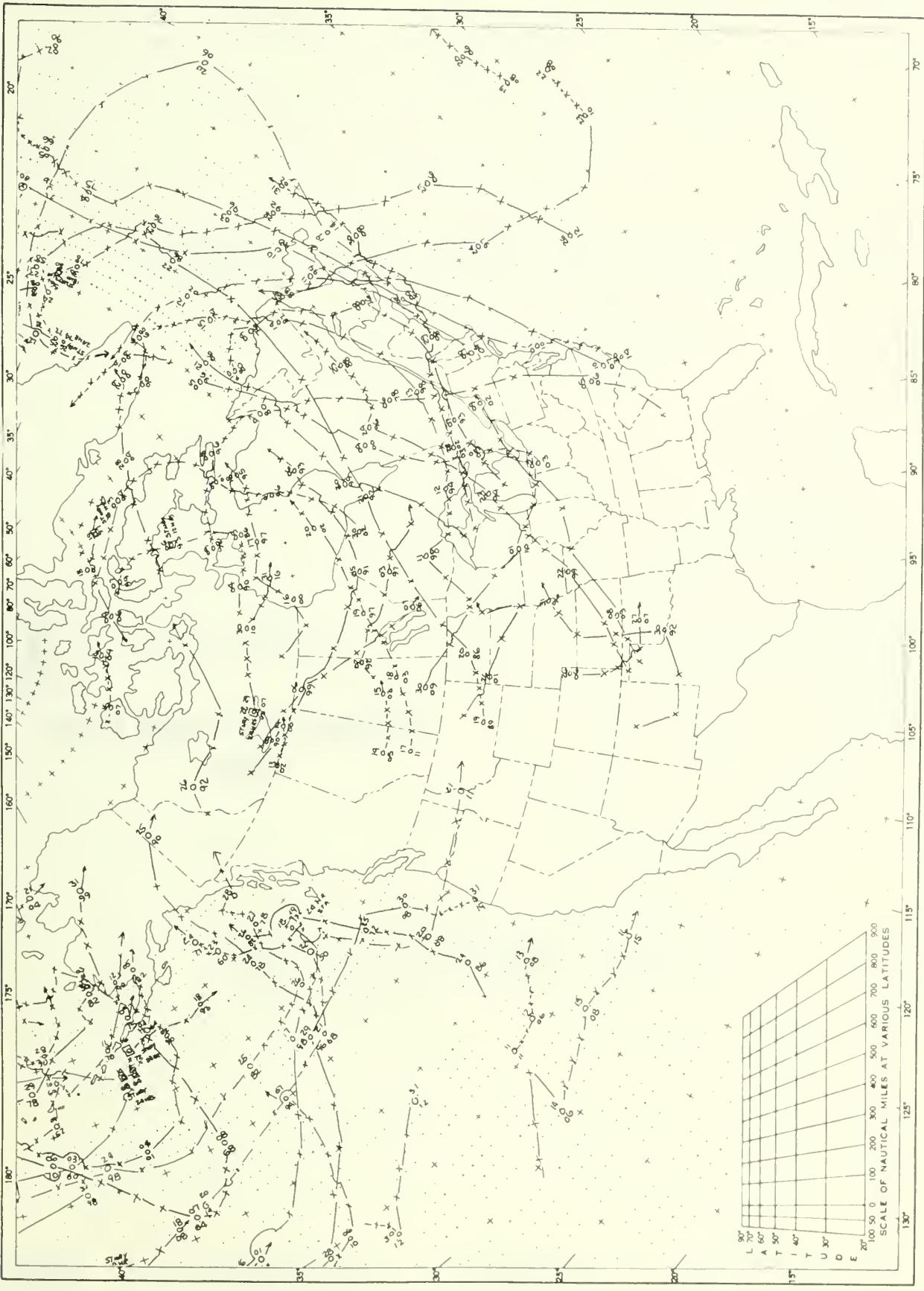


Chart III. Tracks of Centers of Anticyclones at Sea Level, October 1979



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track
 indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IV. Tracks of Centers of Cyclones at Sea Level, October 1979



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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
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NOVEMBER 1979

VOLUME 30

NUMBER 11

CLIMATOLOGICAL DATA

NATIONAL SUMMARY



"I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION AND IS COMPILED FROM INFORMATION RECEIVED AT THE NATIONAL CLIMATIC CENTER, ASHEVILLE, NORTH CAROLINA 28801."

Daniel B. Mitchell
DIRECTOR
NATIONAL CLIMATIC CENTER

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

NOVEMBER 1979

GENERAL SUMMARY OF WEATHER CONDITIONS

Lyle Denny, Climatologist
Environmental Data and Information Service, NOAA

HIGHLIGHTS: Early in November, a frontal system stagnated in the Southeast and spread heavy rain from the lower Mississippi River to the mid-Atlantic States. Again, later in the month, a low center formed in the Texas Panhandle and moved northeastward through the Great Lakes spreading rain from the lower Mississippi River through the New England Coast. Strong northerly winds blowing across the warmer Great Lakes dropped snow, heavy in the eastern portions, on the lee shores. Monthly average temperatures were warmer than normal in the eastern third of the Nation and colder in the West.

A vigorous frontal system edged through the eastern United States as November began at midweek. Rain, showers, and some thunderstorms moved with the front from the Mississippi River Valley to the East Coast. Snow fell in the northern Plains and great lakes area.

At the beginning of the week of the 5th - 11th, a cold airmass moved into the northern Plains, and by midweek, has pushed southward into Mexico and off the Atlantic Coast. A second, somewhat colder system developed and moved rapidly, but slowed as it neared the East Coast. Precipitation with the first system was confined to snow in the central Plains and Rockies and rainshowers in the Lakes area. Rain, with snow at higher elevations, covered the Pacific Northwest and continued eastward. As the second system slowed toward the end of the week, more widespread and heavier rain occurred. The central and lower sections of the Mississippi River were deluged with more than 3 inches of rain. The area from Mississippi to the mid-Atlantic States measured over 2 inches. The colder air averaged 12° below normal in the central Plains.

Precipitation was sparse over most of the Nation during the week of the 12th - 18th, but late in the week a weather system headed into the Northwest spreading rain, with snow at higher elevations, through most of California and the central and northern Plateau. Elsewhere, the remnants of an earlier weather system spread rain along the Coast from the mid-Atlantic States through New England. Light rain or snow fell in the Great Lakes area. Average temperatures for the week in the central and northern Plains and Southwest showed warmer than normal, and the rest of the Nation was near normal.

The week of the 19th - 25th was another week of heavy rain. An upper air low pressure system moved into the Southwest and slowly eastward. Warm, moist air from the Gulf of Mexico moved northward. Blizzard conditions occurred in the Colorado/Wyoming border area and moved eastward toward the Great Lakes. Areas of heavy rain fell from central Oklahoma into northern Missouri and from the lower Mississippi River Valley through the Ohio Valley. The Mississippi Delta was again deluged with 5 or more inches of rain. Temperatures rose sharply in the East. Weekly averages ranged as much as 15° warmer than normal. All of the area west of the Plains was cooler than normal.

During the last week, a large mass of very cold air dropped southward out of Canada and centered in Idaho. The center remained nearly stationary most of the week but elongated southeastward. The cold air reached from the Sierras in the West to the East Coast by the last of the month. Cold northerly winds blowing across the warmer Great Lakes produced snow squalls south of the Lakes. Much of the lee side of the eastern Lakes accumulated 2 to 3 feet of snow. More rain fell in the Pacific Northwest as November ended.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

November 1979

STATE	Temperature						Precipitation					
	Monthly extremes						Monthly extremes					
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Station	Least	
Alabama	4 Stations	83	1	Cartersville	7	30	Cuba	In.	Beatrice 1 E		.38	
Alaska	Wrangell	60	15	Gaithersburg	-31	23	Little Port Walter	11.77	Tok	.06		
Arizona	Tacna 3 NE	89	18	3 Stations	-5	22+	Sunrise Mountain	36.13	22 Stations	.00		
Arkansas	2 Stations	81	21+	6 Stations	11	30	St. Charles	2.70	Oanerville	1.05		
California	Thermal FAA AP	88	15	2 Stations	-9	20	Standish-Nickey St Pk	9.04	25 Stations	.00		
Colorado	Wray	73	18	Antero Reservoir	-33	30	Independence Pass 5 SW	14.80	Dinosaur Natl Monument	.16		
Connecticut	Norwich Pub Util Plt	78	25	Falls Village	17	30	Round Pond	10.37	East Haven Saltonstall	2.30		
Delaware	2 Stations	78	2	3 Stations	23	30	Lewes 1 SW	5.47	Wilmington WSO AP	3.23		
Florida	Clewiston U S Eng	93	11	Smith Creek	17	30	Oaytona Geach WSO AP	5.29	Flamingo Ranger Sta	.36		
Georgia	5 Stations	86	11+	Clayton 1 SSW	9	30	Clayton 1 SSW	7.96	Swainsboro	.78		
Hawaii	Nana Airport 355	94	3	Mauna Kea Oba 111.2	23	14	Puuhokama 2 343	11.70				
Idaho	Council	66	8	Island Park Dam	-28	30	Moscow-Univ of Idaho	40.60	3 Stations	.00		
Illinois	Cahokia	78	20	3 Stations	11	30+	2 Stations	2.85	Mackay Ranger Station	.17		
Indiana	4 Stations	78	1	Angola	13	13+	English	7.77	Peru 2 W	1.54		
Iowa	Logan	72	17	2 Stations	5	13+	Buckeye	8.96	Ft Wayne Disposal Pl	3.13		
Kansas	Greensburg	79	17	Tribune 1 W	7	30	Elgin	3.63	Knoxville	.85		
Kentucky	2 Stations	80	21+	Vanceburg	19	30	Nopkinsville	10.94	Elkhart 6 NNE	0 .06		
Louisiana	2 Stations	86	9	Ashland 2 S	16	30	Marksville	9.95	Ashland	2.24		
Maine	Lewiston	72	2	Squa Pan Dam	6	20	Ellsworth	8.66	Abbeville	2.80		
Maryland	Cumberland 2	78	23	Frostburg 2	14	30	Salisbury FAA AP	5.91	Fort Kent	2.09		
Massachusetts	Chester 2	74	24+	Chester 2	10	17	Elkhart 6 NNE	6.50	Savage River Dam	1.76		
Michigan	3 Stations	74	1	Nerman	-11	11	Gull Lake 8io 1 Sta	5.78	Nantucket FAA AP	2.65		
Minnesota	2 Stations	70	18+	2 Stations	-13	8	Albert Lea	5.54	Kenton	1.42		
Mississippi	Columbia	87	9	Charleston	12	30	Dancy	1.41	Ortonville	.08		
Missouri	3 Stations	79	21+	Willow Springs RDO KUKU	7	30	Waco 2 E	12.29	Vicksburg Military Pk	4.12		
Montana	Grass Range	72	16	West Yellowstone	-27	28	2 Stations	7.24	Weldon Sprng Wildlife Ar	1.19		
Nebraska	Cothenburg	75	16	Crescent Lake Natl WLR	-7	27	Taylor	1.69	7 Stations	T		
Nevada	Sunrise Manr Las Vegas	78	15	Mountain City R S	-22	28	Oenio	4.62	Gordon 3 W	.12		
New Hampshire	2 Stations	72	3+	Mount Washington	-6	16	Mount Washington	2.03	8 Stations	.00		
New Jersey	Hightstown 2 W	77	3	4 Stations	19	30	Greenwood Lake	5.97	Newport	2.30		
New Mexico	Carlsbad FAA AP	82	4	Chama	-10	28	Bloomfield 3 SE	5.55	Trenton WSO Cl	2.60		
New York	Setauket	74	25	Old Forge	7	16	Nooker 4 N	2.29	14 Stations	.00		
North Carolina	Elizabethtown Lock 2	82	10	Grandfather Mountain	5	30	Lake Toxaway 2 SW	8.01	2 Stations	1.61		
North Dakota	2 Stations	70	16	3 Stations	-10	10	Petersburg 2 N	18.26	Wilmington WSO AP	2.01		
Ohio	Gallipolis	79	1	Chardon	12	30	Cincinnati I-Fernbank	9 Stations	T	2.37		
Oklahoma	Waurika	83	19	2 Stations	8	30	Ponca City FAA AP	5.54	New Philadelphia 1 A	2.37		
Oregon	Gold Beach Ranger Sta	74	7	Minan 7 NE	-18	29	Port Orford 5E	12.14	Goodwell Research Sta	.06		
Pacific	Ponape WSO	93	30	Midway Sand Island	56	30	Truk Moen 1 WSO AP	15.79	Oresey	.59		
Pennsylvania	Morgantown	80	26	Warren	13	29	Erik WSO AP	20.97	Wake Island WSO AP	3.09		
Puerto Rico	Lajas Substation	94	4	Adjuntas Substation	53	29	Pico Oel Este	5.84	Landisville 2 NW	1.83		
Rhode Island	Providence WSO AP	73	24	Kingston	22	30	Cyrus City FAA AP	24.54	Puerto Real	1.49		
South Carolina	Florence FAA AP	87	10	Caesars Head	11	30	Port Orford 5E	5.35	Block Island WSO AP	2.83		
South Dakota	Selle Fourche	73	16	2 Stations	-4	29+	Caesars Head	13.56	Aiken 4 NE	1.97		
Tennessee	Kingsport Springs 2 NNE	80	21	Sevierville 1 SE	12	30	Tyndall 1 N	2.99	2 Stations	.00		
Texas	Zapata	95	7	Meriton	6	30	Oover 1 W	10.50	Newport 1 NW	3.45		
Utah	La Verkin	73	6	Woodruff	-30	30	Cypress	7.15	36 Stations	.00		
Vermont	Oorseit 1 S	72	23	Mount Mansfield	5	17+	Alta	7.02	2 Stations	.00		
Virginia	Norfolk WSO AP	83	10	2 Stations	10	30	Mount Mansfield	5.69	South Newbury	2.34		
Virgin Islands	Cruz Bay	91	9	Catherlineburg	65	24	Waverly	9.12	Luray 5 E	2.10		
Washington	Gionoma 1 W	72	15	Winthrop 1 WSW	-5	30	Annaly	17.18	Tague Bay	7.32		
West Virginia	Nuntington WSO AP	82	1	Snowshoe	5	30	Long Beach Exp Sta	9.36	Sequim	.26		
Wisconsin	3 Stations	69	18+	Newald 4 N	-7	11	Pickens 1	5.13	Parkersburg WSO Cl	2.38		
Wyoming	2 Stations	69	18+	Sage 4 NNW	-32	30	Summit Lake Ranger Sta	3.38	Poxboro	.40		
							La Grange	3.74	Shoshoni	T		

CLIMATOLOGICAL DATA
METRIC UNITS

NOVEMBER 1979

State and Station		Elevation (ground)		Pressure		Temperature		Precipitation		Wind		No. of days (sunrise to sunset)											
				Station	mb	Sea level	mb	°C	°C	mm	mm	m/s	km/h	km/h									
ALASKA	BIRCHWOOD	207	998.3	1021.0	17.1	4.8	10.9	-1.4	24.4	22	-6.1	30	0	3	5.6	73	136	4.7	8	10	6.7		
	BIRMINGHAM	189	997.3	1020.9	17.9	5.2	11.6	0.4	25.0	20*	-6.7	30	0	3	5.6	73	140	4.5	8	11	5.0		
	HUNTSVILLE	190	997.3	1020.9	15.9	3.1	9.6	-0.6	23.9	20	-6.3	30	0	3	2.8	68	169	71	0	0	4.4		
	MOBILE	64	1011.5	1020.3	20.3	7.7	14.6	0.0	0.7	26.7	9	-5.9	30	0	2	8.3	72	164	78	2.3	2.5	1.4	
	MONTGOMERY	59	1011.2	1020.6	20.0	6.2	13.1	0.3	0.3	22*	-4.4	30	0	3	6.1	66	104	17	33	8	11	4.8	
ALASKA	ANCHORAGE	35	999.0	1003.9	4.0	-2.3	0.8	6.9	11.7	9	-8.9	14	0	19	-2.2	80	259	70	4	20	1.4	1.6	
	COLD SPRINGS	34	1010.5	1004.7	9.0	3.3	6.2	1.8	14.4	28	-5.0	27	0	30	-2.4	80	65	-6.8	15	2.0	3	2.4	
	ANNEETTE	9	1004.4	1004.7	-9.3	-15.7	-10.5	5.6	6.0	0.2	-16.1	74	5	-6	-1.1	74	53	15	14.3	4.4	6	21	8.2
	BARDI	12	1001.7	1005.7	-8.1	-14.6	-11.3	6.4	1.1	10*	-1.8	21	0	30	-13.3	86	10	11	1.8	7.6	3	21	8.2
	BARTER ISLAND	38	999.0	999.0	-1.0	-6.5	-6.7	4.5	5.0	0.8	-16.1	24	0	28	-5.0	91	84	6.0	17	2.5	2.9	1.9	
	BETHLEHEM	196	980.4	1005.2	-5.1	-11.6	-8.3	10.2	2.8	9	-1.4	27	0	30	-10.0	87	68	4.7	17	2.2	2.1	1.5	
	BIG ODETA	386	997.3	1000.1	0.4	-9.1	-6.3	9.7	11.1	6	-0.8	14	0	30	-2.0	76	150	76	1	0.5	1.4	1.5	
	COLD SPRINGS	29	999.3	1000.1	4.3	-2.3	0.8	6.9	13.3	14	-8.3	20	0	16	-1.1	81	192	93	4.2	28	1.4	2.0	
	FAIRBANKS	133	987.5	1004.9	-2.4	-10.8	-6.6	9.7	5.6	0.9	-0.1	27	0	30	-10.0	75	16	1.2	0	127	9	1	
	GULUKA	477	987.5	1004.9	-0.8	-8.1	-6.4	10.0	7.8	9	-0.2	25	0	24	-1.6	79	15	4	6	0	3.6	2.3	
	HOMER	19	999.3	1012.9	5.2	-0.5	-0.5	2.9	4.3	10.6	7	-8.9	24	0	19	-6.6	76	130	76	1.7	2.1	2.7	2.7
	JUNEAU	4	1012.2	1012.9	5.2	-0.5	-0.5	2.9	2.6	10.6	15	-8.6	27	0	19	-6.6	76	21.6	15	1.6	2.1	2.0	7.8
	KINAI	9	997.3	1002.0	6.9	0.3	-5.6	2.1	4.1	10.0	8	-0.8	24	0	13	-5.6	85	21.6	1.1	1.5	1.9	2.1	1.5
	KOIAK	3	999.3	1002.0	6.9	0.3	-5.6	2.1	11.1	7	-10.0	24	0	14	-0.6	75	73	3.7	1.7	2.5	2.2	2.0	
	KOTZEBUE	105	982.8	1020.2	-2.3	-9.5	-9.5	9.1	7.2	10*	-1.3	27	0	29	-8.9	88	45	3.0	18	2.4	6.0	2.4	
	GRATH	4	995.3	996.0	-1.2	-7.1	-4.2	4.9	5.0	8.8	-0.2	25	0	24	-6.7	81	112	8.4	3.0	10.3	1.7	2.1	
	NAME	7	999.3	996.0	0.8	-6.3	-6.3	7.9	6.9	1.9	-8.7	17	0	16	-1.2	87	20	1.5	2.4	4.4	2.2	7.9	
	ST. PAUL ISLAND	1CS	999.3	1007.8	2.8	-1.6	0.6	3.9	6.7	9	-11.9	30	0	24	-1.1	79	13	4.0	1.5	21	8.4	1.4	
	UNALASKA	15	1007.8	1007.8	2.8	-1.6	0.6	3.9	6.7	9	-8.9	18	0	22	-1.1	88	351	207	52	22	5	2.3	
	VALOZ	11	1006.8	1009.6	6.7	0.1	3.4	3.3	11.7	14	-6.7	25	0	14	-1.7	91	396	20	6.3	19	2.0	8.5	
	YAKUTIA	19	1008.5	1009.6	6.7	0.1	3.4	3.3	11.7	14	-6.7	25	0	14	-1.7	91	117	51	2.3	10	22.8	4	
ARIZONA	FLAGSTAFF	2135	977.7	1016.8	6.6	-7.5	-0.4	-2.9	13.3	6	-0.5	21	0	30	-2.8	34	30	4.2	1.6	10	6	4.0	
	PHOENIX	338	977.7	1015.9	22.1	6.9	1.6	-0.9	27.8	15	-0.6	22	0	2	-2.8	34	3	3	1.2	1.6	1.7	8.7	
	TUCSON	788	927.5	1015.9	21.3	6.0	13.7	-1.1	28.3	3	-0.4	22	0	5	-6.1	28	17	1.3	0.1	1.5	13.4	2.9	
	WINSLOW	1492	992	1015.9	11.8	-5.1	3.3	-2.9	20.6	3	-13.3	22	0	25	-4	13	1	0	0	0	19	4	
	YUMA	59	1007.8	1007.8	24.4	9.4	16.9	-0.6	28.3	16	-2.2	21	0	0	-6	0	0	0	0	11.2	19	5	
ARKANSAS	FORT SMITH	136	1004.1	1021.1	14.5	0.9	7.7	-2.5	23.9	20*	-7.8	30	0	19	1.1	68	3.3	27	3	3	31	11.6	
	LITTLE ROCK	165	1011.2	1021.1	16.3	4.0	10.2	0.0	25.6	20	-5.6	30	0	5	3.3	68	102	64	2	0.8	2.8	12.1	
	NO. LITTLE ROCK	165	1011.6	1018.1	15.1	4.2	9.6	-1.1	24.4	20	-6.7	30	0	6	-2.5	30	64	21	0	0	25	5.0	
CALIFORNIA	BAKERSFIELD	1452	1020.4	1021.7	7.5	1.3	14.6	-1.3	27.8	15*	-0.6	21	0	25	4	3	2	0	0	0.5	10.7	10	
	BISHOP	876.4	1016.8	1017.4	16.8	-3.9	1.8	-1.2	21.1	21	-10.0	21	0	25	1	1	1	0	0	0.5	17.4	12	
	BLUE CANYON	1609.8	1019.4	1019.4	10.4	2.2	6.3	-0.6	17.2	30*	-3.3	19	0	26	1.1	38	11	0	0	1.0	10.7	16	
	FORES U	113	1015.6	1015.5	15.5	7.2	11.3	0.4	19.4	15	0.0	27	0	1	1.1	4.3	13	0	0	1.0	10.7	16	
	FRESNO	100	1008.5	1020.4	18.7	5.7	12.2	0.3	26.1	15	0.0	21	0	1	6.7	75	26	1.5	0.3	5	8.9	16	
	LONG BEACH	8	1016.8	21.4	10.4	15.4	-0.3	28.3	30*	2.8	22*	0	0	6.7	64	6	-19	5	3	0.9	17.8	19	
	LOS ANGELES	30	1011.6	1018.2	21.4	10.8	16.2	0.3	27.2	30*	6.7	21	0	0	6.1	60	6	-19	5	3	0.8	17.8	
	MT. SIASIA D	82	1021.3	1021.3	23.8	12.4	18.1	-1.1	30.1	13	-0.1	21	0	25	5	46	5	3	0	0	10.7	19	
	OAKLAND	1072	1020.5	1020.5	16.8	10.1	13.4	0.5	18.3	14	-0.1	27	0	23	-2.6	66	116	-3	3.2	1.0	12.1	6	
	PEO BLUFF	104	1020.2	1017.2	6.2	6.1	11.7	-0.4	21.1	6	-4.4	21	0	20	8.3	72	52	-9	1.6	1.7	10.7	16	
	SACRAMENTO	505	1015.6	1020.4	16.3	5.6	10.9	-0.7	20.6	6	-5.6	73	0	17	1.6	3.3	12	1.7	0.3	0.3	2.8	25*	
	SAN DIEGO	4	1016.9	1018.0	21.9	11.8	16.9	-0.9	20.6	6	-6.1	73	0	17	1.6	3.7	21	1.7	0.3	0.3	2.8	25*	
	SAN FRANCISCO	2	1019.6	1020.2	16.7	7.8	12.3	-0.7	20.0	14*	2.2	21	0	0	8.3	72	49	-9	1.6	1.7	10.7	19	
	SAN FRANCISCO U	16	1019.3	1019.3	21.1	4.2	14.3	-0.2	27.2	13	-0.3	21	0	2	1.3	33	8	1.7	0.3	0.3	2.8	25*	
	SANTA MARIA	72	1019.3	1019.3	17.9	5.9	11.9	-0.3	22.2	6	0.6	21*	0	0	7.3	72	10	-2	1.6	1.7	10.7	19	
	STOCKTON	7	1019.3	1019.3	17.9	5.9	11.9	-0.3	22.2	6	0.6	21*	0	0	6.7	75	0	0	5	10	3	13	

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State and Station	Elevation (ground)	Pressure				Temperature				Precipitation				Wind				No. of days (sunrise to sunset)		
		Sea level		mb		mb		mb		°C		°C		mm		mm		m/s		Foothill mile (1.6 kilometers)
		Q	mb	mb	mb	mb	mb	mb	mb	°C	°C	°C	°C	mm	mm	mm	mm	m/s	m/s	1.6 kilometers)
COLORADO																				
ALAMOSA	2297	4.2	-16.4	-6.1	-4.9	12.8	4	-1.6	30*	0	30	-10.0	55	1.3	135	102	0.5	2.3	15.6	1.5
COLORADO SPRINGS	1873	810.7	1021.0	-7.3	-3.5	18.3	17	-16.7	29	0	23	5.6	71	3.7	350	203	3.0	1.3	17.9	1.5
DENVER	1610	836.4	1019.0	6.9	-5.5	3.7	4	-15.6	28	0	29	-5.6	71	0	566	432	0.6	1.8	12.1	1.5
GRAND JUNCTION	1476	855.4	1022.9	6.3	-5.0	-3.7	4	-15.6	30	0	26	-1.1	72	1.0	208	102	0.8	1.0	8.5	1.5
PUEBLO	1428	10.7	-6.6	2.1	-2.8	21.1	3	-14.4	30	0	30	-7.2	62	1.3	16	51	1.1	16.1	1.1	1.3
CONNECTICUT																				
BRIDGEPORT	2	1019.0	1019.7	12.2	4.8	8.5	0.7	18.9	2	-1.7	30	0	4	3.3	70	65	-33	22	11	0
HARTFORD	52	1012.5	1019.2	12.6	2.4	7.5	2.3	21.7	25	-5.0	30	0	11	2.2	72	68	-22	32	11	0
DELAWARE																				
WILMINGTON	23	1017.3	1020.4	15.2	4.3	9.8	2.2	22.8	24*	-4.4	30	0	5	3.9	70	82	-7	40	9	0
DIST. OF COLUMBIA																				
WASHINGTON DULLES	88	1008.5	1020.5	16.7	2.9	9.6	2.8	25.0	25	-6.1	30	0	11	4.4	72	67	-10	18	10	1
WASHINGTON NATIONAL	83	1019.3	1020.5	17.5	7.4	12.4	3.6	23.9	23*	-2.2	30	0	1	6.7	70	59	-14	17	7	1
FLORIDA																				
APALACHICOLA U	6	1019.3	1020.0	22.2	10.5	16.4	0.2	26.7	10	-2.8	30	0	1	11.7	77	74	6	58	5	0
CAYTONA BEACH	9	1019.3	1019.3	23.8	14.5	18.9	0.6	24.9	10	1.7	30	0	1	14.4	77	202	14.8	10	1.1	0
FORT MYERS	5	1017.3	1010.2	23.2	10.2	16.6	0.4	27.8	10	-2.2	30	0	1	17.2	73	212	2.4	0	1.5	0
JACKSONVILLE	8	1019.3	1000.3	27.1	21.0	24.9	0.4	30.6	10	0	0	1	13.3	83	4.7	34	6	3	0	0
KEY WEST	1	1016.9	1017.1	22.7	2.0	24.1	1.8	30.0	26*	10.6	30	0	0	20.6	80	41	-27	20	14	0
MIAMI	2	1016.9	1017.1	27.2	21.2	24.9	0.9	30.6	11*	0	0	0	0	19.4	76	41	-28	23	14	0
ORLANDO/M COY AFB	29	1015.2	1015.9	25.9	14.4	20.9	0.2	25.6	9	-2.6	30	0	1	15.0	78	49	18	1.0	1.0	0
PENNSYLVANIA																				
PHILADELPHIA	34	1015.9	1020.2	20.6	9.2	14.9	-0.4	28.3	1	-5.6	30	0	3	9.4	76	138	53	8	2	13.0
TALLAHASSEE	17	1017.3	1019.6	22.4	7.3	14.9	-0.1	28.3	1	-5.6	30	0	1	9.4	76	21	77	1.0	0	1.0
TAMPA	6	1018.6	25.4	15.3	20.4	1.1	2	26.9	24*	3.3	30	0	1	4.4	72	21	-24	9	6	1.0
WEST PALM BEACH	5	1016.9	1017.6	26.7	19.1	22.9	1.2	30.0	10*	7.6	30	0	0	18.9	80	104	41	29	15	0
GEORGIA																				
ATLANTA	24	990.9	1020.0	18.9	6.7	12.8	1.9	25.0	23	-6.7	30	0	3	6.1	69	89	3.3	34	8	0
THENS	308	982.7	1020.0	18.1	6.7	12.4	1.6	26.1	20	-6.1	30	0	3	6.1	70	132	4.5	34	7	0
KALUBLI	41	1016.9	1020.3	20.7	5.4	13.1	1.1	26.7	23*	-6.7	30	0	5	7.2	76	50	-7	42	17	0
COLUMBUS	136	1006.1	1020.4	20.0	7.8	13.9	1.4	26.1	23*	-5.0	30	0	3	8.3	75	115	40	43	6	0
POPE	108	1007.1	1020.3	21.7	7.6	14.9	1.9	27.8	23	-7.8	30	0	3	7.8	69	86	25	44	6	0
SAVANNAH	14	1019.0	1020.9	22.0	9.6	15.8	1.8	28.9	10	-2.6	30	0	1	9.4	70	69	19	37	7	1
HAWAII																				
HONOLULU	8	1014.2	1015.6	26.0	18.7	22.8	-0.3	29.4	30	16.1	7	0	0	18.9	81	548	19.8	290	20	0
KAPULU	15	1014.9	1015.4	29.3	21.1	25.2	0.5	31.1	22*	15.6	27	0	18.9	70	13	-6.3	7	9	1	0
LIHUE	31	1010.8	1016.1	26.2	21.3	23.7	0.7	32.0	28	16.7	28	1	0	19.4	78	77	-39	6	12	0
IDAHO																				
BOISE	865	920.8	1023.8	6.9	-3.9	1.5	-2.8	16.1	6	-15.6	28	0	24	-4.4	68	33	-1	13	9	0
LEWIS	931	1015.6	1015.0	6.4	-0.4	3.1	-1.7	15.0	3	-7.8	29	0	16	-0.4	75	37	5	14	10	0
POCATELLO	1356	867.3	1005.0	3.8	-0.9	-2.0	-4.1	13.1	16	-1.2	29	0	27	-6.7	75	28	-6.7	5	10	0
ILLINOIS																				
CAIRO U	96	1014.0	1016.8	13.4	4.8	9.1	0.1	23.3	20	-3.3	30	0	5	138	71	102	1	1	102	1
CHICAGO O HARE	201	991.9	1015.1	9.2	0.4	4.8	0.8	21.7	18	-7.8	11	0	15	-1.1	65	71	2.7	28	13	0
CHICAGO WILMAY	185	995.6	1017.5	8.8	0.7	4.7	0.1	20.1	18	-6.1	11	0	15	0	54	70	14	2.6	23	13
MOLINE	177	995.6	1017.0	7.9	-0.3	2.8	-1.2	20.6	18	-10.0	10	0	23	-1.7	71	34	1.1	25	13	0
PEORIA	199	994.2	1018.7	8.4	-1.8	3.3	-1.1	21.7	19	-9.4	11	0	21	-1.1	76	70	19	2.0	23	10
FOOTERD	221	990.6	1018.2	7.1	-2.6	0.6	-0.9	20.0	18	-11.1	11	0	22	-6.2	62	124	2.7	24	11	0
SPRINGFIELD	179	996.0	1019.2	10.6	0.3	5.6	-0.1	23.1	19	0	16	1.1	75	50	-4	27	11	0	19	0
INDIANA																				
EVANSVILLE	116	1005.8	1020.1	11.7	6.7	-0.4	22.2	20*	-5.0	14	0	15	2.2	75	173	9.3	52	8	24	16.5

Possible events
(sunrise to sunset)
Cloudy, 0-30%
Partly cloudy, 41-70%
Clear, 0-30%
Date
Resultant direction
Resultant speed
Max wind depth
on ground
Depths in 24 hours
25 m. or more
With undercurrents
500 m.
Departure from normal
Average minimum
Average maximum
Max 32 °C or above
Min 0 °C or lower
Average dew point
Average relative humidity
No. of days

Possible events
(sunrise to sunset)
Cloudy, 0-30%
Partly cloudy, 41-70%
Clear, 0-30%
Date
Resultant direction
Resultant speed
Max wind depth
on ground
Depths in 24 hours
25 m. or more
With undercurrents
500 m.
Departure from normal
Average minimum
Average maximum
Max 32 °C or above
Min 0 °C or lower
Average dew point
Average relative humidity
No. of days

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State and Station		Elevation (ground)		Pressure		Temperature		Precipitation		Wind		Fog		Clouds		Sky cover, tenth's																					
MISSISSIPPI	MERIDIAN	86	1009.8	1021.1	19.1	3.6	11.3	-1.0	27.8	9	-6.7	3.0	0	7	5.6	74	188	99	66	7	2	0	0.8	34	8.9	18	27	14	6	10	4.7						
MISSOURI	COOLUMBIA REGIONAL	270	986.5	1019.5	10.1	0.4	5.3	-1.3	21.7	1.9	-7.8	3.0	0	15	-0.6	69	57	1.2	39	6	0	1	1	1.9	2.4	12.1	Nw	28	+	9	8	13	6.1	5.0			
KANSAS CITY MUN. AP	KANSAS CITY	297	981.4	1019.0	11.7	0.1	4.6	-0.9	21.6	-1.6	-8.3	3.0	0	17	-0.6	61	53	1.7	30	7	0	1	1	2.5	2.3	13.4	Nw	1	1	9	8	13	5.5	5.8			
ST. JOSEPH	KANSAS CITY	247	1019.3	1019.6	11.3	-1.5	4.9	-0.8	23.3	1.7	-6.1	3.0	0	11	-0.6	61	60	2.9	39	6	0	1	1	1.9	2.4	2.4	Nw	2	2	9	8	13	5.5	5.7			
ST. LOUIS	KANSAS CITY	163	999.0	1019.6	11.9	1.9	4.9	-0.8	21.7	1.7	-8.7	3.0	0	17	-0.6	74	53	-1.2	39	6	0	1	1	2.5	2.3	13.4	Nw	2	2	9	8	13	6.5	4.5			
SPRINGFIELD	KANSAS CITY	186	973.6	1019.9	12.2	0.8	6.5	-1.0	24.4	1.9	-7.2	3.0	0	16	-0.6	64	83	2.1	43	7	2	1	1	2.5	2.2	12.1	Nw	2	2	9	9	12	5.6	4.9			
MONTANA	911LLINGS	1067	993.1	1020.6	4.8	-3.2	0.8	-1.2	16.1	1.6	-12.8	2.1	0	24	-7.8	58	13	-5	9	4	0	196	152	3.8	2.5	13.9	Nw	2	2	11	8	13	5.5	5.7			
GLASSGOW	GLEN FALLS	656	916.0	1020.6	2.8	-8.5	-2.8	-1.2	15.6	1.6*	-10.7	2.9	0	28	-7.2	76	15	-5	2	9	0	69	51	1.2	1.2	11.6	Nw	2	2	13.9	3.8	10	9	12	7.0		
GLEN FALLS	GLEN FALLS	1116	891.0	1022.5	6.0	-4.3	-0.4	-0.7	1.1	-8.2	-15.6	2.8	0	26	-8.9	55	13	-3	3	8	0	79	25	3.6	3.0	13.4	Nw	2	2	13.4	3.0	9	6	15	5.6		
HAZEL HILL	HAZEL HILL	788	925.8	1024.3	6.4	-4.7	-0.4	-0.7	1.1	-12.8	-17.8	2.9	0	29	-9.4	61	2.1	-9	2	5	0	15	1	1.7	1.7	1.7	Nw	2	2	12.1	4	10	5	15	5.7		
HELENA	KALISPELL	1167	884.5	1024.3	4.7	-4.7	-0.7	-1.7	0.9	7.2	1.1	-15.6	2.9	0	27	-9.4	82	1.1	-2.5	5	0	0	2	35	5.0	2.5	2.5	2.5	2.5	2	2	8.1	5.4				
MILES CITY	MILES CITY	801	924.8	1020.6	4.6	-7.4	-1.1	-1.4	17.8	1.6	-16.7	2.9	0	30	-7.8	66	5.1	-8	3	0	188	127	0.4	31	8.0	Nw	10	8	3	19	7.0	5.3					
MISOURI	972	909.9	2.1	-7.4	-2.7	-2.8	-8.9	6.0	-0.8	2.9	0	27	-5.6	83	1.3	-12	7	0	188	127	0.4	31	8.0	Nw	10	8	3	19	7.0	5.3							
NEBRASKA	GRAND ISLAND	561	951.0	1019.1	7.1	-4.5	1.3	-2.1	20.6	1.6	-11.1	3.0*	0	27	-5.0	68	4.5	30	2.0	4	1	1	2.2	1.2	1.2	Nw	2	2	13.4	3.3	17	10	4.5	5.9			
LINCOLN	GRAND ISLAND	359	974.6	1018.5	8.5	-3.0	2.9	-0.9	21.9	1.6	-12.2	3.4*	0	24	-1.7	77	3.3	8	20	6	0	107	51	2.4	2.4	14.8	Nw	2	2	11.6	6.1	7	15	6.1	5.9		
NORFOLK	GRAND ISLAND	471	961.4	1018.5	5.6	-8.8	0.5	-1.9	21.1	1.6	-12.2	3.4*	0	26	-3.9	76	4.2	2.6	20	6	0	107	51	2.4	2.4	16.5	Nw	2	2	16.5	6.1	7	15	6.1	5.9		
NORTH PLATE	GRAND ISLAND	846	919.1	1019.8	7.5	-7.2	-0.1	-2.3	21.6	1.6	-14.4	3.0	0	29	-2.2	61	7.2	6.0	38	5	0	45	33	2.5	2.5	16.5	Nw	2	2	21	10	9	11	5.8	6.7		
OMAHA (LEPPEY)	GRAND ISLAND	399	928.0	1020.6	7.0	-7.2	-0.3	-2.1	21.6	1.7	-8.6	2.9	0	24	-2.2	77	3.1	3	14	6	0	45	33	2.8	2.8	14.3	Nw	2	2	21	10	9	9	13	5.2		
SCOTTSBLUFF	VALLENE	1206	880.6	1022.6	5.9	-7.0	-0.2	-0.6	21.1	1.7	-15.0	2.7	0	22	-7.2	66	4.1	31	29	6	0	343	305	3.1	32	16.1	Nw	2	2	28	9	8	9	15	5.2		
VALLENE	VALLENE	789	925.5	1022.7	5.9	-8.1	-1.1	-2.5	22.2	1.7	-16.1	2.3	0	30	-7.2	72	15	4	13	5	0	157	127	2.6	31	17.0	Nw	2	2	28	9	8	13	5.8	5.8		
NEVADA	ELM	1519	849.0	1022.4	8.4	-6.6	0.9	-0.7	16.1	1.6	-16.7	2.6	0	29	-6.1	63	2.8	2	9	7	0	234	51	0.3	30	10.1	Nw	16	5	19	16	13	8	9	4.8		
ELM	LAS VEGAS	1996	810.4	1012.3	8.1	-8.8	-0.8	-0.4	16.1	1.6	-17.8	2.1	0	29	-11.7	46	7.7	-10	4	5	0	56	25	1.0	22	12.5	Nw	16	5	11	9	12	5.2	6.4			
GRAND CANYON	GRAND CANYON OBS	659	962.4	1019.7	12.6	-5.6	4.2	-0.9	21.7	1.5	-12.8	2.2	0	23	-8.3	28	1.1	-10	1	0	0	50	1	0	0	0	0	0	0	3.8	8.4						
GRAND CANYON	GRAND CANYON OBS	1322	868.9	1021.5	12.6	-5.6	3.3	-1.2	21.9	1.7	-13.9	2.4*	0	26	-6.7	54	4.4	-13	2	4	0	1	41	25	0.8	2.8	17.9	Nw	2	2	25	13	15	5.9	7.8		
GRAND CANYON	GRAND CANYON OBS	1311	872.7	1022.9	10.9	-7.0	-1.0	-1.8	16.3	1.5	-16.1	2.1	0	25	-6.7	59	15	-9	9	8	0	41	25	0.8	7	11.2	Nw	2	2	24	12	7	11	5.2	6.3		
NEW HAMPSHIRE	CONDORO	104	1076.1	1018.9	11.2	0.2	5.7	2.3	21.7	2.2	-6.1	1.6	0	17	5	74	-2.6	40	12	0	1	0	0	0	27	17.9	Nw	16	5	20	7.7	4.0					
NEW JERSEY	ATLANTIC CITY	1619	839.1	1018.9	12.1	-2.0	5.0	-1.9	21.7	4	-8.9	2.9	0	23	-6.1	52	2.3	16	9	4	0	20	55	1.3	3.4	16.1	Nw	4	4	26	1	3	26	9.0	29		
NEW YORK	CLAYTON	1515	839.1	1018.3	10.1	-3.1	7.0	-1.3	25.0	26	-10.6	2.9	0	20	-5.0	47	1.7	-7	0	0	0	0	0	0	20	14.8	Nw	4	4	25	18	5	7	3.8	6.0		
NEW YORK	RIDGEWELL	1112	892.0	1020.0	15.2	-1.0	3.1	-1.0	21.1	2.1	-1.7	3.0	0	22	-8.3	24	2.4	-17	20	9	0	1	0	0	0	0	26	17.9	Nw	4	4	25	18	5	7	3.8	6.0
NEW YORK	NEW YORK	94	1008.5	1019.3	11.6	1.8	6.7	2.5	20.6	2.4	-6.1	1.6	0	12	-2.2	74	8.7	14	36	11	0	0	1	7	22	14.8	Nw	2	2	28	4	2	2	8.1	3.0		
BINGHAMTON	BUFFALO	485	999.5	1018.8	19.9	1.8	5.9	2.4	18.1	2.3	-6.1	2.3	0	10	-1.1	73	9.4	15	36	15	0	0	1	4	2.5	2.5	2.1	Nw	2	2	28	4	2	2	8.0	3.4	
NEW YORK	NEW YORK	40	1016.5	1019.8	11.7	1.0	5.5	2.5	20.5	2.4	-5.6	1.6	0	12	-1.1	76	10.5	10	32	21	0	0	1	4	2.5	2.5	2.1	Nw	2	2	28	3	2	2	8.0	3.2	
NEW YORK	KENNEDY	4	1019.0	1019.8	14.9	1.4	5.6	2.8	21.4	2.2	-7.9	1.1	0	14	-4.4	64	8.6	-4	36	9.0	0	0	1	4	2.5	2.5	1.7	Nw	2	2	28	3	2	2	8.0	3.2	
NEW YORK	LA GUARDIA	3	1019.3	1020.3	13.3	6.6	5.6	1.0	19.4	2.5	-2.2	1.0	0	12	-2.0	50	7.9	51	2.0	30	13	0	0	1	4	2.5	2.5	1.7	Nw	2	2	28	3	2	2	8.0	3.2
NEW YORK	ROCHESTER	167	997.6	1018.1	10.3	1.9	6.0	1.4	20.6	2.3	-4.4	1.6	0	12	-2.0	53	7.7	-1	26	10	0	0	1	4	2.5	2.5	1.7	Nw	2	2	28	1	5	5	8.4	2.3	

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State and Station	Elevation (ground)	Station	500 mb level	Pressure				Temperature				Precipitation				Wind				No. of days (sunrise to sunset)																		
				No. of days		Average minimum		Average maximum		Departure from normal		Total		With hindcasters		MaxIMUM depth on ground		Resultant speed		Direction		Speed		Cloudy, 8-10		Partly cloudy, 4-7		Sky cover, 0-3										
				Min. 0 °C or lower	Max 32.7 °C or above	Average dew point	Min. 0 °C or lower	Max 32.7 °C or above	Average relative humidity	Departure from normal	Total	With hindcasters	MaxIMUM depth on ground	Resultant speed	Direction	Speed	m/s	m/s	m/s	m/s	No. of days (sunrise to sunset)	Cloudy, 8-10	Partly cloudy, 4-7	Sky cover, 0-3	Possible sunshine %													
NEW YORK	125	1003.4	1018.4	11.3	2.6	6.9	1.9	20.0	23	-5.6	16	0	9	2.8	7.7	8.3	0	1.7	15	0	36	2.5	1.7	22	20.6	28	0	6	24	8-7	21							
NORTH CAROLINA	652	943.8	1020.7	15.6	3.4	9.6	1.6	22.8	20	-7.2	30	0	13	5.0	7.9	197	122	84	10	2	1	T	0.9	3.5	13.0	3.3	1.3	5.1	5.8	12	1.2	5.3	5.3					
ASHEVILLE	1020.3	1000.6	19.5	10.4	14.8	1.4	2.4	24*	-2.2	30	0	13	10.6	7.7	215	102	100	9	0	0	0	0.6	3.6	13.9	18.2	12	1.2	5.1	5.9	10	5.1	5.9						
CAPE HATTERAS	9	1020.3	1000.6	17.4	5.8	11.6	1.1	2.3	2.3	-6.2	30	0	13	6.1	7.2	117	47	40	10	1	1	C	0.2	1.2	8.9	1.7	1.3	7	10	5.1	5.9	10	5.1	5.9				
CHARLOTTE	224	969.2	1000.6	17.8	4.6	11.3	1.1	2.2	2.0	-7.2	30	0	13	5.6	7.1	121	55	46	10	1	0	0	0.4	2.5	13.0	2.4	2.4	2.4	12	6	1.0	5.2	6.5	1.0	5.2	6.5		
GREENSBORO	213	988.6	1000.4	17.8	4.6	10.1	1.1	1.1	1.1	2.5	20	0	10	7.2	8.1	120	49	46	7	3	0	0	0.2	2.5	9.8	2.4	2.4	2.4	15	6	1.9	5.6	6.2	1.0	5.6	6.2		
PALM BEACH	112	1014.4	1000.4	16.1	4.1	10.1	1.1	1.1	1.1	2.5	20	0	10	7.2	8.1	120	51	51	7	1	0	0	0.2	2.5	12.5	5.6	2.6	1.5	15	6	1.9	5.6	6.2	1.0	5.6	6.2		
WILMINGTON	9	1020.5	1019.0	21.0	7.6	14.3	1.2	27.8	10	-2.8	30	0	2	8.3	6.9	51	25	38	7	1	0	0	0.2	2.5	12.5	5.6	2.6	1.2	8	10	4.8	7.9	7.9					
NORTH DAKOTA	502	957.7	1019.5	3.2	-16.0	-3.4	-1.7	18.3	16	-15.6	23	0	30	-6.3	7.2	1	-1.3	1	4	0	25	1	2.3	31	16.1	4	4	2.2	7.6	4.4	1.0	2.2	7.6	3.7				
BISMARCK	271	987.1	1017.1	-0.2	-8.2	-2.3	-1.7	11.1	17	-0.4	10	0	30	-6.1	8.4	12	-1.2	1	3	0	152	10	1.7	10	16.1	4	4	6	18	6.9	4.6							
FARGO	579	948.9	1020.0	-2.2	-9.9	-3.6	-1.7	15.6	16	-16.7	27	0	30	-8.9	7.2	2	-1.2	1	3	0	125	10	1.8	12.5	12.5	4	4	6	18	6.9	4.6							
ILLINOIS																					25	1.8	28	12.5	12.5	4	4	6	18	6.9	4.6							
OHIO																																						
AKRON	368	973.9	1019.3	10.4	1.3	5.9	1.4	21.1	21	-5.6	30*	0	15	0.0	6.8	80	16	24	17	0	41	0	2.6	2.3	13.0	2.1	2.6	5	6	1.9	7.6	3.3						
CINCINNATI AIRPORT	212	973.5	1019.1	12.4	2.3	7.3	0.7	2.1	2.1	-4.4	29	0	8	0.8	7.2	80	15	34	11	1	1	1	1.9	2.4	1.7	1.7	2.4	1.7	2.4	1.7	2.4	1.7	2.4					
CLEVELAND	217	969.5	1019.1	10.4	1.1	5.7	0.4	18.9	21*	-5.6	12	0	17	0.6	7.2	80	10	19	16	1	1	1	1.9	2.4	1.7	1.7	2.4	1.7	2.4	1.7	2.4	1.7	2.4					
COLUMBUS	247	982.4	1019.3	11.3	1.6	6.4	1.1	2.1	2.1	-5.0	29	0	11	1.1	7.2	80	12	28	10	1	1	1	1.9	2.4	1.7	1.7	2.4	1.7	2.4	1.7	2.4	1.7	2.4					
CAYTON	303	982.4	1019.3	11.1	1.3	6.2	0.8	21.1	21	-6.7	12	0	10	1.1	7.2	80	12	25	53	9	1	1	1.9	2.4	1.7	1.7	2.4	1.7	2.4	1.7	2.4	1.7	2.4					
MANSFIELD	395	992.9	1018.4	9.3	1.5	6.1	1.5	2.1	2.1	-0.6	19.4	21	-6.7	30	0	17	1.1	7.7	80	12	12	1	1	1	1.9	2.4	1.7	1.7	2.4	1.7	2.4	1.7	2.4	1.7	2.4			
TOLEDO	246	992.9	1018.4	10.7	1.5	6.1	1.5	2.1	2.1	-0.7	18	0	16	0.8	7.7	80	12	12	1	1	1	1	1.9	2.4	1.7	1.7	2.4	1.7	2.4	1.7	2.4	1.7	2.4					
YOUNGSTOWN	359	975.6	1018.2	10.7	1.5	6.1	1.5	2.1	2.1	-0.7	18	0	13	0.0	6.0	80	12	12	1	1	1	1	1.9	2.4	1.7	1.7	2.4	1.7	2.4	1.7	2.4	1.7	2.4					
OKLAHOMA CITY	392	973.2	1020.3	14.6	1.4	8.1	2.4	25.6	19	-8.9	30	0	13	-0.6	5.7	80	12	12	1	1	1	1	1.9	2.4	1.7	1.7	2.4	1.7	2.4	1.7	2.4	1.7	2.4					
TULSA	198	995.6	1020.4	14.6	2.6	8.6	-1.1	26.1	19	-6.7	30	0	10	1.1	6.2	142	12	12	1	1	1	1	1.9	2.4	1.7	1.7	2.4	1.7	2.4	1.7	2.4	1.7	2.4					
CORE																																						
ASTORIA	1262	1016.1	1012.3	12.4	4.1	8.3	0.2	17.8	7*	-1.7	26	0	4	4.4	7.9	200	43	48	16	0	27	0	2.6	2.3	9	2.8	6	7	17	6.9	1.0	2.2	8.2					
PLAINS	1255	6.5	-6.6	0.0	-2.1	13.9	10	-0.2	27	0	27	0	13	1.2	8.9	80	15	15	11	3	3	0	2.6	2.3	9	2.8	6	7	17	6.9	1.0	2.2	8.2					
EUGENE	1259	9.6	1.9	2.1	1.2	5.8	-1.0	17.6	7*	-4.2	26	0	12	3.2	8.9	80	15	15	11	3	3	0	2.6	2.3	9	2.8	6	7	17	6.9	1.0	2.2	8.2					
WELFORD	356	922.1	1021.0	10.3	1.2	5.8	-0.9	17.6	7*	-4.2	26	0	12	3.2	8.9	80	15	15	11	3	3	0	2.6	2.3	9	2.8	6	7	17	6.9	1.0	2.2	8.2					
PENOBLETON	462	988.6	1021.8	10.3	1.7	5.8	-1.7	12.2	5	-8.6	27	0	23	-0.6	8.8	80	15	15	11	3	3	0	2.6	2.3	9	2.8	6	7	17	6.9	1.0	2.2	8.2					
DODGE	6	1020.4	1019.4	10.6	1.8	5.8	-1.7	12.2	5	-8.6	27	0	23	-0.6	8.8	80	15	15	11	3	3	0	2.6	2.3	9	2.8	6	7	17	6.9	1.0	2.2	8.2					
SALEM	60	1012.5	1019.9	9.5	1.5	5.4	-1.7	12.2	5	-8.6	27	0	23	-0.6	8.8	80	15	15	11	3	3	0	2.6	2.3	9	2.8	6	7	17	6.9	1.0	2.2	8.2					
SEXTON SUMMIT	1169	984.9	1016.7	6.5	2.6	5.7	0.6	15.6	11	-3.3	26*	0	10	11	8.8	80	15	15	11	2.5	2.5	0	2.6	2.3	9	2.8	6	7	17	6.9	1.0	2.2	8.2					
PACIFIC AREA	110	29.1	22.8	26.1	-0.2	3C.0	23*	16.9	19	0	0	0	23.9	84	172	-4.4	42	27	0	0	0	0	7.0	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4				
HORN	29	31.7	24.0	27.9	-0.2	32.8	8*	22.6	6*	9	0	0	0	23.9	84	294	2.4	27	2.3	0	0	0	0	1.0	4	4	4	4	4	4	4	4	4	4	4			
KOSKI	29	30.8	25.2	28.0	-0.2	32.8	13	23.3	3C.*	1	0	0	0	0	4.4	27	165	96	23	0	0	0	0	1.0	4	4	4	4	4	4	4	4	4	4	4			
MAIALEIN	2	30.7	24.7	27.7	-0.2	32.2	13	23.3	3C.*	1	0	0	0	0	286	-10.3	60	23	0	0	0	0	2.4	2	2	2	2	2	2	2	2	2	2	2				
WAJUHO	4	30.7	24.9	27.6	-0.2	32.1	30*	21.1	2*	0	0	0	0	0	23.9	83	200	-6.1	68	21	0	0	0	0	3.5	1	1	1	1	1	1	1	1	1	1	1		
OAPOPIG	37	32.1	24.9	27.6	-0.2	32.0	30*	21.1	2*	0	0	0	0	0	22.8	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
PONPEP R	2	30.4	24.6	27.6	-0.2	32.0	0.8	23.3	29	-0.6	27	0	0	0	0	0	22.8	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
TRUK MOEN	1540	2.1	1012.4	1012.4	28.6	2.1	31.1	2.1	28*	0	0	0	0	0	23.3	85	78	2.1	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YAP	1	1012.5	31.1	23.7	-0.2	32.2	25	22.2	1	0	0	0	0</																									

CLIMATOLOGICAL DATA
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State and Station		Pressure		Temperature						Precipitation						Wind																				
		Sea level	Stations	Average minimum	Max 32°C or above	Min. 0°C or lower	Average dew point	Date	No. of days	Depature from normal	Total	With thunderstorms	No. of days	Snow, ice pellets	Resultant speed	Date	No. of days (sunrise to sunset)	Farthest mile (1.6 kilometers)																		
RHODE ISLAND	PROVIDENCE	16	1017.1	1016.7	13.8	4.3	9.1	2.6	22.8	24	-2.2	30+	0	7	3.3	70	114	-1	52	9	0	0	1.6	26	13.4	10	3	17	6.4	44						
SOUTH CAROLINA	CHARLESTON	12	1019.0	1020.9	21.9	8.5	15.2	1.7	26.3	10	-3.9	30	0	2	10.0	77	84	2.9	62	9	0	0	0.3	2	9.8	30	26	15	7	8	4.4	63				
CHARLESTON U	COLUMBIA	65	1012.5	1020.6	20.5	5.1	12.5	1.7	27.1	10	-6.7	30	0	7	7.2	76	99	3.9	48	32	8	0	0.2	27	8.9	6	5	13	6	11	4.8	78				
GROVELAND-SPRINGFIELD		292	985.4	1020.3	17.4	5.6	11.5	0.9	23.0	20	-6.7	30	0	3	6.7	75	95	21	32	8	0	0.4	6	9.8	54	25	15	5	10	4.7	62					
SOUTH CAROLINA	ABERDEEN	395	969.9	1018.2	3.3	-6.4	-1.6	-0.7	17.8	16	-11.1	29+	0	29	5.6	70	1	-1.5	1	2	16	25	2.1	31	12.5	N.W.	28+	6	4	20	7.2	69				
HARFORD	RAPID CITY	350	906.5	1020.3	6.8	-5.8	-0.6	-1.3	20.0	16	-0.6	30+	0	28	8.3	56	4	-1.1	3	6	0	81	25	3.5	33	18.3	N.W.	28	8	13	6	5	6.2	51		
MARYLAND	SILVER FALLS	42	965.5	1016.6	4.1	-6.1	-1.0	-1.6	17.8	18+	-16.7	24	0	29	-3.9	81	44	22	29	1C	0	366	330	1.9	52	15.6	N.W.	22+	9	15	5	10	4.7	51		
TENNESSEE	PRISTOL	455	966.1	1020.9	15.5	3.1	9.3	1.7	24.4	21	-5.6	30	0	12	2.8	66	113	4.2	34	6	0	0.6	27	10.3	25	26	9	8	13	6.0	60					
CHATTANOOGA	KNOXVILLE	203	995.6	1020.6	16.2	4.0	10.1	0.7	23.5	22	-6.7	30	0	5	4.4	72	187	87	86	9	2	0	0.3	32	10.7	18	1	12	7	11	5.5	60				
MEMPHIS	NASHVILLE	79	984.8	1020.1	16.6	4.9	10.6	1.2	25.6	21	-7.2	30	0	4	4.4	69	146	55	61	1	0	0	0.4	20	11.6	7	14	7	14	5.9	53					
OAK RIDGE R		180	999.0	1021.0	15.3	3.1	9.2	0.1	25.0	20	-8.3	30	0	5	3.3	70	152	47	10	1	0	0	0.8	23	10.9	23	25	11	7	12	5.5	55				
TEXAS	ABILENE	544	956.3	1020.1	17.3	3.7	10.5	-1.8	26.1	19+	-8.3	30	0	7	2.8	66	113	17	-1.4	8	3	0	1.3	19	13.9	3.3	26	14	8	8	4.3	72				
AMARILLO	AUSTIN	1098	893.3	1020.5	19.9	7.3	13.6	-1.4	27.0	19	-6.9	30+	0	23	4.4	72	187	87	86	9	2	0	0.3	32	10.7	18	1	12	7	11	5.5	72				
BROWNSVILLE	CORPUS CHRISTI	6	1018.6	1019.0	23.8	10.8	18.5	-1.6	30.6	9	2.2	30	0	2	4.4	69	15	-3	6	5	1	0	1.0	1	11.2	21	26	13	4	13	4	13	72			
DEL RIO	EL PASO	12	1018.1	1020.1	17.8	10.9	17.4	-1.6	30.6	9	0.6	30	0	10	10.0	70	3	-31	3	4	0	0	0	2.5	17+	19	27	23	10	11	6.0	47				
DALLAS - FORT WORTH	168	999.7	1021.2	17.8	5.4	11.6	-1.6	26.4	19	-3.3	30	0	12	2.2	56	11	-4	2	4	2	0	0	0.9	25	11.2	18	20	15	7	18	4.3	62				
GALVESTON	HJOSTROM INTERCON	29	1017.3	1021.0	18.1	1.6	8.8	-2.1	27.2	4	-8.3	30	0	14	-5.0	41	15	-1	7	1	0	0	1.6	30	11.3	31	9	12	7	12	5.4	50				
LUBBOCK	WILCOX	865	906.5	1019.5	14.7	5.8	1.2	-3.0	28.9	9	-5.9	30	0	4	7.8	76	45	-5.7	34	4	0	0	3.4	34	12.5	12	28	15	8	7	4.4	71				
PORTHARTHUR	SAN ANGELO	50	952.6	1020.0	18.2	2.7	13.6	-2.1	27.2	6	-8.3	30	0	18	-3.3	52	2	-1.0	2	3	1	0	1.0	3	9.4	31	21	14	7	9	4.4	69				
SAN ANTONIO	VICTORIA	20	991.9	1020.2	21.6	7.5	14.6	-0.8	28.3	9	-3.9	30	0	14	5.0	72	23	-3.6	1	6	1	0	1.5	3	10.7	36	21	11	6	12	4.8	57				
WACO	WICHITA FALLS	131	1020.6	1022.9	18.5	4.2	11.2	-2.8	26.7	19	-7.8	30	0	7	3.9	64	8	-4.9	4	1	0	0	1.5	3	10.7	36	27*	14	12	4	12	4.8	57			
WICHITA FALLS		303	983.1	1020.5	17.1	2.6	9.2	-1.7	27.8	18	-7.2	30	0	9	0.6	60	56	22	40	5	0	0	1.3	24	14.3	31	21	12	10	8	4.3	55				
WILFORD	SALT LAKE CITY	1533	849.0	1022.8	8.5	-7.6	0.4	-2.5	16.7	7*	-16.1	30	0	30	-3.3	69	14	-3	12	4	0	0.6	20	14.8	5.1	18	11	4	15	5.6	61					
VERMONT	PULVERTON	101	1005.4	1016.2	8.8	1.6	5.2	2.4	17.8	26*	-7.2	16	0	14	0.6	71	99	26	38	14	0	0	1.0	1	1.7	19	14.8	4	25	9.0	24					
LYNCHBURG	KOPPOLK	279	986.5	1016.0	18.8	8.1	10.1	1.7	23.3	20	-9.4	30	0	8	7.2	69	81	13	29	11	0	0.8	26	12.1	26	26	11	8	11	5.5	56					
PICHOME	ROONOE	350	1013.9	1020.5	18.3	5.3	11.8	2.4	26.1	21	-5.0	30	0	5	7.2	78	140	58	46	17	0	0.4	24	14.8	29	11.2	27	26	11	7	12	5.2	67			
WALLOPS ISLAND		3	978.0	1020.4	16.1	7.3	11.7	2.0	22.2	3	-6.7	30	0	1	5.0	74	96	33	60	10	0	0	1.0	21.0	SE	26	11	7	12	5.6						
MARYLAND	OLYMPIA	59	1011.9	1019.3	9.4	-4.3	4.6	-1.7	15.6	7*	-6.7	21	0	19	2.8	91	60	-142	20	4	0	0.5	18	7.2	20	23*	1	5	24	8.7	29					
QUILLIAUITE	SEATTLE U	55	1010.5	1007.6	11.8	1.7	6.6	-0.1	17.8	7*	-3.9	27*	0	13	-0.6	28	0	-163	23	12	0	0	1.1	9	10.3	5	7	18	7.3	29						

CLIMATOLOGICAL DATA
METRIC UNITS

NOVEMBER 1979

State and Station	Elevation (ground) m	Station Q 500 level mb	Temperature			Precipitation			Wind		
			Average minimum °C	Average maximum °C	Departure from normal °C	No. of days	Snow/ ice pellets	No. of days	Fastest mile (1.6 kilometers)	No. of days (sunrise to sunset)	Possible sunshine %
WASHINGTON	1122	1003.1	1019.7	9.9	3.3	6.6	-0.4	16.7	6	-2.2	27
SEATTLE-TACOMA	2.8	-4.6	-0.8	-2.8	11.1	6	-11.3	29	0	4.9	-10.0
SPOKANE	718	-3.9	-1.9	-1.4	7.8	9	-6.9	29	14	7.6	-7.7
STANFORD PASS R	1206	681.8	0.1	0.2	2.6	-3.1	11.7	23	13	5.0	-2.6
MOUNT RAINIER	286	5.4	0.2	-2.5	-3.2	-3.1	-7.2	29	11	3.7	5.0
MOUNT RAINIER	321	98.8	1024.6	4.6	-0.2	-0.4	13.9	7*	22	-1.1	8.4
YAKIMA	-	-	-	-	-	-	-	-	12	0.9	-
*EST INDIANAS	4	1010.8	1013.2	30.2	23.8	27.0	1.1	33.3	5	21.1	24
CAN JUAN P.R.	-	-	-	-	-	-	-	-	6	0	-
*EST VIRGINIA	762	937.6	1020.7	11.4	1.8	6.9	1.4	21.4	22	-6.3	30
BECKLEY	310	985.1	1021.1	15.0	2.2	8.6	1.2	25.0	1	-6.1	30
CHARLESTON	594	946.9	1022.2	12.2	0.0	6.1	1.3	21.1	22	-12.1	30
ELMIRA	252	989.8	1020.2	14.8	3.4	0.1	1.6	27.8	1	-0.0	30
HUNTINGTON	187	14.1	14.1	3.3	0.7	6.7	1.5	-5.9	30	0	-5.9
PARKERSBURG U	-	-	-	-	-	-	-	-	-	-	-
*WISCONSIN	208	989.8	1016.1	4.7	-2.7	1.0	-0.2	15.6	19	-13.9	11
GREEN BAY	198	992.2	1017.3	5.2	-2.1	1.6	-0.3	18.3	19	-12.2	10
LAWSON	262	988.8	1016.9	6.0	-2.5	1.7	0.2	19.4	18	-10.8	11
LA CROSSE	205	99.9	1016.8	7.1	-0.2	3.4	0.9	19.4	18	-7.2	11
*IOWA CITY	-	-	-	-	-	-	-	-	0	-0.6	-
*IOWA LAUREL	-	-	-	-	-	-	-	-	17	0	-
CASPER	1627	838.5	1022.0	2.7	-8.9	-3.1	-4.1	12.8	17	-0.7	28
CHEYENNE	1867	811.0	1020.3	4.3	-7.1	-3.4	-3.3	18.9	17	-10.1	28
LARIMER	1696	83.7	1023.0	3.4	-10.1	-0.3	-0.1	11.1	18*	-0.5	30
SHERIDAN	1208	880.8	1022.2	5.1	-7.7	-0.3	-0.1	18.9	15	-16.7	29*

HEATING DEGREE DAYS

(Base 65°F.)

NOVEMBER 1979

State and Station	Current season			State and Station	Current season			State and Station	Current season			State and Station	Current season		
	This month	Period July through this month	Normals		This month	Period July through this month	Normals		This month	Period July through this month	Normals		This month	Period July through this month	Normals
ALABAMA BIRMINGHAM U	398	535	429	IDAHO BOISE	903	1262	1301	NEBRASKA GRANDE ISLAND	915	1349	1279	TENNESSEE BRISTOL	483	835	865
BIRMINGHAM	365	466	534	LEWISTON	819	1126	1285	LINCOLN	825	1201	1192	CHATTANOOGA	438	605	674
HUNTSVILLE	469	621	611	POCATELLO	1090	1589	1606	NORFOLK	954	1457	1398	KNOXVILLE	407	627	659
MOBILE	246	289	250					NORTH PLATTE	975	1383	1459	MEMPHIS	426	502	572
MONTGOMERY	282	358	399	ILLINOIS CAIRO U	495	633	669	OMAHA (EPPLEY)	867			NASHVILLE	487	672	688
ALASKA ANCHORAGE	937	2376	3262	CHICAGO O HARE	722	1201	1249	OMAHA (NORTH)	837	1258	1271	OAK RIDGE	507	781	773
ANNETTE	652	1735	2086	MOLINE	831	1368	1268	VALENTINE	1040	1633	1554	TEXAS ABILENE	429	472	425
BARROW	1660	5185	6211	PEORIA	804	1297	1158	NEVAOA	933	1289	1802	AMARILLO	727	943	787
BARTER ISLAND	1591	5208	6037	ROCKFORD	866	1471	1335	ELY	1005	1710	1869	AUSTIN	278	294	244
BETHEL	1186	3444	3826	SPRINGFIELD	684	1066	1031	LAS VEGAS	395	439	431	BROWNSVILLE	99	99	40
BETTLES	1435	3656	4774					RENO	805	1237	1438	CORPUS CHRISTI	131	137	88
BIG DELTA	1216	2897	4122	INDIANA EVANSVILLE	619	938	873	WINNEMUCCA	875	1332	1596	DALLAS FT WORTH	370	404	347
COLD BAY	893	2866	3126	FORT WAYNE	756	1329	1209	MT WASHINGTON OBS	675	1517	1540	DEL RIO	233	243	218
FAIRBANKS	1336	3155	4170	INDIANAPOLIS	705	1192	1069	NEW HAMPSHIRE CONCORD	1165	4027	4145	EL PASO	505	585	494
GULKAIA	1220	3137	4213	SOUTH BEND	672	1118	1258	MT WASHINGTON OBS				GALVESTON	200	207	117
HOMER	861	2593	3285	IOWA BURLINGTON	762	1193	1154	NEW JERSEY ATLANTIC CITY	483	929	867	HOUSTON INTERCON	297	324	179
JUNEAU	830	2310	2788	DES MOINES	801	1208	1273	ATLANTIC CITY U	404	714	720	LUBBROCK	570	683	656
KING SALMON	1663	2780	3646	DUQUOUE	873	1465	1467	NEWARK	393	716	841	MIDLAND	459	525	437
KODIAK	785	2175	2760	SIOUX CITY	922	1474	1362	TRENTON U	422	808	852	PORT ARTHUR	278	301	219
KOTZEBUE	1400	3867	4537	WATERLOO	675	1391	1493				SAN ANGELO	430	487	371	
MC GRATH	1299	3275	4243								SAN ANTONIO	243	258	211	
NOME	1207	3543	4253								VICTORIA	243	263	138	
ST. PAUL ISLAND	843	2952	3556								WACO	384	427	292	
TALKEETNA	1131	2821	3554								WICHITA FALLS	464	521	461	
UNALAKLEET				KANSAS WICHITA	788	1059	1056	NEW MEXICO ALBUQUERQUE	715	886	840	UTAH MILFORD	958	1355	1401
VALDEZ	948	2734	3341	DOODGE CITY	816	1087	954	CLAYTON	818	1169	1078	SALT LAKE CITY	846	1123	1289
YAKUTAT	800	2421	2970	GOODLAND	909	1316	1290	ROSWELL	602	744	755	Vermont RUPERTON	703	1532	1602
ARIZONA FLAGSTAFF	1008	1945	1792	TOPEKA	741	1057	977	NEW YORK ALBANY	619	1306	1350	VERMONT RUPERTON	703	1532	1602
PHOENIX	204	215	199	WICHITA	690	856	849	PINGHAMONTON	669	1505	1493	VERMONT RUPERTON			
TUCSON	252	278	250	KENTUCKY COVINGTON	616	1037	951	BUFFALO	636	1276	1358	VIRGINIA LYNCBURGH	444	797	807
WINSLOW	796	1031	925	LEXINGTON	574	926	898	NEW YORK U	373	672	766	NORFOLK	272	462	552
YUMA	84	86	108	LOUISVILLE	534	797	876	NEW YORK KENNEDY	493	859	844	RICHMOND	353	603	704
ARKANSAS FORT SMITH	567	698	573	LOUISIANA BATON ROUGE	308	352	262	NEW YORK LA GUARDIA	440	774	785	ROANOKE	458	848	816
LITTLE ROCK	436	516	589	LAKE CHARLES	284	309	213	POCHESTER	655	1328	1294	WALLOPS ISLAND	353	559	658
NO. LITTLE ROCK	466	569	539	NEW ORLEANS	230	243	219	SYRACUSE	607	1265	1261				
CALIFORNIA BAKERSFIELD	196	218	331	SHREVEPORT	366	418	348	NORTH CAROLINA ASHEVILLE	468	816	880	WASHINGTON OLYMPIA	737	1436	1487
RISHOP	634	872	884					CAPE HATTERAS R	208	320	353	QUILLAYUTE	625	1448	1705
BLUE CANYON	640	1350	1149	MARINE				CHARLOTTE	357	569	582	SEATTLE	591	1008	1183
EUREKA U	369	1065	1498	CARIBOU	870	1989	2198	GREENSBORO	377	644	734	SEATTLE-TACOMA	628	1108	1341
FRESNO	323	379	435	PORTLAND	672	1554	1567	RALEIGH	394	603	648	SPOKANE	1029	1588	1682
LONG BEACH	147	166	210	MARYLAND BALTIMORE	425	763	844	WILMINGTTON	239	351	368	STAMPEDE PASS R	1086	2590	2727
LOS ANGELES	121	139	292	MASSACHUSETTS BOSTON	308	352	262	AKRON	664	1289	1224	HUNTINGTON	829	1068	1088
LOS ANGELES U	59	61	153	LEXINGTON	546	1185	1178	CINCINNATI ABBE 08	593	984	894	WALLA WALLA U	919	1382	1464
MT SHASTA R	798	1436	1367	BLUE HILL OBS R	484	971	979	CLEVELAND	670	1191	1177	YAKIMA			
OAKLAND	257	365	639	DETROIT METRO	758	1396	1240	FARGO	1209	2085	1930	WEST VIRGINIA BECKLEY	611	1240	1222
RED BLUFF	355	444	421	DETROIT	753	1403	1431	WILLISTON	1190	1944	2036	CHARLESTON	519	904	901
SACRAMENTO	391	491	466	GRAND RAPIDS	731	1309	1347	MANSFIELD	719	1367	1111	ELKINS	652	1358	1344
SAN DIEGO	75	79	205	WORCESTER	614	1372	1346	TOLEDO	724	1334	1263	HUNTINGTON	494	849	896
SAN FRANCISCO	320	529	671	MICHIGAN ALPENA	929	1928	1902	AKRON	664	1289	1224	MADISON	890	1656	1609
SAN FRANCISCO U	213	576	841	DETROIT METRO	758	1396	1240	COLUMBUS	632	1118	1125	WISCONSIN GREEN BAY	928	1734	1684
SANTA MARIA	299	527	737	DETROIT	753	1403	1431	DAYTON	649	1167	1073	LA CROSSE	894	1583	1466
STOCKTON	338	398	451	FLINT	731	1309	1347	MANFIELD	719	1367	1111	MAISISON	890	1656	1609
COLORADO ALAMOSA	1312	2353	2146	GRAND RAPIDS	731	1309	1347	TOLEDO	724	1334	1263	WILWAUKEE	797	1348	1486
COLORADO SPRINGS	1005	1547	1458	SAULT STE MARIE	893	1843	1856	YOUNGSTOWN	652	1310	1274	WYOMING CASPER	1149	1831	1728
DENVER	941	1366	1296					TULSA	551	645	634	CHEYENNE	1058	1695	1693
GRAND JUNCTION	945	1157	1140						525	615	621	LANDER	1164	1772	1817
PUEBLO	670	1222	1116									SHERIDAN	1051	1694	1785
CONNECTICUT HARTFORD	523	988	873	MISSISSIPPI JACKSON	1277	2100	2198	OREGON ASTORIA	537	1136	1448				
	578	1218	1213	ROCHESTER	992	1687	1655	PURNS U	984	1599	1794				
DELAWARE WILMINGTON	458	818	865	ST CLOUD	974	1684	1698	EUGENE	673	1032	1159				
DIST. OF COLUMBIA WASHINGTON DULLES	461	870	943		1081	2011	1872	MEOFORD	668	886	1126				
WASHINGTON NATIONAL	313	549	714					PENOBLETON	902	1283	1208				
FLORIDA APPALACHICOLA U	147	157	160	MISSOURI COLUMBIA REGIONAL	698	999	922	POTPLANO	592	835	1161				
DAYTONA BEACH	75	75	97	ST JOSEPH	720	1012	990	RHOE ISLAND	634	1149	1370				
FORT MYERS	14	14	44	ST LOUIS	720	1036	1000	HARRISBURG	536	1026	980				
JACKSONVILLE	144	163	180	SPRINGFIELD	610	849	859	PHILADELPHIA	439	802	851				
KEY WEST	0	0	0		633	849	853	PITTSBURGH	601	1199	1204				
MIAMI	6	6	13	MONTANA BILLINGS	937	1373	1612	SCRANTON	568	1173	1258				
ORLANDO	47	47	75	GLASCO	1139	1765	1965	WILLIAMSPORT	601	1204	1184				
PENSACOLA	194	213	221	GREAT FALLS	939	1561	1756								
TALLAHASSEE	213	267	235	HAVRE	1025	1646	1942								
TAMPA	47	47	71	HELENA	1072	1753	2004								
WEST PALM BEACH	11	11	22	KALISPELL	1071	1924	2285								
GEORGIA ATHENS	295	435	540	MILES CITY	1048	1566	1728								
ATLANTA	320	447	553	MISSOULA	1130	1818	2040								
AUGUSTA	294	423	448												
COLUMBUS	255	315	405												
MACON	221	303	386												
ROME	428														
SAVANNAH	183	224	313												

COOLING DEGREE DAYS

(Base 65°F.)

NOVEMBER 1979

State and station	Current season			State and station	Current season			State and station	Current season			State and station	Current season		
	This month	Period January through this month	Normals January through this month		This month	Period January through this month	Normals January through this month		This month	Period January through this month	Normals January through this month		This month	Period January through this month	Normals January through this month
ALABAMA BIRMINGHAM U	5	1725	2219	HAWAII HILO	246	2941	2861	NEBRASKA GRAND ISLAND	0	978	1036	SOUTH CAROLINA CHARLESTON	0	2204	2078
BIRMINGHAM	T	1711	1928	HONOLULU	378	4143	3951	LINCOLN	0	1098	1148	CHARLESTON U	4T	2168	2347
HUNTSVILLE	D	1436	1808	KAHULUI	354	3869	3496	NORFOLK	0	946	925	COLUMBIA	22	1693	2087
MOBILE	16	2437	2567	LIHUE	303	3101	3486	NORTH PLATTE	0	662	802	GRNVILLE-SPRNBORG	1	1296	1573
MONTGOMERY	B	2032	2238	IDAHO BOISE	D	752	714	OMAHA (EPPLEY)	0	1002	949	SOUTH DAKOTA ABERDEEN	0	502	566
ALASKA ANCHORAGE	0	4	0	LEWISTON	0	968	657	SCOTTSBLUFF	0	853	666	HURON	D	783	711
ANNETTE	U	9	14	POCATELLO	0	479	437	VALENTINE	0	777	736	RAPID CITY	0	550	661
BARROW	D	0	0	ILLINOIS CAIRO U	2	1764	1806	NEVADA ELY	0	694	342	SIOUX FALLS	0	724	719
BARTER ISLAND	0	0	0	CHICAGO O HARE	0	806	664	ELKO	0	208	207	SOUTH OAKDALE	0	2204	2078
BETHEL	E	12	17	CHICAGO MIDWAY	0	812	925	ELYS	0	3387	2946	TENNESSEE BRISTOL	0	720	1107
ETTLES	D	28	34	MOLINE	0	907	893	LEAVENWELL	0	404	329	CHATTANOOGA	0	1432	1636
BIG DELTA	0	0	0	PEDRIA	0	903	968	WINNEMUCCA	0	593	407	KNOXVILLE	4	1355	1569
COLD BAY	D	0	0	ROCKFORD	0	679	714	NEW HAMPSHIRE CONCORD	0	519	349	HEMPHIS	4	2088	2029
FAIRBANKS	0	23	52	SPRINGFIELD	0	1201	1116	HT WASHINGTON OBS	0	0	0	NASHVILLE	0	1376	1694
GULKANA	0	0	0	WATERLOO	0	770	675	NEW JERSEY ALBANY	0	850	864	OAK RIDGE	0	1044	1367
HOMER	D	0	0	EVANSVILLE	D	1238	1364	ATLANTIC CITY	0	713	835	TEXAS ABILENE	11	2512	2466
JUVEAU	0	1	0	FORT WAYNE	0	677	748	ATLANTIC CITY U	0	1156	1024	AMARILLO	0	1168	1433
KING SALMON	0	0	0	INDIANAPOLIS	0	882	974	NEWARK	1	936	968	AUSTIN	29	2623	2903
KODIAK	D	8	0	SOUTH BEND	0	801	695	TRENTON U	0	1508	1316	BROWNSVILLE	118	3643	3797
KOTZEBUE	0	1	0	BURLINGTON	0	931	994	NEW MEXICO NEW MEXICO	0	742	767	CORPUS CHRISTI	89	3473	3437
MC GRATH	0	2	14	DES MOINES	0	984	928	ALBUQUERQUE	0	1684	1560	DALLAS FT WORTH	14	2509	2587
NOME	0	0	0	DUBUQUE	0	600	606	CLAYTON	0	1218	1068	EL PASO	24	3201	3363
ST. PAUL ISLAND	0	0	0	SIOUX CITY	0	865	932	ROSWELL	0	824	861	GALVESTON	0	2157	2098
TALKEETNA	0	1	6	WATERLOO	0	770	675	NEW YORK NEW YORK LA GUARDIA	0	1049	1048	HOUSTON INTERCON	26	2571	2878
UNALASKAEE7	0	0	0	KANSAS CONCORDIA	0	1280	1302	ROCHESTER	0	597	531	LUCKBOCK	0	1078	1647
VALDEZ	0	4	0	DODGE C17Y	0	1316	1411	SYRACUSE	0	595	551	MIDLAND	0	2109	2250
YAKUTAT	0	0	0	GOODLAND	0	939	925	NEW YORK U	0	792	872	PORT ARTHUR	27	2579	2790
ARIZONA FLAGSTAFF	0	85	140	TOPEKA	0	1275	1361	NEW YORK KENNEDY	0	371	369	SALT LAKE CITY	D	589	688
PHOENIX	7	4186	3508	WICHITA	0	1663	1673	NEW YORK LA GUARDIA	0	1180	1341	VERMONT	0	1274	927
TUCSON	6	3052	2814	KANSAS LEXINGTON	0	845	1080	ROCHESTER	0	1275	1394	WILMINGTON	0	531	396
WINSLOW	0	1165	1203	LEXINGTON	0	968	1197	SYRACUSE	0	1966	1964	WYOMING	0	982	1100
YUMA	14	4371	4189	LOUISVILLE	0	1236	1268	ASHEVILLE	0	792	872	YAKIMA	0	1187	1107
ARKANSAS FORT SMITH	4	1646	2022	LOUISIANA BATON ROUGE	14	2373	2579	CAPE HATTERAS R	24	1556	1550	YUAH	0	93	101
LITTLE ROCK	1	1926	1925	LAKE CHARLES	17	2443	2732	CHARLOTTE	3	1366	1596	HILFORD	0	894	880
NO. LITTLE ROCK	1	1703	1951	NEW ORLEANS	25	2879	2695	GREENSBORO	4	1180	1341	SALT LAKE CITY	0	1274	927
CALIFORNIA BAKERSFIELD	1	2730	2179	SHREVEPORT	8	2114	2538	WILMINGTTON	28	1966	1964	VERMONT	0	531	396
BISHOP	0	1654	1037	MAINE BLUE CANYON	0	290	128	NORTH DAKOTA BISMARCK	0	365	487	WILMINGTON	0	982	1100
BLUE CANYON	D	15	0	LAKE CHARLES	0	584	457	FARGO	0	504	473	WALLOPS ISLAND	9	1375	1353
EUREKA U	0	2267	1671	NEW ORLEANS	0	789	661	WILLISTON	0	415	422	WALLOPS ISLAND	0	1187	1107
LONG BEACH	1	1189	985	PORTLAND	0	483	387	WISCONSIN OLYMPIA	0	564	634	WALLA WALLA U	0	1032	862
LOS ANGELES	9	822	615	SHREVEPORT	0	2114	2538	CLEVELAND	0	930	1188	YAKIMA	0	571	479
LOS ANGELES U	53	1344	1185	MAINE BLUE HILL OBS R	0	290	128	COLUMBUS	0	715	613	WEST INDIES SAN JUAN P.R.	477	5445	4616
MT SHASTA R	D	235	286	CARIBOU	0	316	252	DAYTON	0	808	809	BECKLEY	0	408	490
OAKLAND	0	252	128	PORTLAND	0	483	387	HANSFIELD	0	854	936	CHARLESTON	0	894	1055
PEO BLUFF	0	2208	1904	WORCESTER	0	483	387	TOLEDO	0	602	685	ELKINS	0	392	389
SACRAMENTO	0	1294	1159	HARYLAND BALTIMORE	1	1137	1108	YOUNGSTOWN	0	501	518	HUNTINGTON	3	1004	1098
SAN DIEGO	5	1207	722	MINNESOTA DULUTH	0	169	176	OHIO AKRON	0	564	634	PARKERSBURG U	0	840	1045
SAN FRANCISCO	0	182	108	INTERNATIONAL FALLS	0	131	176	CINCINNATI ABBE OB	0	715	613	PENNINGTON	0	319	389
SAN FRANCISCO U	0	125	39	MINNEAPOLIS	0	651	585	DETROIT METRO	0	367	289	SEATTLE-TACOMA	0	171	129
SANTA MARIA	D	113	84	ROCHESTER	0	1097	1334	FLINT	0	182	239	SPokane	0	496	388
STOCKTON	0	1793	1259	ST CLDUD	0	324	426	GRAND RAPIDS	0	1805	1876	SEATTLE	0	33	16
COLORADO ALAMOSA	0	34	88	MISSISSIPPI JACKSON	0	1165	1269	OKLAHOMA CITY	6	2157	1949	SEATTLE	0	380	386
COLORADO SPRINGS	0	473	461	MERIDIAN	0	509	438	TULSA	0	462	300	SEATTLE	0	584	695
DENVER	0	661	625	ROCHESTER	0	614	575	OREGON ASTORIA	0	271	13	LA CROSSE	0	450	460
GRAND JUNCTION	0	1263	1140	ST JOSEPH	0	578	535	PORTLAND	0	219	232	WAHISON	0	538	450
PUEBLO	0	904	981	SAULT STE MARIE	0	379	469	SEXTON SUMMIT R	0	228	137	WISCONSIN GREEN BAY	0	415	458
CONNECTICUT BRIDGEPORT	0	731	735	ST LOUIS	0	145	139	EUGENE	0	182	239	WAHISON	0	352	327
HARTFORD	0	811	584	ST. JOSEPH	0	1097	1334	MEADFO	0	182	239	WAHISON	0	436	383
DELAWARE WILMINGTON	0	990	992	ST. LOUIS	0	1578	1475	PENOLETON	0	462	300	WAHISON	0	318	446
DIST. OF COLUMBIA WASHINGTON DULLES	6	976	940	ST. LOUIS	0	611	474	PONAPE R	0	508	551	WAHISON	0	415	458
WASHINGTON NATIONAL	2	1479	1415	ST. LOUIS	0	1122	1382	TRUK MOEN ISLAND	0	504	5711	WAHISON	0	352	327
FLORIDA APPALACHICOLA U	46	2427	2649	ST. LOUIS	0	1165	1269	PAGO PAGO	0	470	5262	WAHISON	0	415	458
DAYTONA BEACH	111	2938	2874	ST. LOUIS	0	1174	1285	PONA R	0	508	551	WAHISON	0	352	327
FORT MYERS	287	4125	3605	ST. LOUIS	0	1097	1334	PONA R	0	511	5605	WAHISON	0	415	458
JACKSONVILLE	61	2490	2577	ST. LOUIS	0	1578	1475	PONA R	0	511	5605	WAHISON	0	352	327
KEY WEST	362	4771	4668	ST. LOUIS	0	1122	1382	PONA R	0	511	5605	WAHISON	0	415	458
MIAMI	324	4040	3879	ST. LOUIS	0	1165	1269	PONA R	0	511	5605	WAHISON	0	352	327
ORLANDO	153	3262	3164	ST. LOUIS	0	1174	1285	PONA R	0	511	5605	WAHISON	0	415	458
PENSACOLA	16	2559	2683	ST. LOUIS	0	1097	1334	PONA R	0	511	5605	WAHISON	0	352	327
TALLAHASSEE	35	2196	2553	ST. LOUIS	0	1578	1475	PONA R	0	511	5605	WAHISON	0	415	458
TAMPA	164	3382	3302	ST. LOUIS	0	1122	1382	PONA R	0	511	5605	WAHISON	0	352	327
WEST PALM BEACH	266	3628	3652	ST. LOUIS	0	390	188	PONA R	0	511	5605	WAHISON	0	415	458
GEORGIA ATHENS	6	1614	1722	MISSOURI BILLINGS	0	716	498	PONA R	0	511	5605	WAHISON	0	352	327
ATLANTA	5	1762	1589	MISSOURI GLASGOW	0	533	438	PONA R	0	511	5605	WAHISON	0	415	458
AUGUSTA	20	1829	1995	MISSOURI GREAT FALLS	0	396	339	PONA R	0	511	5605	WAHISON	0	352	327
COLUMBUS	24	2241	2143	MISSOURI KALISPELL	0	322	256	PONA R	0	511	5605	WAHISON	0	415	458
MACON	33	2111	2294	MISSOURI MILES C17Y	0	514	395	PONA R	0	511	5605	WAHISON	0	352	327
ROME	0	2388	2311	MISSOURI MISSOULA	0	390	188	PONA R	0	511	5605	WAHISON	0	415	458
SAVANNAH	51	2388	2311	MISSOURI MISSOULA	0	390	188	PONA R	0	511	5605	WAHISON	0	352	327
PENNSYLVANIA BLOCK ISLAND	0	716	498	MISSOURI PROVIDENCE	0	492	373	PONA R	0	511	5605	WAHISON	0	415	458
RHODE ISLAND PROVIDENCE	0	533	438	MISSOURI PROVIDENCE	0	828	1025	PONA R	0	511	5605	WAHISON	0	352	327
ALLENTOWN	1	811	772	MISSOURI PHILADELPHIA	0	511	5605	PONA R	0	511	5605	WAHISON	0	415	458
ERIE	0	492	373	MISSOURI PHILADELPHIA	0	511	5605	PONA R	0	511	5605	WAHISON	0	352	327
HARRISBURG	0	511	5605	MISSOURI PHILADELPHIA	0	511	5605	PONA R	0	511	5605	WAHISON	0	415	458
PHILADELPHIA	1	1097	1104	MISSOURI PHILADELPHIA	0	511	5605	PONA R	0	511</					

STORM SUMMARY

November 1979

STATE	TORNADOES				HAILSTORMS				WINDSTORMS				LIGHTNING				@HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				φ ALL OTHER					
	NUMBER	DAYS	DEATHS	INJURIES	DEATHS	INJURIES	PROP. ERTY	†DAMAGE CROPS	DEATHS	INJURIES	PROP. ERTY	†DAMAGE CROPS	DEATHS	INJURIES	PROP. ERTY	†DAMAGE CROPS	DEATHS	INJURIES	PROP. ERTY	†DAMAGE CROPS	DEATHS	INJURIES	PROP. ERTY	†DAMAGE CROPS	DEATHS	INJURIES	PROP. ERTY	†DAMAGE CROPS		
Alabama	*																													
Alaska																														
Arizona																														
Arkansas	*																													
California	*																													
Colorado	*																													
Connecticut	*																													
Delaware	*																													
Florida																														
Georgia																														
Hawaii																														
Idaho	*																													
Illinois	*																													
Indiana																														
Iowa	*																													
Kansas	*																													
Kentucky	*																													
Louisiana																														
Maine																														
Maryland & DC																														
Massachusetts	*																													
Michigan																														
Minnesota	*																													
Mississippi																														
Missouri																														
Montana	*																													
Nebraska																														
Nevada																														
New Hampshire																														
New Jersey																														
New Mexico	*																													
New York	*																													
North Carolina	*																													
North Dakota	*																													
Ohio	*																													
Oklahoma																														
Oregon	*																													
Pennsylvania	*																													
Puerto Rico																														
Rhode Island																														
South Carolina																														
South Dakota																														
Tennessee																														
Texas																														
Utah	*																													
Vermont																														
Virginia																														
Virgin Islands	*																													
Washington																														
West Virginia	*																													
Wisconsin																														
Wyoming	*																													

RAWINSONDE DATA

Average monthly values

NOVEMBER 1979

ALBANY, NY 1009 MB												ALBUQUERQUE, NM 839 MB												AMARILLO, TX 893 MB												ANCHORAGE, AK 999 MB												ANNETTE, AK 1011 MB											
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Resultant Wind																								
5 FC	29	86	4.7	2.1	21	1.6	30	1,619	-1	-6.3	0.4	1.2	30	1,095	+3	-2.6	28	2.0	30	3.0	1.7	1.27	2.7	1.9	1.3	1.5	2.9	37	5.4	1.8	12	2.8	1.1	2.9	5.8	4.3	2.4	1.4	7.0																				
1000	26	172	5.3	1.6	21	2.2	30	1,619	-1	-6.3	0.4	1.2	30	1,095	+3	-2.6	28	2.0	30	3.0	1.7	1.27	2.7	1.9	1.3	1.5	2.9	30	5.0	1.5	11	2.9	1.1	2.9	5.8	4.3	2.4	1.4	7.0																				
950	29	581	5.1	2.7	25	5.5	30	1,619	-1	-6.3	0.4	1.2	30	1,095	+3	-2.6	28	2.0	30	3.0	1.7	1.27	2.7	1.9	1.3	1.5	2.9	30	5.0	1.5	11	18	2.5	5.0	16	7.6																							
900	29	1,022	3.7	-1.2	25	7.9	30	1,619	-1	-6.3	0.4	1.2	30	1,095	+3	-2.6	28	2.0	30	3.0	1.7	1.27	2.7	1.9	1.3	1.5	2.9	30	5.0	1.5	11	18	2.5	5.0	16	7.6																							
850	29	1,484	2.3	-6.0	25	10.8	30	1,619	-1	-6.3	0.4	1.2	30	1,095	+3	-2.6	28	2.0	30	3.0	1.7	1.27	2.7	1.9	1.3	1.5	2.9	30	5.0	1.5	11	18	2.5	5.0	16	7.6																							
800	29	1,974	1.8	-8.6	25	12.6	30	2,004	1.7	-7.9	32	1.6	30	1,967	2.1	-9.7	28	5.7	30	1,815	-6.4	11.8	1.7	10.0	2.9	1,928	-1.1	-11.5	18	8.3																													
750	29	2,492	-0.9	-12.6	25	15.3	30	2,021	-1.1	-10.8	29	4.1	30	2,056	-3.1	-11.9	27	7.4	30	2,317	-9.4	-14.2	18	11.5	29	2,440	-1.0	-14.5	19	8.7																													
700	29	3,040	-3.6	-15.2	25	17.1	30	3,069	-3.8	-14.4	28	7.3	30	3,055	-3.3	-14.7	27	9.2	30	2,848	-12.4	-17.0	18	12.1	29	2,982	-7.1	-18.7	20	8.8																													
650	29	3,591	-6.6	-19.3	25	19.4	30	3,651	-6.9	-19.1	28	10.1	30	3,638	-6.4	-19.3	27	10.7	30	3,411	-15.5	-21.0	19	13.7	29	3,556	-10.3	-21.7	20	9.1																													
600	29	4,243	-10.3	-23.2	25	22.0	30	4,272	-10.1	-22.9	28	11.9	30	4,259	-10.3	-23.6	27	13.0	30	4,010	-19.4	-25.7	20	14.6	29	4,168	-14.6	-25.5	20	9.4																													
550	29	4,708	-14.0	-28.0	25	25.4	30	5,254	-14.9	-29.0	28	12.6	30	5,234	-14.5	-26.6	27	15.4	30	4,816	-23.4	-30.8	21	16.6	29	4,882	-19.0	-30.8	21	9.6																													
500	29	5,200	-18.4	-29.4	25	28.3	30	5,654	-18.9	-30.9	28	16.7	30	5,641	-18.9	-30.8	27	17.7	30	5,341	-28.7	-34.8	28	18.8	29	5,420	-24.4	-34.8	28	10.7																													
450	29	5,645	-23.3	-35.2	25	30.2	30	6,431	-24.2	-35.1	28	18.5	30	6,419	-24.0	-35.6	27	20.5	30	6,087	-31.1	-38.6	28	21.5	29	6,126	-29.0	-37.8	28	10.3																													
400	29	6,257	-29.3	-39.2	24	30.5	30	7,280	-30.2	-40.7	29	20.1	30	7,268	-30.0	-41.0	28	21.0	30	6,901	-40.0	-41.3	21	19.9	29	7,117	-35.1	-41.6	22	8.6																													
350	29	8,201	-35.6	-45.3	25	30.8	30	8,221	-36.6	-45.5	28	23.2	30	8,200	-37.0	-45.5	27	25.0	29	7,800	-45.8	-47.0	22	21.2	29	8,036	-44.5	-47.7	23	10.2																													
300	29	9,253	-43.4	-51.0	25	33.8	30	9,269	-44.0	-51.0	28	25.5	30	9,255	-44.4	-51.0	27	27.4	29	8,817	-50.9	-52.1	22	21.2	29	9,068	-45.5	-52.5	23	11.5																													
250	29	10,459	-51.2	-59.7	26	33.4	30	11,910	-55.0	-59.7	28	30.0	30	10,458	-51.1	-59.5	27	30.4	29	9,999	-53.5	-53.5	22	21.8	28	10,256	-53.2	-53.2	23	11.6																													
200	29	11,889	-57.9	-59.7	26	33.4	30	11,910	-55.0	-59.7	28	27.0	30	20,520	-60.4	-59.7	27	26.8	29	11,242	-53.4	-53.4	22	18.2	28	11,679	-56.8	-56.8	25	9.9																													
175	29	12,724	-59.4	-69.4	26	29.4	30	12,760	-57.0	-69.4	28	24.9	30	12,742	-57.3	-69.4	27	26.6	29	12,293	-52.0	-52.0	22	15.7	28	12,524	-57.3	-57.3	26	7.8																													
150	29	13,687	-60.1	-70.4	26	27.8	29	13,731	-59.9	-70.4	28	22.2	29	13,721	-59.8	-70.4	27	26.2	29	13,291	-52.1	-52.1	22	13.8	28	13,502	-55.5	-55.5	26	8.0																													
125	29	14,827	-60.2	-70.4	26	22.5	29	14,866	-61.7	-70.4	28	19.8	30	14,852	-60.9	-70.4	27	21.7	27	14,787	-51.4	-51.4	23	12.8	28	14,667	-54.6	-54.6	26	7.7																													
100	29	16,210	-61.9	-72.6	26	16.3	29	16,242	-63.0	-72.6	28	15.7	29	16,232	-62.6	-72.6	27	17.8	27	15,927	-51.4	-51.4	23	12.0	28	16,094	-54.8	-54.8	27	5.4																													
90	29	17,613	-62.5	-72.6	27	12.8	29	17,614	-63.0	-72.6	27	11.7	29	17,608	-62.5	-72.6	27	9.4	28	17,380	-51.5	-51.5	27	9.1	27	17,376	-52.0	-52.0	27	5.1																													
70	29	18,450	-60.8	-72.6	27	11.5	29	18,437	-62.4	-72.6	28	8.2	29	18,434	-61.7	-72.6	27	11.0	27	18,244	-52.0	-52.0	23	8.8	28	18,376	-55.2	-55.2	27	4.9																													
60	29	19,398	-61.3	-72.6	28	11.8	29	19,389	-62.1	-72.6	28	8.5	29	19,386	-61.5	-72.6	27	10.7	27	19,182	-52.5	-52.5	23	8.0	28	19,182	-55.2	-55.2	27	4.0																													
50	29	20,375	-61.4	-72.6	28	25.9	29	20,374	-61.4	-72.6	28	18.0	29	20,373	-61.4	-72.6	27	19.8	27	20,372	-51.4	-51.4	23	11.7	28	20,372	-53.4	-53.4	27	3.1																													
40	29	21,941	-61.4	-72.6	28	25.9	29	21,940	-61.4	-72.6	28	18.0	29	21,939	-61.4	-72.6	27	19.8	27	21,938	-51.4	-51.4	23	11.7	28	21,938	-53.4	-53.4	27	3.1																													
30	29	22,549	-61.4	-72.6	28	25.9	29	22,548	-61.4	-72.6	28	18.0	29	22,547	-61.4	-72.6	27	19.8	27	22,546	-51.4	-51.4	23	11.7	28	22,546	-53.4	-53.4	27	3.1																													
20	29	23,774	-58.8	-68.4	28	7.4	29	23,773	-58.8	-68.4	28	7.4	29	23,772	-58.8	-68.4	27	15.4	28	23,771	-58.8	-68.4	23	23.7	28	23,771	-58.8	-68.4	27	4.9																													
15	29	24,921	-57.7	-68.4	28	7.4	29	24,920	-57.7	-68.4	28	7.4	29	24,919	-57.7	-68.4	27	15.4	28	24,918	-57.7	-68.4	23	23.7	28	24,918	-58.8	-68.4	27	4.9																													
10	29	26,334	-55.5	-68.4	28	9.4	29	26,333	-55.5	-68.4	28	10.0	29	26,332	-55.5	-68.4	27	18.0	28	26,331	-54.5	-68.4	23	23.7	28	26,331	-54.5	-68.4	27	4.0																													
15	29	26,177	-53.8	-68.4	28	12.6	29	26,176	-53.8	-68.4	28	12.6	29	26,175	-53.8	-68.4	27	18.0	28	26,174	-52.8	-68.4	23	23.7	28	26,174	-52.8	-68.4	27	4.0																													
10	29	26,177	-53.8	-68.4	28	12.6	29	26,176	-53.8	-68.4	28	12.6	29	26,175	-53.8	-68.4	27	18.0	28	26,174	-52.8	-68.4	23	23.7	28	26,174	-52.8	-68.4	27	4.0																													
10	29	26,332	-54.7	-68.4	28	12.6	29	26,331	-54.7	-68.4	28	12.6	29	26,330	-54.7	-68.4	27	18.0	28	26,329	-53.7	-68.4	23	23.7	28	26,329	-53.7	-68.4	27	4.0																													
10	29	26,332	-54.7	-68.4	28	12.6	29	26,331	-54.7	-68.4	28	12.6	29	26,330	-54.7	-68.4	27	18.0	2																																								

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Standard pressure surface mb.	No. of observations	CARIBOU, ME 993 MB						CENTREVILLE, AL 1000 MB						CHARLESTON, SC 1019 MB						CHATHAM, MA 1018 MB						CHIHUAHUA, MEXICO 859 MB											
		Temperature °C			Dew Point °C			Resultant Wind			Temperature °C			Dew Point °C			Resultant Wind			Temperature °C			Dew Point °C			Resultant Wind			Temperature °C			Dew Point °C			Resultant Wind		
		Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.						
SFC	30	19.1	+8	-1.6	6	2.6	1.3	30	14.0	7.4	5.0	0.2	1.2	30	10.9	9.1	3.4	+7	3.6	16	8.3	5.6	2.5	1.2	30	1,428	+4.6	-1.4	21	30	1,428	+4.6	-1.4	21			
1000	10	21.1	+1	-1.4	6	2.4	2.4	24	19.0	7.6	3.2	0.1	2.1	30	15.1	8.9	0.1	+5	3.8	162	9.6	5.9	2.6	2.9	30	1,428	+4.6	-1.4	21	30	1,428	+4.6	-1.4	21			
950	30	5.4	+1	-3.4	2	4.1	5.9	30	5.9	2.3	1.5	.5	3.0	60.4	13.7	5.8	2.0	1.1	586	7.6	4.9	2.6	2.9	30	1,428	+4.6	-1.4	21	30	1,428	+4.6	-1.4	21				
900	30	9.75	-9	-7.4	2	6.0	30	1,519	8.5	-1.8	2.3	2.3	30	1,059	11.6	2.4	2.2	3.1	1,030	5.8	-1.8	2.6	6.5	30	1,428	+4.6	-1.4	21	30	1,428	+4.6	-1.4	21				
850	30	1,431	-2	-3.7	2	6.0	30	1,519	7.7	-4	2.5	5.1	30	1,536	10.1	-2.1	2.3	5.3	1,047	4.3	-5.6	2.6	2.9	30	1,428	+4.6	-1.4	21	30	1,428	+4.6	-1.4	21				
800	30	1,911	-3	-7	2	6.0	30	1,519	7.0	-4	2.5	5.1	30	2,059	8.3	-6	2.2	7.0	1,090	3.8	-8.3	2.6	2.9	30	1,428	+4.6	-1.4	21	30	1,428	+4.6	-1.4	21				
750	30	2,420	-5	-14	2	6.0	30	2,544	4.3	-12.4	2.5	8.8	30	2,571	7.1	-10.1	2.4	8.6	2,512	1.4	-11.6	2.6	13.4	30	2,545	5.8	-7.2	2.5	30	2,545	5.8	-7.2	2.5				
700	30	2,960	-7	-17	2	6.0	30	3,140	1.9	-15.3	2.5	11.1	30	3,135	4.2	-12.6	2.4	9.0	3,068	-1.5	-1.0	2.6	15.2	30	2,945	4.8	-11.6	2.6	30	2,945	4.8	-11.6	2.6				
650	30	3,535	-9	-21	2	6.0	30	3,677	-1.4	-13.3	2.5	10.5	30	3,733	-3.0	-2.4	2.5	10.9	3,651	2.7	-19.2	2.6	20.0	30	3,651	-1.7	-19.6	2.6	30	3,651	-1.7	-19.6	2.6				
600	30	4,150	-13	-26	2	6.0	30	4,370	5.2	-20.7	2.5	17.5	30	5,056	-7.4	-25.6	2.5	13.2	4,950	-11.7	-24.5	2.6	28.6	30	4,326	-5.6	-15.0	2.6	30	4,326	-5.6	-15.0	2.6				
550	30	4,808	-18	-26	2	6.0	30	5,008	-2.3	-23.8	2.5	17.5	30	5,781	-12.4	-29.2	2.5	19.8	4,930	-21.0	-24.0	2.6	28.0	30	4,808	-5.0	-23.8	2.6	30	4,808	-5.0	-23.8	2.6				
500	30	5,373	-21	-33	2	6.0	30	5,740	-13.7	-27.8	2.5	19.8	30	5,781	-12.4	-29.2	2.5	19.8	5,673	-16.7	-24.0	2.6	21.1	30	5,759	-13.0	-27.7	2.6	30	5,759	-13.0	-27.7	2.6				
450	30	5,973	-24	-33	2	6.0	30	6,252	-19.3	-32.4	2.5	22.5	30	6,568	-17.8	-32.7	2.5	16.9	6,457	-21.6	-33.0	2.6	25.5	30	6,554	-18.5	-31.9	2.6	30	6,554	-18.5	-31.9	2.6				
400	29	6,429	-11	-41	2	6.0	30	7,397	-25.5	-37.9	2.5	24.1	30	7,459	-24.0	-37.1	2.5	18.9	7,315	-27.6	-38.6	2.6	27.1	30	7,422	-24.7	-36.8	2.6	30	7,422	-24.7	-36.8	2.6				
350	29	8,064	-38.0	-44	2	6.0	30	25.7	35.7	30	8,355	-32.8	4.3	26.3	8.0	8,423	-31.2	-42.6	21.0	8.0	8,266	-34.7	-43.3	21.0	8.0	8,383	-31.7	-42.3	21.0	8.0	8,383	-31.7	-42.3	21.0			
300	29	9,109	-44.3	2	6.0	30	9,419	-40.8	4.3	25	2.5	30	9,494	-39.3	-48.8	25	2.5	9,321	-42.4	-48.8	25	2.5	9,289	9.5	-40.4	25	2.5	9,289	9.5	-40.4	25						
250	29	10,311	-51.0	2	6.0	30	10,637	-49.3	2.5	25	10.9	30	10,719	-48.1	2.5	25	10.5	30	10,532	-50.6	2.5	25	31.2	29	10,675	-49.0	2.5	25	31.2	29	10,675	-49.0	2.5	25			
200	29	11,746	-56.3	2	6.0	30	12,072	-57.4	2	25	3.6	30	12,162	-56.7	2	25	3.0	30	11,960	-58.3	2	25	30.9	29	12,112	-57.6	2	25	30.9	29	12,112	-57.6	2	25			
175	28	12,592	-57.3	2	6.0	30	12,911	-59.5	2	25	3.7	30	13,001	-60.5	2	25	3.9	30	12,795	-60.6	2	25	31.1	29	12,951	-60.4	2	25	31.1	29	12,951	-60.4	2	25			
150	28	13,566	-57.2	2	6.0	30	13,871	-62.4	2	25	3.5	30	13,954	-63.7	2	25	3.1	30	13,753	-61.1	2	25	29.8	29	13,903	-63.5	2	25	29.8	29	13,903	-63.5	2	25			
125	28	14,718	-57.8	2	6.0	30	14,990	-65.0	2	25	2.8	30	15,064	-66.7	2	25	2.7	30	14,883	-61.9	2	25	24.7	29	15,013	-67.1	2	25	24.7	29	15,013	-67.1	2	25			
100	27	16,117	-58.3	2	6.0	30	16,342	-67.4	2	25	2.9	30	16,403	-68.5	2	25	2.1	30	16,265	-63.3	2	25	19.1	29	16,152	-69.3	2	25	19.1	29	16,152	-69.3	2	25			
80	27	16,521	-59.0	2	6.0	30	16,688	-66.1	2	25	13.8	29	17,743	-67.4	2	25	14.1	29	17,642	-63.4	2	25	13.5	28	17,685	-68.5	2	25	13.5	28	17,685	-68.5	2	25			
60	27	18,352	-59.4	2	6.0	30	18,500	-64.6	2	25	10.9	29	18,553	-67.4	2	25	10.5	29	18,465	-62.4	2	25	11.7	29	18,490	-65.9	2	25	11.7	29	18,490	-65.9	2	25			
50	27	19,317	-59.7	2	6.0	30	19,494	-62.5	2	25	8.3	29	19,495	-63.5	2	25	8.3	29	19,416	-62.2	2	25	10.3	25	19,436	-62.5	2	25	10.3	25	19,436	-62.5	2	25			
40	27	21,338	-60.1	2	6.0	30	21,416	-60.6	2	25	7.0	27	22,004	-60.5	2	25	5.9	29	20,544	-62.4	2	25	8.0	25	20,544	-60.9	2	25	8.0	25	20,544	-60.9	2	25			
30	27	23,036	-59.3	-24	2	6.0	30	23,777	-2.6	-2.6	2	25	2.5	30	24,050	-2.5	-2.5	2	25	2.5	30	23,374	-6.0	2	25	2.5	30	23,374	-6.0	2	25						
20	27	24,022	-5.2	-24	2	6.0	30	24,022	-5.2	-24	2	25	1.7	30	24,022	-5.2	-24	2	25	1.7	30	24,022	-5.2	2	25	1.7	30	24,022	-5.2	2	25						
10	27	24,502	-5.3	-24	2	6.0	30	24,502	-5.3	-24	2	25	1.7	30	24,502	-5.3	-24	2	25	1.7	30	24,502	-5.3	2	25	1.7	30	24,502	-5.3	2	25						
7	27	24,573	-5.3	-24	2	6.0	30	24,573	-5.3	-24	2	25	1.7	30	24,573	-5.3	-24	2	25	1.7	30	24,573	-5.3	2	25	1.7	30	24,573	-5.3	2	25						
300	27	24,866	-48.6	-44	2	6.0	30	27,900	-37.0	-46.2	2	25	9.0	30	27,900	-37.0	-46.2	2	25	9.0	30	27,900	-37.0	2	25	9.0	30	27,900	-37.0	2	25						
200	27	25,182	-48.1	-41	2	6.0	30	25,182	-48.1	-41	2	25	9.0	30	25,182	-48.1	-41	2	25	9.0	30	25,182	-48.1	2	25	9.0	30	25,182	-48.1	2	25						
100	27	25,624	-51.4	-51	2	6.0	30	25,624	-51.4	-51	2	25	9.0	30	25,624	-51.4	-51	2	25	9.0	30	25,624	-51.4	2	25	9.0	30	25,624	-51.4	2	25						
7	27	26,162	-61.2	-61	2	6.0	30	26,162	-61.2	-61	2	25	9.6	25	26,162	-61.2	-61	2	25	9.6	25	26,162	-61.2	2	25	9.6	25	26,162	-61.2	2	25						
6	26	26,367	-60.6	-60	2	6.0	30	26,367	-60.6	-60	2	25	6.5	24	26,367	-60.6	-60	2	25	6.5	24	26,367	-60.6	2	25	6.5	24	26,367	-60.6	2	25						
5	26	26,501	-60.2	-60	2	6.0	30	26,501	-60.2	-60	2	25	6.5	24	26,501	-60.2	-60	2	25	6.5	24	26,501	-60.2	2	25	6.5	24	26,501	-60.2	2	25						
4	26	26,895	-59.5	-59	2	6.0	30	26,895	-59.5	-59	2	25	6.5	24	26,895	-59.5	-59																				

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FLINT, MI 988 MB										GLASGOW, MT 936 MB										GRAND JUNCTION, CO 855 MB										GREAT FALLS, MT 890 MB										GREEN BAY, WI 989 MB									
Standard pressure surface mb.	No. of observations	Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind																				
		Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg	Speed m.p.s.																
5FC	30	236	3.0	+5	21	2.7	30	696	-5.8	-8.3	31	1.6	30	1,011	+1.4	-7.8	31	5.9	1,556	-1.8	8.1	1.9	29	1,490	+9	-10.7	27	7.2	30	535	+1.9	-4.2	28	+4.6															
1000	30	556	2.4	+2.1	29	6.3	101	1,450	-1.1	-2.2	10-1	31	8.0	2,023	1.5	-8.0	11	1.9	2,005	-1.3	-0.6	1.2	1.7	29	1,976	-1.4	-2.6	29	-5.5																				
950	30	992	-0.8	+4.7	25	8.9	30	1,467	-1.2	-2.1	10-1	31	9.0	2,005	1.3	-8.0	12	1.7	2,005	-1.2	-0.6	1.2	1.7	29	1,986	-5.5	-5.2	27	7.5																				
850	30	1,450	-1.1	+4.7	25	8.9	30	1,467	-1.2	-2.1	10-1	31	9.0	2,005	1.3	-8.0	13	1.7	2,005	-1.2	-0.6	1.2	1.7	29	2,047	-4.4	-14.9	30	2,400																				
800	30	1,932	-2.7	+11.9	25	11.1	30	1,499	-3.4	-12.9	31	9.0	2,030	2.1	-5.5	11	1.7	2,023	-2.3	-1.7	1.2	1.7	29	3,027	-7.7	-17.8	30	2,400																					
750	30	2,442	-4.6	+14.8	25	12.5	30	2,457	-5.5	-17.1	31	9.0	2,040	2.1	-5.5	12	1.7	2,023	-2.3	-1.7	1.2	1.7	29	3,027	-9.7	-19.3	27	9.7																					
700	30	2,983	-7.4	+18.8	25	14.9	30	2,995	-6.5	-18.7	32	10.8	2,030	1.5	-6.9	13	1.7	2,023	-2.3	-1.7	1.2	1.7	29	3,027	-11.5	-20.9	30	14.0																					
650	30	3,557	-10.4	+22.3	25	16.3	30	3,566	-12.0	-22.4	32	11.5	20.0	3.6	-10.4	14	2.7	2,023	-2.3	-1.7	1.2	1.7	29	3,601	-10.9	-21.1	31	15.0																					
600	30	4,171	-13.4	+26.1	25	18.1	30	4,174	-15.3	-24.7	32	12.0	20.0	4.2	-13.1	15	2.7	2,023	-2.3	-1.7	1.2	1.7	29	4,212	-14.4	-25.2	31	15.0																					
550	30	4,828	-17.3	+28.4	25	20.5	30	4,826	-19.4	-28.4	32	12.6	20.0	4.0	-9.0	17.2	2.7	2,023	-2.3	-1.7	1.2	1.7	29	4,866	-16.5	-29.2	32	15.0																					
500	30	5,536	-21.9	+33.4	24	23.1	30	5,528	-24.0	-33.3	32	12.9	20.0	5.6	-6.1	21.4	3.1	2.0	10.2	2.9	29	5,571	-23.0	-33.3	32	15.0																							
450	30	6,304	-26.8	+38.4	24	25.6	30	6,290	-28.9	-37.8	33	13.5	20.0	6.8	-3.8	21.7	2.7	2.0	10.2	2.9	29	6,333	-28.4	-37.4	33	15.0																							
400	30	7,144	-32.6	+40.9	24	28.9	30	7,123	-34.9	-42.1	33	14.1	20	7.2	-2.2	32.4	-4.2	2.0	10.8	2.9	29	7,167	-34.6	-43.7	33	15.0																							
350	29	8,066	-38.4	+43.5	24	29.8	30	8,044	-41.4	-42.7	33	13.8	20	8.1	-1.5	26.4	-3.7	2.0	10.8	2.9	29	8,089	-41.5	-47.4	33	15.0																							
300	29	9,107	-45.3	+47.7	24	32.7	30	9,070	-46.6	-50.1	33	14.4	20	9.1	-1.7	45.6	-3.7	2.0	10.8	2.9	29	9,117	-47.9	-53.4	33	15.0																							
250	29	10,304	-50.8	+51.0	24	31.1	30	10,250	-54.1	-54.3	32	14.0	20	11.2	-1.5	50.2	-3.7	2.0	10.8	2.9	29	10,304	-53.4	-53.4	33	15.0																							
200	29	11,447	-54.7	+54.7	24	32.0	30	11,481	-56.3	-56.3	32	14.0	20	11.2	-1.5	54.8	-3.7	2.0	10.8	2.9	29	11,530	-56.2	-56.2	33	15.0																							
175	24	12,595	-59.5	+59.5	24	32.6	30	12,535	-59.5	-59.5	32	12.6	18	12,676	-56.1	-56.1	29	19.2	20	12,529	-56.0	-56.0	31	21.2	20	12,513	-53.6	-53.6	26	21.0																			
150	24	13,581	-55.2	+55.2	24	31.6	30	13,523	-55.6	-55.6	31	12.4	18	13,655	-52.3	-52.3	29	19.8	20	13,559	-55.8	-55.8	31	21.2	20	13,550	-52.3	-52.3	26	19.5																			
125	24	14,742	-58.6	+58.6	24	31.1	30	14,692	-58.2	-58.2	30	12.0	18	14,810	-57.0	-57.0	29	16.4	18	14,720	-56.4	-56.4	31	21.0	18	14,720	-56.4	-56.4	26	19.1																			
100	24	16,153	-57.8	+57.8	24	15.3	29	16,113	-55.9	-55.9	30	9.3	28	16,211	-59.7	-59.7	29	12.4	28	16,113	-57.1	-57.1	31	9.0	28	16,082	-57.3	-57.3	26	13.7																			
80	24	17,557	-58.7	+58.7	24	12.6	29	17,533	-55.6	-55.6	31	7.8	27	17,600	-60.3	-60.3	29	10.2	28	17,548	-56.9	-56.9	31	6.4	28	17,491	-58.0	-58.0	25	11.7																			
75	24	18,395	-58.9	+58.9	24	11.2	29	18,381	-56.5	-56.5	31	6.8	26	18,438	-59.9	-59.9	29	7.0	28	18,394	-57.3	-57.3	31	6.4	28	18,336	-58.6	-58.6	26	8.7																			
60	24	19,362	-59.2	+59.2	24	9.7	29	19,360	-56.7	-56.7	32	5.9	26	19,397	-60.2	-60.2	29	5.6	28	19,368	-57.5	-57.5	32	5.4	28	19,304	-58.8	-58.8	26	6.7																			
50	24	20,504	-59.4	+59.4	24	9.2	29	20,516	-56.3	-56.3	32	4.4	25	20,533	-60.0	-60.0	29	4.6	28	20,521	-57.1	-57.1	33	4.1	28	20,446	-59.2	-59.2	27	7.2																			
40	24	21,901	-59.4	+59.4	24	7.0	29	21,933	-55.6	-55.6	33	4.4	25	21,930	-58.8	-58.8	30	2.7	28	21,934	-56.7	-56.7	35	3.2	27	21,881	-59.2	-59.2	28	5.8																			
30	24	23,703	-58.8	+58.8	24	6.8	27	23,758	-56.3	-56.3	34	4.7	24	23,747	-57.2	-57.2	33	1.3	27	23,763	-56.2	-56.2	34	1.1	26	23,645	-58.9	-58.9	30	5.4																			
25	24	24,842	-58.5	+58.5	24	8.7	26	24,921	-55.5	-55.5	34	0.7	24	24,903	-55.6	-55.6	34	2.0	27	24,924	-55.2	-55.2	34	0.2	26	24,791	-58.2	-58.2	31	6.1																			
20	24	26,259	-57.6	+57.6	31	5.8	26	26,348	-54.5	-54.5	34	6.0	22	26,328	-54.8	-54.8	36	3.6	25	26,350	-54.4	-54.4	34	0.3	27	26,195	-57.8	-57.8	32	6.2																			
15	24	28,297	-55.9	+55.9	31	6.7	24	28,200	-52.0	-52.0	34	7.5	19	28,175	-53.5	-53.5	36	2.9	24	28,194	-54.0	-54.0	34	0.2	26	28,010	-56.4	-56.4	32	8.0																			
10	5	30,728	-52.7	+52.7	12	30.7	22	30,776	-52.5	-52.5	34	11	30	20,795	-53.8	-53.8	36	11	30	20,795	-53.8	-53.8	34	13	30,624	-53.4	-53.4	29	10.3																				

GREENSBORO, NC 988 MB										GUADALUPE 15°, MEXICO 1015 MB										GUAM, MARIANA 15° 998 MB										HILDEBOLD 15° 1015 MB										HUNTINGTON, WV 991 MB									
No. of observations		Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind			Resultant Wind														
SFC	30	359	-7.0	-9.2	28	1.7	30	100	26.3	23.1	06	4.2	29	177	8.3	4.0	02	.4	28	5	9.1	4.3	26	.7	30	246	5.6	1.5	24	-6																			
1000	30	532	-5.3	-8.0	29	2.7	30	585	13.9	5.0	32	3.0	544	23.5	21.6	0.8	11.2	30	581	19.3	17.7	0.5	2.1	30	592	6.9	.9	25	3.7																				
900	30	600	10.0	2.9	25	2.0	30	1,039</td																																									

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KEY WEST, FL 1016 MB												KING SALMON, AK 997 MB												KOPOR, CAROLINE IS. 1005 MB												KOTZEBUE, AK 998 MB												LAKE CHARLES, LA 1020 MB											
Standard pressure surface mb	No. of observations	Resultant Wind				Resultant Wind				Resultant Wind				Resultant Wind				Resultant Wind				Resultant Wind				Resultant Wind																																	
		Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Speed m.p.s.																														
SFC	30	3	23.4	20.5	0.5	3.6	2.9	1.5	7.6	2.4	-1.3	1.6	3.5	30	28.4	25.0	0.4	1.5	30	5.7	3.3	0.9	3.4	30	5	8.2	6.2	0.2	1.3																														
1000	30	138	22.8	19.8	0.6	4.9	4.7	2.0	2.5	2.7	2.3	2.0	3.0	76	27.3	24.2	0.6	1.7	72	5.0	3.0	1.1	2.8	50	172	11.8	5.3	0.4	0.5																														
950	30	584	22.0	16.9	0.8	6.1	2.9	1.1	4.1	2.2	2.4	1.8	4.1	532	24.2	22.4	0.6	2.3	30	3.6	2.6	1.3	2.6	50	601	10.5	5.2	0.5	1.6																														
900	30	1,050	17.3	13.3	0.9	4.9	2.9	1.1	2.4	1.6	1.6	1.6	3.0	831	24.3	22.3	0.6	2.3	30	3.6	2.6	1.3	2.6	50	1,052	9.3	5.3	0.5	1.6																														
850	30	1,533	14.6	9.7	1.1	2.1	2.9	1.1	2.8	1.6	1.6	1.6	3.0	1,501	16.4	15.4	0.7	1.0	1,251	10.2	4.7	6.0	1.0	50	1,052	9.3	5.3	0.5	1.6																														
800	30	2,088	10.3	5.5	1.1	2.1	2.9	1.1	2.8	1.6	1.6	1.6	3.0	1,000	16.2	16.2	0.7	2.3	1,717	12.1	-1.7	16.0	6.1	30	2,027	7.5	4.3	0.5	1.6																														
750	30	2,588	10.5	-1.7	1.5	1.9	2.9	2.5	2.5	1.1	2.6	2.6	3.0	2,568	13.5	2.8	0.8	2.5	2,208	14.4	-19.8	18.1	3.0	30	2,557	5.6	-11.7	2.6	1.5																														
700	30	3,160	8.1	-6.3	1.7	1.5	2.9	2.5	2.5	2.1	2.0	2.0	3.0	3,147	10.5	4.4	0.0	3.2	2,728	17.6	-23.6	18.2	3.0	30	3,118	3.2	-14.1	2.6	0.7																														
650	30	3,769	5.2	-9.9	2.2	1.1	2.9	3.3	3.3	2.1	2.0	2.0	3.0	3,762	7.3	4.9	0.0	3.2	3,279	21.1	-26.5	19.9	3.0	30	3,716	4.4	-16.6	2.5	1.1																														
600	30	4,418	1.5	-13.5	2.5	2.1	2.9	3.3	3.3	2.0	2.0	2.0	3.0	4,416	3.8	-3.4	1.0	3.5	2,866	24.8	-30.6	11.0	3.0	30	4,353	-3.5	-20.1	2.5	1.3																														
550	30	5,114	-2.7	-18.4	2.7	2.4	2.9	4.0	4.0	2.5	2.5	2.5	3.0	5,121	-0.2	-8.5	0.9	4.1	4,495	28.9	-36.1	19.1	3.0	30	5,035	-7.8	-24.6	2.5	1.1																														
500	30	5,663	-7.4	-24.6	2.7	5.6	2.8	5.6	5.6	2.1	2.1	2.1	3.0	5,627	-4.4	-14.2	1.0	3.7	5,170	-33.4	-40.0	16.2	30	5,770	-12.7	-28.6	2.5	1.4																															
450	30	6,675	-12.8	-29.2	2.7	7.3	2.8	6.0	6.0	-34.5	-0.5	2.1	9.5	6,701	-9.2	-19.8	11	3.0	2,909	5.9	50,902	-38.1	-42.3	20	17.9	30	6,566	-18.0	-32.6	2.5	1.9																												
400	30	7,563	-19.2	-33.6	2.7	9.3	2.8	6,825	40.1	-4.4	4.4	11.2	30	7,602	-14.7	-26.8	12	2.4	2,949	6.0	7,04	-43.3	-42.2	20	20.9	30	7,435	-24.3	-38.1	22.0	2.0																												
350	30	8,545	-26.3	-39.8	2.7	12.3	2.8	7,728	45.6	-1.1	2.1	13.2	30	8,604	-21.1	-34.3	0.9	2.2	2,727	7,585	-48.5	-48.5	21	21.2	30	8,397	-31.6	-43.7	2.5	2.8																													
300	30	9,339	-34.9	-48.0	2.7	17.3	2.7	8,750	49.4	-1.1	2.1	13.3	30	9,721	-29.6	-42.1	0.8	1.1	27	8,586	-52.8	21	21.5	30	9,466	-40.0	-49.6	2.5	2.8																														
250	30	10,688	-44.3	-50.0	2.7	20.3	2.7	9,947	51.3	-1.1	2.1	12.7	30	10,994	-40.0	-52.0	1.3	2.4	27	9,761	-52.7	21	20.2	30	10,687	-49.1	-52.7	2.5	2.8																														
200	30	12,347	-55.4	-55.4	2.7	24.7	2.7	11,398	51.1	-1.1	2.1	11.0	30	12,477	-52.6	-52.6	1.1	1.1	27	11,202	-51.4	21	16.0	30	12,122	-57.7	-57.7	2.5	2.8																														
175	30	13,188	-61.0	-61.0	2.7	26.4	2.7	12,623	50.8	-1.1	2.1	10.4	30	13,326	-59.7	-59.7	1.0	6.4	27	12,075	-50.5	21	14.8	30	12,955	-60.7	-60.7	2.5	2.8																														
150	30	14,133	-66.3	-66.3	2.7	25.4	2.7	13,268	50.3	-1.1	2.1	10.6	30	14,272	-67.3	-67.3	0.9	8.0	27	13,081	-50.4	22	14.5	30	13,912	-63.2	-63.2	2.5	3.3																														
125	30	15,222	-71.4	-71.4	2.7	21.3	2.7	14,461	49.6	-1.1	2.1	10.2	30	15,350	-75.1	-75.1	0.9	8.6	26	14,261	-50.0	22	14.7	30	15,025	-66.3	-66.3	2.5	2.7																														
100	30	16,522	-75.2	-75.2	2.7	13.7	2.7	15,920	49.8	-1.1	2.1	10.2	30	16,682	-82.2	-82.2	0.9	8.7	26	15,526	-50.0	22	14.2	30	16,366	-68.3	-68.3	2.5	2.7																														
80	30	18,721	-74.1	-74.1	2.7	5.6	2.7	16,300	50.5	-1.1	2.1	10.2	30	18,746	-87.0	-87.0	0.9	8.9	26	18,525	-50.2	22	14.5	30	18,178	-68.8	-68.8	2.5	2.7																														
60	30	19,529	-66.9	-66.9	1.0	7.7	24	19,232	51.0	-1.1	2.1	10.2	30	19,501	-70.8	-70.8	0.9	12.3	27	19,063	-62.3	22	14.8	30	18,790	-51.5	-51.5	2.5	2.7																														
50	30	20,693	-62.7	-62.7	1.0	1.4	22	20,415	51.8	-1.1	2.1	10.2	30	20,530	-70.8	-70.8	0.9	20.1	27	20,253	-50.1	22	13.1	30	20,590	-61.0	-61.0	2.5	2.7																														
40	30	22,032	-58.8	-58.8	1.0	1.7	22	21,860	52.3	-1.1	2.1	10.2	30	22,005	-60.6	-60.6	0.9	24.4	22	21,707	-50.4	22	12.6	30	21,985	-58.8	-58.8	2.5	2.7																														
30	27	23,857	-54.7	-54.7	0.6	1.8	23	23,723	51.1	-1.1	2.1	10.2	30	23,823	-54.4	-54.4	0.9	30.4	20	23,576	-50.5	23	10.3	30	23,795	-57.7	-57.7	2.5	2.7																														
25	25	25,024	-53.7	-53.7	0.6	1.9	23	24,908	51.2	-1.1	2.1	10.2	30	25,001	-50.5	-50.5	0.9	29.4	20	24,769	-50.9	24	10.3	30	24,997	-56.9	-56.9	2.5	2.7																														
20	25	26,467	-51.2	-51.2	0.6	2.8	18	26,353	51.2	-1.1	2.1	10.2	30	26,449	-46.8	-46.8	1.0	16.2	20	26,216	-51.4	24	9.8	26	21,365	-55.2	-55.2	2.5	2.7																														
15	20	28,337	-49.9	-49.9	0.6	7.8	26	28,255	50.7	-1.1	2.1	10.2	30	28,247	-41.2	-41.2	1.0	27	5.3	27	28,113	-51.2	24	10.7	30	28,215	-52.3	-52.3	2.5	2.7																													
10	9	31,009	-45.6	-45.6	0.6	7	30,902	50.3	-1.1	2.1	10.2	30	30,817	-38.1	-38.1	0.9	20	30,861	-48.6	-48.6	27	18.3	30	30,861	-48.6	-48.6	2.5	2.7																															
LANDER, WY 830 MB												LIHUE KAUAI, HI 1012 MB												LITTLE ROCK, AR 1000 MB												LONGVIEW, TX 1007 MB												MCGRATH, AK 989 MB											
SFC	30	1,697	-6.8	-11.4	24	1.2	30	36	23.2	19.4	0.5	4.2	30	79	5.9	1.8	28	1.0	30	124	7.3	4.0	30	+5	30	103	-5.7	-1.8	0.9	1.2																													
1000	30	2,277	23.7	0.6	2.9	1.0	30	143	23.1	18.6	0.5	5.3	17	208	5.1	-0.9	32	1.5	30	194	7.9	1.8	33	1.2	30	132	-7.0	-0.2	0.9	1.2																													
950	30	589	19.6	17.0	0.6	7.0	30	593	6.8	-1.9	2.7	4.0	30	602	8.5	-2.5	26	2.7	30	423	3.8	5.6	16	1.7	30	450	-4.7	-2.6	0.5	0.6																													
900	30	1,053	16.2	13.9	0.6	6.4	30	1,053	5.9	-1.9	2.7	5.4	30	1,049	7.6	-5.5	26	3.2	30	580	-4.4	-7.2	18	0.8	30	550	-1.7	-10.2	0.5	0.6																													
850	30	1,538	13.1	10.1	0.6	5.8	30	1,538	5.0	-0.9	2.6	5.4	30	1,519	6.8	-9.9	26	4.3	30	550	-6.1	-9.7	19	0.8	30	521	-6.1	-9.7	0.5	0.6																													
800	30	1,989	-3.1	-12.2	2.2	7.0	30	2,047	11.7	1.4	0.7	4.3	30	2,047	2.9	-1.8	26	5.8	30	1,772	-8.4	-13.6	19	0.5	30	1,772	-8.4	-13.6	19	0.5																													
750	30	2,499</																																																									

RAWINSONDE DATA

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MONLT, MO 968 MB		NASHVILLE, TN 999 MB		NOME, AK 995 MB		NORTH PLATTE, NE 919 MB		OAKLAND, CA 1020 MB																																																																																						
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	Dew Point °C	Dynamic height meters	Temperature °C	Resultant Wind	Dew Point °C	Dynamic height meters	Temperature °C	Resultant Wind	Dew Point °C	Dynamic height meters	Temperature °C	Resultant Wind																																																																														
5FC 30 438 2.3 -1.0 19 1.4 19 180 5.7 2.3 20 8.4 30 2.2 30 8.4 7 4.5 -9.1 32 2.3 29 2.9 6 10.2	438 2.3 -1.0 19 1.4 19 180 5.7 2.3 20 8.4 30 2.2 30 8.4 7 4.5 -9.1 32 2.3 29 2.9 6 10.2	592 4.9 -6.6 23 2.7 30 5.9 2.4 22 2.9 30 3.6 9 -5.2 2.9 11 2.5 29 1.6 7.7 32 2.3 29 5.9 6 10.2	592 4.9 -6.6 23 2.7 30 5.9 2.4 22 2.9 30 3.6 9 -5.2 2.9 11 2.5 29 1.6 7.7 32 2.3 29 5.9 6 10.2	1,028 4.2 -3.6 26 7.4 30 1,038 5.7 -2.3 23 4.7 30 7.9 2.3 -10.8 16 4.0 30 1,011 -1.6 -7.2 32 4.1 29 1,046 9.5 -2.4 31 1.3	1,028 4.2 -3.6 26 7.4 30 1,038 5.7 -2.3 23 4.7 30 7.9 2.3 -10.8 16 4.0 30 1,011 -1.6 -7.2 32 4.1 29 1,046 9.5 -2.4 31 1.3	1,492 2.7 -7.5 28 9.0 30 1,505 5.7 -7.9 24 3.0 1,236 -9.6 -12.7 18 4.3 30 1,470 -5.0 -10.0 33 6.1 29 1,519 8.3 -6.9 27 2.8	1,492 2.7 -7.5 28 9.0 30 1,505 5.7 -7.9 24 3.0 1,236 -9.6 -12.7 18 4.3 30 1,470 -5.0 -10.0 33 6.1 29 1,519 8.3 -6.9 27 2.8	1,980 0.7 -10.4 28 9.9 30 1,998 5.7 -10.3 25 8.1 30 1,702 -11.6 -15.3 18 4.9 30 1,955 -3.3 -12.9 32 6.9 29 2,017 5.9 -8.4 27 3.4	1,980 0.7 -10.4 28 9.9 30 1,998 5.7 -10.3 25 8.1 30 1,702 -11.6 -15.3 18 4.9 30 1,955 -3.3 -12.9 32 6.9 29 2,017 5.9 -8.4 27 3.4	2,497 -1.1 -13.5 27 10.4 30 2,519 1.1 -12.2 25 10.2 30 2,195 -14.2 -18.9 19 5.9 30 2,467 -4.0 -14.3 31 8.4 29 2,543 3.2 -12.5 26 3.7	2,497 -1.1 -13.5 27 10.4 30 2,519 1.1 -12.2 25 10.2 30 2,195 -14.2 -18.9 19 5.9 30 2,467 -4.0 -14.3 31 8.4 29 2,543 3.2 -12.5 26 3.7	3,045 -3.6 -16.8 27 11.5 30 3,071 -1.4 -14.5 25 12.2 30 2,715 -17.2 -23.3 19 6.7 30 3,008 -7.0 -17.5 31 9.2 29 3,099 -1.1 -16.3 29 5.6	3,045 -3.6 -16.8 27 11.5 30 3,071 -1.4 -14.5 25 12.2 30 2,715 -17.2 -23.3 19 6.7 30 3,008 -7.0 -17.5 31 9.2 29 3,099 -1.1 -16.3 29 5.6	3,628 -6.4 -20.1 26 13.5 30 3,660 -4.1 -17.0 25 14.8 30 3,267 -20.4 -27.2 20 8.7 30 3,583 -10.2 -20.8 31 9.2 29 3,689 -3.3 -19.6 29 7.3	3,628 -6.4 -20.1 26 13.5 30 3,660 -4.1 -17.0 25 14.8 30 3,267 -20.4 -27.2 20 8.7 30 3,583 -10.2 -20.8 31 9.2 29 3,689 -3.3 -19.6 29 7.3	4,294 -9.9 -24.8 26 15.0 30 4,287 -7.7 -20.0 25 17.5 30 3,856 -24.1 -30.6 20 10.2 30 4,196 -13.9 -23.7 30 9.2 29 4,317 -7.4 -22.7 28 8.4	4,294 -9.9 -24.8 26 15.0 30 4,287 -7.7 -20.0 25 17.5 30 3,856 -24.1 -30.6 20 10.2 30 4,196 -13.9 -23.7 30 9.2 29 4,317 -7.4 -22.7 28 8.4	4,915 -14.0 -26.4 26 17.0 30 4,959 -11.1 -24.9 25 20.5 30 4,486 -28.1 -35.3 21 11.2 30 4,851 -18.1 -28.3 29 10.8 29 4,959 -12.0 -24.8 29 10.2	4,915 -14.0 -26.4 26 17.0 30 4,959 -11.1 -24.9 25 20.5 30 4,486 -28.1 -35.3 21 11.2 30 4,851 -18.1 -28.3 29 10.8 29 4,959 -12.0 -24.8 29 10.2	5,632 -18.8 -30.9 26 20.2 30 5,683 -16.4 -29.5 25 22.5 30 5,163 -32.7 -40.2 21 12.3 30 5,556 -23.0 -32.7 29 11.6 29 5,712 -17.1 -28.0 29 13.0	5,632 -18.8 -30.9 26 20.2 30 5,683 -16.4 -29.5 25 22.5 30 5,163 -32.7 -40.2 21 12.3 30 5,556 -23.0 -32.7 29 11.6 29 5,712 -17.1 -28.0 29 13.0	6,411 -23.9 -36.0 26 23.4 30 6,467 -21.6 -32.1 25 24.9 30 5,899 -37.5 -41.7 21 13.2 30 6,320 -28.1 -37.3 29 11.8 29 6,494 -22.4 -32.6 29 15.1	6,411 -23.9 -36.0 26 23.4 30 6,467 -21.6 -32.1 25 24.9 30 5,899 -37.5 -41.7 21 13.2 30 6,320 -28.1 -37.3 29 11.8 29 6,494 -22.4 -32.6 29 15.1	7,259 -29.7 -41.1 25 25.0 30 7,324 -27.6 -37.9 25 27.0 30 6,702 -42.5 -43.6 20 15.0 30 7,155 -3.4 -31.1 29 12.5 29 7,348 -28.7 -37.2 29 18.1	7,259 -29.7 -41.1 25 25.0 30 7,324 -27.6 -37.9 25 27.0 30 6,702 -42.5 -43.6 20 15.0 30 7,155 -3.4 -31.1 29 12.5 29 7,348 -28.7 -37.2 29 18.1	8,211 -36.5 -46.1 25 27.6 30 8,204 -34.1 -43.4 26 24.9 30 7,597 -40.7 -20.7 20 17.3 30 8,081 -40.6 -6.6 22 13.4 30 8,293 -35.8 -43.6 29 20.2	8,211 -36.5 -46.1 25 27.6 30 8,204 -34.1 -43.4 26 24.9 30 7,597 -40.7 -20.7 20 17.3 30 8,081 -40.6 -6.6 22 13.4 30 8,293 -35.8 -43.6 29 20.2	8,821 -43.4 -51.5 25 29.0 30 8,794 -42.4 -49.7 27 31.5 30 8,949 -51.3 -21.1 21 15.6 30 9,114 -46.5 28 15.7 29 10,548 -52.0 29 22.6	8,821 -43.4 -51.5 25 29.0 30 8,794 -42.4 -49.7 27 31.5 30 8,949 -51.3 -21.1 21 15.6 30 9,114 -46.5 28 15.7 29 10,548 -52.0 29 22.6	9,485 -51.5 30 30 9,485 10.1 10.1 30 10,311 -51.2 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	9,485 -51.5 30 30 9,485 10.1 10.1 30 10,311 -51.2 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	10,188 -55.6 30 30 10,188 10.1 10.1 30 10,918 -51.1 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	10,188 -55.6 30 30 10,188 10.1 10.1 30 10,918 -51.1 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	10,944 -61.6 30 30 10,944 10.1 10.1 30 10,918 -51.1 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	10,944 -61.6 30 30 10,944 10.1 10.1 30 10,918 -51.1 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	11,733 -66.6 30 30 11,733 10.1 10.1 30 11,511 -51.0 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	11,733 -66.6 30 30 11,733 10.1 10.1 30 11,511 -51.0 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	12,511 -72.7 30 30 12,511 10.1 10.1 30 12,289 -50.9 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	12,511 -72.7 30 30 12,511 10.1 10.1 30 12,289 -50.9 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	13,289 -78.7 30 30 13,289 10.1 10.1 30 13,067 -50.8 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	13,289 -78.7 30 30 13,289 10.1 10.1 30 13,067 -50.8 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	14,067 -84.7 30 30 14,067 10.1 10.1 30 13,845 -50.7 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	14,067 -84.7 30 30 14,067 10.1 10.1 30 13,845 -50.7 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	14,845 -90.7 30 30 14,845 10.1 10.1 30 14,623 -50.6 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	14,845 -90.7 30 30 14,845 10.1 10.1 30 14,623 -50.6 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	15,621 -96.7 30 30 15,621 10.1 10.1 30 15,400 -50.5 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	15,621 -96.7 30 30 15,621 10.1 10.1 30 15,400 -50.5 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	16,399 -102.7 30 30 16,399 10.1 10.1 30 16,177 -50.4 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	16,399 -102.7 30 30 16,399 10.1 10.1 30 16,177 -50.4 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	17,187 -108.7 30 30 17,187 10.1 10.1 30 16,955 -50.3 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	17,187 -108.7 30 30 17,187 10.1 10.1 30 16,955 -50.3 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	17,975 -114.7 30 30 17,975 10.1 10.1 30 17,753 -50.2 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	17,975 -114.7 30 30 17,975 10.1 10.1 30 17,753 -50.2 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	18,763 -120.7 30 30 18,763 10.1 10.1 30 18,551 -50.1 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	18,763 -120.7 30 30 18,763 10.1 10.1 30 18,551 -50.1 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	19,551 -126.7 30 30 19,551 10.1 10.1 30 19,339 -50.0 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	19,551 -126.7 30 30 19,551 10.1 10.1 30 19,339 -50.0 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	20,339 -132.7 30 30 20,339 10.1 10.1 30 20,127 -49.9 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	20,339 -132.7 30 30 20,339 10.1 10.1 30 20,127 -49.9 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	21,127 -138.7 30 30 21,127 10.1 10.1 30 20,915 -49.8 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	21,127 -138.7 30 30 21,127 10.1 10.1 30 20,915 -49.8 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	21,915 -144.7 30 30 21,915 10.1 10.1 30 21,693 -49.7 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	21,915 -144.7 30 30 21,915 10.1 10.1 30 21,693 -49.7 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	22,703 -150.7 30 30 22,703 10.1 10.1 30 22,481 -49.6 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	22,703 -150.7 30 30 22,703 10.1 10.1 30 22,481 -49.6 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	23,491 -156.7 30 30 23,491 10.1 10.1 30 23,269 -49.5 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	23,491 -156.7 30 30 23,491 10.1 10.1 30 23,269 -49.5 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	24,279 -162.7 30 30 24,279 10.1 10.1 30 24,047 -49.4 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	24,279 -162.7 30 30 24,279 10.1 10.1 30 24,047 -49.4 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	25,057 -168.7 30 30 25,057 10.1 10.1 30 24,825 -49.3 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	25,057 -168.7 30 30 25,057 10.1 10.1 30 24,825 -49.3 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	25,835 -174.7 30 30 25,835 10.1 10.1 30 25,603 -49.2 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	25,835 -174.7 30 30 25,835 10.1 10.1 30 25,603 -49.2 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	26,613 -180.7 30 30 26,613 10.1 10.1 30 26,381 -49.1 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	26,613 -180.7 30 30 26,613 10.1 10.1 30 26,381 -49.1 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	27,391 -186.7 30 30 27,391 10.1 10.1 30 27,169 -49.0 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	27,391 -186.7 30 30 27,391 10.1 10.1 30 27,169 -49.0 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	28,179 -192.7 30 30 28,179 10.1 10.1 30 27,957 -48.9 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	28,179 -192.7 30 30 28,179 10.1 10.1 30 27,957 -48.9 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	28,967 -198.7 30 30 28,967 10.1 10.1 30 28,735 -48.8 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	28,967 -198.7 30 30 28,967 10.1 10.1 30 28,735 -48.8 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	29,755 -204.7 30 30 29,755 10.1 10.1 30 29,533 -48.7 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	29,755 -204.7 30 30 29,755 10.1 10.1 30 29,533 -48.7 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	30,543 -210.7 30 30 30,543 -51.6 21 19.9 30 30,321 -51.5 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	30,543 -210.7 30 30 30,543 -51.6 21 19.9 30 30,321 -51.5 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	31,321 -216.7 30 30 31,321 -51.5 21 19.9 30 31,100 -51.4 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	31,321 -216.7 30 30 31,321 -51.5 21 19.9 30 31,100 -51.4 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	32,109 -222.7 30 30 32,109 -51.4 21 19.9 30 31,889 -51.3 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	32,109 -222.7 30 30 32,109 -51.4 21 19.9 30 31,889 -51.3 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	32,897 -228.7 30 30 32,897 -51.3 21 19.9 30 32,676 -51.2 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	32,897 -228.7 30 30 32,897 -51.3 21 19.9 30 32,676 -51.2 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	33,685 -234.7 30 30 33,685 -51.2 21 19.9 30 33,464 -51.1 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	33,685 -234.7 30 30 33,685 -51.2 21 19.9 30 33,464 -51.1 21 19.9 30 10,752 -5.6 28 14.3 29 11,970 -2.3 28 18.5 29 24.5	

RAWINSONDE DATA

Average monthly values

NOVEMBER 1979

Standard pressure surface mb.	SALEM, 1L 998 MB					SALEM, OR 1012 MB					SALT LAKE CITY, UT 875 MB					SAN DIEGO, CA 1003 MB					SAN JUAN, P. R. 1013 MB						
	No. of observations	Resultant Wind		Direction tens of deg	Speed m.p.s.	No. of observations	Resultant Wind		Direction tens of deg	Speed m.p.s.	No. of observations	Resultant Wind		Direction tens of deg	Speed m.p.s.	No. of observations	Resultant Wind		Direction tens of deg	Speed m.p.s.	No. of observations	Resultant Wind		Direction tens of deg	Speed m.p.s.		
		Dynamic height meters	Temperature °C	Dew Point °C	+		Dynamic height meters	Temperature °C	Dew Point °C	+		Dynamic height meters	Temperature °C	Dew Point °C	+		Dynamic height meters	Temperature °C	Dew Point °C	+		Dynamic height meters	Temperature °C	Dew Point °C	+		
SFC	30	17	4	3.0	1.1	23	1.5	6.1	3.4	1.4	30	1,288	-6.7	-4.3	17	1.5	27	10.7	6.5	0.6	30	23.5	21.6	0.9	2.5		
1000	15	196	1.2	-3.1	27	1.9	30	160	5.2	3.2	14	+1	1,522	1.0	-6.1	18	1.8	27	153	13.0	4.8	05	23.4	21.0	0.9	3.3	
950	30	76	4.5	-2.3	26	5.1	30	580	6.4	1.2	18	+1	2,006	-9.9	-9.7	22	1.9	27	579	14.0	8.8	05	21.7	18.0	8.8	5.6	
900	30	1,015	1.4	-4.6	26	1.0	30	1,058	6.6	-3.1	18	+1	2,124	1.1	-1.2	21	1.9	27	153	13.0	4.8	05	21.7	18.0	8.8	5.6	
850	1,477	1.3	-7.6	26	1.0	30	1,943	6.6	-2.1	21	+1	2,520	1.0	-3.8	12-8	26	2,014	8.1	-11.2	31	4.0	20.3	19.5	1.0	4.2		
800	30	1,064	-1.1	-11.9	26	9.1	30	1,985	2.3	-0.9	23	+1	2,504	6.8	-2.0	25	2,544	5.8	-13.6	30	5.5	30	2,576	11.1	5.2	10	2.6
750	30	2,479	-2.1	-14.4	26	10.6	30	2,504	-12.8	2.4	6.8	+0.3	3,061	-6.7	-17.1	28	4.7	3,108	2.4	-17.6	31	8.2	30	3,750	5.2	1.0	2.1
700	30	3,025	-4.5	-18.8	25	12.3	30	3,052	-3.9	-15.6	24	+0.3	3,636	-9.9	-21.1	26	6.4	3,700	-9.9	-19.9	30	8.2	30	3,750	5.2	1.0	2.1
650	30	3,603	-7.0	-21.6	25	14.9	30	3,634	-7.2	-18.5	25	+0.3	4,250	-13.0	-24.9	26	8.2	4,335	-4.5	-23.8	29	10.6	30	4,905	1.7	-10.0	17
600	30	4,226	-10.5	-25.7	25	16.9	30	4,253	-11.2	-22.4	26	+0.3	4,915	-15.6	-26.4	27	8.7	5,000	-4.9	-27.8	30	12.4	30	5,105	-1.8	-15.7	32
550	30	4,890	-15.0	-28.1	25	18.8	30	4,915	-15.6	-26.4	27	+0.3	4,908	-17.2	-27.8	30	9.9	5,013	-9.3	-26.8	28	12.4	30	5,105	-1.8	-15.7	32
500	30	5,605	-19.4	-31.2	25	21.7	30	5,628	-20.2	-32.1	28	+0.3	5,616	-21.9	-31.7	30	11.5	5,748	-14.1	-29.8	28	14.3	30	5,859	-6.2	-20.2	33
450	29	6,374	-24.6	-34.7	25	24.6	30	6,400	-25.5	-36.3	28	+0.3	6,384	-27.0	-36.6	30	13.2	6,539	-19.5	-32.6	28	16.2	30	6,675	-11.4	-26.2	31
400	29	7,224	-30.0	-42.2	25	26.5	30	7,244	-31.7	-40.7	27	+0.3	7,223	-32.7	-42.8	28	16.1	7,404	-25.7	-36.9	28	19.2	30	7,569	-17.5	-32.0	29
350	29	8,186	-36.9	-47.2	25	28.9	30	8,178	-38.4	-45.9	28	+0.3	8,154	-39.0	-46.0	30	17.7	8,359	-32.9	-43.3	28	23.9	30	8,555	-24.4	-38.6	30
300	29	9,211	-44.0	-53.8	25	32.0	30	9,129	-45.5	-52.4	29	+0.3	9,117	-46.0	-56.0	30	18.9	9,424	-40.8	-51.2	28	26.8	30	9,660	-32.8	-46.3	30
250	29	10,417	-50.7	-59.7	25	33.5	30	10,412	-51.3	-53.4	29	+0.3	10,388	-52.4	-59.0	30	20.4	10,640	-50.0	-59.0	28	29.3	30	10,918	-42.6	-51.0	31
200	29	11,853	-55.6	-64.2	25	33.0	30	11,832	-58.2	-62.4	29	+0.3	11,820	-59.0	-68.7	30	21.8	12,086	-58.7	-68.7	28	33.1	29	12,388	-53.4	-69.7	31
150	29	12,478	-59.6	-68.2	25	31.4	30	12,463	-61.3	-68.2	29	+0.3	12,458	-62.0	-69.7	30	19.1	12,624	-62.0	-69.7	28	34.2	29	12,888	-53.4	-69.7	31
125	29	13,881	-59.1	-68.2	25	24.5	30	13,871	-59.1	-68.2	29	+0.3	13,861	-59.1	-68.2	30	15.3	14,059	-59.1	-68.2	28	34.5	29	14,288	-53.4	-69.7	31
100	29	14,331	-59.1	-68.2	25	23.1	30	14,790	-58.3	-68.2	29	+0.3	14,779	-58.7	-68.2	30	15.8	15,063	-58.7	-68.2	28	34.5	29	14,288	-53.4	-69.7	31
80	29	16,226	-60.6	-69.6	25	18.4	30	16,193	-58.6	-68.4	29	+0.3	16,185	-60.0	-68.0	30	12.4	16,326	-66.5	-66.5	27	16.8	29	16,566	-77.3	-66.4	32
70	29	17,615	-60.6	-69.6	25	14.6	30	17,596	-58.4	-68.4	29	+0.3	17,578	-60.0	-68.0	30	9.3	18,177	-67.9	-65.8	28	10.1	29	17,846	-76.6	-63.7	03
60	29	18,445	-60.1	-69.1	26	11.1	29	18,438	-58.5	-68.5	30	+0.3	18,411	-60.1	-68.1	30	6.5	18,493	-64.7	-64.7	28	7.1	29	18,623	-72.6	-67.0	07
50	29	20,551	-59.2	-68.2	26	9.4	29	19,407	-58.8	-68.8	30	+0.3	19,373	-60.2	-68.8	30	4.3	20,511	-59.7	-68.1	28	4.7	29	19,540	-68.0	-69.9	09
40	22	21,941	-59.4	-68.2	27	6.8	28	21,956	-57.8	-68.2	30	+0.1	21,909	-59.2	-68.2	33	2.7	21,951	-60.4	-68.2	28	5.1	29	22,030	-60.0	-69.4	10
30	20	23,748	-58.7	-68.2	28	5.7	28	23,776	-56.4	-68.2	30	+0.4	23,719	-57.4	-68.2	36	1.9	23,758	-57.6	-68.2	27	4.6	28	23,854	-54.1	-69.0	10
25	19	24,892	-58.1	-68.2	28	6.6	28	24,938	-55.4	-68.2	30	+0.6	24,874	-56.5	-68.2	02	3.6	24,918	-55.7	-68.2	26	4.9	28	25,029	-52.3	-69.4	11
20	19	26,301	-57.1	-68.2	29	6.7	26	26,365	-53.9	-68.2	30	+0.6	26,299	-55.7	-68.2	02	4.1	26,342	-54.3	-68.2	28	5.5	28	26,479	-50.4	-69.8	11
15	18	28,134	-54.7	-68.2	29	8.9	26	28,219	-52.9	-68.2	30	+0.6	28,188	-53.9	-68.2	04	5.9	28,198	-52.9	-68.2	28	6.5	26	28,364	-46.5	-69.9	14
10	10	30,768	-49.4	-68.2	29	14	30	31,877	-51.6	-68.2	30	+0.4	31,795	-50.4	-68.2	04	7.2	31,805	-49.4	-68.2	28	8.5	26	31,076	-41.7	-68.2	28

SFC	SAULT STE MARIE, MI 987 MB					SPOKANE, WA 937 MB					TAMPA BAY, FL 917 MB					TOPEKA, KS 917 MB					TRUK, CAROLINE IS. 1009 MB							
	TUCSON, AZ 926 MB					VANDENBERG AFB, CA 1008 MB					WILLISTON, ND 916 MB					WICHITA, TX 1016 MB					WAKE IS., PACIFIC AREA 1013 MB							
	769	8.1	-6.7	14	2.3	30	100	10.3	5.2	02	1.1	30	33	9.4	7.1	03	1.3	29	5.23	23.3	07	6.5	30	4	9.6	6.9	28	.5
SFC	30	1,030	12.4	-4.6	13	3.0	31	1,049	12.2	-2.3	25	3.2	30	1,050	10.9	-7	21	1.2	29	1,038	18.6	0.7	10.4	30	1,051	8.1	24.3	23.8
1000	30	1,508	10.5	-5.9	13	1.3	30	1,526	10.1	-6.3	25	2.9	30	1,526	9.7	-4.6	25	3.6	29	1,528	15.8	1.8	9.3	30	1,522	6.3	-4.6	24
950	30	2,059	7.3	-7.6	27	1.5	30	2,028	8.0	-6.3	33	4.6	2,027	7.2	-5.9	26	4.6	2,042	13.7	6.8	0.8	30	2,018	5.4	-7.9	24.8		
900	30	2,409	7.3	-7.6	27	1.5	30	2,423	8.0	-6.3	33	5.6	2,423	7.2	-5.9	26	6.4	2,454	13.7	6.8	0.8	30	2,436	3.4	-12.2	20.9		
850	30	2,850	4.4	-9.4	27	1.6	30	2,852	5.5	-6.6	33	6.5	2,852	4.4	-6.6	26	7.4	2,879										

RAWINSONDE DATA

Average monthly values

NOVEMBER 1979

WASHINGTON DULLES INT. AP 1010 MB				WAYCROSS, GA 1014 MB				WEST PALM BEACH, FL 1017 MB				WINNEBUCKA, NV 873 MB				WINSTON-SALEM, NC 054 MB						
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C +	Resultant Wind Speed m.p.s.	Direction tens of deg.	Dew Point °C +	No. of observations	Resultant Wind Speed m.p.s.	Direction tens of deg.	Dew Point °C +	No. of observations	Resultant Wind Speed m.p.s.	Direction tens of deg.	Dew Point °C +	No. of observations	Resultant Wind Speed m.p.s.	Direction tens of deg.	Dew Point °C +	No. of observations	Resultant Wind Speed m.p.s.	Direction tens of deg.	
SFC	29	85	5.2	2.6	24	1.9	30	164	4.4	10.7	9.3	32	1.6	30	150	2.0	17.9	9	30	1,512	-3.5	
1000	27	176	8.0	1.9	25	1.5	30	164	4.2	9.2	6.2	02	1.0	30	150	2.2	17.9	9	30	1,487	-2.2	
950	29	593	8.3	1.9	25	1.4	30	598	13.9	6.7	13	3.0	3.0	160	19.0	1.0	16.0	9	30	1,487	-5.7	
900	29	1,039	6.3	-1.7	26	6.7	30	1,053	11.7	3.1	22	2.3	3.0	1,058	16.0	12.0	1.0	3.7	30	1,487	+8	
850	29	1,506	4.6	-3.5	26	8.1	30	1,530	10.5	-2.9	23	4.9	1.0	1,543	13.7	7	7.8	11	2.5	30	1,521	-1.0
800	29	1,973	2.9	-5.3	26	9.5	30	2,010	9.5	-2.1	24	5.6	2.0	2,014	12.1	-1.3	1.0	16.0	2.4	30	1,509	-9.7
750	29	2,521	1.2	-7.0	26	11.9	30	2,566	7.8	-10.1	24	5.4	2.0	2,572	10.3	-2.6	1.9	16.0	2.8	30	1,487	2.8
700	29	3,074	-1.0	-15.9	24	14.6	30	3,134	-5.1	-14.0	24	8.4	3.0	3,164	7.6	-5.1	1.0	16.0	3.0	30	1,487	-17.4
650	29	3,663	-4.0	-19.2	24	16.5	30	3,735	-1.8	-18.1	25	8.6	3.0	3,771	4.4	-11.8	25	2.3	29	3,656	-19.3	
600	29	4,290	-7.6	-22.4	24	17.5	30	4,375	-2.3	-21.1	25	10.6	4.0	4,418	-5.5	-15.4	25	4.0	29	4,277	-19.3	
550	29	4,962	-11.7	-25.3	24	19.4	30	5,061	-6.7	-24.5	25	12.0	5.6	5,110	-10.6	-20.2	25	5.4	29	4,941	-25.9	
500	29	5,685	-15.6	-29.9	24	21.0	30	5,797	-11.9	-26.5	25	14.0	5.0	5,857	-7.9	-25.0	25	7.4	29	5,655	-19.9	
450	29	6,471	-21.0	-33.5	25	24.5	30	6,595	-17.4	-32.3	25	17.0	6.0	6,668	-13.7	-28.9	27	9.3	29	6,529	-29.9	
400	29	7,331	-27.0	-39.2	25	26.5	30	7,467	-23.7	-37.4	25	19.3	7.0	7,552	-19.8	-34.7	27	13.0	29	7,274	-31.0	
350	29	8,282	-34.0	-43.4	25	26.8	30	8,431	-30.9	-42.0	25	22.1	8.5	8,532	-27.2	-40.6	26	14.6	29	8,209	-38.3	
300	29	9,341	-42.0	-48.9	25	28.2	30	9,508	-38.9	-49.3	25	25.8	9.0	9,622	-35.3	-47.3	27	18.9	29	9,244	-43.7	
250	29	10,554	-50.2	-56.2	25	28.5	30	10,731	-47.4	-52.0	25	32.0	10.6	10,866	-44.9	-53.5	26	23.1	29	10,442	-53.5	
200	29	11,915	-55.7	-61.0	25	30.1	30	11,767	-56.4	-58.6	25	38.3	12.2	12,222	-55.4	-61.0	26	27.3	29	11,862	-57.4	
175	29	2,822	-60.1	-65.3	25	30.3	30	13,016	-60.4	-62.5	26	36.6	13.1	13,404	-58.6	-62.0	26	27.3	29	12,791	-56.5	
150	29	13,762	-61.3	-67.5	25	29.0	30	13,762	-61.3	-67.5	25	29.4	14.2	13,675	-58.6	-62.0	29	27.3	29	12,791	-58.1	
125	29	11,911	-62.2	-68.2	25	25.6	30	15,072	-67.7	-72.7	25	28.4	20.8	16,208	-69.9	-72.7	26	23.4	27	14,815	-72.9	
100	29	16,285	-63.5	-72.2	25	20.4	30	16,405	-70.2	-72.2	25	21.3	29	16,524	-72.9	-72.9	26	16.9	26	16,208	-59.5	
90	29	17,653	-63.0	-72.7	25	14.0	30	17,732	-69.4	-72.7	25	14.2	29	17,832	-72.0	-72.0	27	7.4	26	17,600	-60.5	
70	29	18,476	-62.3	-73.0	25	11.6	30	18,535	-66.7	-72.7	25	9.7	29	18,625	-68.9	-72.7	28	3.4	26	18,352	-60.3	
60	29	19,429	-62.0	-73.0	25	10.2	30	19,471	-64.7	-72.7	25	6.2	29	19,556	-65.5	-72.7	25	4.5	29	19,397	-60.0	
50	29	20,558	-61.4	-73.0	26	9.1	30	23,591	-62.3	-72.7	26	5.2	29	20,676	-61.3	-72.7	23	4.5	29	20,535	-59.9	
40	29	21,943	-61.2	-73.0	27	5.5	30	21,976	-60.4	-72.7	28	5.8	29	22,070	-58.5	-72.7	33	1.9	29	21,936	-58.3	
30	29	23,734	-60.1	-73.0	28	5.7	30	23,780	-57.9	-72.7	28	8.3	29	23,894	-56.0	-72.7	30	2.6	29	23,755	-56.3	
25	29	24,875	-59.1	-73.0	30	6.3	30	24,933	-56.8	-72.7	27	9.8	28	25,065	-53.3	-72.7	28	5.0	23	24,919	-55.0	
20	29	26,280	-57.0	-73.0	29	6.2	29	26,357	-54.9	-72.7	27	13.8	26	26,506	-51.1	-72.7	27	8.0	26	26,360	-53.9	
15	29	26,103	-55.6	-73.0	27	10.3	26	28,203	-53.0	-72.7	27	18.4	25	28,385	-49.8	-72.7	26	13.1	26	28,219	-52.2	
10	29	30,699	-52.6	-73.0	29	11.2	23	30,846	-48.7	-72.7	26	25.5	17	31,050	-46.2	-72.7	27	2.2	26	30,865	-50.7	
7	7	5	3,166	-46.1	7	33,430	-41.8	7	33,430	-56.8	7	33,430	-56.8	7	33,430	-56.8	7	33,430	-56.8	7	33,430	-56.8

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

NOVEMBER 1979

Date	Sun's zenith distance								Date	Sun's zenith distance										
	A.M.				*	P.M.				A.M.				*	P.M.					
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°		60.0°	70.7°	75.7°	78.7°		60.0°	70.7°	75.7°	78.7°		
MAUNA LOA OBSERVATORY, HI																				
Air mass																				
3.34 2.67 2.01 1.34 * 1.34 2.01 2.67 3.34																				
6-----	1.11	1.21	1.35	1.51	1.63	----	----	----	----	----	----	----	----	----	----	----	----			
10-----	1.21	1.30	1.39	1.51	1.61	1.48	1.37	1.29	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21			
11-----	1.22	1.32	1.41	1.52	1.60	1.50	1.39	1.30	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22			
21-----	1.25	1.33	1.42	1.53	----	----	----	----	----	----	----	----	----	----	----	----	----			
30-----	----	----	----	----	1.62	1.52	1.41	1.33	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24			
Aver-	1.20	1.29	1.39	1.52	1.61	1.50	1.39	1.30	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22			
ages																				
TUCSON, AZ																				
Air mass																				
4.64 3.71 2.78 1.86 * 1.86 2.78 3.71 4.64																				
1-----	.98	1.05	1.19	1.37	1.47	1.35	1.18	1.07	.98	.98	.98	.98	.98	.98	.98	.98	.98			
2-----	1.01	1.09	1.22	1.36	1.47	1.38	1.22	1.08	.94	.94	.94	.94	.94	.94	.94	.94	.94			
3-----	1.02	1.12	1.23	1.38	1.47	1.34	1.22	1.08	.94	.94	.94	.94	.94	.94	.94	.94	.94			
4-----	.98	1.10	1.21	1.35	1.46	1.33	1.18	1.06	.92	.92	.92	.92	.92	.92	.92	.92	.92			
5-----	.97	1.09	1.19	1.35	1.46	1.34	1.17	1.06	.92	.92	.92	.92	.92	.92	.92	.92	.92			
6-----	----	----	----	----	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43			
7-----	.96	1.06	1.18	1.34	1.39	1.30	1.19	1.05	.95	.95	.95	.95	.95	.95	.95	.95	.95			
8-----	.89	1.00	1.13	1.30	1.42	1.32	1.20	1.09	.97	.97	.97	.97	.97	.97	.97	.97	.97			
9-----	1.01	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11			
10-----	1.01	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11			
11-----	1.01	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11			
12-----	1.01	1.11	1.27	1.43	1.52	1.43	1.28	1.16	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03			
13-----	1.13	1.23	1.33	1.46	1.52	1.42	1.24	1.14	.92	.92	.92	.92	.92	.92	.92	.92	.92			
14-----	----	----	1.24	----	----	----	----	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10			
15-----	.97	1.08	----	----	1.41	1.30	1.12	.98	.89	.89	.89	.89	.89	.89	.89	.89	.89			
16-----	.88	1.00	1.12	1.27	1.38	1.25	1.09	.94	.83	.83	.83	.83	.83	.83	.83	.83	.83			
17-----	.90	----	----	----	----	----	----	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04			
18-----	.91	.98	1.13	1.30	1.37	1.33	1.15	1.01	.88	.88	.88	.88	.88	.88	.88	.88	.88			
20-----	.99	1.10	1.21	1.36	1.53	1.44	1.29	1.16	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03			
21-----	.99	1.11	1.26	1.41	1.46	1.35	1.19	1.03	.92	.92	.92	.92	.92	.92	.92	.92	.92			
22-----	.94	1.05	1.20	1.35	1.46	1.40	1.29	1.18	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08			
23-----	----	----	1.24	----	----	----	----	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
24-----	1.05	1.15	1.25	1.40	1.48	1.38	1.24	1.11	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01			
25-----	1.02	1.12	1.25	1.36	1.46	1.38	1.24	1.12	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01			
26-----	1.02	----	----	----	1.46	----	1.25	1.12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
27-----	1.02	1.12	1.24	1.37	1.44	1.36	1.18	1.07	.96	.96	.96	.96	.96	.96	.96	.96	.96			
28-----	.92	1.01	1.17	1.35	1.43	1.34	1.20	1.07	.96	.96	.96	.96	.96	.96	.96	.96	.96			
29-----	.97	1.08	1.21	1.38	1.41	1.33	1.20	1.08	.96	.96	.96	.96	.96	.96	.96	.96	.96			
30-----	----	1.07	1.21	----	----	1.33	1.20	1.04	.97	.97	.97	.97	.97	.97	.97	.97	.97			
Aver-	ages	.98	1.08	1.21	1.36	1.45	1.35	1.20	1.08	.97	.97	.97	.97	.97	.97	.97	.97			

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langley	-11	-10	-18	-12	-11	-13	-13	-10	-17	-12	-8	-11	M -13	-12	-3	0	28	-8	-8	-6	1	2	1	2	1	7	-2	-1	1	4	-58	

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES:

Dates in the table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

+ And also on an earlier date or date.

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch of water equivalent to every 10 inches of snow fall.

CLIMATOLOGICAL DATA - METRIC UNITS: Data from airport unless otherwise specified.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.

Y Peak Cust.

+ And also on an earlier date or dates.

U Indicates Urban site.

R Indicates Rural site.

Ø Station pressures apply to elevations shown in the "Elevations" table of the annual issue of this publication.

Conversion formulae to English Units are as follows:

1 foot = 0.3048 meters

$^{\circ}\text{F.} = \frac{9}{5} \times ^{\circ}\text{C} + 32$

5

1 inch = 25.4 millimeters

1 mile per hour = 0.447 meters per second

HEATING DECREE DAYS: Data from airport unless otherwise specified.

U Indicates Urban site.

R Indicates Rural site.

COOLING DECREE DAYS: Data from airport unless otherwise specified.

U Indicates Urban site.

R Indicates Rural site.

STORM SUMMARY:

o Includes crop damage.

C Crop damage.

* No occurrence of storms or unusual weather phenomena reported.

@ Includes heavy sleet storm.

Freezing drizzle and freezing rain, commonly known as glaze.

Ø For breakdown of "All Others," and for detailed listing of other storms, see the Environmental Data and Information Service, NOAA, monthly publication STORM DATA.

† No Storm Data Report received for this State.

◇ Report Incomplete.

+ Storm damages are placed in categories varying from 1 to 9 as follows:

1 Less than \$50

2 \$50 to \$500

3 \$500 to \$5,000

4 \$5,000 to \$50,000

5 \$50,000 to \$500,000

6 \$500,000 to \$5 Million

7 \$5 Million to \$50 Million

8 \$50 Million to \$500 Million

9 \$500 Million to \$5 Billion

RAWINSONDE DATA (Average Monthly Values):

All observations scheduled at 1200, C.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C . Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon. The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygrometers. These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 C.C.T.

+ Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

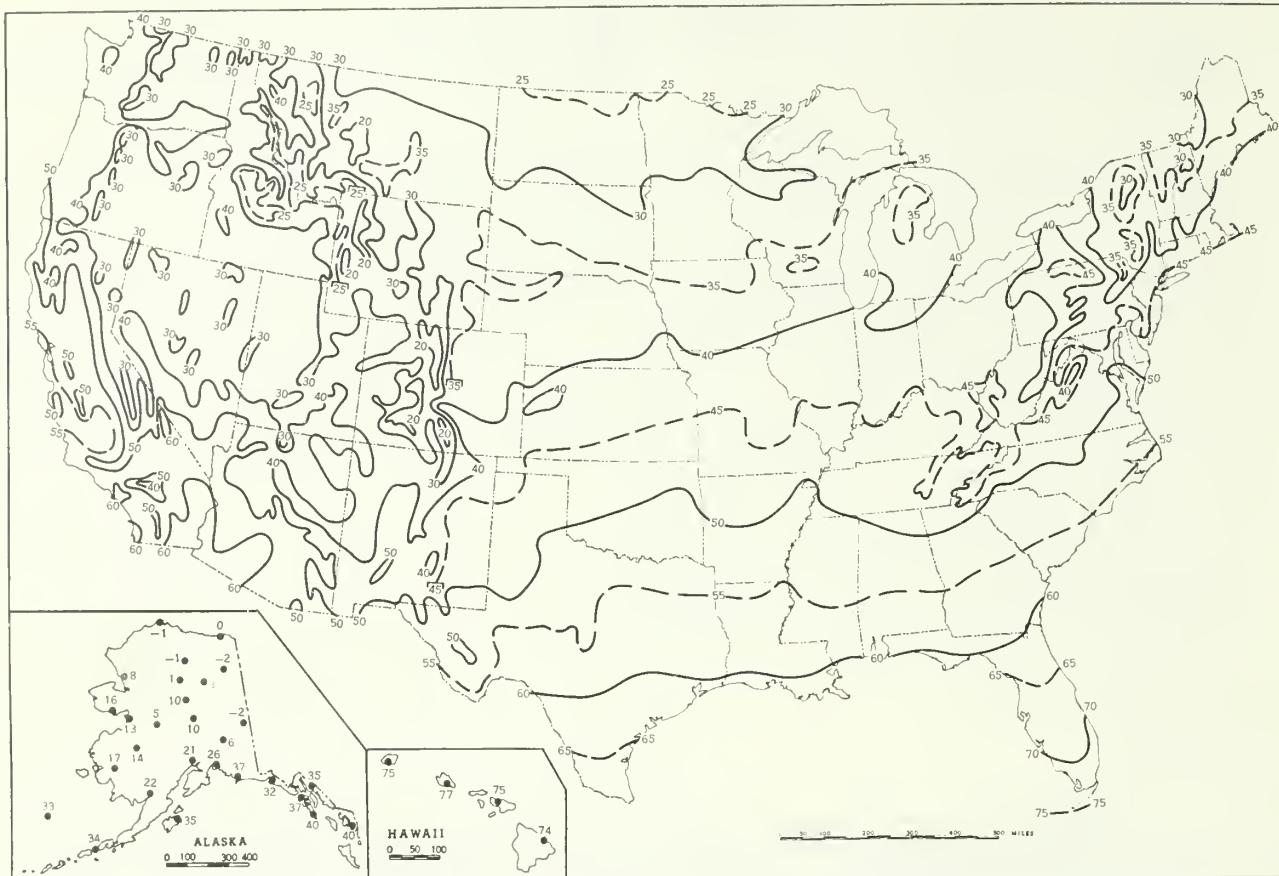
SOLAR RADIATION INTENSITIES: Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

(O)	Clouds Present	DM	Moderate Dust	HM	Moderate Haze	KS	Slight Smoke
*	Values corresponding to true solar noon	DS	Slight Dust	HS	Slight Haze	M	Moderate Haze-indeterminate
BD	Blowing Dust	F	Fog	I	Intense Haze-indeterminable		
BN	Blowing Sand	CF	Ground Fog	K	Smoke	N	Sand
D	Dust	H	Haze	KI	Intense Smoke	S	Slight Haze-indeterminable
DI	Intense Dust	HI	Intense Haze	KM	Moderate Smoke		

NET RADIATION: The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

The data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

Chart 1. A. Normal Daily Average Temperature ($^{\circ}\text{F}$. 1941-70), November.



B. Temperature Departure from 30 - Year Mean ($^{\circ}\text{F}$ 1941-70), November 1979

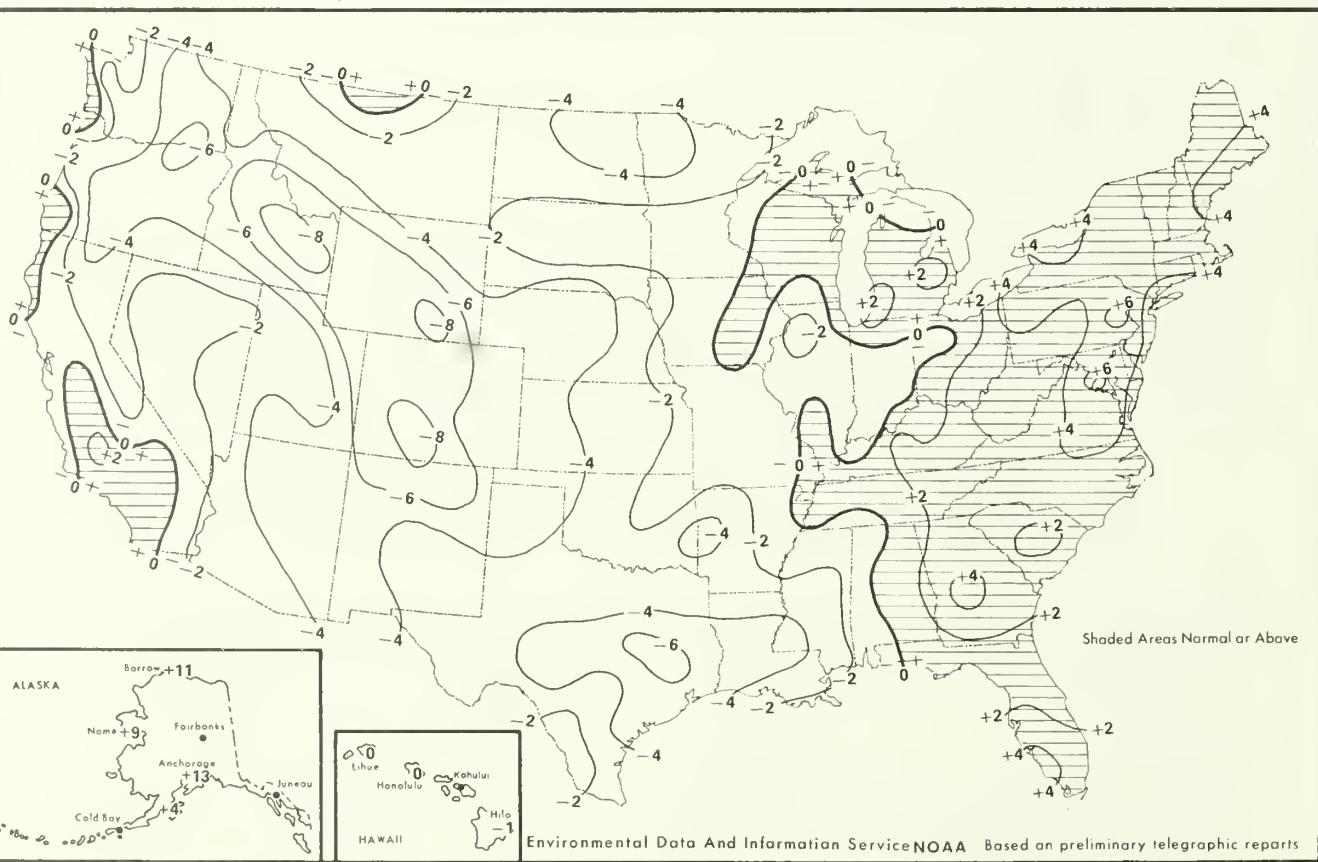
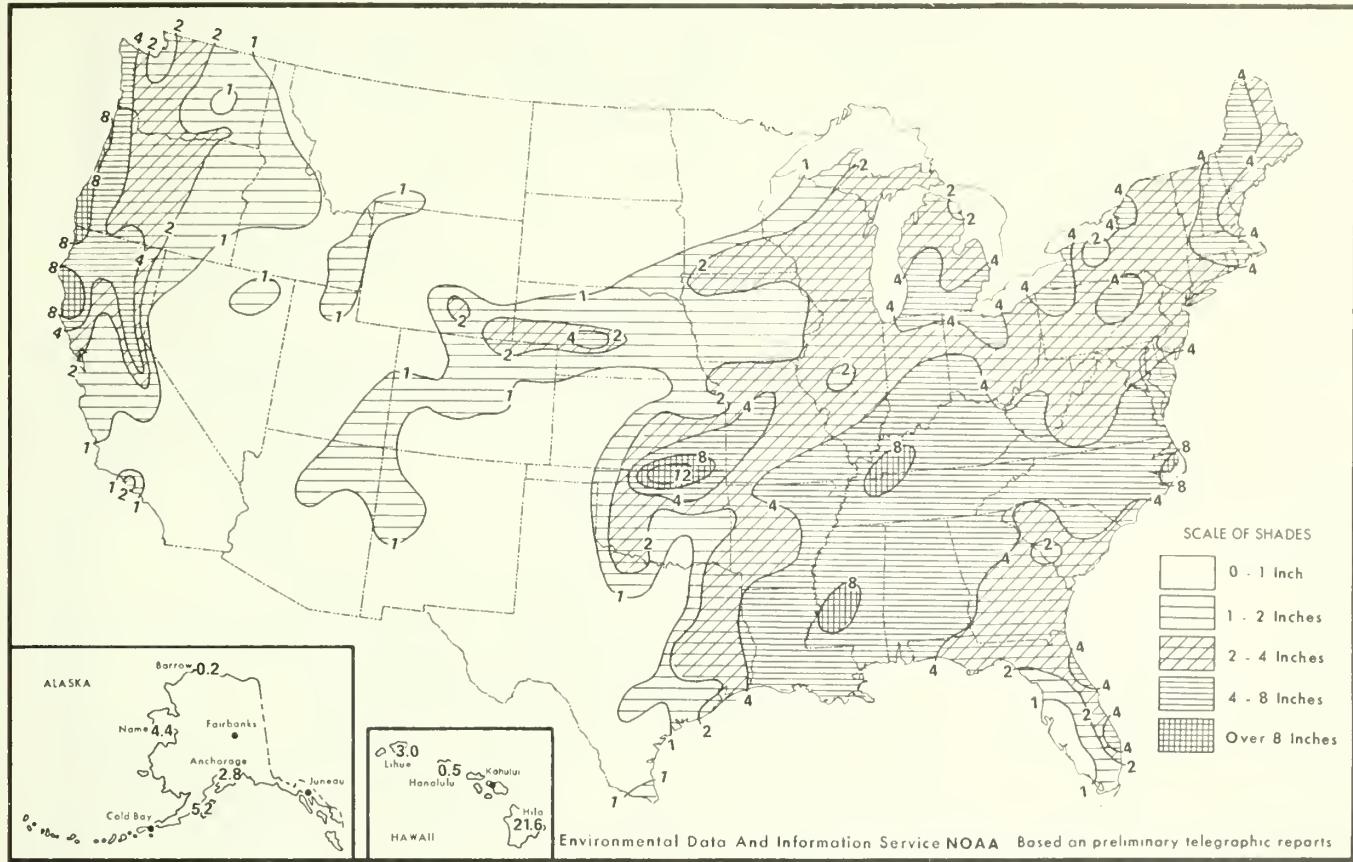


Chart II. A. Total Precipitation (Inches), November 1979



B. Percentage of Normal Precipitation, November 1979

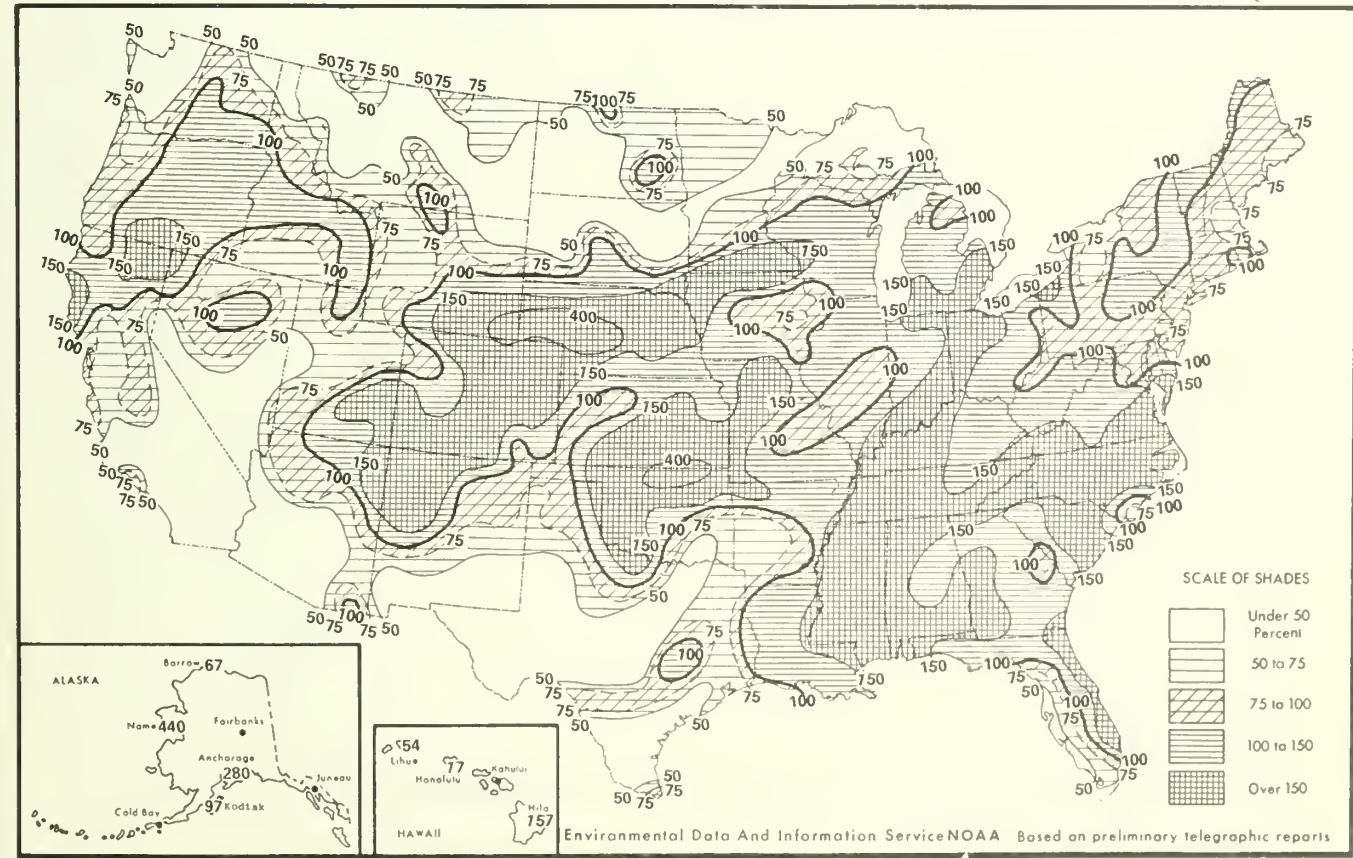
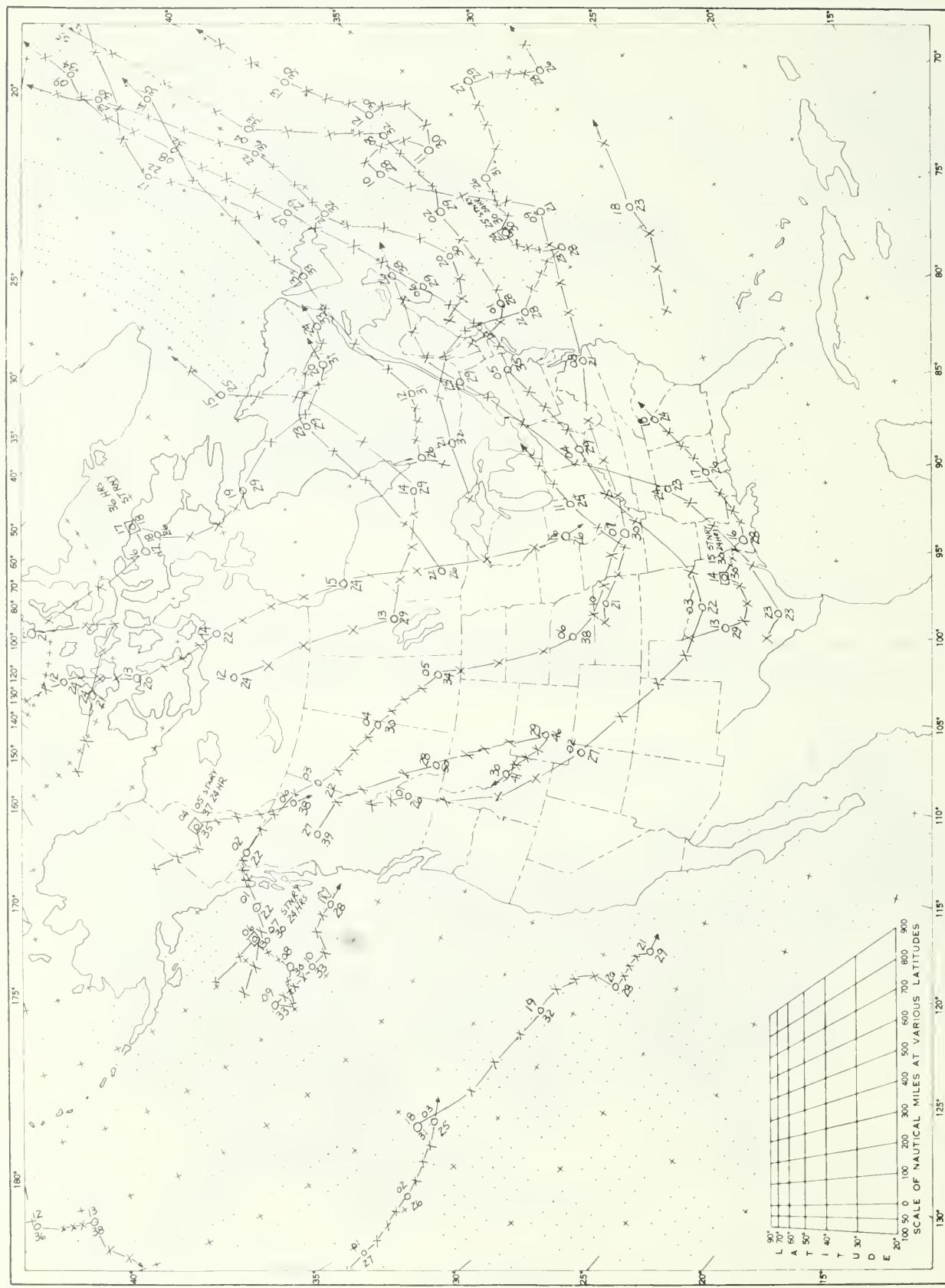
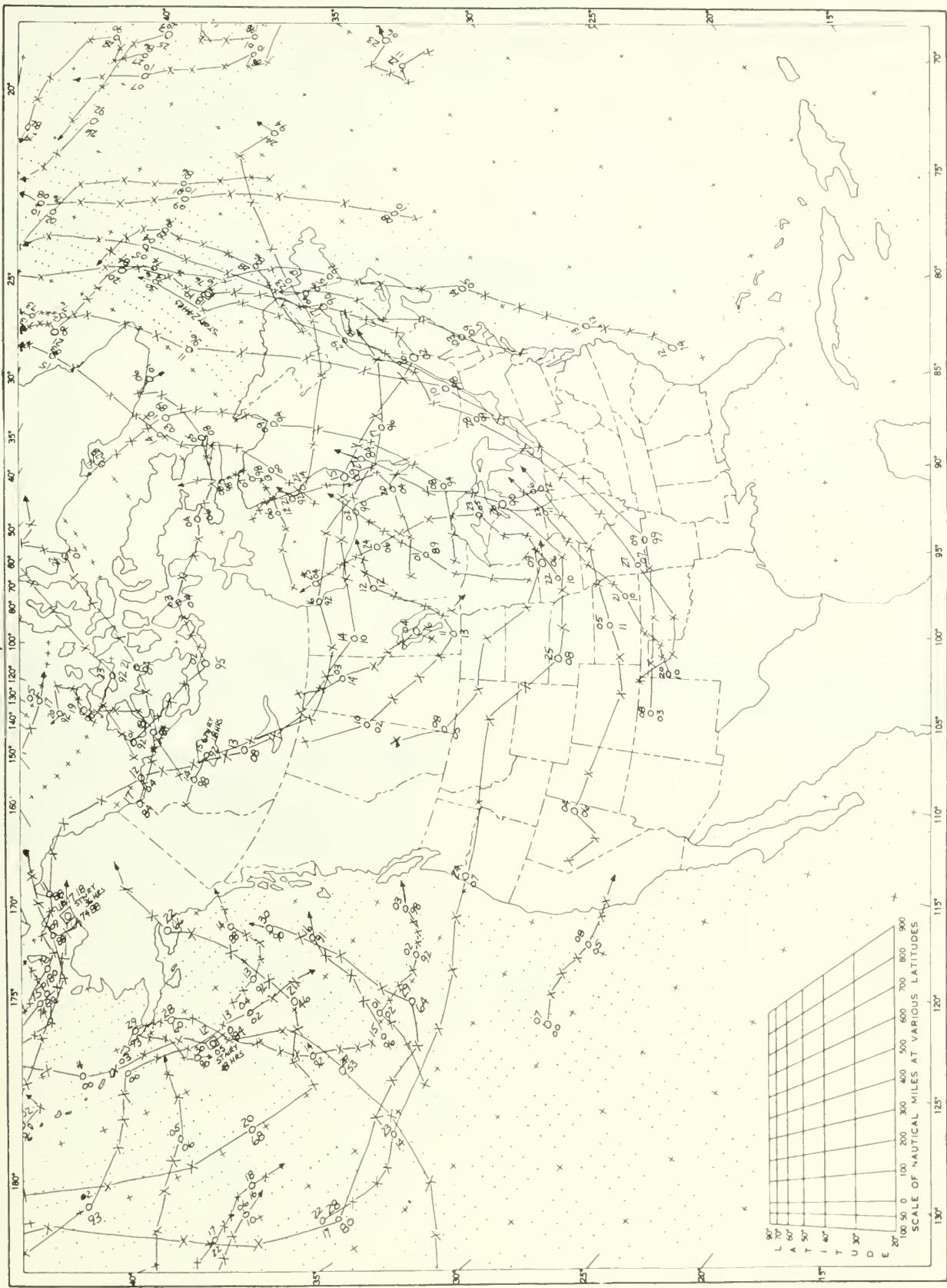


Chart III. Tracks of Centers of Anticyclones at Sea Level, November 1979



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IV. Tracks of Centers of Cyclones at Sea Level, November 1979



USCOMM-NOAA-ASHEVILLE, N.C. 1980-2070

Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

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DECEMBER 1979

VOLUME 30

NUMBER 12

CLIMATOLOGICAL DATA

NATIONAL SUMMARY



"I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF
THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRA-
TION AND IS COMPILED FROM INFORMATION RECEIVED AT
THE NATIONAL CLIMATIC CENTER, ASHEVILLE, NORTH
CAROLINA 28801."

Daniel B. Mitchell

DIRECTOR
NATIONAL CLIMATIC CENTER

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

DECEMBER 1979

GENERAL SUMMARY OF WEATHER CONDITIONS

Lyle Denny, Climatologist
Environmental Data and Information Service, NOAA

HIGHLIGHTS: The heaviest precipitation areas ranged from Texas through the Great Lakes, from central California through Washington, and in the southeast. It was late in the month when heavy snow fell in the Cascades, the Sierras, and the central Rockies; the deep snow was most welcome in those snow-free areas. The dry parts of western Texas were soaked by more than 2.5 inches of moisture, generally in the form of snow. Much of the Nation recorded less than the normal amount of precipitation. Temperatures averaged well above normal in much of the Nation. Parts of the northern Plains were as much as 10° warmer than normal.

Early in December, a low pressure system moving through the Great Lakes deposited large amounts of snow. The areas along the southern shores of the eastern Lakes accumulated over 20 inches in the first 2 days of the month.

The week of the 3d-9th was unusually warm in the west. A high pressure system centered in the Rockies, brought warm breezes through California from the south and colder air into the Plains from the north. Contrasting temperatures showed record low readings in the Plains and the south and record highs in the west. Precipitation during the period was confined to heavy rains in the southeast with lesser amounts all along the East Coast, snow in the Great Lakes area, and heavy rain in the Pacific Northwest.

In the following week, the 10th-16th, the warm weather moved to the eastern United States. Readings in the 60°'s were recorded in the Great Lakes area and Maine. Later in the week, a mass of cold air dropped southward through Montana plunging temperatures from record highs to record lows.

Rain amounts increased in the Pacific Northwest during this week. Amounts of 5 or more inches resulted

in flooding in Washington from the Cascades to the coast. Elsewhere, a frontal system moving eastward encountered moisture from southern New Mexico northeastward, and rain or snow fell all along the front as it tracked eastward. The previously dry areas in southern New Mexico and western Texas got up to 2 inches of moisture, mostly in the form of snow. The rain became heavier as the front moved further into the moist air. From 2 to 5 inches fell from the lower Mississippi Valley through Kentucky, and substantial amounts extended into Pennsylvania.

Precipitation was more widespread in the third week of the month, the 17th-23d. The moisture in the west spread to southern California and into the Rockies. Cooler air at the end of the week allowed snow to accumulate in the mountains. In the east, after a cold beginning, temperatures warmed by week's end and heavy showers, thunderstorms, and even tornadoes occurred in the lower Mississippi Valley on the 22d.

The last week of the month and year was a wet one in most of the Nation. Snow fell in the Cascades, the Sierras, the central Rockies, and the west central Plains and was welcome in these snowless areas. However, snow was scarce elsewhere. Beneficial rain fell on central Texas, Oklahoma, and eastern Kansas, and rainy weather enveloped the region from the Mississippi River to the east coast. Most of the Nation was warmer than normal. Average temperatures for the week were as much as 15° warmer than normal in the northern Plains. However, freezing temperatures did reach as far south as northern Florida in the latter part of the week.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

DECEMBER 1979

STATE	Temperature						Precipitation					
	Monthly extremes						Monthly extremes					
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least		
		°F			°F			In.				In.
Alabama	Brantley	79	13	Saint Bernard	10	18	Evergreen	5.00	Hightower	.79		
Alaska	Ketchikan	55	28	Allakaket	-59	24	Pelican	26.81	Lonely	D .01		
Arizona	2 Stations	87	4	Hawley Lake	-10	29	Tonto Creek F H 2	2.54	4 Stations	.00		
Arkansas	2 Stations	75	12+	3 Stations	1	18+	Amity 3 NE	7.34	Greenforest	.91		
California	2 Stations	95	5+	Bridgeport	-20	28	Lake Spaulding	15.31	10 Stations	.00		
Colorado	4 Stations	76	5+	Taylor Park	-31	29	Wolf Creek Pass 1 E	5.44	2 Stations	.10		
Connecticut	West Thompson Lake	67	13	2 Stations	1	19+	Norfolk 2 SW	3.30	West Thompson Lake	1.96		
Delaware	2 Stations	68	12	Milford 2 WSW	17	18	Georgetown 5 SW	1.74	Middletown 1 WSW	1.37		
Florida	2 Stations	87	24+	Smith Creek	17	1	St Augustine WFOY	7.28	Deland 1 SSE	.46		
Georgia	2 Stations	82	13	Blairsville Exp Station	8	3	Valdosta 3 E	6.61	Atlanta Bolton	.67		
Hawaii	Pukohola Heiau 98.1	91	12	Mauna Kea Obs 111.2	20	27	Manoa Lyon Arboretum	16.25	2 Stations	.00		
Idaho	Three Creek	64	17+	Island Park Dam	-30	11	Sandpoint KSPT	D 7.19	Leadore 2	T		
Illinois	Cahokia	70	6	Rochelle	-8	17	Anna 1 E	4.08	Moweaqua	.55		
Indiana	2 Stations	68	12+	Kewanna 7 NW	-5	18	Crane Naval Depot	4.13	Hobart	1.01		
Iowa	6 Stations	63	10+	Estherville 2 N	-12	16	De Witt	2.82	2 Stations	T		
Kansas	Syracuse 2 W	78	4	Hunter	-7	17	Wichita WSO AP	1.99	8 Stations	.00		
Kentucky	6 Stations	70	13+	3 Stations	8	17+	Caneyville	7.42	Elkhorn City	1.65		
Louisiana	3 Stations	81	13+	Converse	9	18	LSU Dean Lee Exp Station	9.01	Gonzales	2.21		
Maine	Saco	67	12	Van Buren 2	-25	21+	Woodland	3.67	Long Falls Dam	1.64		
Maryland	Cumberland 2	73	11	Oakland 1 SE	-2	3	Mc Henry 2 NW	2.85	Assateague State Park	.41		
Massachusetts	Chester 2	72	12	Chester 2	-13	20	Amherst	4.00	Rockport 1 ESE	.95		
Michigan	2 Stations	61	11	Crystal Falls 6 NE	-15	17	South Haven Exp Farm	3.88	Barraga 5 WNW	.36		
Minnesota	2 Stations	57	11	Tower 3 S	-30	12	Winona	1.02	11 Stations	T		
Mississippi	2 Stations	79	12+	2 Stations	10	18	Natchez	6.42	Crawford 5 W	2.12		
Missouri	Dora	74	6	Coil Camp 9 SE	-6	17	Wappapello Dam	4.67	2 Stations	T		
Montana	2 Stations	72	4	Ingomar 11 NE	-41	16	Many Glacier	10.79	15 Stations	T		
Nebraska	Beaver City	75	4	Nenzel 20 S	-20	16	Ravenna	.99	Merriman	.00		
Nevada	Sunrise Manr Las Vegas	80	5	Mountain City Ranger Station	-15	23	Glenbrook	D 5.73	6 Stations	.00		
New Hampshire	Durham	68	12	Mount Washington	-25	17	Pinkham Notch	3.51	Milford	1.16		
New Jersey	2 Stations	71	13	2 Stations	-1	22+	Tuckerton	3.39	Shiloh	1.35		
New Mexico	2 Stations	79	10+	Eagle Nest	-20	29	El Morro Natl Mon	1.93	2 Stations	.00		
New York	3 Stations	68	13+	Old Forge	-18	19	West Seneca 1 NE	4.65	Watertown FAA AP	.32		
North Carolina	3 Stations	76	23+	2 Stations	2	3+	Cape Hatteras WSO	5.19	Louisburg	.58		
North Dakota	3 Stations	67	5+	2 Stations	-28	16	Forbes 9 NNW	.90	2 Stations	.00		
Ohio	Portsmouth	70	12	Plymouth 2 WSW	-2	3	Dorset	7.16	Lancaster 2 NW	1.25		
Oklahoma	2 Stations	78	12+	Mannford 6 NW	-1	17	Valliant 3 W	7.13	4 Stations	T		
Oregon	Silver Creek Falls	75	17	2 Stations	-3	28+	Nehalem 9 NE	22.61	Christians Valley	T		
Pennsylvania	Mercersburg 1 E	70	13+	Bakerstown 3 WNW	1	18	Erie WSO AP	4.90	Morgantown	.61		
Puerto Rico	2 Stations	93	18+	Adjuntas Substation	46	26	Pico Del Este	11.35	Santa Rita	.00		
Rhode Island	Providence WSO AP	69	12	North Foster 1 E	1	19	Newport	2.84	Kingston	1.54		
South Carolina	Summerville 4 NW	81	13	Caesars Head	11	17	Walterboro 2 SW	5.98	Woodruff 5 NW	.95		
South Dakota	2 Stations	74	18	Deerfield 4 NW	-30	16	Deerfield 4 NW	.95	2 Stations	.00		
Tennessee	Erwin 2 SW	75	13	2 Stations	6	18+	Savannah	7.34	Erwin 2 SW	1.46		
Texas	3 Stations	87	12	Lipscomb	2	17	Bronson	7.41	7 Stations	.00		
Utah	Garrison	72	4	Scofield	-21	12	Monticello	1.75	3 Stations	.00		
Vermont	Ball Mountain Lake	63	13	Enosburg Falls	-20	19	Mount Mansfield	D 4.26	Bristol 5 NNW	.92		
Virginia	Colonial Beach	74	24	Mt Lake Biological Station	1	17	Pennington Gap	3.42	2 Stations	.45		
Virgin Islands	Truman Field FAA AP	89	24+	Dorothea AES	61	26	Ham Bluff L H Station	6.29	Cruz Bay	1.66		
Washington	Mud Mountain Dam	65	18	Chesaw 4 NNW	5	16	Forks 1 E	40.12	Richland	.38		
West Virginia	Martinsburg FAA AP	74	12	Canaan Valley	-3	3	Corton	3.92	Cacapon State Park 2	.73		
Wisconsin	2 Stations	58	10	3 Stations	-15	17+	West Allis	2.66	2 Stations	.08		
Wyoming	2 Stations	69	4	Recluse 14 NNW	-32	16	Cheyenne WSFO AP	1.50	8 Stations	T		

CLIMATOLOGICAL DATA
METRIC UNITS

DECEMBER 1979

State and Station	Elevation (ground)	Pressure		Temperature				Precipitation				Wind				No. of days (sunrise to sunset)													
		Sea level	mb	Date	Highest	°C	°C	Total	mm	mm	mm	mm/s	mm/s	mm	mm	mm	No. of days (sunrise to sunset)												
								Departure from normal	With thunderstorms	Departure from normal	Resultant speed	Cloudy, partly cloudy, 4/7	Precip. 0-3	Precip. 4/7	Sky cover, feet to sunset	Possible sunshine %													
ALABAMA	207	1000.0	1023.0	12·7	1·6	7·2	-1·4	22·2	12	-6·7	18	0	12	50	-87	19	10	34	10·1	27	25*	9	7	15	6·2				
FIRMINGHAM U	169	1000.0	1023.0	13·6	1·9	7·7	-0·7	22·2	12	-7·2	18	0	13	56	-93	7	0	0	0·3	0·1	4	10·1	16	25	1	4	64		
GILMINGHAM	197	999.3	1022.0	11·4	-0·4	5·4	-0·4	20·6	12	-9·4	18	0	19	56	-61	24	9	0	0	1·3	3	10·3	35	17	6	17	6·5		
HUNTSVILLE	64	1114.2	1022.4	16·6	4·9	10·7	-0·9	24·4	13	-5·6	18	0	7	59	-55	8	1	0	0	0	1	13·0	24	10	5	16	6·2		
MARPLE	59	1015.2	1022.7	15·9	3·8	9·8	-0·7	25·6	12	-5·0	16*	0	10	1·7	62	-53	7	0	0	0·6	1	13·0	24	10	5	16	4·9		
MONTGOMERY																													
ALASKA	15	999.0	1000.1	-8·5	-15·9	-12·2	-1·7	-26·7	31	-15·4	6	0	21	-29	2	9	15	0	406	293	1·7	12·5	35	12	8	5	18	6·7	
ANCHORAGE	34	1000.0	1025.0	-5·6	-5·6	-27·3	-2·4	-12·1	14	-12·1	14	0	12	-6	83	31	2·0	2·0	333	152	2·0	15·6	16	25	1	4	26	8·9	
ANCHORAGE	9	1113.9	1014·2	-21·4	-21·4	-24·9	-0·2	-5·6	14	-35·4	31	0	31	-22·0	61	6	0	0	53	203	2·0	15·6	28	15*					
BARROO	12	1112.2	1014·3	-22·6	-22·6	-25·7	-1·1	-7·8	15*	-36·7	22	0	31	-19·0	77	6	0	0	5	3	3·8	27	20·4	26	15				
EASTER ISLAND	38	1002.4	1016.7	-16·6	-21·6	-18·0	-0·7	-17·7	29	-31·7	29	0	31	-11·0	65	12	0	0	523	381	2·0	23·2	16	3	15	6	10	4·4	
PHILIPINES	196	687·5	1014·6	-26·0	-31·5	-30·7	-3·0	-4·8	23*	-42·2	13	0	31	-8	4	10	0	0	330	914	1·1	35							
POLINESIA	566	-19·3	-28·6	-23·9	-3·6	-23·9	-0·7	-3·9	4	-42·2	13	0	31	-5	4	10	0	0	154	154	1·1	35							
BALI DELTA	29	1013·1	1006·7	-19·4	-21·4	-24·9	-0·2	-2·9	3	-16·3	30	0	29	-6·7	77	5	-6	17	19	0	267	12	1·6	30	21·5	3	2	9	21·7·9
CULIBAY	133	999·6	1011·9	-19·0	-21·6	-25·4	-0·4	-1·1	4	-38·9	33	0	31	-15·0	63	12	-4	14	14	0	275	2·0	34	25	4	7	17	6·9	
FAIRBANKS	477	-16·3	-21·6	-22·9	-2·3	-2·3	-0·8	-0·8	31	-20·0	31	0	31	-16·1	62	12	0	0	416	457	1·1	34							
GULFARIA	17	-3·8	-11·1	-5·7	-5·7	-5·7	-0·5	-1·1	4	-16·1	24	0	31	-20·0	15*	21	-6	0	134	75	2·0	22·9	12	10	6	15	5·9		
HONOLULU	4	1004·6	-10·4	-5·0	-5·0	-5·0	-0·5	-1·1	4	-16·1	24	0	31	-20·0	15*	21	-6	0	196	82	2·0	2·2	12	10	6	15	5·9		
JULIAU	15	103·7	1005·9	-10·3	-10·3	-10·3	-0·4	-15·3	29	-20·0	15*	0	21	-6	1·1	6	-1	0	17	13	0	15	36	1·5	16	3	15	4·6	
KING SALVATION	4	99·3	1012·5	-10·6	-10·6	-10·6	-0·4	-2·9	1·7	-16·1	29	0	31	-20·0	15*	21	-6	0	28	7·5	2·0	17·4	16	3	21	7·9			
MOLOKAI	3	1011·9	1012·5	-20·6	-20·6	-25·4	-3·1	-2·8	3	-20·0	15*	0	31	-17·0	76	13	-5	0	112	506	2·0	20·6	27	4	21	7·9			
KUZILUE	105	997·9	1011·5	-20·6	-20·6	-25·9	-3·1	-1·1	4	-16·1	31	0	31	-21·0	29	13	-5	0	505	610	2·0	20·6	27	4	21	7·9			
MC GREGOR	105	997·8	1011·6	-15·4	-15·4	-24·3	-2·3	-0·6	3	-15·0	29	0	31	-13·0	65	20	-1	0	246	533	1·7	20·6	23	3	17	5·9			
MC PAIL ISLAND	7	103·9	1011·6	-10·7	-10·7	-22·6	-0·6	-1·1	2·3	-16·1	28	0	31	-21·0	28	21	-1	0	154	102	1·7	19·2	23	2	10	8·0			
TALKEETNA	1·5	-1·5	-3·6	-3·6	-1·6	-16·6	-0·6	-1·1	28*	-35·0	51*	0	31	-20·0	15*	34	-1	0	59	737	1·7	19·2	3	11	11	2	18	6·2	
VALdez	11	1002·0	1003·2	-4·2	-9·4	-6·8	-0·2	-1·7	1	-16·1	12	0	31	-11·7	69	131	-6	0	268	1092	3·0	24·1	35	22	9	6	16	6·5	
YUKON	0	1011·1	1001·1	0·7	-1·1	-2·6	0·3	-1·1	2·3	-18·9	14	0	25	-5·6	60	263	-44	0	1227	457	1·8	9	16·1	20	5	2	24	7·8	
AKAZDORA	213·5	979·3	1018·7	7·9	-8·8	-10·8	-0·8	-1·1	4	-16·1	23	0	31	-20·0	30	17	-17	19	4	36	13	21	16	5	10	4·5	80		
PIGEON	236	92·0	1017·7	20·3	5·3	12·6	1·7	2·6	1·9	26·3	4	0	31	-20·0	31	20	-17	19	3	11	16·1	21	16	7	3·5	79			
TUCSON	178	92·0	1017·7	6·7	-6·2	-1·1	-0·1	-1·1	10·3	15	0	30	-13·9	15	14	-5	1	0	0	0	2·3	14	15·6	25	13·6	52			
YUKON	149·2	-5·9	22·7	7·9	15·3	1·1	-1·1	27·8	5	3·3	23	0	30	-13·9	15	14	-7	2	1	0	0	0	0	0	0	0	0		
ATKANSAS	126	100·4	1022·6	12·2	-1·9	5·7	0·6	22·8	5	-12·2	17	0	19	-1·1	67	70	-4	39	6	2	0	0	0	0	0	0	0		
FORT SMITH	78	1012·9	1022·8	13·8	1·6	7·7	2·3	21·0	10·*	-6·9	17	0	12	-12·2	17	0	-14	74	5	2	0	0	0	0	0	0	0		
LITTLE ROCK	165	1012·9	1022·8	12·4	1·3	6·9	0·8	20·0	5	-12·2	17	0	12	-12·2	17	0	-27	39	5	2	0	0	0	0	0	0	0		
NC. LITTLE ROCK																													
CALIFORNIA	105	1013·1	1021·9	19·2	5·8	12·3	3·5	26·3	3	-0·6	28	0	50	66	6	-1·3	5	3	1	0	0	0	0	0	0	0	0		
RAVENSBURG	172	87·5	1021·6	8·9	1·3	2·6	0·5	22·8	4	-11·7	12	0	29	-5·0	66	14	-1·2	14	140	140	1·6	24·5	31	23	16	23	3·9		
HISHOP	165	87·5	1019·6	10·3	2·6	6·4	1·8	21·9	7·6	-4·4	26*	0	29	-5·6	50	30	-1·2	66	12	2	0	0	0	0	0	0	0		
ELD CAYCH	13	1019·5	1020·5	15·2	1·5	2·2	1·8	22·2	17	-0·6	11	0	30	-5·6	59	95	-7·2	19	4	1	0	0	0	0	0	0	0		
FRESNO	100	1019·5	1021·3	14·7	1·8	8·3	0·3	23·9	3	-3·3	28	0	11	4·4	82	19	-25	9	4	1	0	0	0	0	0	0	0		
LONG BEACH	8	1013·0	1019·1	21·0	1·7	16·6	1·7	21·0	7	-3·3	28	0	11	3·3	56	76	-25	9	4	1	0	0	0	0	0	0	0		
LOS ANGELES	37	1015·6	1020·2	21·1	1·5	15·9	2·6	30·0	5	-6·0	23	0	12	0	9	51	-34	6	2	0	0	0	0	0	0	0	0		
LOS ANGELES	82	23·2	11·4	17·3	2·8	22·8	4	-11·7	12	-5·0	27	0	12	-5·0	56	13	-42	13	0	0	0	0	0	0	0	0	0		
ST. LOUIS	177	895·4	1021·6	8·9	2·1	3·4	0·7	15·6	3	-1·1	27	0	29	-5·0	56	13	-42	13	0	0	0	0	0	0	0	0	0		
CARLTON	152	1022·3	1022·5	14·8	7·7	11·2	1·3	19·4	7	-3·3	28	0	29	-5·0	56	13	-42	13	0	0	0	0	0	0	0	0	0		
PLD RUFF	134	1022·8	1022·8	15·4	8·0	15·4	1·6	24·4	6	-4·1	11*	0	30	-5·0	56	13	-42	13	0	0	0	0	0	0	0	0	0		
SACRAMENTO	105	1022·0	1022·7	13·5	2·8	6·5	0·5	22·4	14	-2·2	14	0	30	-5·0	56	13	-42	13	0	0	0	0	0	0	0	0	0		
SAN DIEGO	4	1018·9	1020·2	21·0	1·0	15·9	2·6	27·0	5	-6·0	23	0	12	-5·0	56	13	-42	13	0	0	0	0	0	0	0	0	0		
SAN FRANCISCO	2	1019·6	1020·2	15·1	1·5	10·5	2·6	27·6	7	-6·1	22	0	12	-5·0	56	13	-42	13	0	0	0	0	0	0	0	0	0		
SANTA MARIA	16	21·1	3·5	12·3	1·3	23·3	0·7	22·9	6	-2·2	22	0	3	-2·2	12	0	-27	45	8	0	0	0	0	0	0	0	0		
SANTA MARIA	72	21·1	3·5	12·3	1·3	23·3	0·7	22·9	6	-2·2	22	0	3	-2·2	12	0	-27	45											

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State and Station		Pressure				Temperature				Precipitation				Wind		
		mb	mb	mb	mb	°C	°C	°C	°C	Total	Deparature from P.M.	No. of days	Snow/Ice Pellets	Frost/mile (1.6 kilometers)	No. of days	
		Station	Sea Level	Altitude (ground)	Average maximum	Average minimum	Average dew point	Lowest	Date	Deparature from P.M.	Deparature from normal	With thunderstorms	Resultant direction	Speed	Direction	
COLORADO	ALBUQUERQUE	2297	3.0	-1.8	-7.5	-9.4	7.6	16+	-28.3	31	0.31	-8+9	55	14	5	
COLORADO	SPRINGS	1873	1022.0	7.6	-6.0	1.4	17+2	10	0	26	10	15	7	173	152	
DALE	OLIVIA	1610	1019.6	8.7	-5.9	1.1	18+9	18	0.28	-7+6	57	27	16	419	254	
GRAND	JUNCTION	1476	1022.0	2.5	-8.2	-2+8	7+2	9	0.31	-7+8	74	7	3	50	51	
PUEBLO		1426	1018.5	1.1	-8+7	1.1	21+7	10	-1b+9	30+	0	31	5	251	251	
CONNECTICUT	PHILADELPHIA	2	1019.6	1019.1	6.6	-C+7	3+3	3+4	12+8	12	-10+0	19	0	16	-5+0	
HARFORD		52	1011.5	1019.3	5.4	-3+7	0+9	3+0	18+9	12	-13+9	19	0	23	62+1	
DELAWARE		23	1017.6	1020.7	8+4	-1+7	3+4	1.9	17+8	12	-7+2	18+	0	21	-3+9	
WILMINGTON																
WISCONSIN	OF COLUMBIA	88	1009.1	1021.3	10.7	-1.7	4+5	3+4	22+2	12	-8+9	18	0	21	-2+8	
WASHINGTON	DULLES	9	1019.6	1021.2	11.1	1.9	6+5	3+5	20+6	12	-6+1	18	0	10	-1+1	
WASHINGTON	NATIONAL	3	1019.0													
FLORIDA	APALACHICOLA	6	1021.3	1022.0	17.6	6.8	12+2	-0+7	23+9	13	-1+7	1	0	3	7+8	
DAYTONA BEACH		9	1019.6	1021.1	24.4	14.3	19+4	1+2	30+0	13	7+2	27+	0	0	14+9	
FOUNTAIN	MYERS	5	1019.6	1021.1	6.5	12+4	-0+6	25+6	13	17+8	21	0	2	14+9	78	
JACKSONVILLE		8	1020.3	1021.6	18.2	2.5	21.2	0.5	27+8	13+	16+2	26+	0	0	18+3	
KEY WEST		1	1019.1	1019.1	24.7	2.1	21.2	1+1	28+3	14+	11+1	28	0	0	16+7	
MIRAMAR		2	1019.5	1019.7	24.6	17.6	21.2	1+1	28+3	14+	12+3	28	0	0	12+2	
ORLANDO/W.C. COY AFB		29	1017.5	1021.1	22.7	11.3	21.3	0.9	22+4	15	-3+9	18	0	5	16+7	
PESSACOLA		34	1019.4	1022.4	16.6	5.8	11+2	-0+9	22+4	12	-6+7	26+1	0	0	1+8	
TALLAHASSEE		17	1019.9	1021.8	18.1	4.1	11+1	0.7	26+1	12	-2+2	1	0	0	1+1	
TAMPA		6	1020.7	1020.9	22.2	12.3	17.2	0+8	28+2	12	-2+2	1	0	0	1+1	
KELP PALM BEACH		5	1019.3	1019.9	23.9	15.0	19.5	0+2	27+2	14+	6+7	27	0	0	11+7	
GEORGIA																
ATLANTA		244	1021.8	13.8	2+3	8+1	1+3	23+9	12	-6+7	4	0	0	6.3	35	
ATLANTA		303	684.1	1021.9	13.7	2+7	8+2	1+8	23+9	12	-5+6	18	0	0	6.4	
AUGUSTA		41	1016.6	1022.2	14+7	0+8	9+7	-0+3	24+4	13	-6+9	4	0	0	14.1	
COLUMBUS		136	1009.5	1022.5	15.3	4+2	9+7	1+0	25+1	12	-4+9	18+	0	0	7.2	
MACON		138	1009.1	1022.4	16.2	3.7	17.0	0+9	25+1	12	-6+7	18+	0	0	16.7	
ROME		194	1021.0	1022.7	12.7	-0+7	6+2	0+7	22+2	12	-8+3	19	0	0	29	
SAVANNAH		14	1021.0	1022.7	15.9	4+9	10+4	0+2	24+4	12	-3+9	18	0	0	6.6	
HAWAII		8	1014.6	1015.8	27.3	16+5	22+7	0+7	30+0	15*	14+4	31*	0	0	188	
HONOLULU		2	1015.2	1015.7	28+2	19.8	24+1	0+9	31+7	1	16+1	6	0	0	18+9	
KAHULUI		15	1013.2	1015.4	28.3	19.2	24+1	1+6	30+0	20*	15+0	5	0	0	18+9	
LIHUE		31	1010.4	1016.0	26.2	22+7	3+2	24+1	16	29+4	16	17+2	31*	0	0	
104-HO		865	923.8	1021.6	6.6	-2+4	2+1	12+8	16	-8+3	11	0	23	-3+3	70	
LITTLESTON		431	867.6	1025.4	8.1	0+6	4+3	2+6	16+1	4	-5+6	11	0	0	16+1	
PUCAILLO		1358	-	-	-6.5	-1.5	1.3	12+2	19	-8+3	1	0	28	-6+7	70	
ILLINOIS		96	994.2	1010.3	9.0	1+4	5+2	1+3	18+9	11	-10+6	17	0	14	49	
CAIRO U		201	995.0	1019.6	5.4	-3+6	0+9	16+7	23	-8+9	17	0	25	8	62	
CHICAGO O HARE		185	993.1	1019.6	5.2	-2+9	3+1	15+0	23	-16+7	17	0	24	51	1+9	
CHICAGO M 10 AM		176	994.3	1020.2	5.1	-5+5	-0+2	2+6	15+0	17	-16+3	17	0	24	61	1+9
MULINE		177	996.2	1021.0	4.7	-5+7	-0+1	2+1	15+0	23*	-18+9	17	0	25	56	2+4
FLORIDA		199	996.2	1020.7	3.9	-6+3	-0+7	2+3	12+8	23	-6+6	17	0	25	1+3	25
ROCKFORD		211	994.6	1021.5	7.4	-2+8	-2+1	2+9	16+3	11	-6+1	17	0	24	57	1+7
SPRINGFIELD		179	994.6	1021.5	7.0	-2+8	-2+1	2+9	16+3	11	-6+1	17	0	24	57	1+7
INDIANA		116	1007.8	1022.2	8+2	-C+9	3+7	1+8	19+4	11	-11+7	17	0	20	-0+8	76
EVANSVILLE												77	-7	-7	13	5.8

CLIMATOLOGICAL DATA METRIC UNITS

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State and Station	Elevation (ground)	Sea level	Slope	Stiffness	Deparature from normal	Average minimum	Average maximum	Temperature	Pressure	Relative humidity	Deparature from normal	Total	Dew point	Min. 0°C or lower	Max 32.2°C or above	Average dew point	% of days	No. of days	Precipitation	Wind	Frost/freeze	Snow	Ice pellets	No. of days (sunrise to sunset)	Passable sunshin				
INDIANA	FORT WAYNE	1020.4	3.3	-4.1	-0.4	1.5	15.0	11	-17.2	2	0	26	-4.4	76	65	9	21	9	0	51	2.6	25	21.5	■	5	8	18	7.3	
INDIANAPOLIS	1021.3	6.3*	-3.2	-2.1	1.6	2.2	17.2	11	-14.4	17	0	25	-3.3	73	65	-4	30	10	1	5	1	2.6	24	16.1	■	7	8	4	19
SOUTH BEND	1019.3	5.2	-2.1	1.6	3.7	1.5	16.1	11	-16.1	2	0	21	-1.1	81	93	30	38	12	0	345	178	2.2	23	13.4	■	7	4	6	21
BURLINGTON	1021.1	5.2	-4.7	0.2	2.7	16.1	10	-18.3	17	0	26	-5.6	66	23	-18	19	4	1	1	1	1.8	2.6	14.3	■	3	8	8	15	
DIX MOINES	1021.0	5.2	-5.7	-0.2	3.7	16.7	10	-18.9	17	0	29	-6.7	65	5	-2.3	3	5	1	10	1.0	1.3	2.8	15.6	■	7	9	15	6.7	
DUQUESNE	1020.9	5.2	-6.4	-1.3	3.7	13.3	10	-17.0	17	0	30	-1.1	20.1	3	-1.4	5	1	31	6.1	73	36	25	0.7	31	1.6	1.1	15		
SIOUX CITY	1020.9	5.2	-7.3	-1.1	3.7	17.0	10	-20.1	16	0	31	-6.1	73	5	-1.4	3	4	0	38	1.0	1.3	0	31	1.1	1.1	11	15		
WATERLOO	1020.7	3.6	-7.7	-2.1	3.6	14.4	10	-19.4	17*	0	30	-6.7	74	18	-12	17	3	0	5	1	1.5	2.8	11.2	■	7	7	7	17	
KANSAS	1021.5	8.5	-4.7	1.9	2.9	20.6	4	-17.2	17*	0	29	-5.0	64	9	-11	7	2	0	114	76	1.1	2.5	16.1	■	11	12	7	12	
CONCORDIA	1021.5	8.5	-5.6	1.3	2.6	21.7	18	-17.6	17*	0	31	-6.7	65	18	-5	17	3	0	86	76	1.2	2.5	17.9	■	11	11	10	45	
DODGE CITY	1021.5	9.0	-5.1	1.9	3.0	24.8	18	-15.6	30	0	30	-6.1	63	29	16	16	3	0	439	305	2.3	2.7	15.6	■	11	11	18	4	
GODDARD	1021.0	9.0	-5.2	1.9	2.1	1.9	1.0	-1.8	17	0	28	-5.0	65	1	-3.8	1	1	0	0	0	0.7	26	13.4	■	11	11	8	11	
TOPEKA	1021.8	9.8	-7.7	-2.1	3.6	14.4	10	-19.4	17*	0	30	-6.7	74	22	-4.6	3	0	1	0	0.3	33	17.9	■	11	11	17	4		
WICHITA	1020.7	4.0	-3.4	3.2	1.8	17.8	22*	-16.1	17	0	24	-9.4	62	51	-2.2	7	0	1	1	1.3	2.3	14.3	■	11	11	10	4.6		
KENTUCKY	1021.9	7.0	-2.4	2.3	1.4	16.1	11	-12.2	17	0	23	-1.7	76	74	1	3.3	9	0	25	2.5	1.9	24	12.5	■	11	11	7	17	
CINCINNATI	1021.9	7.0	-1.9	3.3	1.3	19.4	11	-10.6	17*	0	22	-2.2	70	70	-2.2	7	1	1	1.9	2.2	2.5	12.5	■	11	11	7	17		
LAWNTON	1022.0	8.4	-1.9	4.0	2.0	20.6	11	-10.6	17	0	21	-2.2	67	97	-1.2	42	7	0	1	1.3	2.3	1.3	14.3	■	11	11	4	5.6	
Louisville	1022.2	9.1	-1.1	4.0	2.0	20.6	11	-10.6	17	0	21	-2.2	67	97	-1.2	42	7	0	1	1.3	2.3	1.3	14.3	■	11	11	4	5.6	
LOUISIANA	1020.3	16.4	3.5	10.0	-1.6	25.6	23	-6.7	18	0	11	4.4	74	72	-5.6	55	7	1	0	0	0	0.9	12.5	■	11	11	7	17	
RALEIGH ROUGE	1022.8	3.5	10.0	-1.6	2.3	24.5	23	-6.7	18	0	11	6.1	78	62	-6.3	48	9	0	0	0	0	0.9	12.5	■	11	11	7	17	
LAKE CHARLES	1022.0	17.2	4.9	-1.1	-1.3	27.2	12*	-3.3	18	0	11	6.1	72	78	-5.2	33	7	1	0	0	0	0.9	12.5	■	11	11	7	17	
NEW ORLEANS	1022.0	17.6	5.2	1.4	2.2	27.2	12*	-3.3	18	0	12	2.8	69	79	-2.7	33	7	1	0	0	0	0.9	12.5	■	11	11	7	17	
SHREVEPORT	1022.2	15.9	2.8	9.4	-0.2	24.4	11	-8.9	18	0	12	-8.9	18	0	-8.9	18	0	12	0	0	0	0	0	0	0	0	0		
MAINE	CARIBOU	988.8	-11.4	7.1	1.7	9.4	6	-27.2	20	0	31	-6.7	70	66	-37	38	11	0	46	457	12.1	2.1	30	15.2	■	11	11	9	13
PORTLAND	1014.2	3.8	-6.2	-1.2	2.3	17.8	12	-18.3	19	0	26	-6.7	70	77	-11	42	12	0	46	457	12.1	2.1	30	15.2	■	11	11	9	13
MARYLAND	BALTIMORE	1020.7	10.1	-0.9	4.6	2.8	21.7	12	-8.3	18	0	21	-3.3	60	22	-6.1	12	5	0	1	1	2.1	2.8	14.8	■	11	11	14	4.9
MASSACHUSETTS	1014.9	1020.7	10.1	-0.9	4.6	2.8	21.7	12	-8.3	18	0	21	-3.3	60	22	-6.1	12	5	0	1	1	2.1	2.8	14.8	■	11	11	14	4.9
BLUE HILL 005 R	1016.9	5.6	-3.2	1.2	2.5	19.4	12	-17.2	19	0	23	-5.0	61	4.3	-7.7	16	10	0	157	76	1.1	2.7	27.7	■	11	11	8	12	
BLUFFSTON	1015.9	4.1	-1.6	2.6	2.6	16.7	12	-17.2	19	0	24	-6.7	64	4.8	-5.2	20	9	0	53	51	3.2	2.8	18.2	■	11	11	8	12	
BLUFFSTON 005 R	1016.9	4.1	-4.3	0.1	1.9	15.0	11	-15.0	17	0	26	-3.9	78	60	-2.1	31	9	0	56	25	2.2	2.7	15.6	■	11	11	8	12	
BLUFFSTON 005 R	1016.9	4.1	-3.7	0.1	1.9	14.4	11	-15.6	17*	0	26	-2.1	80	58	-1.6	30	10	0	64	102	2.3	2.4	13.0	■	11	11	8	12	
BLUFFSTON 005 R	1016.9	4.1	-3.7	0.1	1.9	14.4	11	-15.6	17*	0	26	-2.1	80	58	-1.6	30	10	0	64	102	2.3	2.4	13.0	■	11	11	8	12	
BLUFFSTON 005 R	1016.9	4.1	-3.7	0.1	1.9	14.4	11	-15.6	17*	0	26	-2.1	80	58	-1.6	30	10	0	64	102	2.3	2.4	13.0	■	11	11	8	12	
BLUFFSTON 005 R	1016.9	4.1	-3.7	0.1	1.9	14.4	11	-15.6	17*	0	26	-2.1	80	58	-1.6	30	10	0	64	102	2.3	2.4	13.0	■	11	11	8	12	
BLUFFSTON 005 R	1016.9	4.1	-3.7	0.1	1.9	14.4	11	-15.6	17*	0	26	-2.1	80	58	-1.6	30	10	0	64	102	2.3	2.4	13.0	■	11	11	8	12	
BLUFFSTON 005 R	1016.9	4.1	-3.7	0.1	1.9	14.4	11	-15.6	17*	0	26	-2.1	80	58	-1.6	30	10	0	64	102	2.3	2.4	13.0	■	11	11	8	12	
BLUFFSTON 005 R	1016.9	4.1	-3.7	0.1	1.9	14.4	11	-15.6	17*	0	26	-2.1	80	58	-1.6	30	10	0	64	102	2.3	2.4	13.0	■	11	11	8	12	
BLUFFSTON 005 R	1016.9	4.1	-3.7	0.1	1.9	14.4	11	-15.6	17*	0	26	-2.1	80	58	-1.6	30	10	0	64	102	2.3	2.4	13.0	■	11	11	8	12	
BLUFFSTON 005 R	1016.9	4.1	-3.7	0.1	1.9	14.4	11	-15.6	17*	0	26	-2.1	80	58	-1.6	30	10	0	64	102	2.3	2.4	13.0	■	11	11	8	12	
BLUFFSTON 005 R	1016.9	4.1	-3.7	0.1	1.9	14.4	11	-15.6	17*	0	26	-2.1	80	58	-1.6	30	10	0	64	102	2.3	2.4	13.0	■	11	11	8	12	
BLUFFSTON 005 R	1016.9	4.1	-3.7	0.1	1.9	14.4	11	-15.6	17*	0	26	-2.1	80	58	-1.6	30	10	0	64	102	2.3	2.4	13.0	■	11	11	8	12	
BLUFFSTON 005 R	1016.9	4.1	-3.7	0.1	1.9	14.4	11	-15.6	17*	0	26	-2.1	80	58	-1.6	30	10	0	64	102	2.3	2.4	13.0	■	11	11	8	12	
BLUFFSTON 005 R	1016.9	4.1	-3.7	0.1	1.9	14.4	11	-15.6	17*	0	26	-2.1	80	58	-1.6	30	10	0	64	102	2.3	2.4	13.0	■	11	11	8	12	
BLUFFSTON 005 R	1016.9	4.1	-3.7	0.1	1.9	14.4	11	-15.6	17*	0	26	-2.1	80	58	-1.6	30	10	0	64	102	2.3	2.4	13.0	■	11	11	8	12	
BLUFFSTON 005 R	1016.9	4.1	-3.7	0.1	1.9	14.4	11	-15.6	17*	0	26	-2.1	80	58	-1.6	30	10	0	64	102	2.3	2.4	13.0	■	11	11	8	12	
BLUFFSTON 005 R	1016.9	4.1	-3.7	0.1	1.9	14.4	11	-15.6	17*	0	26	-2.1	80	58	-1.6	30	10	0	64	102	2.3	2.4	13.0	■	11	11	8	12	
BLUFFSTON 005 R	1016.9	4.1	-3.7	0.1	1.9	14.4	11	-15.6	17*	0	26	-2.1	80	58	-														

State and Station		Elevation (feet)		Pressure		Temperature		Precipitation		Wind		Frostiest mile (1.6 kilometers)		No. of days (sunrise to sunset)		Cloudy, 8-10		Partly cloudy, 4-7		Sunny, 0-3								
No. of days	Max 32°F or above	Date	Min 0°C or lower	Average dew point	%	°C	°C	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm							
MISSISSIPPI	MERIDIAN	86	1011.5	1023.0	15.7	1.6	8.6	-0.2	22.8	11+	-6.7	18	0	14	2.2	71	59	-82	28	9	0	0	0	0	0	17	6.2	
MISSOURI	COLUMBIA	270	988.5	1021.7	7.4	-3.2	2.2	1.7	18.9	11	-16.7	17	0	24	-4.4	67	35	-11	31	5	1	1	1	1	7	15	6.1	5.6
KANSAS CITY	KAN. CITY	226	983.7	1021.6	9.7	-4.2	2.2	2.9	20.6	22	-18.3	17	0	27	-6.1	59	1	-37	1	3	1	1	1	1	1	13	5.4	5.3
ST. JOSEPH	ST. LOUIS	247	7.3	1021.9	6.6	-4.6	1.4	2.1	17.2	22	-15.6	17	0	16	-5.0	56	1	-38	1	1	0	0	0	0	0	12	6.0	5.5
SPRINGFIELD	SPRINGFIELD	386	971.3	1021.6	11.3	-1.2	1.0	5.2	20.1	11	-14.1	17	0	20	-2.2	70	4.7	-39	1	1	1	1	1	1	1	13	4.9	5.4
MONTANA	BILLINGS	1087	891.0	1017.3	8.5	-3.8	2.4	5.3	18.3	4	-26.7	16	0	21	-8.9	47	2	-15	2	2	0	0	0	0	0	16	6.2	4.7
GLASCOW	GLASCOW	696	932.6	1017.2	3.7	-9.8	-1.4	5.2	15.0	18	-26.3	16	0	30	-7.2	79	1	-11	1	4	0	10	25	0.3	7	18	6.7	
GEAT FALLS	GEAT FALLS	1116	886.5	1017.3	7.8	-4.9	1.4	4.5	16.7	9	-33.3	16	0	22	-8.3	50	7	-6	3	4	0	76	102	6.3	22	9	2.1	
HAVRE	HAVRE	768	921.4	1020.5	6.7	-12.7	-1.2	4.1	16.1	9	-32.8	16	0	27	-6.3	17	6	-3	4	0	73	75	3.1	18	7.1	2.9		
HELENA	HELENA	1167	881.1	1020.5	4.6	-8.9	-1.2	2.7	16.1	4	-36.6	16	0	28	-8.9	63	15	0	16.5	127	2.0	2.6	16.6	6	2.1			
KALISPELL	KALISPELL	904	911.3	1019.4	3.6	-3.7	0.1	4.7	13.9	9	-15.6	16	0	25	-2.8	65	32	8	17	0	1.3	1.6	4	15	0	2.8		
KALISPELL	KALISPELL	905.5	1021.2	2.6	-3.7	-0.4	3.6	19.9	14	-30.6	16	0	27	-8.7	67	1	-11	2	20	0	79	76	0.5	28	9.5	2.6		
MISSOULA	MISSOULA	972	922.1	1020.1	5.0	-5.0	-0.4	3.6	12.8	14	-10.6	16	0	25	-3.3	83	21	-9	7	10	0	1	4	26	9.0	2.6		
NEBRASKA	GRAND ISLAND	561	952.9	1021.2	7.2	-5.8	0.7	3.4	18.9	18	-17.8	16	0	30	-6.7	65	12	12	3	0	157	152	1.7	27	14.3	9.9		
LINCOLN	LINCOLN	359	971.0	1021.3	6.7	-6.4	0.2	2.6	17.8	18	-18.3	17	0	30	-5.0	73	10	-15	6	5	0	61	51	1.2	30	15.2	6.2	
NARFOLK	NARFOLK	471	963.1	1021.7	5.6	-6.7	0.6	3.6	18.0	18	-26.0	16	0	31	-5.0	73	14	-5	8	5	64	76	1.8	28	11.4	5.5		
NORTH PLATE	NORTH PLATE	846	920.8	1021.3	8.4	-6.2	1.1	4.0	18.9	18	-16.5	16	0	29	-7.2	60	7	-5	6	3	0	58	76	1.4	30	11.4	5.3	
OMAHA (UPPER)	OMAHA (UPPER)	298	5.3	1020.5	5.2	-5.3	-0.9	1.3	16.7	7	-19.4	17	0	31	-1.4	5	2	3	5	0	36	33	2.5	16.5	7	5.1		
OMAHA (NORTH)	OMAHA (NORTH)	399	1020.5	8.3	-6.7	1.3	3.4	16.1	10	-19.4	16	0	29	-7.2	60	6	-14	4	2	13	203	2.6	30	11.3	5.7			
SOUTHSBURG	SOUTHSBURG	1206	881.0	1020.5	9.2	-6.7	1.3	3.7	20.6	18	-16.9	16	0	30	-2.5	60	12	2	7	1	27	22.8	0.5	11	8.1	5.3		
VALERINE	VALERINE	789	925.8	1020.5	8.3	-8.1	0.1	4.3	21.1	18	-25.0	16	0	31	-7.2	66	1	-7	1	2	13	13	2.1	27	22.8	7.3		
NEVADA	FLOKO	1539	844.0	1024.3	7.2	-7.8	-0.3	3.1	12.8	15	-15.0	12	0	30	-6.7	65	9	-20	4	0	58	51	0.1	34	10.3	5.2		
ELY	ELY	1906	811.7	1023.2	9.2	-9.9	-0.3	2.9	18.9	17	-16.9	12	0	31	-12.2	47	2	-16	1	3	0	20	1	2.1	20	12	5.4	
LAS VEGAS	LAS VEGAS	659	946.4	1021.6	15.3	1.6	8.4	1.1	23.3	5	-22.8	23	0	29	-7.2	36	6	-3	6	1	0	0	0	0	16	7.8	8.2	
FENG	FENG	1342	869.6	1022.8	10.2	-6.4	1.9	1.4	20.0	4	-11.9	12	0	28	-6.7	60	51	-24	26	6	0	20	53	2.5	21	13.4	6.9	
W. NMHMUCCA	W. NMHMUCCA	1311	873.4	1024.1	9.2	-6.2	0.5	1.4	17.2	9	-16.7	11	0	29	-7.2	61	8	-16	6	0	20	5	15	1.5	13.0	9	7	
NEW HAMPSHIRE	CONCORD	104	1017.5	4.0	-6.9	-1.4	2.6	19.4	12	-22.2	20	0	26	-7.8	64	49	-34	30	11	0	53	51	2.3	30	10.3	4.5		
WASHINGTON DGS	WASHINGTON DGS	1909	1024.3	1017.3	9.2	-9.9	-0.3	2.9	18.9	17	-16.9	12	0	31	-12.2	47	86	-93	13	21	0	597	76	2.1	20	12	3.3	
NEW JERSEY	ATLANTIC CITY	20	1013.6	1019.7	7.7	-6.7	0.6	4.1	21.7	12	-6.7	18	0	14	-1.7	71	5.6	-46	16	8	0	122	102	2.2	28	13.4	9	
NEW JERSEY	TRENTON U	117	1020.8	893.7	11.5	-5.1	3.2	0.8	17.2	25	-9.4	31	0	30	-7.2	52	22	9	18	4	0	69	76	0.9	2.6	13.4	9	
NEW MEXICO	ALBUQUERQUE	1619	841.5	1022.2	11.3	-5.1	3.2	0.8	17.2	21	-12.8	30	0	28	-5.6	56	8	-3	5	5	0	97	102	0.6	31	14.3	5.2	
CLAYTON	ROSSLIN	1112	1012.6	893.7	12.6	-3.1	4.8	0.7	22.8	10	-11.1	1	0	26	-5.6	56	9	-3	5	5	0	97	102	0.6	31	14.3	5.2	
NEW YORK	ALBANY	84	1003.1	1019.0	4.3	-5.1	-0.3	3.1	16.7	12	-17.2	20	0	24	-5.6	70	24	-51	13	9	0	147	76	1.9	26	17.0	6	
BERKHAMPTON	BERKHAMPTON	215	958.0	1018.7	3.2	-4.1	-0.8	3.1	15.6	11	-15.6	18	0	25	-5.6	70	46	-23	11	9	0	424	152	1.4	25	18.2	3	
BUFFALO	BUFFALO	40	1011.6	1019.2	8.3	-2.7	0.8	3.1	15.6	12	-12.8	17	0	23	-3.9	73	87	-11	47	14	0	500	610	3.2	24	18.2	3	
NEW YORK U.	NEW YORK KENNEDY	4	1018.6	1019.4	6.6	-1.2	1.8	1.1	18.3	12	-6.7	19	0	12	-3.9	56	62	-21	27	8	0	69	76	0.7	27	16.5	2.1	
NEW YORK LA GUARDIA	NEW YORK LA GUARDIA	3	1019.0	1020.0	7.1	-0.7	3.9	1.9	16.1	12	-7.2	19	0	15	-2.2	70	53	-38	21	10	0	64	70	3.0	31	16.5	2.9	
ROCHESTER	ROCHESTER	167	997.6	1018.7	3.9	-3.6	0.2	2.2	16.1	11	-13.9	17	0	26	-3.3	78	73	-13	31	17	0	310	127	2.6	24	18.1	3	

CLIMATOLOGICAL DATA
METRIC UNITS

DECEMBER 1979

State and Station		Pressure			Temperature			Precipitation			Wind			No. of days (sunrise to sunset)																				
		Elevation (ground)		Sfc level	Average minimum	Highst.	Lowest	Date	No. of days	Min. 0°C or lower	Max. 32.7°C or above	Total	Resultant speed	Fodest mile (1.6 kilometers)	No. of days (sunrise to sunset)																			
Q	mb	mb	°C	°C	°C	°C	°C	°C	%	%	%	mm	mm/s	mm	%																			
NEW YORK	SYRACUSE	125	1003.4	1018.7	4.6	-3.0	0.6	2.9	17.2	11	-18.9	18	0	22	-3.9	73	47	-32	21	15	0	353	17.9	NW	8	1	6	24	8.5	28				
NORTH CAROLINA	ASHEVILLE	652	1021.9	12.3	-1.3	5.6	1.8	20.6	12	-11.7	3	0	19	-1.1	71	27	-65	18	5	0	1	0	1.6	34	17	14	6	11	11	4.6	65			
CAPT HATIEPAS R	224	1021.0	14.2	4.8	9.5	0.8	2.2	24	-3.9	19	0	5.0	74	132	17	91	8	0	0	0	0	2.4	34	12.5	22	25	12	10	9	4.8	57			
CHARLOTTE	273	994.2	1022.3	12.2	0.8	6.5	1.2	-6.1	3	0	5.3	1.0	35	-5.3	16	5	1.1	66	28	-52	10	5	0	0	0.3	36	11.2	35	2	14	9	4.9	69	
GLENNSBRO	132	1022.9	11.4	0.9	5.3	1.1	20.6	12	-9.4	3	0	21	-1.1	66	28	-52	10	5	0	0	0	0.8	28	11.2	28	14	9	13	4	1.3	62			
RALEIGH	1202.3	1021.8	12.5	0.1	6.3	1.2	22.2	12	-9.4	3	0	16	0.6	70	24	-54	10	5	0	0	0	0.9	27	8.9	23	25	14	6	11	4.7	59			
WILMINGTON	9	1020.3	1021.7	15.3	2.2	8.8	2.2	23.3	24	-3.9	18	0	14	1.7	66	60	-26	7	0	0	0	1.2	32	12.1	54	24	15	3	13	4.9	76			
NORTH DAKOTA	BISMARCK	502	983.0	1019.0	2.8	-12.1	-6.6	4.5	18.3	4	-23.3	16	0	31	-8.3	81	6	-6	3	4	0	4.1	25	1.0	29	15.6	NW	5	8	6	17	6.1	56	
FARGO	273	983.7	1018.0	-1.5	-21.0	-6.3	4.3	-25.6	16	0	31	-8.3	83	4	-12	3	3	0	2	3	0	38	25	1.3	21	1.9	5	7	5	19	4.7	56		
WILLISTON	579	946.5	1017.5	2.6	-11.8	-4.6	4.7	14.4	4	-28.3	17	0	31	-9.4	74	2	-10	2	3	0	8	25	1.8	25	16.5	NW	4	10	6	15	5.9	56		
OHIO	AKRON	368	974.6	1022.5	4.5	-3.3	0.6	2.1	16.7	11	-12.8	18*	0	26	-5.0	66	62	1	24	13	0	130	51	2.7	23	15.6	23	7	3	9	19	7.5	45	
CINCINNATI ABFO OB	232	990.5	1020.5	7.4	-3.1	1.9	1.9	16.7	11	-14.4	18	0	24	-3.3	74	102	42	48	12	0	102	51	3.4	22	14.3	22	5	3	5	23	8.0	25		
COLUMBUS	247	972.6	1021.5	4.9	-2.6	1.7	2.4	17.2	11	-11.1	17	0	24	-2.0	74	146	44	18	9	0	5	1	1.9	24	2.4	23	15.2	6	20	7.4	35			
DAYTON	303	983.7	1022.0	6.0	-3.0	1.7	2.3	16.7	11	-12.2	17	0	23	-1.3	71	54	-4	23	9	0	5	1	2.4	24	19.2	7	6	19	7.1	4.4	35			
MANSFIELD	395	972.6	1021.0	6.4	-3.0	1.7	2.3	16.4	11	-13.1	17	0	26	-3.3	79	56	-3	22	11	0	143	102	3.3	23	15.6	25	7	7	17	7.0	39			
TOLEDO	204	993.9	1020.0	4.0	-4.1	0.1	2.3	16.7	11	-16.7	17	0	26	-3.3	75	62	31	11	0	38	25	1.6	25	15.6	7	7	7	19	7.3	39				
YOUNGSTOWN	359	976.3	1020.4	4.1	-3.1	0.6	2.3	16.1	11	-12.8	18	0	25	-5.0	67	100	36	58	13	0	188	76	2.3	24	15.6	25	7	6	21	7.9	35			
OKLAHOMA	392	974.3	1021.7	12.7	-0.2	6.3	1.8	21.1	22	-16.7	17	0	17	-2.8	57	65	33	52	5	0	1	0.3	29	14.8	14	31	12	4.8	61					
OKLA CITY	198	997.3	1022.3	13.1	0.6	6.9	2.6	23.3	11	-13.9	17	0	14	-1.1	60	11	-30	11	2	0	0	0.7	21	13.0	36	16	14	8	9	4.9	47			
OREGON	ASTORIA	2	1016.6	1017.3	11.8	5.3	8.6	2.6	17.2	3	-0.6	11	0	2	6.1	85	335	66	62	28	2	1	2.1	16	14.3	18	17*	1	3	27	9.1	45		
BUR利S U	1265	1005.4	1019.3	4.2	-6.7	-1.2	1.1	12.2	15	-15.6	27	0	31	7	4.6	88	187	41	7	24	7	0	279	10	2.1	16	15.5Y	10	2	6	23	8.4	43	
EUGENE	109	972.6	1021.2	5.2	0.2	4.3	1.2	20.0	3	-6.1	11	0	15	1.1	84	69	-24	31	11	0	1	1	1.7	17	8.9	18	31*	1	2	28	9.3	43		
HEOFHO	396	972.6	1020.1	7.7	0.8	3.4	1.4	15.6	17*	-8.3	1	0	17	0.6	78	16	-23	4	9	1	0	0.3	14	13.0	14	30	1	21	8.3	43				
PENITENTI	452	1018.0	1019.1	9.9	3.8	6.9	2.1	16.7	3	-2.8	11	0	5	4.9	85	184	30	42	19	0	1	76	1.5	25	15.6	27	9	2	25	8.8	46			
SALEM	6	1011.5	1018.8	11.0	3.2	7.1	1.8	9.6	1.9	16.7	8	-3.9	22*	0	7	5.6	90	177	3	36	20	0	1	18	0	1.4	14.8	30	2	4	25	8.6	46	
SEXTON SUMMIT Q	1169	884.2	1018.2	7.3	1.8	4.6	1.9	1.9	1.6	1.7	8	-3.9	22*	0	10	-2.8	65	142	-15	41	10	0	363	254	2.1	18	11.2	19	2	0	9	22	8.6	46
PACIFIC ARALIA	110	981.7	1013.5	28.7	22.3	25.6	-0.3	31.1	13	17.8	28	0	0	22.2	82	144	-5	28	24	0	0	0	0	5.9	7	17.4	16	23*	0	12	19	7.9	56	
GUAM TAUAC R	2	1012.9	1013.5	31.1	23.8	27.5	0.1	32.2	17*	22.2	24*	4	0	21.7	24	294	-3.3	134	21	4	0	0	1.2	3	9.8	NE	9	14	5	1.1	25	8.8	43	
KODOR R	29	1005.4	1013.5	30.4	25.1	27.8	0.2	30.3	24.9	27.6	24*	21*	24	0	21.7	24	210	-24	51	27	0	0	0	5.6	7	11.6	72	26*	0	6	25	8.8	43	
X & JALETA	2	1003.5	1013.5	31.1	23.8	31.1	0.3	32.2	28*	23.3	28*	1	0	21.7	24	180	-121	36	23	0	0	0	4.5	7	13.0	126	31	2	28	9.3	43			
MAJURO	3	1019.3	1020.5	7.7	0.8	3.4	1.7	16.7	12	-7.8	17	0	18	-2.2	69	164	66	20	3	0	0	2.0	10	17.0	NW	11	1	22	8.1	29				
PAGO PAGO	37	1003.5	1008.7	29.9	2.0	26.9	0.3	32.7	8	20.0	16	3	23.1	81	214	-97	158	22	1	0	0	0	8.5	5	14.0	30	4	0	22	9.5	33			
PUNAPE R	37	1008.5	1013.2	31.3	23.2	27.5	0.3	33.9	9	21.1	26*	0	21.1	6*	187	-16.7	66	19	0	0	0	0	1.4	6	17.4	5	11	1	30	9.7	45			
TRUK MOEN ISLAND	2	1012.9	1014.2	26.1	23.6	25.8	-0.1	31.6	31	17.8	17*	0	21.1	4*	17	30	-14	11	16	0	0	0	0	4.2	6	11	9	5.2	56					
LAKE YAP R	13	1007.5	30.5	23.3	26.9	-0.3	31.7	15*	21.7	24*	0	0	21.1	77	34-	89	94	22	0	0	0	0	2.2	6	1C.3	E	21	1	21	8.5	68			
PENNSYLVANIA	ALLENTOWN	118	1006.1	1020.6	6.5	-1.8	2.3	1.4	1.4	3.0	16.1	11	-6.9	17	0	19	65	63	-29	19	0	114	102	2.1	30	13.9	30	8	10	7	14	6.1	57	
ERIE	223	992.2	1015.8	10.2	1.0	1.6	2.2	19.4	12	-6.1	12	0	26	-3.3	72	124	53	61	15	0	0	0	2.4	3.4	22	14.3	19	5	3	25	8.5	58		
HARRISBURG	103	1008.1	1021.2	10.2	1.0	1.6	2.2	19.4	12	-7.8	17	0	22	-1.8	68	37	-41	22	6	0	0	0	1.3	32	11.2	26	4	9	13	6	54			
PALMOPHILIA	2	1019.3	1020.5	7.7	0.8	3.4	1.7	16.7	12	-7.8	17	0	18	-2.2	69	42	-43	13	6	0	0	0	1.3	30	14.3	32	7	3	25	8.5	58			
PITTSBURGH	347	976.0	1021.2	5.5	-2.6	1.4	2.3	17.8	11	-13.3	18	0	26	-6.1	59	56	-5	25	11	0	0	0	0	2.5	2.1	25	15.6	27	7	3	25	7.5	33	
SCRANTON	283	984.0	1020.9	6.0	-2.0	2.0	2.0	21.1	12	-10.6	17	0	19	-5.0	63	43	-21	15	11	0	0	0	0	1.4	2.1	27	17.0	27	7	3	25	7.5	37	
WILLIAMSPORT	160	1000.7	1020.3	5.8	-2.5	1.7	2.7	21.1	12	-10.6	17	0	23	-4.6	70	23	-30	23	9	0	0	0	0	1.4	2.1	27	17.0	27	7	3	25	7.5	37	
ROCK ISLAND	34	990.1	1020.3	8.1	1.7	3.1	4.9	16*	0	14.4	19	0	13	0	50	-54	27	7	0	0	0	0	1.3	32	8	32	8	1	1	1	1	1	6.0	32

CLIMATOLOGICAL DATA

METRIC UNITS

DECEMBER 1979

State and Station		Temperature												Precipitation													
		Pressure						Departure from normal						No. of days						No. of days							
		Sea level	500 mb	mb	mb	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C		
RHOE ISLAND PROVIDENCE	16	1015.9	1018.3	8.0	-2.1	2.9	3.2	20.6	12	-15.6	19	0	21	-5.6	5.6	4.6	-5.9	18	7	0	1	1	2.6	2.9	17.0		
SOUTH CAROLINA CHARLESTON U	12	1020.7	1022.6	15.6	2.9	9.3	-0.3	25.0	13	-5.0	18	0	10	2.8	70	67	-1.3	39	7	0	0	1	3.3	17.9	17.4		
COLUMBIA GRENVILLE-SPRINGFIELD	65	1014.2	1022.5	15.3	6.6	10.9	0.3	23.3	13	0.0	3	0	17	1.1	73	74	-4.7	40	6	0	0	0	0.5	3.4	25*		
292 985.5	1021.9	13.3	1.6	7.2	2.2	24.4	1.3	0.6	7.4	2.0	27*	3	0	14	0.0	64	32	-7.2	14	5	0	0	0.4	32	13.0		
SOUTH DAKOTA ABERDEEN	395	970.2	970.9	1019.1	5.0	-8.6	-1.8	5.1	15.0	-1.0	-1.1	16	0	31	-6.7	72	41	-12	1	2	0	10	25	2.5	10.5	16	
HURON RAPID CITY	964	905.5	905.5	1010.3	8.9	-7.7	0.7	3.7	21.1	18	-8.8	16	0	30	-8.3	56	7	-8	1	3	0	8	15.2	2.2	35	10.5	
SIOUX FALLS	432	967.2	1020.6	2.3	-7.7	-2.7	3.9	10.0	18*	-0.9	16	0	30	-5.6	81	1	-18	1	3	0	8	15.2	1.2	35	15.5		
TENNESSEE BRISTOL	459	967.2	1022.9	10.5	-10.2	-3.6	5.1	11.4	18*	-0.9	16	0	31	-6.7	72	41	-8.2	3	2	0	10	25	9.4	2.5	14		
CHATTANOOGA	203	979.6	979.6	1022.9	10.9	-0.6	5.2	0.1	19.4	12	-7.8	18	0	18	-1.7	65	42	-6.5	19	7	0	0	0	0.5	2.5	11.3	
KNOXVILLE	299	986.5	1022.4	11.2	0.1	5.7	0.4	20.6	12	-7.2	13	0	18	-1.7	65	49	-12.5	16	8	0	0	0	0.6	3.4	11.2		
MEMPHIS	79	1012.9	1023.3	12.0	2.2	7.4	1.5	22.1	11	-8.2	17	0	12	0.6	66	65	74	8	1	0	0	0	0.3	2.0	16.6		
NASHVILLE	150	1000.7	1022.9	11.1	-0.6	5.3	0.6	19.4	11	-10.0	11	0	19	-0.6	70	128	15	77	9	1	1	0	2.0	24*	13.5		
OAK RIDGE R	276	919.9	-1.6	4.2	0.2	17.8	12	-8.3	3	0	22	0	57	-7.9	24	8	1	0	0	0	0	0	0	24*	16		
TEXAS ABILENE	594	957.3	1021.4	14.9	2.6	8.7	0.7	26.1	5	-8.3	17	0	11	-1.1	58	67	-4.1	27	5	1	1	1	1.3	24	1.6		
MARFA	1088	994.0	1020.3	11.8	-4.0	3.8	0.2	22.8	25	-12.8	16	0	27	-6.1	56	62	-17	1	2	0	8	1	1.6	29	22*		
AUSTIN	182	999.3	1021.7	17.5	5.4	11.5	0.4	24.4	11	-3.9	18*	0	20	-0.6	59	66	30	3.9	66	86	0	0	0	0.5	3	13.4	
BROWNSVILLE	6	1020.3	1022.0	17.5	5.4	15.4	-0.7	1.7	20	-20*	18	0	20	-1.7	79	52	-20	28	7	0	0	0	0.5	3	18.3		
CORpus CHRISTI	12	1020.3	1022.8	20.9	8.8	14.9	-0.9	30.5	23	-1.7	18	0	22	-1.7	89	73	-13.5	15	5	0	0	0	1.0	7	18.1		
DALLAS - FORT WORTH	168	1000.3	1022.2	15.9	3.4	9.7	0.2	25.6	11	-6.8	17	0	6	1.1	61	69	-23	35	4	1	0	0	0.8	2.5	12.5		
DEL RIO	313	984.4	1022.1	18.8	5.5	12.9	0.9	25.6	12	-2.8	18	0	5	3.9	63	73	-16	9	9	1	0	0	0.8	7	30.3		
EL PASO	1194	885.9	1020.6	14.8	-2.6	8.2	0.2	22.8	5	-10.7	5	0	23	-5.0	53	6	-6	3	4	0	0	0	0	0	2.5		
GALVESTON	29	1018.6	1022.5	10.1	2.6	8.7	0.7	26.1	5	-8.3	17	0	11	-1.1	58	67	-18	48	8	0	0	0	0	0	2.5		
HOUSTON INTERCOAST	992	907.2	1020.6	12.5	-0.9	5.8	0.7	23.9	10	-11.1	17	0	18	-3.9	57	33	-20	5	1	27	1.1	0	0	0	0	0	2.5
MILANO	669	920.1	1020.1	15.1	0.8	8.0	0.3	25.0	11	-7.2	12	0	15	-1.7	71	58	-20	5	1	29	1.1	0	0	0	0	0	2.5
PORT ARTHUR	565	1051.7	1021.8	17.8	5.3	11.6	-0.6	26.1	11	-5.6	18	0	14	6.1	75	64	-60	26	8	1	0	0	1.0	4	11.6		
SAN ANGELO	580	953.6	1021.6	15.9	1.6	8.6	0.6	25.6	12	-7.2	11	0	16	0.6	61	69	-51	26	7	1	0	0	1.3	2.3	1.1		
VICTORIA	240	1018.3	1022.2	18.8	6.1	13.0	1.2	26.7	11	-2.2	18*	0	4	5.6	61	73	-36	42	8	1	0	0	0.8	36	13.0		
KICHLITA FALLS	303	984.1	1021.5	14.9	1.3	8.2	1.4	25.0	10*	-10.0	17	0	13	-1.1	59	51	18	28	6	0	0	0	0.8	36	13.0		
UTAH MILFORD	1533	850.7	1025.2	8.3	-9.7	-0.7	1.2	16.3	4	-16.9	12	0	31	-7	9	12	-21	12	3	0	0	0	0.3	2.5	10.5		
SALT LAKE CITY	1227	876.7	1022.9	6.2	-5.2	0.5	1.4	12.8	20	-11.1	23	0	29	-8.4	75	14	-21	12	3	0	0	0	0.3	2.5	10.5		
VERMONT BURLINGTON	101	1004.7	1017.8	2.2	-5.6	-1.7	3.6	13.3	12	-21.7	19	0	24	-7.2	67	38	-18	23	19	0	0	0	1.0	2.2	17.9	3.2	
VIRGINIA LYNCHBURG	279	986.8	1021.8	10.7	-1.1	4.8	1.6	21.7	12	-10.6	3	0	19	0.6	67	29	-5.3	17	6	0	0	0	0.9	27	13.0		
NORFOLK RICHMOND	50	1014.9	1021.5	12.0	2.3	7.2	1.4	21.7	24	-5.6	18	0	11	0.6	73	42	-54	9	5	0	0	0	0.7	32	13.0		
ROANOKE HALLOPS ISLAND	350	978.7	1021.5	10.9	-1.1	4.9	1.0	22.1	12	-8.9	18	0	20	-2.8	62	42	-50	14	5	0	0	0	1.7	29	12.5		
WASHINGTON OLYMPIA	59	1009.1	1016.6	9.3	1.0	5.2	1.0	13.3	17	-5.0	22	0	14	3.9	91	330	122	76	22	0	1	2.5	20	10.7			
QUILLAYUTE SEATTLE U	55	1007.5	1021.5	9.7	4.2	7.1	4.4	2.0	12.8	3	-1.1	10	0	4	1.0	54	261	144	28	2	1	1	1.5	16	15.6		
SEATTLE U	6	9.8	9.8	4.4	7.1	1.6	1.6	12.8	31*	-0.6	11	0	1	0	1	1	1	1	1	0	0	0	1	1	1		

CLIMATOLOGICAL DATA
METRIC UNITS

DECEMBER 1979

State and Station	Elevation (ground) m	Pressure		Temperature						Precipitation						Wind																
		Station Q	Sea level mb	Date	Average	Depature from normal	No. of days	Average relative humidity	Total	With thunderstorms	No. of days	Snow, Ice Pellets	Frost/mile (1.6 kilometers)	No. of days (sunrise to sunset)	Cloudy, B-10	Partly cloudy, A-7	Sky cover, feet/sunrise to sunset)	Possible sunshine %														
MASHINGTON	122	1000.0	1016.6	9.4	6.7	2.0	13.3	17	-1.1	11	0	6	3.3	80	301	150	66	22	0	2.7	8.9	15										
SEATTLE-TACOMA	718	933.3	1018.7	4.9	-1.4	1.8	3.4	12.2	18	-7.2	28	0	21	-2.2	75	49	-11	13	19	0	2.3	2.7	9.1	12								
SPokane	1206	878.1	1019.0	1.0	-3.7	-1.3	2.0	11.1	8	-10.0	16	0	25	1.1	26	1946	864	118	115	26	1	1.3	3.0	9.7	17							
STAMPEDE PASS R	289	980.4	1020.0	6.6	1.4	5.1	2.3	16.7	9	-8.4	1	0	13	3.4	-16	10	14	20	51	0	5	2.6	9.1	18								
WALLA WALLA U	321			5.5	-2.4	1.6	1.9	13.9	14+	-8.9	26	0	28	-1.7	82	34	5	9	15	0	290	152	1.2	2.7	13.0	25	8.5					
YAKIMA																																
SAN JUAN P.R.	4	1013.5	1015.9	28.8	23.1	25.9	1.1	30.6	7	20.6	26	0	0	21.1	78	97	-23	31	15	1	0	2.3	7	11.2	24	6	21	4	5.3	74		
WEST VIRGINIA	763	930.9	1022.3	7.9	-3.3	2.3	2.0	18.3	12	-13.9	18+	0	25	-4.4	67	38	-47	19	9	0	119	51	1.7	24	11.2	7	11	6	14	5.8		
BECKLEY	310	986.5	1022.7	9.2	-2.0	3.5	1.2	21.1	11	-11.1	18	0	21	-3.3	67	71	-9	4.3	10	0	10	1.4	25	10.3	2.5	27	7	12	4	15	5.8	
CHARLESTON	594	949.2	1022.0	7.5	-5.3	1.1	1.3	18.3	11	-16.1	18	0	26	-5.9	59	23	2.4	13	25	76	1.1	25	12.5	30	7	10	5	16	6.4			
EKINS	252	991.2	1022.0	7.1	-1.4	2.8	1.1	18.9	11	-9.4	3	0	21	-5.9	60	70	-5	4.4	10	0	8	1.1	25	12.5	30	7	10	5	16	6.2		
HUNTINGTON	187																															
PARKERSBURG U																																
WISCONSIN	208	991.9	1018.6	2.4	-2.4	3.8	10.0	5	-21.7	17	0	29	-5.6	79	33	0	11	6	0	36	25	1.9	26	12.5	15	10	3	18	6.3			
GREEN BAY	198	994.9	1020.3	3.7	-6.6	-2.1	3.6	13.3	10	-18.3	17	0	29	-5.0	81	17	-9	4.0	4	0	1.7	26	13.4	N	16	5	9	17	7.0			
LA CROSSE	262	986.8	1019.4	4.1	-7.2	-1.8	3.8	12.8	5	-19.4	17+	0	29	-5.0	80	49	12	26	7	0	3.3	25	1.7	26	13.4	2	7	6	18	6.7		
MADISON	205	992.9	1019.0	4.1	-4.7	-0.3	4.0	12.8	11	-16.9	17	0	27	-3.9	78	58	1.3	47	8	0	15	1	2.9	27	23.2	N	24	7	6	4.5		
WAUKEE																																
WYOMING	1627	838.5	1021.3	3.6	-7.3	-1.8	1.4	10.6	18	-23.9	11	0	27	-8.9	60	9	-3	4	6	0	224	127	5.8	22	20.6	22	24	8	10	13	6.1	
CASPER	1867	812.1	1019.8	6.8	-5.9	0.5	2.1	14.4	19	-17.8	20+	0	27	-10.0	49	38	29	30	6	0	396	432	4.2	28	25.0	23	27.3	4	4	11	11	5.7
CHEYENNE	1696	830.3	1023.0	2.8	-10.7	-3.9	1.1	16.7	4	-20.0	31	0	31	-10.0	66	28	16	24	6	0	518	381	0.9	23	27.3	4	8	6	17	6.2		
LANDER	1208	878.8	1019.6	8.2	-9.3	-0.5	3.1	20.6	4	-29.4	16	0	30	-8.3	65	6	-12	3	5	0	107	51	1.3	27	21.0	4	12	6	13	5.6		

HEATING DEGREE DAYS

(Base 65° F.)

DECEMBER 1979

State and Station	Current season			Current season			Current season			Current season			Current season			
	This month	Period July through this month	Normals	This month	Period July through this month	Normals	This month	Period July through this month	Normals	This month	Period July through this month	Normals	This month	Period July through this month	Normals	
ALABAMA BIRMINGHAM U	615	1150	978	10AH0	899	2161	2321	NEBRASKA	978	2327	2457	TENNESSEE	PR1STOL	804	1639	1711
PIMPINGHAM	598	1054	1148	LEWISTON	774	1900	2221	GRAND ISLAND	1007	2208	2361	CHATTANOOGA	728	1333	1412	
HUNTSVILLE	714	1335	1312	POCATELLO	1100	2689	2787	LINCOLN	1046	2503	2663	KNOXVILLE	700	1327	1388	
MURKILLE	624	713	635					NORTH PLATE	957	2340	2643	MEMPHIS	598	1100	1263	
MONTGOMERY	466	824	911	ILLINOIS				OMAHA (EPPLEY)	1070			NASHVILLE	723	1395	1451	
ALA-KA ANCHORAGE	1704	4024	4874	CAIRO	727	1360	1472	OMAHA (NORTH)	1016	2274	2489	OAK RIDGE	783	1564	1573	
ANCHORAGE	654	2589	2988	CHICAGO O HARE	967	2168	2424	SCOTTSBLUFF	946	2358	2650	TEXAS	ABILENE	530	1002	1002
ANAPOL	2301	7576	8607	CHICAGO MIDWAY	951	2120	2251	VALENTINE	1010	2643	2813	AMARILLO	806	1749	1609	
BAPTIST ISLAND	2463	7671	8436	MOLINE	1027	2395	2398	NEVAOA				AUSTIN	372	666	643	
RETHEL	2073	5517	5705	PEORIA	1022	2319	2305	ELKO	1032	2321	3014	BROWNSVILLE	204	303	185	
PETTLES	2720	6376	7167	ROCKFORD	1110	2501	2578	ELY	1035	2745	3072	CORPUS CHRISTI	233	370	307	
IG DELTA	2360	5257	6267	SPRINGFIELD	896	1964	2101	LAS VEGAS	546	985	1045	DALLAS FT WORTH	478	882	877	
COLD EASY	1179	4045	4242	EVANSVILLE	813	1751	1794	PENO	908	2145	2430	DEL RIO	346	589	612	
FAIRBAKS	2335	5490	6507	FORT WAYNE	1037	2366	2337	WINNEMUCCA	988	2320	2669	EL PASO	670	1255	1133	
GULKANA	2307	5444	6366	INDIANAPOLIS	929	2121	2126	NEW HAMPSHIRE				GALVESTON	302	509	379	
POWER	1432	4025	4637	SOUTH BEND	926	2046	2399	CONCORD	1098	2615	2786	HOUSTON INTERCON	389	713	512	
JUNEAU	1197	3097	3957	IOWA				MT WASHINGTON OBS	1657	5684	5884	LUBBOK	690	1373	1391	
KILO-SALMON	1872	6452	5116	NEW JERSEY				NEW JERSEY				MIDLAND	566	1091	1029	
KODIAK	1177	3352	1848	PURLINGTON	1004	2197	2313	ATLANTIC CITY	830	1759	1794	PORT ARTHUR	382	683	561	
KOTZEEUE	2372	6279	6673	DES MOINES	1031	2239	2513	ATLANTIC CITY U	708	1422	1566	SAN ANGELO	542	1029	889	
MC CRATH	2473	5748	6543	DUQUOUE	1067	2552	2769	NEWARK	763	1479	1787	SAN ANTONIO	306	564	584	
NAME	2134	5677	6132	SIOUX CITY	1075	2549	2619	TRENTON U	768	1596	1785	VICTORIA	329	592	423	
ST. RAUL ISLAND	1030	3982	4709	WATERLOO	1131	2522	2832	WICHITA FALLS	563	1084	1106	WACO	483	910	763	
TALKEETNA	1949	4770	5290	KANSAS				WICHITA FALLS				WICHITA FALLS				
UNALAKLEET				CONCORDIA	909	1968	2132	NEW MEXICO				VERMONT				
VALDEZ	1397	4131	4752	DOOSE CITY	940	2027	1934	ALBUQUERQUE	840	1726	1733	BURLINGTON	1107	2639	2916	
YAKUTAT	1160	3581	4157	GOODLAND	907	2223	2372	CLAYTON	836	2005	2005	UTAH				
AP-1000				TOPEKA	908	1965	2006	ROSELL	748	1492	1552	MILFORD	1050	2405	2529	
FLAGSTAFF	1042	2987	2683	WICHITA	828	1694	1795	NEW YORK				SALT LAKE CITY	987	2110	2365	
PHOENIX	277	402	507	KENTUCKY				NEW YORK				WALLOPS ISLAND	671	1230	1470	
TUCSON	302	580	653	COVINGTON	687	1924	1921	ALBANY	1036	2342	2562	WALLOPS ISLAND				
WINSLG	966	2003	1692	LEXINGTON	833	1759	1813	BINGHAMTON	1040	2545	2721	WALLOPS ISLAND				
YUMA	169	255	384	LOUISVILLE	792	1589	1787	BUFFALO	973	2249	2508	WALLOPS ISLAND				
ARCANAS				SHREVEPORT	498	916	838	CHARLOTTE	655	1224	1280	WALLOPS ISLAND				
FORT SMITH	699	1397	1302	LOUISIANA				GREENSBORO	719	1363	1521	WALLOPS ISLAND				
LITTLE ROCK	588	1104	1314	BATON ROUGE	465	817	643	PALEIGH	661	1264	1386	WALLOPS ISLAND				
NO. LITTLE ROCK	633	1202	1221	LAKE CHARLES	400	709	551	WILMINGT	525	876	911	WALLOPS ISLAND				
CAKERSFIELD	334	552	861	NEW ORLEANS	396	639	546	NORTH CAROLINA	707	1523	1695	WALLOPS ISLAND				
RISHOP	805	1677	1693	NEW ORLEANS	396	639	546	ASHEVILLE	487	807	889	WALLOPS ISLAND				
ALUL CANYON	657	2007	1952	SHREVEPORT	498	916	838	CAPE HATTERAS R	655	1224	1280	WALLOPS ISLAND				
FUREKA U	404	1469	2006	MAINE				CHARLOTTE	655	1224	1280	WALLOPS ISLAND				
FRESNO	555	934	1030	CARIBOU	1413	3402	3714	GREENSBORO	719	1363	1521	WALLOPS ISLAND				
LONG BEACH	204	372	505	PORTLAND	1083	2637	2785	PALEIGH	661	1264	1386	WALLOPS ISLAND				
LOS ANGELES	150	289	571	MARYLAND				WILMINGT	525	876	911	WALLOPS ISLAND				
LOS ANGELES U	114	174	373	BALTIMORE	757	1520	1765	NORTH DAKOTA				WALLOPS ISLAND				
MT. SHASTA R	625	2261	2282	MASSACHUSETTS				BISMARCK	1273	3322	3483	WALLOPS ISLAND				
OAKLAND	390	755	1107	BLUE HILL OBS R	949	2134	2272	FARGO	1367	3452	3542	WALLOPS ISLAND				
REO BLUFF	472	916	998	BOSTON	873	1844	1971	WILLISTON	1272	3216	3574	WALLOPS ISLAND				
SACRAMENTO	558	1049	1061	DETROIT	1019	2391	2518	OHIO				WEST VIRGINIA				
SAN DIEGO	136	215	462	DETROIT METRO	1019	2415	2372	AKRON	981	2270	2328	CHARLESTON	890	2130	2226	
SAN FRANCISCO U	431	960	1148	DETROIT	1014	2417	2615	CINCINNATI ABE 08	850	1834	1883	ELKINS	920	1724	1794	
SAN FRANCISCO U	293	869	1244	DETROIT METRO	1019	2415	2372	CLEVELAND	967	2158	2253	HUNTINGTON	798	1697	1795	
SANTA MARIA	330	857	1148	DETROIT	1014	2417	2615	COLUMBUS	920	2038	2188	MADISON	858	1786	1841	
STOCKTON	518	916	1052	DETROIT METRO	1019	2415	2372	DAYTON	923	2090	2130	MILWAUKEE	1036	2384	2751	
COLORADO	1438	3791	3566	DETROIT METRO	1019	2415	2372	MANSFIELD	1018	2385	2171	GREEN BAY	1151	2885	3051	
COLORADO SPRINGS	969	2516	2512	DETROIT METRO	1019	2415	2372	TOLEDO	1005	2343	2410	LA CROSSE	1133	2716	2805	
DENVER	939	2305	2300	DETROIT METRO	1019	2415	2372	YOUNGSTOWN	987	2297	2396	MADISON	1112	2768	2945	
GRAND JUNCTION	1175	2332	2241	HUGHTON LAKE	1059	2515	2516	OKLAHOMA				MILWAUKEE	1036	2384	2751	
PUEBLO	959	2181	2108	HUGHTON LAKE	1059	2515	2516	OKLAHOMA CITY	669	1314	1409	WYOMING				
CONNECTICUT				SAULT STE MARIE	1263	3446	3453	OKLAHOMA CITY	632	1247	1402	CASPER	1116	2947	2931	
B-HOGEPORT	833	1821	1840	MINNESOTA				TULSA				CHEYENNE	990	2685	2803	
HARTFORD	965	2183	2354	OUTLTH	1317	3469	3767	OREGON	540	1676	2136	LANDER	1234	3006	3119	
DELAWARE				INTERNATIONAL FALLS	1539	4239	4157	ASTORIA	1082	2681	2899	SHERIDAN	1044	2738	3010	
WILMINGTON	827	1645	1804	INTERNATIONAL FALLS	1539	4239	4157	BURNS U	671	1703	1888					
DIST OF COLUMBIA				MINNEAPOLIS	1203	2890	3093	EUGENE	726	1662	1972					
WASHINGTON CULLES	765	1635	1904	POCHESTER	1201	2885	3127	EDFORD	726	2106	2116					
WASHINGTON NATIONAL	654	1203	1570	ST CLOUD	1297	3308	3397	PENOLETON	723	2106	2116					
FLORIDA				MISSISSIPPI				PORTLAND	631	1466	1914					
APPALACHICOLA U	335	492	498	JACKSON	580	1099	896	SALEM	620	1747	1923					
OATONA BEACH	183	258	309	MERIDIAN	536	1003	972	SEXTON SUMMIT R	762	2241	2426					
FORT MYERS	44	56	156	SPRINGFIELD	726	1575	1752	PENNSYLVANIA								
JACKSONVILLE	331	494	497	SPRINGFIELD				ALLENTOWN	849	1890	2179					
KEY WEST	10	16	69	SPRINGFIELD				ERIE	939	2088	2483					
MIAMI				MISSOURI				HARRISBURG	844	1870	1984					
ORLANDO	119	166	245	COLUMBIA REGIONAL	897	1896	1920	PHILADELPHIA	823	1625	1775					
PENACOLA	392	603	580	KANSAS CITY	918	1930	2035	PITTSBURGH	935	2134	2274					
TALLAHASSE	399	666	611	ST JOSEPH	938	1974	2063	SCRANTON	900	2073	2371					
TAMPA	112	159	240	ST LOUIS	610	1659	1801	WILLIAMSPORT	919	2123	2263					
WEST PALM BEACH	46	57	100	ST LOUIS	726	1575	1752									
GEORGIA				HELIOS												
ATHENS	567	1002	1188	GREAT FALLS	934	2495	2950	RHODE ISLAND	745	1561	1894					
ATLANTA	559	1006	1220	HAVRE	1118	2764	3393	PROVIDENCE	849	1855	2143					
AUGUSTA	584	1007	1025	HELENA	1138	2891	3297									
COLUMBUS	475	790	941	KALISPELL	1008	2932	3565									
MACON	461	764	904	MILES CITY	1107	2673	3061	SOUTH CAROLINA	500	771	832					
ROME	667	1203	1570	MISSOULA	1043	2861	3289	CHARLESTON	407	583	696					
SAVANNAH	438	662	771					CHARLESTON U	600	1165	1259					
								SOUTH DAKOTA								
								ABERDEEN	1215	3039	3307					
								HURON	1117	2842	3071					
								PAPIO CITY	982	2459	2777					
								SIOUX FALLS	1168	2849	3010					

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State and Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total for Season	Normals Jan.- Dec.
ALABAMA														
BIRMINGHAM U	0	0	11	40	176	317	452	453	222	49	5	1	1726	2219
BIRMINGHAM	0	1	8	43	198	308	466	424	198	74	7	2	1719	1928
HUNTSVILLE	0	0	9	16	113	280	400	393	189	36	0	0	1436	1808
MOBILE	0	6	28	144	267	448	512	509	361	146	16	5	2442	2577
MONTGOMERY	0	2	13	77	214	346	482	474	337	79	8	1	2033	2238
ALASKA														
ANCHORAGE	0	0	0	0	0	0	4	0	0	0	0	0	4	0
ANNEETTE	0	0	0	0	0	0	1	8	0	0	0	0	9	14
BARROW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BARTER ISLAND	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BETHEL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PETTLES	0	0	0	0	0	0	11	1	0	0	0	0	12	17
BIG DELTA	0	0	0	0	0	0	13	15	0	0	0	0	28	34
COLD BAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FAIRBANKS	0	0	0	0	0	0	16	7	0	0	0	0	23	52
GULKANA	0	0	0	0	0	0	1	0	0	0	0	0	1	0
HOMER	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUNEAU	0	0	0	0	0	0	0	1	0	0	0	0	1	0
KING SALMON	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KODIAK	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KOTZEBUE	0	0	0	0	0	0	1	0	0	0	0	0	8	0
MO GRATH	0	0	0	0	0	0	1	1	0	0	0	0	1	0
NOME	0	0	0	0	0	0	0	0	0	0	0	0	2	14
ST. PAUL ISLAND	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TALKEETNA	0	0	0	0	0	0	0	0	0	0	0	0	1	6
UNALAKLEET	0	0	0	0	0	0	0	1	0	0	0	0	0	0
VALDEZ	0	0	0	0	0	0	0	0	0	0	0	0	4	0
YAKUTAT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ARIZONA														
FLAGSTAFF	0	0	0	0	0	10	47	24	6	0	0	0	85	140
PHOENIX	0	0	11	191	411	741	901	763	764	397	7	0	4186	3508
TUCSON	0	0	1	101	249	551	706	576	580	282	6	0	3052	2814
WINSLOW	0	0	0	2	30	213	430	310	187	13	0	0	1185	1203
YUMA	0	0	60	232	476	724	867	813	809	416	14	10	4381	4195
ARKANSAS														
FORT SMITH	0	0	7	33	113	307	464	426	207	85	4	0	1646	2022
LITTLE ROCK	0	0	24	48	178	396	502	442	240	95	1	0	1926	1925
NO. LITTLE ROCK	0	0	7	39	131	329	472	431	194	99	1	0	1703	1951
CALIFORNIA														
BAKERSFIELD	0	0	12	40	321	500	614	524	513	205	1	3	2733	2179
BISHOP	0	0	0	70	187	365	243	172	17	0	0	0	1054	1037
BLUE CANYON	0	0	0	12	128	61	80	14	0	0	0	0	295	0
EUREKA U	0	0	0	0	0	0	0	0	15	0	0	2	17	0
FRESNO	0	0	2	37	229	396	541	471	442	149	0	0	2267	1671
LONG BEACH	0	10	25	61	220	226	272	362	72	1	14	0	1203	985
LOS ANGELES	0	9	0	35	133	112	193	271	60	9	23	0	845	615
LOS ANGELES U	0	14	17	67	209	229	252	379	124	53	62	0	1406	1185
MT SHASTA R	0	0	0	2	19	123	59	27	5	0	0	0	235	286
OAKLAND	0	0	0	13	29	35	33	110	28	0	0	0	252	128
REO BLUFF	0	6	0	246	401	556	423	444	132	0	0	0	2208	1904
SACRAMENTO	0	0	0	117	214	336	260	295	72	0	0	0	1294	1159
SAN BERNARD R	0	0	0	0	0	0	0	0	0	0	0	0	0	800
SAN DIEGO	0	10	6	46	169	216	283	348	124	5	8	0	1215	722
SAN FRANCISCO	0	0	0	11	19	25	21	88	18	0	0	0	182	108
SAN FRANCISCO U	0	0	0	11	13	10	3	72	16	0	0	0	125	39
SANTA MARIA	0	0	0	8	14	21	7	51	12	0	0	0	113	84
STOCKTON	0	0	0	192	309	412	386	390	104	0	0	0	1793	1259
COLORADO														
ALAMOSA	0	0	0	0	0	0	21	13	0	0	0	0	34	88
COLORADO SPRINGS	0	0	1	84	185	124	77	2	0	0	0	0	473	461
DENVER	0	0	2	112	275	163	102	7	0	0	0	0	661	625
GRAND JUNCTION	0	0	6	52	225	428	310	215	27	0	0	0	1263	1140
PUEBLO	0	0	1	25	169	363	221	124	1	0	0	0	904	981
CONNECTICUT														
BRIDGEPORT	0	0	0	0	16	79	288	259	85	4	0	0	731	735
HARTFORD	0	0	0	60	151	320	218	56	6	0	0	0	811	584
DELAWARE														
WILMINGTON	0	0	4	1	57	123	327	324	138	16	0	0	990	992
DIST. OF COLUMBIA														
WASHINGTON DULLES	0	0	9	69	147	297	310	112	21	6	0	0	976	940
WASHINGTON NATIONAL	0	0	14	9	120	231	431	425	208	39	2	0	1479	1415
FLORIDA														
APPALACHICOLA U	1	0	4	134	252	426	513	498	406	147	46	1	2428	2663
DAYTONA BEACH	26	28	68	231	332	419	538	471	462	252	111	23	2961	2919
FORT MYERS	52	80	124	344	444	535	650	604	563	442	287	112	4237	3711
JACKSONVILLE	1	13	36	131	259	369	532	484	436	158	61	3	2483	2596
KEY WEST	154	147	250	417	516	588	637	632	566	502	362	235	5006	4888
MIAMI	90	81	149	391	492	516	572	537	481	407	324	178	4218	4038
ORLANDO	26	31	65	260	330	479	575	546	498	299	153	53	3315	3226
PENSACOLA	0	2	16	146	276	467	546	527	401	162	16	1	2560	2695
TALLAHASSEE	0	2	10	103	241	378	503	456	366	102	35	2	2198	2563
TAMPA	28	36	73	283	344	482	592	543	515	322	164	55	3437	3366
WEST PALM BEACH	59	87	123	267	349	461	555	549	496	396	266	117	3745	3786
GEORGIA														
ATHENS	0	0	15	25	180	286	398	443	221	40	6	0	1614	1722
ATLANTA	0	13	33	181	327	436	475	243	49	5	0	0	1762	1589
AUGUSTA	0	9	29	197	301	473	460	288	52	20	0	0	1829	1995
COLUMBUS	0	2	21	86	243	398	536	518	314	99	24	2	2243	2143
MACON	0	1	18	57	210	375	505	514	312	86	13	4	2115	2294
ROME	0	0	4	158	285	447	477	447	202	17	0	0	2390	2317
SAVANNAH	0	5	28	105	282	360	537	516	378	126	51	2	2390	2317

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HAWAII														
HILO	155	160	210	271	278	280	302	338	351	350	246	248	3189	3066
HONOLULU	159	209	250	299	412	458	500	485	489	504	378	326	4469	4221
KAHULUI	197	197	206	255	346	410	446	486	485	487	354	331	4200	3732
LIHUE	263	224	220	229	320	374	423	445	474	426	303	252	3953	3719
IDAHO														
BOISE	0	0	0	0	27	129	293	199	101	3	0	0	752	714
LEWISTON	C	C	0	0	15	131	360	315	140	7	0	0	968	657
POCATELLO	0	0	0	0	0	64	207	145	63	0	0	0	479	437
ILLINOIS														
CAIRO U	C	C	0	14	131	402	484	444	221	66	2	0	1764	1806
CHICAGO O HARE	0	0	0	2	61	164	241	213	99	26	0	0	806	664
CHICAGO MIDWAY	0	0	0	1	51	165	251	227	92	25	0	0	812	925
MOLINE	0	0	0	0	83	206	272	245	79	22	0	0	907	893
PEORIA	0	0	0	0	62	206	259	258	95	23	0	0	903	968
ROCKFORD	0	0	0	0	56	134	217	187	69	16	0	0	679	714
SPRINGFIELD	0	0	0	2	93	305	327	295	138	41	0	0	1201	1116
INDIANA														
EVANSVILLE	0	0	0	13	65	310	365	312	138	35	0	0	1238	1364
FORT WAYNE	0	0	0	4	58	156	198	167	78	16	0	0	677	748
INDIANAPOLIS	0	0	0	7	57	197	255	250	92	24	0	0	882	974
SOUTH BEND	C	0	0	2	46	181	236	220	93	21	0	0	801	695
IAWA														
BURLINGTON	C	0	0	0	65	212	275	259	101	19	0	0	931	994
DES MOINES	0	0	0	0	48	194	304	305	118	15	0	0	984	928
CUBUQUE	0	0	0	0	36	106	203	181	66	8	0	0	600	606
SIOUX CITY	0	0	0	3	33	186	299	249	95	0	0	0	865	932
WATERLOO	0	0	0	0	35	153	237	230	106	9	0	0	770	675
KANSAS														
CONCORDIA	0	0	1	5	39	261	381	365	201	27	0	0	1280	1302
DODGE CITY	0	0	2	23	46	292	411	296	206	40	0	0	1316	1411
GOODLAND	0	0	0	3	29	176	346	235	139	11	0	0	939	925
TOPEKA	0	0	4	7	76	237	401	379	144	27	0	0	1275	1361
WICHITA	0	0	5	14	81	294	488	465	249	67	0	0	1663	1673
KENTUCKY														
COVINGTON	0	0	2	8	38	154	271	248	102	22	0	0	845	1080
LEXINGTON	0	0	2	8	57	199	287	292	102	21	0	0	968	1197
LOUISVILLE	0	C	5	10	73	279	326	350	154	39	0	0	1236	1268
LOUISIANA														
BATON ROUGE	1	6	44	141	233	430	521	501	338	144	14	6	2379	2585
LAKE CHAPLES	2	2	36	140	248	444	521	514	336	183	17	1	2444	2739
NEW ORLEANS	0	14	63	198	307	491	581	559	435	206	25	16	2895	2706
SHREVEPORT	0	8	39	86	178	395	5C9	483	284	124	8	2	2116	2538
MINNE														
CARIBOU	0	0	C	0	8	50	153	57	16	6	0	0	290	128
PORTLAND	0	0	0	C	15	34	162	83	19	3	0	0	316	252
MARYLAND														
BALTIMORE	0	0	15	4	72	183	348	341	145	28	1	0	1137	1108
MASSACHUSETTS														
BLUE HILL 085 R	0	0	0	0	26	56	264	167	57	14	0	0	584	457
ROSTON	0	0	0	0	35	122	304	226	85	17	0	0	789	661
WORCESTER	0	0	0	0	24	44	225	142	38	10	0	0	483	387
MICHIGAN														
ALPENA	C	0	0	0	10	47	112	55	41	7	0	0	272	208
DETROIT	0	0	0	0	46	138	198	135	69	12	0	0	598	
DETROIT METRO	0	0	0	0	32	109	184	124	57	16	0	0	522	654
FLINT	0	0	0	0	43	118	177	97	57	17	0	0	509	438
GRAND RAPIDS	0	0	0	0	46	129	204	147	69	19	0	0	614	575
HOUGHTON LAKE	0	0	0	0	18	58	112	45	31	7	0	0	271	250
LANSING	0	0	0	0	48	133	192	125	63	17	0	0	578	535
MUSKEGON	0	0	0	0	29	67	137	103	36	7	0	0	379	469
SAULT STE MARIE	0	0	0	0	0	13	87	30	15	0	0	0	145	139
MINNESOTA														
DULUTH	C	0	0	0	4	25	95	30	15	0	0	0	169	176
INTERNATIONAL FALLS	C	0	0	0	1	18	86	18	8	0	0	0	131	176
MINNEAPOLIS	0	0	0	0	17	113	275	181	65	0	0	0	651	585
POCHESTER	0	0	0	0	21	119	246	167	57	1	0	0	611	474
ST CLOUD	0	0	0	0	14	52	140	87	31	0	0	0	324	426
MISSISSIPPI														
JACKSON	0	2	35	69	190	357	482	461	269	76	4	2	1947	2321
MERIDIAN	0	0	13	57	168	309	526	493	307	63	6	0	1942	2231
MISSOURI														
COLUMBIA REGIONAL	0	0	0	10	73	224	357	337	125	39	0	0	1165	1269
KANSAS CITY	1	3	77	229	348	340	47	29	0	0	0	0	1174	1285
ST JOSEPH	0	0	0	48	199	331	356	135	28	0	0	0	1097	1334
ST LOUIS	C	0	2	9	102	354	446	420	195	50	0	0	1578	1475
SPRINGFIELD	0	0	0	10	56	183	319	341	148	65	0	0	1122	1382
MONTANA														
BILLINGS	0	0	0	0	12	126	270	216	86	6	0	0	716	498
GLASGOW	0	0	0	8	70	236	170	48	1	0	0	0	533	438
GREAT FALLS	0	0	0	2	55	152	132	50	5	0	0	0	396	339
HAVRE	0	0	0	5	83	187	185	48	6	0	0	0	395	
HELENA	C	0	0	1	45	152	103	21	0	0	0	0	322	256
KALISPELL	0	0	0	0	0	18	142	96	2	0	0	0	258	117
MILES CITY	0	C	0	4	26	138	305	237	92	0	0	0	802	752
MISSOULA	0	0	C	0	0	50	177	146	17	0	0	0	390	188

MONTHLY AND SEASONAL COOLING DEGREE DAYS

(Base 65°F)

1979

State and Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total for Season	Normals Jan.- Dec.
NEBRASKA														
GRAND ISLAND	0	0	0	0	36	211	294	303	132	2	0	0	978	1036
LINCOLN	0	0	0	7	42	235	320	160	4	0	0	0	1098	1148
NDFOLK	0	0	0	2	39	212	297	268	128	0	0	0	946	925
NORTH PLATTE	0	0	0	0	27	156	294	262	123	0	0	0	862	802
OMAHA (EPPLEY)	0	0	0	8	64	249	344	345	122	0	0	0	1132	
OMAHA (NORTH)	0	0	0	1	47	206	301	303	142	2	0	0	1002	949
SCOTTSBLUFF	0	0	0	8	19	163	317	224	121	1	0	0	853	666
VALENTINE	0	0	0	4	20	136	280	208	129	0	0	0	777	736
NEVADA														
ELKO	0	0	0	0	9	120	284	207	70	4	0	0	694	342
ELY	0	0	0	0	0	35	103	56	14	0	0	0	208	207
LAS VEGAS	0	0	0	104	346	625	813	656	614	229	0	0	3387	2946
RENO	0	0	0	0	9	63	169	122	38	3	0	0	404	329
WINNEMUCCA	0	0	0	0	29	114	256	165	26	3	0	0	593	407
NEW HAMPSHIRE														
CONCORD	0	0	0	1	15	69	232	150	46	6	0	0	\$19	349
MT WASHINGTON OBS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW JERSEY														
ATLANTIC CITY	0	0	5	0	50	103	308	266	103	15	0	0	850	864
ATLANTIC CITY U	0	0	0	0	5	74	252	263	111	8	0	0	835	
NEWARK	0	0	0	2	59	147	381	372	158	34	3	0	1156	1024
TRENTON U	0	0	0	1	44	131	308	313	119	19	1	0	936	968
NEW MEXICO														
ALBUQUERQUE	0	0	0	5	67	269	491	382	249	45	0	0	1508	1316
CLAYTON	0	0	0	1	6	145	283	173	117	17	0	0	742	767
ROSWELL	0	0	0	35	133	311	506	364	251	84	0	0	1684	1560
NEW YORK														
ALBANY	0	0	0	0	39	99	258	168	55	17	0	0	636	574
BINGHAMTON	0	0	0	0	23	47	167	98	22	14	0	0	371	369
BUFFALO	0	0	0	6	40	118	217	120	49	20	0	0	570	437
NEW YORK U	0	0	0	4	71	149	378	376	192	43	5	0	1218	1068
NEW YORK KENNEDY	0	0	0	0	26	83	310	283	115	7	0	0	824	861
NEW YORK LA GUARDIA	0	0	0	0	41	138	382	335	131	22	0	0	1049	1048
ROCHESTER	0	0	0	1	52	121	244	112	49	18	0	0	597	531
SYRACUSE	0	0	0	2	50	109	232	134	46	22	0	0	595	551
NORTH CAROLINA														
ASHEVILLE	0	0	0	1	55	141	234	261	96	4	0	0	792	872
CAPE HATTERAS R	0	0	2	23	121	203	394	407	313	69	24	0	1556	1550
CHARLOTTE	0	0	4	28	122	208	369	419	183	30	3	0	1366	1596
GREENSBORO	0	0	6	26	95	159	340	365	157	28	4	0	1180	1341
RALEIGH	0	0	6	28	105	159	332	384	205	46	10	0	1275	1394
WILMINGTTON	0	2	9	84	210	298	487	490	293	65	28	0	1966	1964
NORTH DAKOTA														
81SNARCK	0	0	0	0	6	67	178	86	28	0	0	0	365	487
FARGO	0	0	0	0	12	85	225	124	58	0	0	0	504	473
WILLISTON	0	0	0	0	12	83	180	107	33	0	0	0	415	422
OHIO														
AKRON	0	0	0	5	36	106	173	166	68	10	0	0	564	634
CINCINNATI A88E DB	0	0	2	11	64	173	254	281	122	23	0	0	930	1188
CLEVELAND	0	0	0	6	42	122	213	218	93	21	0	0	715	613
COLUMBUS	0	0	0	7	54	163	230	239	93	22	0	0	808	809
OAYTON	0	0	1	12	63	179	260	234	87	18	0	0	854	936
MANSFIELD	0	0	0	4	38	109	157	146	60	17	0	0	531	818
TOLEDO	0	0	0	0	46	127	182	158	67	22	0	0	602	685
YOUNGSTOWN	0	0	0	7	38	95	147	139	61	14	0	0	501	518
OKLAHOMA														
OKLAHOMA CITY	0	0	10	18	112	314	505	471	252	121	2	0	1805	1876
TULSA	0	0	9	48	167	388	577	527	298	137	6	0	2157	1949
OREGON														
ASTORIA	0	0	0	0	0	0	15	0	11	1	0	0	27	13
BURNS U	0	0	0	3	48	172	111	111	27	6	0	0	367	289
EUGENE	0	0	0	0	0	16	111	40	15	0	0	0	182	239
MEFORD	0	0	0	2	95	251	172	108	30	0	0	0	658	562
PENOLETON	0	0	0	21	114	261	186	65	3	0	0	0	650	656
PORTLAND	0	0	0	18	65	183	124	65	7	0	0	0	462	300
SALEM	0	0	0	0	29	121	48	20	1	0	0	0	219	232
SEXTON SUNNIT R	0	0	0	5	35	88	11	63	26	0	0	0	228	137
PACIFIC AREA														
GUAN TAGUAC R	391	344	403	423	480	491	461	435	425	447	422	408	5130	5011
JOHNSTON	338	304	384	377	442	459	500	531	532	534	424	431	5256	5086
KOROR R	S16	463	511	497	547	488	506	524	520	533	522	520	6147	6008
KWAJALEIN	502	467	561	504	544	526	546	536	547	559	530	532	6354	6164
NAJURO	S07	454	519	447	501	504	520	500	512	537	510	527	6038	5904
PAGO PAGO	502	465	540	458	509	487	424	436	469	502	470	487	5749	5325
PONAPE R	S24	465	525	477	520	506	516	494	512	524	508	531	6074	5652
TRUK NOEN ISLAND	S13	489	531	511	531	527	529	512	531	513	504	517	6228	5888
WAKE	392	354	443	458	527	556	632	518	550	576	436	426	5668	5455
YAP R	490	434	499	510	518	500	475	477	501	505	493	485	5887	5916
PENNSYLVANIA														
ALLENTOWN	0	0	0	1	42	126	274	268	92	7	1	0	811	772
ERIC	0	0	0	3	29	69	125	164	71	32	0	0	493	373
HARRISBURG	0	0	0	5	43	138	279	264	92	7	0	0	828	1025
PHILADELPHIA	0	0	6	5	90	146	357	339	137	16	1	0	1097	1104
PITTSBURGH	0	0	0	9	41	125	193	175	70	7	0	0	620	647
SCRANTON	0	0	0	2	32	78	218	214	75	15	0	0	634	608
WILLIANSPT	0	0	0	3	48	105	262	212	73	4	0	0	707	698
RHODE ISLAND														
BLOCK ISLAND	0	0	0	0	0	22	211	190	84	2	0	0	509	359
PROVIDENCE	0	0	0	0	26	59	279	190	74	12	0	0	640	532

MONTHLY AND SEASONAL COOLING DEGREE DAYS

(Base 65°F)

1979

State and Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total for Season	Normals Jan.- Dec.
SOUTH CAROLINA														
CHARLESTON	0	2	9	71	241	335	533	514	354	105	40	0	2204	2078
CHARLESTON U	0	0	5	72	178	316	516	535	355	144	47	1	2169	2354
COLUMBIA	0	0	13	36	157	253	425	461	276	50	22	0	1693	2087
GRNVLLE-SPRTNERD	0	0	8	28	164	215	312	368	180	20	1	0	1296	1573
SOUTH DAKOTA														
ABERDEEN	0	0	0	0	11	83	183	150	75	0	0	0	502	566
HURON	0	0	0	0	13	162	324	188	96	0	0	0	783	711
RAPID CITY	0	0	0	4	15	99	179	141	110	2	0	0	550	661
SIOUX FALLS	0	0	0	3	25	131	289	189	87	0	0	0	724	719
TENNESSEE														
BRISTOL	0	0	0	1	59	113	194	259	85	9	0	0	720	1107
CHATTANOOGA	0	0	0	12	119	279	361	410	227	24	0	0	1432	1636
KNOXVILLE	0	0	15	20	111	242	317	399	224	23	4	0	1355	1569
MEMPHIS	0	0	19	68	184	394	553	499	259	108	4	0	2088	2029
NASHVILLE	0	0	11	5	103	264	393	381	175	44	0	0	1376	1694
OAK RIDGE	0	0	2	5	74	202	285	314	151	11	0	0	1044	1367
TEXAS														
AUSTIN	0	9	20	67	209	428	586	539	390	253	11	0	2512	2466
AMARILLO	0	0	0	12	64	218	380	276	177	41	0	0	1168	1433
BROWNSVILLE	4	56	173	339	380	517	645	614	388	368	118	46	3689	3874
CORPUS CHRISTI	26	39	140	289	366	507	639	624	421	333	89	47	3520	3474
DALLAS FT WORTH	0	1	9	67	179	489	613	551	366	220	14	0	2509	2587
DEL RIO	0	9	66	172	340	444	701	625	483	337	24	9	3210	3363
EL PASO	0	0	0	84	190	414	630	432	308	99	0	0	2157	2098
GALVESTON	0	0	22	128	271	488	544	547	339	268	22	0	2629	3004
HOUSTON INTERCON	7	13	62	142	261	454	552	519	324	211	26	6	2577	2889
LUBBOCK	0	0	0	44	183	371	524	394	264	98	0	0	1878	1647
MIDLAND	0	0	5	43	216	383	539	442	314	167	0	0	2109	2250
PORTE ARTHUR	4	17	54	156	250	464	529	523	352	203	27	11	2590	2798
SAN ANGELO	0	2	17	77	263	394	579	487	309	217	12	0	2357	2702
SAN ANTONIO	3	13	6	166	285	482	619	570	418	322	42	13	2998	2994
VICTORIA	7	18	78	190	277	476	563	559	362	266	28	5	2829	3140
WACO	0	1	21	61	177	426	544	529	320	220	17	1	2317	2863
WICHITA FALLS	0	2	18	49	208	444	628	551	324	176	14	1	2415	2611
UTAH														
MILFORD	0	0	0	0	4	89	267	174	54	1	0	0	589	688
SALT LAKE CITY	0	0	0	2	54	214	439	336	208	21	0	0	1274	927
VERMONT														
BURLINGTON	0	0	0	2	29	106	253	101	27	13	0	0	531	396
VIRGINIA														
LYNCHBURG	0	0	11	12	54	143	298	322	121	21	0	0	982	1100
NORFOLK	0	0	11	13	112	171	385	426	239	54	22	0	1433	1441
RICHMOND	0	0	16	30	117	188	374	404	195	42	9	0	1375	1353
ROANOKE	0	0	10	7	56	150	273	296	97	12	1	0	902	1030
WALLOPS ISLAND	0	0	1	0	26	124	375	394	229	38	0	0	1187	1107
WASHINGTON														
OLYMPIA	0	0	0	0	0	6	73	12	2	0	0	0	93	101
QUILLAYUTE	0	0	0	0	0	0	11	1	3	0	0	0	15	8
SEATTLE	0	0	0	0	1	12	79	27	20	0	0	0	139	183
SEATTLE-TACOMA	0	0	0	2	27	106	15	21	0	0	0	0	171	129
SPokane	0	0	0	1	73	217	166	39	0	0	0	0	496	388
STAMPEDE PASS R	0	0	0	0	1	32	0	0	0	0	0	0	33	16
WALLA WALLA U	0	0	0	3	44	165	375	299	135	11	0	0	1032	862
YAKIMA	0	0	0	12	91	255	174	37	2	0	0	0	571	479
WEST INDIES														
SAN JUAN P.R.	426	393	404	436	512	571	582	564	511	569	477	432	5877	4982
WEST VIRGINIA														
BECKLEY	0	0	0	1	31	49	121	157	39	6	0	0	404	490
CHARLESTON	0	0	13	18	69	138	257	277	105	17	0	0	894	1055
ELKINS	0	0	0	2	21	45	142	149	33	0	0	0	392	389
HUNTINGTON	0	0	13	17	76	173	286	301	113	22	3	0	1004	1098
PARKERSBURG U	0	0	9	11	70	129	240	267	96	18	0	0	840	1045
WISCONSIN														
GREEN BAY	0	0	0	0	6	68	191	91	23	1	0	0	380	386
LA CROSSE	0	0	0	30	104	226	161	60	3	0	0	0	584	695
MADISON	0	0	0	33	88	168	115	33	13	0	0	0	450	460
MILWAUKEE	0	0	0	16	87	209	147	68	11	0	0	0	538	450
WYOMING														
CASPER	0	0	0	0	0	62	187	129	37	0	0	0	415	458
CHEYENNE	0	0	0	1	42	160	100	49	0	0	0	0	352	327
LANDER	0	0	0	2	81	185	113	55	0	0	0	0	436	383
HERIDIAN	0	0	0	1	42	108	121	46	0	0	0	0	318	446

STORM SUMMARY

DECEMBER 1979

STATE	TORNADOES			HAILSTORMS			WINDSTORMS			LIGHTNING			@HEAVY SNOWSTORMS AND BLIZZARDS			# ICE STORMS			◊ ALL OTHER						
	NUMBER	DAYS	DEATHS	INJURIES	† DAMAGE	DEATHS	INJURIES	PROP. ERTY CROPS	DEATHS	INJURIES	PROP. ERTY CROPS	DEATHS	INJURIES	PROP. ERTY CROPS	DEATHS	INJURIES	PROP. ERTY CROPS	DEATHS	INJURIES	PROP. ERTY CROPS					
Alabama	*																								
Alaska	*																								
Arizona	*																								
Arkansas																									
California																									
Colorado	*																								
Connecticut	*																								
Delaware																									
Florida	*																								
Georgia	*																								
Hawaii	#																								
Idaho	*																								
Illinois																									
Indiana																									
Iowa	*																								
Kansas	*																								
Kentucky	*																								
Louisiana																									
Maine	*																								
Maryland & DC																									
Massachusetts	*																								
Michigan																									
Minnesota	*																								
Mississippi																									
Missouri																									
Montana																									
Nebraska																									
Nevada	*																								
New Hampshire	*																								
New Jersey	*	3	1																						
New Mexico	*																								
New York																									
North Carolina																									
North Dakota																									
Ohio																									
Oklahoma	*																								
Oregon	*																								
Pacific																									
Pennsylvania																									
Puerto Rico	*																								
Rhode Island																									
South Carolina	*																								
South Dakota	*																								
Tennessee	*																								
Texas																									
Utah	*																								
Vermont	*																								
Virginia	*																								
Virgin Islands	*																								
Washington																									
West Virginia	*																								
Wisconsin																									
Wyoming																									

RAWINSONDE DATA

Average monthly values

DECEMBER 1979

RAWINSONDE DATA

Average monthly values

DECEMBER 1979

Standard pressure surface mb.	CARIBOU, ME 949 MB										CENTREVILLE, AL 1006 MB										CHARLESTON, SC 1021 MB										CHATHAM, MA 1015 MB										CHIHUAHUA, MEXICO 861 MB									
	No. of observations					Resistant Wind					No. of observations					Resistant Wind					No. of observations					Resistant Wind					No. of observations					Resistant Wind														
	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.															
5FC 31 191 7 23.0 -8.3 -12.2 30 3.0 3C 31 140 3.9 -1 02 1.3 31 1.5 2.3 34 3.6 31 16 2.6 -1.8 30 3.0 31 1,428 3.1 -2.0 25 .6	950 31 500 8.0 -11.0 28 6.0 30 25 612 7.0 -2.0 24 1.3 31 0.6 2.4 36 2.0 30 1.5 2.6 31 1.529 2.1 -4.5 25 .6	900 31 920 8.8 -13.3 29 9.0 30 1,057 7.3 -1.5 26 3.2 31 1,055 8.9 -3.5 25 3.6 31 1.982 1.7 -1.1 29 8.8 30 1,428 3.1 -2.0 25 .6	850 31 1,363 9.4 -13.3 29 11.3 30 1,527 7.2 -8.0 27 5.3 31 1,528 7.6 -2.6 22 5.5 31 1,437 2.3 -12.9 29 10.2 31 1,529 6.2 -2.7 25 .8	800 31 1,831 10.0 -16.1 29 11.9 30 2,025 5.7 -9.0 27 6.5 31 2,026 6.3 -9.1 26 7.7 31 1,918 -1.3 16.7 31 2,028 7.2 -3.3 25 2.3	750 31 2,321 11.3 -17.8 29 13.1 30 2,551 3.5 -11.5 26 7.1 31 2,553 4.1 -11.2 27 9.0 31 2,427 -5.0 18.6 28 14.5 31 2,558 5.1 -2.5 24 3.6	700 31 2,856 13.3 -20.2 28 14.5 30 3,107 1.1 -13.0 26 9.1 31 3,111 1.4 -13.7 27 11.3 31 2,967 -7.4 20.9 28 17.2 31 3,119 2.0 -10.1 24 6.2	650 31 3,418 15.7 -23.9 28 15.5 30 3,699 -2.8 -14.8 26 11.3 31 3,705 -1.8 15.4 27 12.6 31 3,542 -10.0 19.5 31 3,715 -5.5 15.5 25 6.8	600 31 4,018 18.7 -18.5 28 17.5 30 4,329 -6.5 -16.6 26 13.1 31 4,337 -5.4 14.5 27 13.1 31 4,155 -13.5 26.6 28 13.1 31 4,350 -4.3 20.4 26 8.5	550 31 4,662 22.5 -30.5 28 18.1 30 5,005 -10.1 -23.4 27 15.6 31 5,015 -9.3 23.5 27 17.2 31 4,813 -17.0 29.0 28 22.5 31 5,030 -4.3 24.7 26 10.6	510 31 5,296 26.9 -33.5 28 20.2 30 5,734 -14.2 -27.2 27 18.3 31 5,745 -14.2 27.5 27 20.3 31 5,522 -21.5 33.6 28 25.2 31 5,762 -6.2 27.6 21 11.6	450 31 6,109 31.8 -38.1 28 21.0 30 6,525 -19.8 -32.6 26 20.5 31 6,536 -19.7 32.4 27 22.4 30 6,292 -26.2 38.3 27 26.8 31 6,554 -19.3 33.7 26 13.6	400 31 6,533 37.1 -42.5 27 23.4 29 7.3 -25.8 -37.6 26 23.6 31 7,400 -25.9 38.5 27 25.4 30 7,133 -32.5 44.4 27 28.8 31 7,419 -25.5 37.6 26 16.0	350 31 6,948 42.5 -46.9 27 27 29 8.3 -33.1 -43.1 26 26.4 31 8,355 -33.1 43.8 27 28.0 30 8,064 -39.2 47.7 27 30.9 31 8,376 -32.7 43.9 26 17.0	300 31 8,675 46.1 -51.4 27 27 29 9.1 -12.1 -48.4 26 30.8 31 9,418 -41.0 47.0 27 32.2 30 9,100 -46.7 56.7 27 31.8 31 9,440 -41.1 45.7 27 17.8	250 30 10,062 51.4 -56.4 27 27 29 10.6 -22.5 26 30.6 31 10,635 -49.7 27 36.0 30 10,292 -52.5 57.7 27 33.2 30 10,653 -50.0 27 20.7	200 30 11,508 52.2 27 27 30 4.2 12.0 55.9 26 33.5 31 12,088 -57.5 27 38.8 30 11,724 -54.8 58.0 27 31.4 30 12,088 -57.0 27 23.1	175 29 12,371 52.2 27 27 29 24.8 12,892 -59.7 26 33.5 31 12,990 -59.3 27 37.1 30 12,578 -55.3 57.7 27 29.7 30 12,926 -59.4 26 23.3	150 29 13,367 52.9 27 27 29 24.6 13,851 -63.2 26 33.5 31 13,660 -63.5 27 33.1 30 13,566 -63.2 57.7 27 27.4 30 13,885 -62.3 26 22.3	125 27 14,525 54.1 27 27 21.0 26 14,966 -64.5 27 26.1 30 14,993 -64.7 27 27.1 30 14,713 -58.4 57.7 27 25.0 30 15,000 -65.2 26 20.2	100 26 15,956 54.8 28 20.9 26 16,320 -67.0 27 18.9 30 16,345 -67.4 27 15.8 30 16,352 -67.5 57.7 27 17.0 29 16,352 -68.1 27 15.9	80 25 17,385 54.7 27 15.8 25 17,664 -67.7 27 14.8 30 17,689 -67.5 27 15.8 30 17,507 -67.5 57.7 27 15.4 24 16,408 -68.0 26 7.0	70 25 18,233 57.0 27 15.9 25 18,469 -66.7 27 11.5 30 18,495 -66.7 27 11.6 30 18,390 -60.4 57.7 27 14.7 23 19,420 -57.5 57.7 27 13.5 23 20,535 -61.1 27 3.5	60 24 19,204 57.7 27 15.9 24 19,045 -65.8 27 7.8 30 19,431 -65.2 27 8.4 28 19,303 -59.6 57.7 27 10.5 23 21,917 -60.5 57.7 27 9.4 22 21,917 -60.5 26 8.4	50 23 20,353 57.3 27 13.9 24 20,519 -63.3 27 7.3 29 20,546 -63.1 27 7.2 28 20,444 -59.7 57.7 27 10.5 23 21,740 -61.1 57.7 27 9.4 22 21,740 -61.1 26 8.4	40 23 21,763 58.1 27 10.6 24 21,897 -61.4 27 6.8 29 21,926 -61.0 29 5.3 27 21,895 -58.8 57.7 27 8.9 20 23,723 -57.6 57.7 27 8.9 20 23,723 -57.6 27 2.4	30 19 23,575 57.8 27 11.5 23 23,695 -58.8 30 4.1 29 23,728 -57.8 30 3.6 26 23,659 -58.8 57.7 27 8.9 20 23,728 -57.6 57.7 27 8.9 20 23,728 -57.6 27 3.4	25 15 24,727 58.0 27 10.6 22 24,848 -58.0 29 4.5 29 24,880 -58.9 29 3.5 25 24,799 -58.0 57.7 27 8.9 19 24,884 -55.6 57.7 27 8.9 19 24,884 -55.6 27 2.4	20 12 26,143 57.8 27 11.3 26,259 -55.6 28 6.4 28 26,302 -55.2 29 5.9 26,205 -58.4 57.7 27 8.6 13 26,314 -53.0 57.7 27 8.6 13 26,314 -53.0 27 2.4	15 7 27,983 56.9 27 14 30,703 -49.4 28 18.5 15 30,807 -48.0 28 10.1 28,002 -58.7 28 14.0 25 28,206 -50.0 57.7 27 8.0 13 28,206 -50.0 57.7 27 8.0 13 28,206 -50.0 27 3.4																					

Standard pressure surface mb.	COLO. BAY, AK 1003 MB										DAYTON, OH 984 MB										DEL RIO, TX 984 MB										DENVER, CO 839 MB										DESERT ROCK, NV 906 MB									
	No. of observations					Resistant Wind					No. of observations					Resistant Wind					No. of observations					Resistant Wind					No. of observations					Resistant Wind														
	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.															
5FC 31 30 -2.8 -5.9 22 .9 31 299 -.1 -4.1 22 1.7 31 314 8.3 -1 02 1.3 31 9.6 3.6 15 2.0 31 1,611 -2.3 -9.2 18 1.5 31 1,007 3.5 -7.8 07 1.4	950 31 30 -1.9 -7.0 16 1.4 31 582 .6 -5.6 25 4.6 31 607 9.6 -2.0 20 2.7 31 1,529 1.9 2.0 2.0 31 2,026 4.7 -10.5 11 2.3	900 30 30 -6.6 -10.8 29 3.7 31 1,017 -9.8 -8.2 26 6.6 31 1,056 9.5 -2.0 20 2.7 31 1,529 1.9 2.0 2.0 31 2,026 4.7 -10.5 11 2.3	850 30 1,332 -8.4 -15.4 28 4.2 31 1,476 -.7 -9.9 27 8.8 31 1,531 9.2 -5.3 25 3.3 31 1,530 1.9 2.0 2.0 31 2,026 4.7 -10.5 11 2.3	800 31 1,801 -10.5 -19.0 29 4.9 31 1,953 -.3 -10.8 27 10.9 31 2,032 8.2 -5.1 27 4.3 31 1,992 2.7 -10.5 26 3.1 31 2,026 4.7 -10.5 11 2.3	750 30 2,296 -12.4 -17.1 28 5.9 31 2,477 -2.3 -13.5 27 13.3 31 2,563 5.8 -8.3 27 5.7 31 2,513 2.1 -13.9 29 3.1 31 2,550 2.6 -11.5 12 2.5	700 30 2,820 -15.1 -25.2 28 7.5 31 3,023 -4.8 -16.5 27 15.3 31 3,125 3.2 -14.8 27 6.3 31 3,065 -2.0 20 16.5 27 3.1 31 3,104 1.4 -2.2 28 2.3	650 30 3,306 -17.9 -28.1 27 8.9 31 3,602 -7.8 -18.9 27 16.8 31 3,721 -4.7 -17.5 27 8.5 31 3,651 -5.4 25 3.1 31 3,699 -11.6 27 2.0 29 6.7	600 30 3,972 -21.2 -30.9 27 11.8 31 4,221 -10.9 -22.9 27 17.9 31 4,357 -4.0 -19.9 27 10.9 31 4,274 -9.1 -22.0 31 8.8 31 4,325 -7.0 -23.8 29 5.6	550 30 4,610 -25.1 -31.4 27 11.8 31 4,851 -14.9 -26.1 27 18.3 31 5,038 -8.2 -23.5 26 12.6 31 4,942 -13.4 -25.0 30 10.8 31 5,721 -17.0 -31.5 28 8.1	500 31 5,296 -29.5 -38.0 27 12.1 31 5,600 -19.5 -30.5 28 20.8 31 5,771 -13.4 -28.2 26 14.4 31 5,660 -18.7 -30.0 30 10.8 31 5,721 -17.0 -31.5 28 8.1	450 31 6,041 -34.3 -39.2 27 12.4 31 6,375 -24.3 -34.0 27 22.9 31 6,565 -18.8 -32.1 26 16.8 31 6,537 -18.3 -34.0 30 15.0 31 6,502 -22.9 -35.0 29 8.0	400 31 6,855 -40.1 -42.0 27 13.9 31 7,224 -30.4 -40.4 27 25.6 31 7,432 -25.3 -36.8 28 19.3 31 7,286 -30.5 -41.3 30 12.4 31 7,354 -29.4 -40.9 29 8.5	350 31 7,758 -45.4 -53.6 27 18.7 31 8,182 -30.9 -40.4 27 26.9 31 8,389 -32.8 -45.9 28 21.2 31 8,223 -38.1 -45.4 30 14.4 31 8,344 -44.3 46.1 29 10.8	300 31 8,675 -51.3 27 19.7 31 9,207 -44.9 27 30.2 31 9,452 -41.6 25 25.8 31 9,266 -46.4 29 14.4 30 9,344 -44.3 30 12.4	250 30 9,496 -54.6 27 21.7 31 10,404 -52.8 27 32.9 31 10,668 -49.8 27 29.7 31 10,455 -53.0 29 17.9 30 10,514 -51.5 30 14.6	200 31 11,371 -54.9 27 21.6 31 12,049 -56.3 27 33.2 31 12,103 -57.5 27 30.5 31 11,871 -53.3 28 16.0 29 12,069 -58.2 30 13.0	175 30 12,227 -55.3 27 15.9 31 12,647 -56.7 27 32.2 31 12,941 -59.8 27 28.4 31 12,618 -56.1 28 16.4 27 12,616 -56.4 30 13.6	150 30 13,215 -54.1 26 16.7 31 13,653 -57.5 27 30.1 31 13,620 -62.0 27 26.0 31 13,692 -58.5 28 17.2 27 13,740 -60.1 29 19.1	125 29 14,388 -57.3 27 17.7 31 14,797 -59.0 27 26.4 31 15,010 -63.0 27 21.1 30 14,832 -60.8 28 16.7 27 14,912 -62.3 29 15.0	100 28 15,002 -55.8 26 17.9 31 16,184 -63.4 27 21.8 31 16,364 -68.4 27 26.1 30 16,214 -62.4 28 15.5 27 16,285 -64.1 29 11.5	80 26 17,222 -56.3 26 19.7 31 17,565 -62.4 27 21.4 31 17,698 -69.0 27 26.5 30 17,586 -63.7 28 10.9 27 17,649 -64.6 29 9.2	70 26 18,669 -57.1 26 21.6 30 18,394 -62.3 27 17.3 31 18,498 -67.6 27 28.2 30 18,069 -62.5 28 9.6 27 18,465 -64.5 29 7.1	60 26 19,433 -57.8 26 22.0 30 19,348 -61.8 27 14.8 31 19,428 -66.4 27 26.1 30 19,359 -62.7 28 7.5 27 19,093 -63.8 29 4.6	50 26 20,192 -58.7 26 25.0 31 20,482 -61.4 27 15.0 31 20,541 -63.7 27 26.8 31 20,488 -62.0 28 6.8 24 20,525 -62.3 29 3.4	40 26 21,590 -59.7 26 26.6 31 21,865 -61.2 27 10.0 31 21,918 -61.3 27 24.1 30 21,872 -60.2 27 4.1 23 21,907 -61.2 31 2.0	30 26 23,383 -61.6 26 21.2 31 23,655 -59.8 27 8.0 31 23,711 -58.9 27 24.7 30 23,666 -59.4 27 4.7 22 23,708 -58.1 32 1.7	25 27 24,499 -62.9 26 21.6 31 24,806 -58.9 27 9.0 31 24,860 -57.1 27 24.1 30 24,809 -58.8 27 5.8 22 24,857 -56.6 28 3.8	20 26 25,862 -64.0 26 21.6 31 26,217 -58.4 27 9.5 31 26,279 -54.7 27 24.7 30 26,213 -58.5 27 5.8 22 26,278 -55.5 29 5.5	15 26 27,616 -65.9 27 21.8 31 28,055 -57.3 27 9.8 31 28,134 -51.6 27 24.8 30 28,016 -58.8 27 8.8 22 26,278 -55.5 29 5.5	10 12 30,142 -67.0 27 21.8 31 30,609 -54.9 27 10.5 31 30,807 -45.8 27 20.6 31 30,593 -58.4 27 14.																				

RAWINSONDE DATA

Average monthly values

DECEMBER 1979

FLINT, MI 990 MB				GLASGOW, MT 933 MB				GRAND JUNCTION, CO 858 MB				GREAT FALLS, MT 887 MB				GREEN BAY, WI 992 MB			
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind Speed m.p.s.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind Speed m.p.s.			
5FC 31 236 -1 +1 -3.8 24 1 +7 31 696 -5.6 +2.8 6 +3 31 983 -.5 -7.2 27 5 +4 28 1,561 -3.6 -8.8 13 2 +7 31 1,456 -1.6 -9.3 24 12.2 30 1,427 -3.2 +15.8 29 7.0	31	236	-1	+1	-3.8	24	1	+7	31	696	-5.6	+2.8	6	+3	31	983			
900 31 560 -1.7 -5.6 26 4 +8 28 1 +0.0 28 10.0 28 10.0 28 1,561 -3.6 -8.8 13 2 +7 31 1,456 -1.6 -9.3 24 12.2 30 1,427 -3.2 +15.8 29 7.0	31	560	-1.7	-5.6	26	4	+8	28	1	+0.0	28	10.0	28	1,561	-3.6	-8.8	13		
900 31 560 -9.4 -2.4 -9.2 28 6 +3 31 983 -.5 -7.2 27 5 +4 28 1,561 -3.6 -8.8 13 2 +7 31 1,456 -1.6 -9.3 24 12.2 30 1,427 -3.2 +15.8 29 7.0	31	560	-9.4	-2.4	-9.2	28	6	+3	31	983	-.5	-7.2	27	5	+4	28	1,561		
850 31 1,443 -2.5 -13.3 28 8 +2 31 1,443 -9.1 +10.0 28 11.6 31 2,031 -2.2 -9.2 14 2 +7 31 1,942 -1.1 -11.2 25 13.0 30 1,907 -3.6 +17.7 29 8.5	31	1,443	-2.5	-13.3	28	8	+2	31	1,443	-9.1	+10.0	28	11.6	31	2,031	-2.2	-9.2	14	
800 31 1,924 -2.8 -14.9 -9.7 27 11.0 31 1,928 -1.3 -11.6 26 5 +4 28 1,561 -3.6 -8.8 13 2 +7 31 1,456 -1.6 -9.3 24 12.2 30 1,427 -3.2 +15.8 29 7.0	31	1,924	-2.8	-14.9	-9.7	27	11.0	31	1,928	-1.3	-11.6	26	5	+4	28	1,561			
750 31 2,434 -4.4 -8.8 -17.0 27 12.7 31 2,440 -4.1 -14.4 28 12.0 31 2,544 -2.2 -11.1 19 2 +7 31 2,454 -3.4 -12.4 26 13.7 30 2,415 -5.6 +19.6 29 9.5	31	2,434	-4.4	-8.8	-17.0	27	12.7	31	2,440	-4.1	-14.4	28	12.0	31	2,544	-2.2	-11.1	19	
700 31 2,974 -7.3 -21.5 27 13.8 31 2,981 -6.9 -17.6 26 12.8 31 3,091 -3.5 -14.5 28 12.6 31 2,998 -1.6 -14.7 27 15.4 30 2,953 -8.5 +21.8 29 10.6	31	2,974	-7.3	-21.5	27	13.8	31	2,981	-6.9	-17.6	26	12.8	31	3,091	-3.5	-14.5	28		
650 31 3,549 -10.2 -22.7 28 14.6 31 3,556 -16.1 -20.2 29 14.2 31 3,674 -6.2 -16.7 28 16.1 31 3,576 -8.4 -18.0 28 15.7 30 3,525 -11.4 +23.0 29 11.4	31	3,549	-10.2	-22.7	28	14.6	31	3,556	-16.1	-20.2	29	14.2	31	3,674	-6.2	-16.7	28		
600 31 4,162 -13.5 -26.3 28 16.3 31 4,169 -13.8 -23.4 29 15.8 31 4,297 -9.3 -21.6 29 18.1 30 4,193 -12.1 -21.8 28 17.0 30 4,135 -14.8 +26.3 29 13.3	31	4,162	-13.5	-26.3	28	16.3	31	4,169	-13.8	-23.4	29	15.8	31	4,297	-9.3	-21.6	29		
550 31 4,818 -17.7 -29.9 28 17.6 31 4,825 -18.0 -26.7 29 16.6 31 4,964 -13.5 -25.8 29 17.4 30 4,851 -16.7 -26.9 28 17.5 30 4,788 -18.8 +30.1 28 15.2	31	4,818	-17.7	-29.9	28	17.6	31	4,825	-18.0	-26.7	29	16.6	31	4,964	-13.5	-25.8	29		
500 31 5,525 -22.3 -33.2 28 19.1 31 5,531 -22.5 -30.9 29 19.3 31 5,682 -18.5 -29.7 29 19.0 30 5,560 -21.1 -31.5 29 18.9 30 5,492 -23.1 +35.0 28 17.9	31	5,525	-22.3	-33.2	28	19.1	31	5,531	-22.5	-30.9	29	19.3	31	5,682	-18.5	-29.7	29		
450 31 6,292 -27.2 -38.5 28 21.5 31 6,297 -27.6 -35.5 29 21.3 31 6,460 -23.9 -36.4 28 21.0 30 6,329 -26.7 -36.4 28 20.9 30 6,257 -28.2 +38.9 29 19.7	31	6,292	-27.2	-38.5	28	21.5	31	6,297	-27.6	-35.5	29	21.3	31	6,460	-23.9	-36.4	28		
400 31 7,130 -33.1 -42.7 28 24.9 31 7,134 -33.7 -40.4 29 23.0 31 7,303 -30.4 -41.0 29 21.9 30 7,092 -33.9 +43.7 28 21.1	31	7,130	-33.1	-42.7	28	24.9	31	7,134	-33.7	-40.4	29	23.0	31	7,303	-30.4	-41.0	29		
350 31 8,060 -39.4 -47.5 28 27.0 31 8,060 -40.5 -42.8 29 25.2 31 8,247 -37.6 -45.6 28 24.9 30 8,096 -39.4 -44.7 29 21.9 30 8,018 -40.3 +47.9 28 23.3	31	8,060	-39.4	-47.5	28	27.0	31	8,060	-40.5	-42.8	29	25.2	31	8,247	-37.6	-45.6	28		
300 31 9,097 -46.4 -50.7 27 29.2 31 9,090 -48.0 -49.0 29 28.0 31 9,291 -45.2 -49.2 28 27.9 30 9,056 -47.5 -49.7 28 27.3 30 9,036 -48.6 +53.6 28 21.1	31	9,097	-46.4	-50.7	27	29.2	31	9,090	-48.0	-49.0	29	28.0	31	9,291	-45.2	-49.2	28		
250 31 10,292 -52.5 28 31.9 31 10,274 -54.8 29 31.3 31 10,489 -52.0 28 31.2 30 10,325 -54.7 29 30.0 30 10,236 -55.6 +55.6 28 25.1	31	10,292	-52.5	28	31.9	31	10,274	-54.8	29	31.3	31	10,489	-52.0	28	31.2	30	10,325		
200 31 11,724 -54.8 27 31.0 31 11,691 -56.9 28 31.0 31 11,915 -54.4 28 31.0 30 11,768 -58.2 28 29.8 30 11,642 -55.6 +55.6 28 24.5	31	11,724	-54.8	27	31.0	31	11,691	-56.9	28	31.0	31	11,915	-54.4	28	31.0	30	11,768		
175 31 12,579 -54.5 28 31.1 29 12,534 -56.2 28 31.1 29 12,758 -58.0 28 31.1 30 12,515 -57.3 28 29.7 30 12,451 -55.7 +55.7 28 21.6	31	12,579	-54.5	28	31.1	29	12,534	-56.2	28	31.1	29	12,758	-58.0	28	31.1	30	12,515		
150 29 13,564 -55.5 27 31.2 29 13,515 -55.8 28 31.2 29 13,748 -58.3 28 31.2 30 13,549 -57.0 28 29.6 30 13,456 -55.8 +55.8 28 20.0	31	13,564	-55.5	27	31.2	29	13,515	-55.8	28	31.2	29	13,748	-58.3	28	31.2	30	13,549		
125 29 14,742 -57.0 27 31.3 29 14,671 -56.1 28 31.3 29 14,907 -58.7 28 31.3 30 14,781 -56.9 28 29.5 30 14,656 -55.7 +55.7 28 18.2	31	14,742	-57.0	27	31.3	29	14,671	-56.1	28	31.3	29	14,907	-58.7	28	31.3	30	14,781		
100 29 16,186 -59.2 27 31.4 29 16,104 -58.2 28 31.4 29 16,343 -58.7 28 31.4 30 16,196 -59.5 28 29.4 30 16,060 -58.8 +58.8 28 16.8	31	16,186	-59.2	27	31.4	29	16,104	-58.2	28	31.4	29	16,343	-58.7	28	31.4	30	16,196		
80 29 17,523 -59.9 27 31.5 29 17,478 -58.9 28 31.5 29 17,721 -58.7 28 31.5 30 17,584 -59.5 28 29.3 30 17,454 -58.8 +58.8 28 17.2	31	17,523	-59.9	27	31.5	29	17,478	-58.9	28	31.5	29	17,721	-58.7	28	31.5	30	17,584		
70 29 18,351 -60.1 27 31.6 29 18,317 -58.6 28 31.6 29 18,557 -60.2 28 31.6 30 18,429 -59.7 28 29.2 30 18,300 -59.7 +59.7 28 17.0	31	18,351	-60.1	27	31.6	29	18,317	-58.6	28	31.6	29	18,557	-60.2	28	31.6	30	18,429		
60 29 19,306 -60.3 27 31.7 29 19,286 -59.1 28 31.7 29 19,547 -60.4 28 31.7 30 19,407 -62.4 28 29.1 30 19,255 -60.0 +60.0 28 16.8	31	19,306	-60.3	27	31.7	29	19,286	-59.1	28	31.7	29	19,547	-60.4	28	31.7	30	19,407		
50 29 20,446 -59.6 27 31.8 29 20,427 -60.4 28 31.8 29 20,694 -61.4 28 31.8 30 20,553 -61.4 28 29.0 30 20,432 -59.5 28 15.0 30 20,393 -59.9 +59.9 28 10.3	31	20,446	-59.6	27	31.8	29	20,427	-60.4	28	31.8	29	20,694	-61.4	28	31.8	30	20,553		
40 29 21,684 -59.3 27 31.9 29 21,616 -61.6 28 31.9 29 21,882 -62.0 28 31.9 30 21,752 -60.7 28 28.8 30 21,717 -59.6 +59.6 28 14.8	31	21,684	-59.3	27	31.9	29	21,616	-61.6	28	31.9	29	21,882	-62.0	28	31.9	30	21,752		
30 29 23,696 -58.8 27 32.0 29 23,616 -60.7 28 32.0 29 23,884 -62.7 28 32.0 30 23,759 -60.3 28 28.3 30 23,720 -59.3 +59.3 28 14.3	31	23,696	-58.8	27	32.0	29	23,616	-60.7	28	32.0	29	23,884	-62.7	28	32.0	30	23,759		
25 29 24,791 -58.8 27 32.1 29 24,763 -60.5 28 32.1 29 25,087 -62.8 28 32.1 30 24,957 -61.1 28 28.2 30 24,763 -61.1 +61.0 28 14.0	31	24,791	-58.8	27	32.1	29	24,763	-60.5	28	32.1	29	25,087	-62.8	28	32.1	30	24,957		
20 29 26,191 -58.7 27 32.2 29 26,151 -61.6 28 32.2 29 26,286 -62.7 28 32.2 30 26,278 -57.3 28 28.1 30 26,278 -61.0 +61.0 28 13.9	31	26,191	-58.7	27	32.2	29	26,151	-61.6	28	32.2	29	26,286	-62.7	28	32.2	30	26,278		
15 29 28,193 -57.5 27 32.3 29 27,942 -61.9 28 32.3 29 28,088 -56.6 28 32.3 30 28,088 -56.6 28 28.0 30 27,946 -63.3 +63.3 28 13.7	31	28,193	-57.5	27	32.3	29	27,942	-61.9	28	32.3	29	28,088	-56.6	28	32.3	30	27,946		
10 29 30,202 -57.5 27 32.4 29 30,051 -56.4 28 32.4 29 30,554 -59.6 28 32.4 30 30,554 -59.6 28 27.7 30 30,409 -61.0 +61.0 28 13.5	31	30,202	-57.5	27	32.4	29	30,051	-56.4	28	32.4	29	30,554	-59.6	28	32.4	30	30,409		

* INTERNATIONAL FALLS, MN 972 MB			* ISLE OEL CISNE 1013 MB			JACKSON, MS 1012 MB			JOHN F. KENNEDY INT. AP NY 1020 MB			JOHNSTON IS., PACIFIC AREA 1014 MB		
SFC	31	359 -10.7 -13.4 24 .8	31	10 25.5 21.6 05 4 +2	31	100 3.5 1 -6 02	.3	26 5 3.4 -3 .3	32	1.7 31 3 25.5 22.4 08	5.8			
1000			31	123 25.1 21.3 05 5 +2	29	191 5.5 +8 07	4	25 172 2.2 -3 .6	32	3.7 31 121 24.8 20.6 08	6.6			
950	30	545 -8.6 -11.2 26 2.9	31	573 21.7 16.8 05 6 +8	31	607 8.5 -2 +2 24	2	21 26 579 1.3 -4 +5	32	5.9 31 570 20.8 18.9 08	7.6			
900	31	958 -6.3 -12.3 27 6 +1	31	1,041 18.5 14.8 06 6 +3	31	1,054 8.3 -4 +0 26	3	37 26 1,013 1.2 -6 +5	29	7.6 31 1,037 18.0 14.3 09	6.6			
850	31	1,406 -5.0 -15.8 29 8 +2	31	1,530 15.5 10.6 06 5 +2	31	1,525 7.7 -6 +4 27	5	24 1,971 5.5 -10 +6	26	8.5 31 1,525 15.2 10.5 10	5.7			
800	31	1,883 -5.9 -18.4 29 9 +4	31	2,043 13.0 6.0 +0 7	31	2,024 6.2 -8 +2 27	7	5.2 26,1,955 1.9 -12 +8	27	10.8 31 2,036 13.7 2.4 10	5.5			
750	31	2,386 -7.9 -20.3 29 10 +7	31	2,584 10.8 .3 09	46	2,551 4.1 -10 +6 27	9	0.6 26,2,466 3.9 -15 +1	28	12.1 31 2,581 12.3 -2.8 09	5.3			
700	31	2,920 -10.7 -23.1 29 11 +7	31	3,157 8.5 -7 +3 09	45	3,110 1.6 -11 +1 26	10	9.2 26,3,000 5.9 -17 +3	27	14.2 31 3,157 10.5 -8.9 +9	4.0			
650	31	3,487 -13.6 -26.6 29 12 +9	31	3,767 5.8 -10 +6 09	43	3,703 -1.5 -15 +4 26	12	2.2 26,3,587 8.8 -20 +3	27	15.5 31 3,770 7.6 -12 +7	0.9			
600	31	4,092 -16.8 -29.2 29 13 +9	31	4,418 2.1 -14 +9 09	40	4,336 -5.2 -19 +2 26	13	1.6 26,4,203 12.0 -24 +1	27	16.0 31 4,425 4.1 -15.4 10	2.9			
550	31	4,747 -20.7 -32.0 29 16 +5	31	5,115 -1.7 -19 +2 08	26	5,014 -9.1 -24 +4 27	15	7.4 26,4,866 15.8 -27 +4	27	18.0 31 5,127 .0 -19 +2 11	1.9			
500	31	5,439 -25.0 -35.0 29 18 +5	31	5,867 -6.3 -24 +7 08	19	5,746 -13.5 -27 +8 26	17	9.2 26,5,576 20.3 -31 +6	27	20.0 31 5,883 -5.2 -23.5 09	7.7			
450	29	6,133 -30.2 -38.5 29 21 +3	31	6,683 -11.5 -28 +6 02	10	6,539 -19.3 -33 +0 26	19	4.2 26,6,355 3.5 -36 +0	27	21.7 30 6,702 -10.6 -28 +6 25	.8			
400	29	6,822 -34.0 -45.4 29 23 +6	31	7,361 5.7 -34 +2 33	33	7,403 -25.9 -37 +9 26	22	0.2 26,7,198 31.8 -41 +8 28	28	24.3 30 7,596 -17.1 -33 +6 30	3.2			
350	29	7,936 -43.0 -54.0 29 25 +6	31	8,575 -2.4 -32 +5 30	30	8,539 -33.0 -43 +2 26	24	4.2 26,8,131 38.8 -46 +2 28	26	26.0 30 8,588 -23.9 -39.4 31	5.0			
300	29	8,957 -49.6 -64.0 29 25 +6	31	9,659 -3.0 -30 +0 47.5	27	9,712 -9.8 -42 +2 26	26	4.2 26,9,170 46.0 -46 +2 28	26	29.0 30 9,692 -32.0 -46.6 29	7.2			
250	29	10,137 -54.1 -69.4 29 25 +6	31	10,909 -4.4 -42 +2	27	9.8 10,635 -49.2 47.1	26	2.4 26,10,200 53.1 -53.1 28	28	30.0 30 10,954 -41.8 29	9.2			
200	29	11,569 -54.1 -74.9 29 26 +4	31	12,369 -5.5 -53.3 26	12.1 +2 29 12,070 -57.3 26	0.2 24 11,222 -55.4 28	28	30.8 30 12,444 -53.4 28	11.1					
175	29	12,427 -55.1 -78.5 29 26 +3	31	13,209 -6.1 -61.4 25	13.3 +2 29 12,910 -59.2 26	3.8 24 12,644 -55.5 28	29	20.0 30 13,275 -55.0 28	12.1					
150	29	13,418 -54.1 -81.0 29 26 +3	31	14,151 -6.7 -67.8 25	15.8 +2 29 13,871 -61.5 26	30.4 24 13,626 -55.2 28	27	16.0 30 14,221 -67.1 27	13.9					
125	29	14,585 -55.5 -84.0 29 26 +3	31	15,233 -7.2 -72.9 25	12.6 +2 27 14,990 -66.9 26	25.1 24 14,778 -58.5 28	27	24.0 30 15,302 -74.3 27	12.4					
100	29	16,003 -57.0 -87.0 29 26 +3	31	16,528 -7.6 -75.5 28	6.8 +2 26,134 -57.6 26	18.1 24 16,172 -60.5 27	21	29.0 30 16,565 -80.0 29	5.7					
80	28	17,412 -58.0 -88.0 29 26 +3	31	19,5 +2 26,17,77.9 32	2.6 +2 17,689 -57.9 26	15.3 +2 17,559 -61.1 27	19.0 +2 27,17,840 -81.0 03	2.0						
70	28	16,254 -58.3 -88.3 29 26 +3	31	18,7 +2 26,18,75.1 07	2.1 +2 18,494 -57.2 27	11.8 +2 18,387 -61.6 28	13.8 +2 18,599 -76.5 08	4.1						
60	28	19,223 -58.7 -88.7 29 26 +3	31	19,479 -6.8 -68.5 09	2.9 +2 19,490 -65.9 26	7.8 +2 19,345 -60.6 28	12.2 +2 19,502 -70.6 09	6.4						
50	27	20,373 -59.1 -89.1 29 26 +3	31	20,585 -6.4 -69.4 09	5.5 +2 20,541 -63.7 26	7.6 +2 20,498 -60.6 28	9.6 +2 20,598 -65.6 09	8.5						
40	26	21,773 -59.6 -89.6 29 26 +3	31	21,965 -5.9 -59.6 08	6.6 +1 21,915 -61.9 28	6.4 +2 21,872 -59.2 27	9.0 +2 21,967 -62.0 09	9.9						
30	24	23,582 -59.8 -89.8 29 26 +3	31	23,789 -5.5 -55.1 06	4.3 +1 23,709 -58.9 28	5.6 +2 23,679 -58.6 28	7.2 +2 23,773 -56.1 08	9.1						
25	23	24,720 -60.0 -90.0 29 26 +3	31	24,953 -5.3 -53.7 05	1.9 +1 24,857 -57.9 29	4.3 +2 24,828 -58.3 28	8.2 +2 24,938 -54.6 08	7.0						
20	22	26,618 -60.5 -90.5 29 26 +3	31	26,398 -4.9 -49.6 32	1.8 +1 26,279 -55.9 28	6.0 +2 26,232 -58.2 28	9.1 +2 26,369 -53.2 07	4.4						
15	12	26,005 -58.9 -90.9 29 1 +8	31	26,313 -4.3 -49.3 26	7.7 +1 28,107 -54.6 28	11.2 +2 28,042 -57.5 27	10.4 +2 28,236 -49.5 33	1.8						
10	9	30,595 -58.4 -90.4 29 8 +1	31	31,071 -3.8 -38.8 27	11 +1 30,726 -51.2 27	21.5 +1	22 30,932 -42.3 26	10.4						
7							18 33,354 -39.3 25	19.8						

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Standard pressure surface mb.	KEY WEST, FL 1019 MB	KING SALMON, AK 1004 MB	KOROR, CAROLINE IS. 1007 MB	KOTZEBUE, AK 1012 MB	LAKE CHARLES, LA 1022 MB										
No. of observations	Resultant Wind	Temperature °C	No. of observations	Resultant Wind	Temperature °C	No. of observations	Resultant Wind	Temperature °C	No. of observations	Resultant Wind	Temperature °C	No. of observations	Resultant Wind	Temperature °C	No. of observations
	Dynamic height meters	Direction tens of deg.		Dynamic height meters	Temperature °C		Dynamic height meters	Temperature °C		Dynamic height meters	Temperature °C		Dynamic height meters	Temperature °C	
	Dew Point °C	Speed m.p.s.		Dew Point °C	Speed m.p.s.		Dew Point °C	Speed m.p.s.		Dew Point °C	Speed m.p.s.		Dew Point °C	Speed m.p.s.	
SFC	31	3	20.7	18.2	0.3	3-1	31	15	-15.0	-19.5	30	27.7	24.5	-23.7	2.7
1000	31	603	20.3	16.6	0.5	4-4	19	141	-13.2	-17.3	34	34.4	24.5	-21.2	1.5
950	31	603	17.8	14.9	0.7	4-2	31	936	-12.6	-17.5	24	34.4	24.5	-21.2	1.5
900	31	1,065	15.4	11.4	0.9	2-5	31	850	-12.1	-17.6	34	6.5	21.0	-18.1	0.6
850	31	1,549	13.6	16.1	1.3	7-3	1,287	-12.4	-21.1	33	7.2	1,508	18.0	-18.4	0.4
800	31	2,059	12.2	-2.2	24.5	1-0	31	1,750	-13.2	-23.6	32	7.2	31.0	2.027	11.3
750	31	2,598	10.2	-7.1	28	2-0	30	2,246	-15.1	-26.1	32	7.3	2,574	13.2	7.3
700	31	3,168	7.5	-9.8	28	3-2	30	2,765	-17.9	-29.6	31	7.4	3,153	10.6	3.1
650	31	3,775	4.0	-12.7	29	4-2	30	3,116	-20.9	-32.4	31	7.3	3,768	7.4	-2.4
600	31	4,421	0.0	-16.4	27	5-6	30	3,900	-24.3	-36.1	31	8.1	4,423	6.3	-5.4
550	31	5,113	-3.9	-19.6	27	5-5	30	4,533	-28.1	-39.0	29	9.8	5,124	-4.4	-9.9
500	31	5,859	-8.7	-22.3	27	8-9	30	5,212	-31.9	-42.8	29	12.5	5,881	-8.4	-19.0
450	30	6,667	-14.0	-26.3	26	10.4	30	5,950	-36.6	-45.7	28	15.2	6,703	-9.5	-18.7
400	30	7,550	-20.6	-33.3	27	12.6	30	6,757	-41.6	-45.5	29	14.4	7,603	-13.0	-25.6
350	30	8,526	-28.1	-40.1	27	14.9	30	7,655	-46.6	-52.8	17	16.4	8,603	-21.7	-32.7
300	30	9,611	-36.5	-47.2	27	18.6	30	8,665	-51.0	-57.0	27	17.2	9,717	-30.1	-40.8
250	30	10,849	-46.3	-27	21.8	30	9,845	-53.1	-59.6	26	12.8	10,988	-40.3	-50.4	
200	30	12,297	-56.4	-27	27.5	29	11,285	-53.5	-59.6	26	13.1	12,469	-52.9	-60.0	
175	30	13,135	-61.4	-27	26.7	29	12,144	-53.6	-59.6	26	12.9	13,317	-60.0	-60.0	
150	29	14,194	-66.0	-27	24.6	29	13,131	-53.5	-59.6	26	13.4	14,261	-68.1	-60.0	
125	29	15,178	-59.0	-27	20.4	29	14,194	-54.3	-59.6	26	15.6	15,333	-74.8	-60.0	
100	29	16,500	-73.0	-27	15.5	29	15,735	-59.6	-59.6	26	16.0	16,600	-70.1	-60.6	
80	29	17,801	-74.4	-27	13.9	29	17,152	-56.9	-59.6	26	17.3	17,887	-61.0	-60.6	
70	29	18,580	-72.8	-27	13.8	29	17,996	-57.8	-59.6	26	19.1	18,618	-76.3	-60.6	
60	29	19,497	-67.7	-26	2.0	29	18,966	-59.0	-59.6	26	19.5	19,525	-70.5	-60.5	
50	29	20,606	-63.6	-33	5-5	20	12,121	-60.1	-59.6	26	21.8	20,619	-65.7	-60.5	
40	28	21,985	-60.8	-31	2-2	26	21,508	-61.6	-59.6	26	26.4	21,994	-50.4	-60.4	
30	28	23,792	-57.0	-31	3-4	26	23,308	-62.5	-59.6	26	29.1	27,315	-53.0	-60.4	
25	27	24,997	-55.8	-28	4-5	22	24,428	-63.5	-59.6	27	31.7	21,249	-49.4	-60.4	
20	26	26,377	-52.9	-27	6.3	19	25,827	-65.1	-59.6	27	30.8	15,264	-49.2	-60.4	
15	23	28,241	-48.4	-28	10.6	13	27,728	-65.5	-59.6	27	38.4	28,409	-42.0	-60.4	
10	14	30,932	-42.7	-27	19.5					6	31,153	-39.9			

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MONETTI, MO 969 MB												NASHVILLE, TN 1001 MB												NOME, AK 1010 MB												NORTH PLATTE, NE 921 MB												OAKLAND, CA 1019 MB											
Standard pressure surface mb.	No. of observations	Resultant Wind			Temperature °C			Dew Point °C			Speed m.p.s.			Resultant Wind			Temperature °C			Dew Point °C			Speed m.p.s.			Resultant Wind			Temperature °C			Dew Point °C			Speed m.p.s.			Resultant Wind			Temperature °C			Dew Point °C			Speed m.p.s.												
		Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Temperature °C	Dew Point °C	Direction tens of deg.	Temperature °C	Dew Point °C	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.	Dynamic height meters	Temperature °C	Dew Point °C	Direction tens of deg.	Speed m.p.s.																				
5FC	31	4.38	-9	-3.2	21	9	31	18.0	-2.3	-1.0	1.9	31	5	-20.0	0.0	2.4	1.5	31	18.0	-2.3	-1.0	1.9	31	1.0	10.9	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																							
1000	31	5.96	-3.6	2.1	31	5.96	3.0	2.38	-2.9	-2.3	4.7	31	4.61	-15.5	-2.8	-2.8	3.6	31	5.96	-3.6	-2.3	4.7	31	5.94	10.9	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																							
950	31	5.96	-3.6	2.1	31	5.96	3.0	2.38	-2.9	-2.3	4.7	31	4.61	-15.5	-2.8	-2.8	3.6	31	5.96	-3.6	-2.3	4.7	31	5.94	10.9	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																							
900	31	1.036	-6.9	-5.9	26	6.0	3.0	1.000	4.2	-4.4	2.6	6.3	3.0	86.4	-1.6	-3.0	3.2	2.4	31	1.048	-6.9	-5.9	-4.4	2.6	31	1.045	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
850	31	1.502	-6.9	-5.9	26	7.0	3.0	1.005	4.3	-4.5	2.7	6.4	3.0	86.4	-1.6	-3.0	3.2	2.4	31	1.049	-6.9	-5.9	-4.5	2.7	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
800	31	1.995	-3.9	-10.8	26	7.9	3.1	1.000	3.9	-3.9	2.9	7.5	3.1	1.000	-1.6	-3.0	3.2	2.4	31	1.049	-7.8	-1.7	-1.4	11.1	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
750	31	2.518	-3.9	-10.8	26	8.9	3.1	1.000	3.9	-3.9	2.9	7.5	3.1	1.000	-1.6	-3.0	3.2	2.4	31	1.049	-7.8	-1.7	-1.4	11.1	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
700	31	3.471	-1.0	-15.3	26	10.1	3.1	1.000	3.7	-3.7	2.2	9.5	3.1	2.237	-1.9	-3.0	3.2	2.4	31	1.049	-3.0	-3.0	-3.0	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
650	31	3.659	-5.6	-17.4	27	11.2	3.1	1.000	4.2	-4.2	1.8	10.9	3.1	2.748	-2.1	-3.0	3.2	2.4	31	1.049	-3.6	-3.6	-3.6	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
600	31	4.284	-8.4	-21.4	27	12.3	3.1	1.000	4.8	-4.8	1.7	11.7	3.1	2.748	-2.7	-3.0	3.2	2.4	31	1.049	-4.8	-4.8	-4.8	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
550	31	4.954	-12.0	-25.4	27	12.8	3.1	1.000	4.6	-4.6	1.7	12.1	3.1	4.889	-3.1	-3.0	3.2	2.4	31	1.049	-5.1	-5.1	-5.1	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
500	31	5.676	-16.8	-29.6	27	13.9	3.1	1.000	5.1	-5.1	1.7	16.7	2.7	18.1	3.1	5.155	-1.6	-3.0	3.2	2.4	31	1.049	-5.6	-5.6	-5.6	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																			
450	31	6.459	-22.5	-35.0	27	15.4	3.0	1.000	5.6	-5.6	1.7	19.4	3.1	5.155	-1.6	-3.0	3.2	2.4	31	1.049	-6.1	-6.1	-6.1	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
400	31	7.313	-28.7	-40.3	27	17.9	3.0	1.000	5.6	-5.6	1.7	21.4	3.1	5.155	-1.6	-3.0	3.2	2.4	31	1.049	-6.6	-6.6	-6.6	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
350	31	8.259	-35.3	-45.4	27	20.8	3.0	1.000	5.1	-5.1	1.7	23.9	3.1	5.155	-1.6	-3.0	3.2	2.4	31	1.049	-7.1	-7.1	-7.1	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
300	31	9.313	-43.2	-52.0	27	23.9	2.9	1.000	5.7	-5.7	1.7	27.7	3.1	5.155	-1.6	-3.0	3.2	2.4	31	1.049	-7.8	-7.8	-7.8	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
250	30	10.521	-50.9	-59.0	27	27.0	2.9	1.000	5.6	-5.6	1.7	31.4	3.1	11.102	-5.5	-5.5	3.2	2.4	31	1.049	-8.3	-8.3	-8.3	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
200	30	11.195	-56.9	-65.9	27	27.0	2.9	1.000	5.6	-5.6	1.7	31.4	3.1	11.102	-5.5	-5.5	3.2	2.4	31	1.049	-8.3	-8.3	-8.3	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
175	30	12.797	-57.4	-67.4	27	26.5	2.9	1.000	5.6	-5.6	1.7	30.3	3.0	11.195	-5.5	-5.5	3.2	2.4	31	1.049	-8.3	-8.3	-8.3	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
150	30	13.767	-58.8	-68.8	27	24.1	2.9	1.000	5.6	-5.6	1.7	27.1	3.0	12.934	-5.5	-5.5	3.2	2.4	31	1.049	-8.3	-8.3	-8.3	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
125	30	14.906	-61.2	-71.2	27	21.4	2.9	1.000	5.6	-5.6	1.7	24.3	3.1	14.093	-5.5	-5.5	3.2	2.4	31	1.049	-8.3	-8.3	-8.3	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
100	30	16.283	-63.6	-73.6	27	16.2	2.9	1.000	5.6	-5.6	1.7	18.2	3.0	15.505	-5.5	-5.5	3.2	2.4	31	1.049	-8.3	-8.3	-8.3	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
80	30	17.650	-64.2	-74.2	27	13.3	2.9	1.000	5.6	-5.6	1.7	12.4	3.0	17.645	-5.5	-5.5	3.2	2.4	31	1.049	-8.3	-8.3	-8.3	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
60	30	17.443	-64.4	-74.4	27	11.0	2.9	1.000	5.6	-5.6	1.7	9.1	3.0	17.443	-5.5	-5.5	3.2	2.4	31	1.049	-8.3	-8.3	-8.3	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
40	30	17.727	-31.0	-40.2	28	17.3	3.1	1.000	5.6	-5.6	1.7	14.8	2.8	17.489	-5.5	-5.5	3.2	2.4	31	1.049	-8.3	-8.3	-8.3	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
350	31	7.340	-38.1	-49.9	28	18.6	3.1	1.000	5.6	-5.6	1.7	21.7	2.8	18.385	-2.4	-3.0	3.2	2.4	31	1.049	-8.3	-8.3	-8.3	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
300	31	9.204	-45.7	-55.7	28	21.3	3.1	1.000	5.6	-5.6	1.7	24.4	2.8	19.704	-3.0	-4.2	3.2	2.4	31	1.049	-8.3	-8.3	-8.3	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
250	31	10.399	-52.9	-62.9	28	24.4	3.1	1.000	5.6	-5.6	1.7	27.1	2.8	20.478	-3.0	-4.2	3.2	2.4	31	1.049	-8.3	-8.3	-8.3	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
200	31	11.823	-56.5	-66.5	28	23.7	3.1	1.000	5.6	-5.6	1.7	26.2	2.8	20.402	-3.0	-4.2	3.2	2.4	31	1.049	-8.3	-8.3	-8.3	3.2	31	1.049	10.5	-4.5	-1.3	13	1.0	1.0	8.1	-5.1	1.3	1.0	1.0	1.2																					
175	31	12.671	-56.6	-66.6	28	23.0	3.1	1.000	5.6	-5.6	1.7	22.5	2.8	20.440	-3.0	-4.2	3.2	2.4	31	1.049	-8.3	-8.3	-8.3	3.2	31	1.049																																	

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SALEM, IL 1000 MB				SALEM, OR 1011 "6				SALT LAKE CITY, UT 877 MB				SAN DIEGO, CA 1004 MB				SAN JUAN, P. R. 1015 MB					
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	Dew Point °C	Direction tens of deg	Speed m.p.s.	Resultant Wind	Dew Point °C	Direction tens of deg	Speed m.p.s.	Resultant Wind	Dew Point °C	Direction tens of deg	Speed m.p.s.	Resultant Wind	Dew Point °C	Direction tens of deg	Speed m.p.s.		
5FC 31	17.4	-5	-1.3	25	1.2	31	6.1	6.1	2.1	20	2.6	31	1	2.88	-2.9	-5.7	16	1.24	10.3	-1.1	
1000 16	27.2	-3.3	-6.8	01	1.3	26	1.67	6.7	2.4	21	2.6	31	2	2.00	-2.9	-5.7	17	1.24	10.3	-1.1	
950 31	2.7	-1.7	-6.3	26	4.2	31	5.76	6.9	2.4	20	6.3	31	3	1.288	-2.9	-5.7	16	1.24	10.3	-1.1	
90.0 31	1.019	3.3	-8.6	27	6.3	31	1,020	5.4	-7	21	8.2	31	1	1.537	1.2	-6.7	18	3.1	2.9	1.5	
450 31	1.483	2.6	-10.3	27	7.8	31	1,465	3.3	-3	22	9.3	31	1	1.537	1.2	-6.7	18	3.1	2.9	1.5	
800 31	1.972	1.6	-12.2	28	9.2	31	1,975	1.2	-6.5	23	10.0	31	2	2.026	1.4	-9.9	19	4.4	2.9	2.07	
750 31	2.491	0.0	-14.1	26	10.5	31	2,492	-1.4	-8.3	24	11.1	31	2	2.543	-1.1	-11.8	25	3.9	2.9	1.5	
700 31	3.041	-2.7	-16.2	28	11.7	31	3,039	-4.4	-11.0	24	12.0	31	3	3,090	-4.0	-14.0	28	6.3	2.9	5.5	
650 31	3.625	-5.9	-18.3	28	13.5	31	3,620	-7.7	-15.3	25	12.8	31	3	3,671	-6.6	-18.0	29	8.3	3.1	5.5	
600 31	4.243	-9.2	-22.7	28	14.4	31	4,239	-10.7	-18.9	25	13.6	31	3	4,293	-9.8	-21.8	29	10.0	2.9	4.4	
550 31	4.911	-13.3	-26.4	28	16.0	31	4,903	-14.9	-23.7	27	14.5	31	4	4,959	-14.0	-25.5	29	11.0	2.9	5.0	
500 31	5.635	-17.9	-30.0	27	17.7	31	5,617	-19.9	-28.4	26	17.6	31	5	5,676	-19.1	-29.3	29	12.3	2.9	5.0	
450 31	6.415	-23.0	-36.2	27	18.9	31	6,370	-25.6	-32.9	26	18.6	31	6	5,524	-24.6	-34.1	29	13.4	2.9	5.0	
400 31	7.268	-29.1	-41.3	27	20.0	31	7,234	-31.8	-36.8	26	19.2	30	7	7,291	-30.1	-41.2	29	14.2	2.9	5.0	
350 31	8.211	-36.2	-46.7	26	22.5	31	8,167	-38.5	-43.3	26	20.3	30	8	8,229	-37.8	-46.3	29	16.2	2.9	5.0	
300 31	9.260	-44.4	-52.1	26	25.1	31	9,206	-46.4	-52.1	26	21.5	30	9	9,270	-50.5	-59.9	29	17.8	2.9	5.0	
250 31	10.460	-52.1	-59.3	27	31.4	31	10,396	-54.0	-59.3	27	27.3	30	10	1,465	-52.7	-59.7	29	19.7	2.9	5.0	
200 31	11.689	-56.3	-63.7	27	30.2	31	11,813	-58.1	-63.7	27	22.2	30	11	1,886	-57.7	-63.7	29	19.1	2.9	5.0	
175 31	12.735	-57.0	-67.7	27	29.9	31	12,654	-58.0	-67.7	27	19.4	30	12	1,726	-58.6	-67.7	29	17.0	2.7	5.0	
150 31	13,710	-57.7	-68.4	27	27.4	31	13,627	-58.0	-68.4	27	19.7	30	13	1,692	-59.3	-68.4	28	17.2	2.7	5.0	
125 31	14,654	-60.4	-70.0	27	23.3	31	14,773	-59.2	-69.4	27	19.5	30	14	1,532	-60.4	-70.0	28	18.4	2.7	5.0	
100 31	16,237	-62.4	-70.7	27	19.5	31	16,167	-59.8	-69.8	27	17.1	30	16	21,216	-62.1	-71.1	28	13.9	2.6	5.0	
80 31	19,766	-62.7	-71.4	27	14.2	31	17,561	-60.1	-69.7	27	14.0	30	17	1,595	-62.1	-71.4	28	11.1	2.6	5.0	
70 31	19,164	-62.6	-72.4	28	12.4	31	19,164	-60.4	-69.4	27	12.7	30	18	1,420	-62.6	-72.4	28	9.2	2.5	5.0	
60 31	19,391	-62.2	-70.4	28	10.4	31	19,356	-60.2	-69.2	27	11.6	30	19	1,372	-62.0	-70.4	29	6.6	2.5	5.0	
50 31	20,518	-61.6	-73.0	28	6.1	31	20,492	-62.2	-72.8	28	11.2	29	20	5,052	-62.6	-73.0	28	5.9	2.5	5.0	
40 31	21,906	-60.6	-74.9	29	6.7	21	18,855	-60.0	-74.9	28	9.6	21	18,888	-60.6	-74.9	29	5.4	2.5	5.0		
30 27	23,711	-58.6	-76.9	29	4.7	23	17,678	-59.2	-76.9	28	10.1	29	17,888	-59.2	-76.9	28	6.5	2.4	5.0		
25 27	24,857	-58.2	-78.3	29	7.3	24	18,831	-59.8	-78.3	28	9.8	26	24,827	-59.3	-78.3	28	6.8	2.3	5.0		
20 23	26,269	-57.3	-78.6	28	6.3	20	26,227	-60.3	-78.6	28	12.1	28	26,224	-59.3	-78.6	29	8.1	2.1	5.0		
15 18	28,096	-56.6	-78.7	28	9.3	16	28,034	-60.7	-78.7	29	13.7	22	28,032	-58.0	-78.7	28	16.3	1.5	5.0		
10					6	30,579	-56.7			6	30,580	-57.2		6	30,580	-49.8		16	31,020	-40.6	

* TUCSON, AZ 928 MB		* VANOENBERG AFB, CA 1008 MB		VICTORIA, TX 1018 MB		* WAKE 15., PACIFIC AREA 1015 MB		* WALLOPS ISLAND, VA NASA 1021 MB	
SFC	31	78.9	8.0	-6.4	14	3.0	31	100	11.4
1000							30	167	13.3
950							31	597	14.8
900	31	1,043	12.0	-3.6	13	4.7	31	1,053	13.4
850	31	1,520	10.6	-5.6	12	3.1	31	1,532	10.8
800	31	2,028	7.7	-7.8	11	2.1	31	2,035	8.3
750	31	2,552	5.1	-10.6	26	1.4	31	2,565	5.3
700	31	3,170	1.7	-13.4	28	2.1	31	3,175	2.3
650	31	3,765	-1.4	-14.7	29	3.1	31	3,771	-1.2
600	31	4,337	-5.6	-24.2	29	5.1	31	4,341	-22.9
550	31	5,101	-16.0	-26.4	29	9.1	31	5,029	-10.3
500	31	5,740	-15.3	-30.6	29	13.0	31	5,755	-15.0
450	30	6,531	-20.0	-35.1	28	9.0	31	5,541	-21.6
400	30	7,390	-27.4	-39.5	28	10.7	31	7,397	-27.8
350	29	8,343	-33.4	-45.6	29	12.3	31	8,346	-34.9
300	29	9,403	-41.2	-48.6	28	15.0	31	9,401	-42.8
250	29	10,619	-49.7	-57.3	28	17.6	31	10,610	-50.8
200	29	12,C53	-55.6	-62.8	27	20.0	31	12,038	-57.3
175	28	12,898	-57.7	-64.6	27	20.0	31	12,881	-58.6
150	28	13,867	-59.6	-71.7	27	18.7	31	13,845	-60.5
125	28	14,998	-63.0	-76.8	27	16.8	30	14,971	-62.8
100	28	16,362	-65.8	-81.9	27	13.9	28	16,342	-65.2
80	28	17,712	-68.6	-87.4	27	9.2	28	17,696	-65.8
70	27	18,512	-66.0	-87.4	27	7.8	28	18,510	-65.6
60	27	19,451	-64.4	-87.4	27	5.7	27	19,452	-64.0
50	27	20,566	-63.3	-87.4	27	3.5	25	20,574	-62.0
40	27	21,948	-61.3	-87.4	26	2.1	22	21,954	-60.8
30	25	23,746	-57.7	-87.4	27	2.0	21	23,759	-58.2
25	25	24,901	-56.0	-87.4	27	3.5	20	24,909	-56.7
20	22	26,327	-53.8	-87.4	29	7.2	19	26,328	-54.6
15	19	28,174	-52.4	-87.4	28	10.0	19	28,176	-53.3
10	11	30,604	-48.7	-87.4	28	22.6	15	30,815	-49.7
7					9	33,205	4.6		

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WASHINGTON DULLES INT. AP 1011 MB				WAYCROSS, GA 1016 MB				WEST PALM BEACH, FL 1019 MB				WINNEMUCCA, NV 873 MB				WINSLOW, AZ 856 MB				
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind	No. of observations	Dynamic height meters	Temperature °C	Resultant Wind
5FC 31 188	1 + 8	-3.5 30	31	1 + 9	30	175	6 + 4	31	1 + 7	31	16.0	1 + 2	31	1 + 312	-4 + 9	-8 + 7	12	1 + 0	31	1 + 487
1 000 278	1 + 8	-5 + 4	31	1 + 9	30	175	6 + 4	31	1 + 7	31	16.0	1 + 2	31	1 + 312	-4 + 9	-8 + 7	12	1 + 0	31	1 + 487
950 31 1,619	1 + 8	-6 + 2	29	4 + 9	30	602	10 + 6	29	3 + 3	31	1 + 2	31	1 + 312	-4 + 9	-8 + 7	12	1 + 0	31	1 + 487	
900 31 1,619	1 + 8	-9 + 6	29	7 + 6	30	1,053	10 + 3	29	2 + 6	31	1 + 2	31	1 + 312	-4 + 9	-8 + 7	12	1 + 0	31	1 + 487	
850 31 1,478	-4 + 4	-13 + 6	29	9 + 6	30	1,528	9 + 4	29	-4 + 25	5 + 2	1 + 2	31	1 + 312	-4 + 9	-8 + 7	12	1 + 0	31	1 + 487	
800 31 1,943	-5 + 4	-14 + 5	30	10 + 6	30	1,528	8 + 1	29	-8 + 6	6 + 1	31	2 + 057	11 + 8	-7 + 2	26	3 + 6	31	2 + 032		
750 31 2,144	-2 + 1	-16 + 2	28	11 + 9	30	2,560	5 + 8	-11 + 8	2 + 6	7 + 7	3 + 2	2 + 594	9 + 6	-7 + 1	28	4 + 3	31	2 + 554		
700 31 3 + 24	-3 + 1	-16 + 2	28	13 + 9	30	3,122	2 + 0	-13 + 6	2 + 6	10 + 3	3 + 1	3 + 163	6 + 4	-10 + 9	27	5 + 8	31	3 + 107		
650 31 3 + 55	-6 + 9	-21 + 1	28	15 + 6	30	3,718	-4 + 4	-18 + 2	2 + 7	12 + 5	3 + 1	3 + 767	3 + 0	-11 + 6	28	7 + 4	31	3 + 696		
600 31 4 + 26	-10 + 0	-23 + 6	28	17 + 9	30	4,354	-4 + 3	-19 + 5	2 + 7	14 + 5	3 + 1	4 + 411	-9 + 0	-15 + 0	28	9 + 6	31	4 + 324		
550 31 4 + 80	-1 + 1	-27 + 7	28	19 + 8	30	5,035	-8 + 1	-23 + 5	2 + 7	16 + 5	5 + 1	5 + 100	-5 + 0	-19 + 3	27	11 + 2	31	4 + 997		
500 31 2,678	-19 + 0	-31 + 3	27	21 + 9	30	5,768	-12 + 9	-28 + 0	2 + 7	18 + 9	5 + 1	5 + 843	-6 + 6	-23 + 3	27	13 + 1	31	5 + 557		
450 31 2,204	-20 + 0	-35 + 8	28	23 + 9	29	6,565	-18 + 5	-33 + 0	2 + 7	21 + 8	6 + 1	6 + 649	-15 + 0	-28 + 3	27	14 + 6	31	5 + 241		
400 31 7,235	-3 + 6	-41 + 7	27	26 + 8	29	7,432	-25 + 0	-36 + 9	2 + 7	24 + 1	7 + 0	7,259	-21 + 3	-34 + 0	27	17 + 2	31	7 + 312		
350 31 6 + 17	-36 + 7	-46 + 2	27	29 + 4	29	8,392	-31 + 9	-42 + 3	2 + 7	28 + 9	8 + 0	8 + 552	-26 + 7	-40 + 1	27	21 + 3	30	8 + 249		
300 31 9,223	-4 + 3	-46 + 2	27	29 + 4	29	9,460	-40 + 0	-47 + 4	27	32 + 1	9 + 0	9,585	-37 + 1	-46 + 8	27	23 + 3	30	9 + 292		
250 31 10 + 43	-5 + 2	-52 + 2	28	33 + 2	29	10,681	-49 + 2	-57 + 4	27	35 + 7	10 + 0	10,819	-46 + 7	-57 + 3	27	27 + 3	30	10 + 467		
200 31 11,651	-5 + 8	-55 + 8	28	32 + 7	29	12,115	-57 + 8	-62 + 7	26	39 + 3	10 + 0	12,265	-56 + 6	-73 + 0	27	33 + 0	30	11,908		
175 31 12,700	-5 + 5	-58 + 5	28	29 + 2	29	12,952	-60 + 3	-67 + 3	27	37 + 9	10 + 0	13,104	-60 + 8	-80 + 2	27	31 + 8	30	12,745		
150 31 13,676	-5 + 8	-62 + 7	28	28 + 3	29	13,906	-63 + 1	-73 + 6	27	33 + 6	10 + 0	14,054	-64 + 6	-86 + 5	26	28 + 7	29	13,716		
125 31 14,211	-5 + 9	-69 + 9	28	24 + 4	29	15,020	-66 + 0	-86 + 0	27	26 + 7	10 + 0	15,159	-68 + 1	-91 + 7	27	23 + 6	29	14,850		
100 31 16,201	-62 + 0	-86 + 2	28	21 + 6	29	16,365	-68 + 5	-98 + 0	27	20 + 9	10 + 0	16,487	-72 + 0	-100 + 7	27	17 + 2	26	16,242		
80 30 17,577	-5 + 2	-67 + 4	28	15 + 4	28	17,703	-69 + 3	-100 + 7	27	14 + 7	10 + 0	17,798	-72 + 7	-100 + 7	27	9 + 9	28	17,627		
70 29 18,406	-62 + 6	-86 + 2	28	14 + 2	28	18,502	-68 + 2	-100 + 3	26	10 + 3	10 + 0	18,584	-70 + 9	-100 + 3	26	6 + 7	28	18,450		
60 28 19,355	-62 + 5	-86 + 9	28	11 + 6	27	19,432	-66 + 9	-100 + 7	27	7 + 5	29 + 0	19,506	-67 + 0	-100 + 7	27	4 + 6	28	19,402		
50 28 20,444	-60 + 9	-86 + 9	28	11 + 7	27	20,540	-64 + 5	-100 + 7	27	5 + 8	29 + 0	20,617	-63 + 8	-100 + 7	28	3 + 1	28	20,533		
40 26 21,875	-5 + 9	-86 + 8	28	8 + 1	26	21,914	-61 + 9	-100 + 7	29	5 + 4	29 + 1	21,994	-61 + 5	-100 + 7	29	3 + 8	28	21,915		
30 24 23,674	-58 + 5	-86 + 5	29	7 + 6	26	23,707	-59 + 0	-100 + 7	31	4 + 0	29 + 3	23,796	-57 + 5	-100 + 7	30	4 + 4	28	23,709		
25 23 24,622	-58 + 3	-86 + 5	28	7 + 8	26	24,855	-57 + 5	-100 + 7	30	3 + 2	29 + 4	24,953	-55 + 6	-100 + 7	29	4 + 9	28	24,847		
20 23 19,266	-58 + 0	-86 + 2	28	9 + 4	26	26,274	-55 + 6	-100 + 7	29	5 + 6	29 + 2	26,381	-53 + 3	-100 + 7	28	6 + 15	28	26,245		
15 17 20,039	-57 + 4	-86 + 2	28	11 + 0	23	28,121	-52 + 8	-100 + 6	28	9 + 8	28 + 2	28,247	-49 + 6	-100 + 6	28	11 + 3	28	28,261		
10 7 30,581	-53 + 8	-86 + 6	27	17 + 3	28	30,761	-48 + 6	-100 + 6	27	21 + 6	21 + 0	30,936	-42 + 6	-100 + 6	27	21 + 6	28	30,698		
7 5	53,009	-45 + 5		53,009					5	45 + 5							8	50,500	-51 + 7	

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

DECEMBER 1979

Date	Sun's zenith distance								Date	Sun's zenith distance								
	A.M.				P.M.					A.M.				P.M.				
	78.7°	75.7°	70.7°	60.0°	60.0°	70.7°	75.7°	78.7°		60.0°	70.7°	75.7°	78.7°	60.0°	70.7°	75.7°	78.7°	
MAUNA LOA OBSERVATORY, HI																		
Air mass																		
3.34 2.67 2.01 1.34 * 1.34 2.01 2.67 3.34																		
4-----	----	----	----	----	1.58	1.47	1.36	1.26	1.17	----	----	----	----	----	----	----	----	
5-----	1.22	1.28	1.38	1.51	----	----	----	----	----	----	----	----	----	----	----	----	----	
6-----	1.21	1.30	1.39	1.50	----	----	----	----	----	----	----	----	----	----	----	----	----	
7-----	1.20	1.28	1.36	1.49	----	----	----	----	----	----	----	----	----	----	----	----	----	
8-----	1.18	1.26	1.36	1.49	----	----	----	----	----	----	----	----	----	----	----	----	----	
10-----	1.22	1.31	1.38	1.52	----	----	----	----	----	----	----	----	----	----	----	----	----	
11-----	1.23	1.32	1.40	1.52	----	----	----	----	----	----	----	----	----	----	----	----	----	
12-----	1.22	1.30	1.40	1.52	----	----	----	----	----	----	----	----	----	----	----	----	----	
13-----	1.19	1.28	1.37	1.50	1.57	1.50	1.38	1.29	1.20	----	----	----	----	----	----	----	----	
14-----	----	----	----	----	----	1.46	1.33	1.22	1.14	----	----	----	----	----	----	----	----	
17-----	----	----	----	----	1.64	1.50	1.39	1.30	1.22	----	----	----	----	----	----	----	----	
19-----	----	----	----	----	1.61	1.52	1.41	1.33	1.26	----	----	----	----	----	----	----	----	
20-----	1.23	1.35	1.44	1.55	1.65	1.56	1.46	1.36	1.30	----	----	----	----	----	----	----	----	
21-----	1.28	1.35	1.44	1.55	1.64	1.55	1.45	1.35	1.26	----	----	----	----	----	----	----	----	
22-----	1.28	1.36	1.45	1.56	1.65	1.56	1.46	1.37	1.30	----	----	----	----	----	----	----	----	
23-----	1.27	1.37	1.46	1.57	1.65	1.55	1.45	1.36	1.30	----	----	----	----	----	----	----	----	
27-----	1.26	1.33	1.42	1.54	1.62	1.52	1.45	1.36	1.30	----	----	----	----	----	----	----	----	
28-----	1.26	1.35	1.43	1.53	1.61	1.52	1.41	1.31	1.21	----	----	----	----	----	----	----	----	
29-----	1.28	1.35	1.44	1.54	1.62	1.52	1.41	1.31	1.21	----	----	----	----	----	----	----	----	
30-----	1.30	1.36	1.46	1.55	1.64	1.51	1.40	1.30	1.20	----	----	----	----	----	----	----	----	
31-----	----	----	----	----	1.68	1.54	1.42	1.33	1.26	----	----	----	----	----	----	----	----	
Aver-ages	1.24	1.32	1.41	1.53	1.63	1.52	1.41	1.32	1.24	----	----	----	----	----	----	----	----	

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleyes	0	1	7	-1	18	7	0	-2	3	8	11	3	5	5	13	-1	6	130	18	29	-21	17	-12	31	52	77	49	41	31	56		

STORM SUMMARY

STATE	TORNADOES				HAILSTORMS				WINDSTORMS				LIGHTNING				@HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				ALL OTHER				
	NUMBER	DAYS	DEATHS	INJURIES	DEATHS	INJURIES	†DAMAGE	PROP. CROPS	DEATHS	INJURIES	†DAMAGE	PROP. CROPS	DEATHS	INJURIES	†DAMAGE	PROP. CROPS	DEATHS	INJURIES	†DAMAGE	PROP. CROPS	DEATHS	INJURIES	†DAMAGE	PROP. CROPS	DEATHS	INJURIES	†DAMAGE		
LATE REPORTS JULY 1979																													
Utah																													
CORRECTIONS JUNE 1979																													
Minnesota																													

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES: Dates in the table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

- + And also on an earlier date or dates.
- D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch of water equivalent to every 10 inches of snow-fall.

CLIMATOLOGICAL DATA - METRIC UNITS: Data from airport unless otherwise specified.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

- B Number of days maximum 21.1°C. or above for Alaskan Stations.
- Y Peak Gust.
- + And also on an earlier date or dates.
- U Indicates Urban site.
- R Indicates Rural site.
- Ø Station pressures apply to elevations shown in the "Elevations" table of the annual issue of this publication.

Conversion formulae to English Units are as follows:

$$\begin{aligned} 1 \text{ foot} &= 0.3048 \text{ meters} \\ {}^{\circ}\text{F.} &= \frac{9}{5} \times {}^{\circ}\text{C} + 32 \\ 1 \text{ inch} &= 25.4 \text{ millimeters} \\ 1 \text{ mile per hour} &= 0.447 \text{ meters per second} \end{aligned}$$

HEATING DEGREE DAYS: Data from airport unless otherwise specified.

- U Indicates Urban site.
- R Indicates Rural site.

COOLING DEGREE DAYS: Data from airport unless otherwise specified.

- U Indicates Urban site.
- R Indicates Rural site.

STORM SUMMARY:

- o Includes crop damage.
- C Crop damage.
- * No occurrence of storms or unusual weather phenomena reported.
- @ Includes heavy sleet storm.
- # Freezing drizzle and freezing rain, commonly known as glaze.
- Ø For breakdown of "All Others," and for detailed listing of other storms, see the Environmental Data and Information Service, NOAA, monthly publication STORM DATA.
- † No Storm Data Report received for this State.
- ◇ Report Incomplete.
- † Storm damages are placed in categories varying from 1 to 9 as follows:
 - 1 Less than \$50
 - 2 \$50 to \$500
 - 3 \$500 to \$5,000
 - 4 \$5,000 to \$50,000
 - 5 \$50,000 to \$500,000
 - 6 \$500,000 to \$5 Million
 - 7 \$5 Million to \$50 Million
 - 8 \$50 Million to \$500 Million
 - 9 \$500 Million to \$5 Billion

RAWINSONDE DATA (Average Monthly Values):

All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 60° above the horizon, or any obstruction above the horizon. The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygrometers. These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

- * Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.
- + Observations for these stations are scheduled at 0000 G.C.T.
- † Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

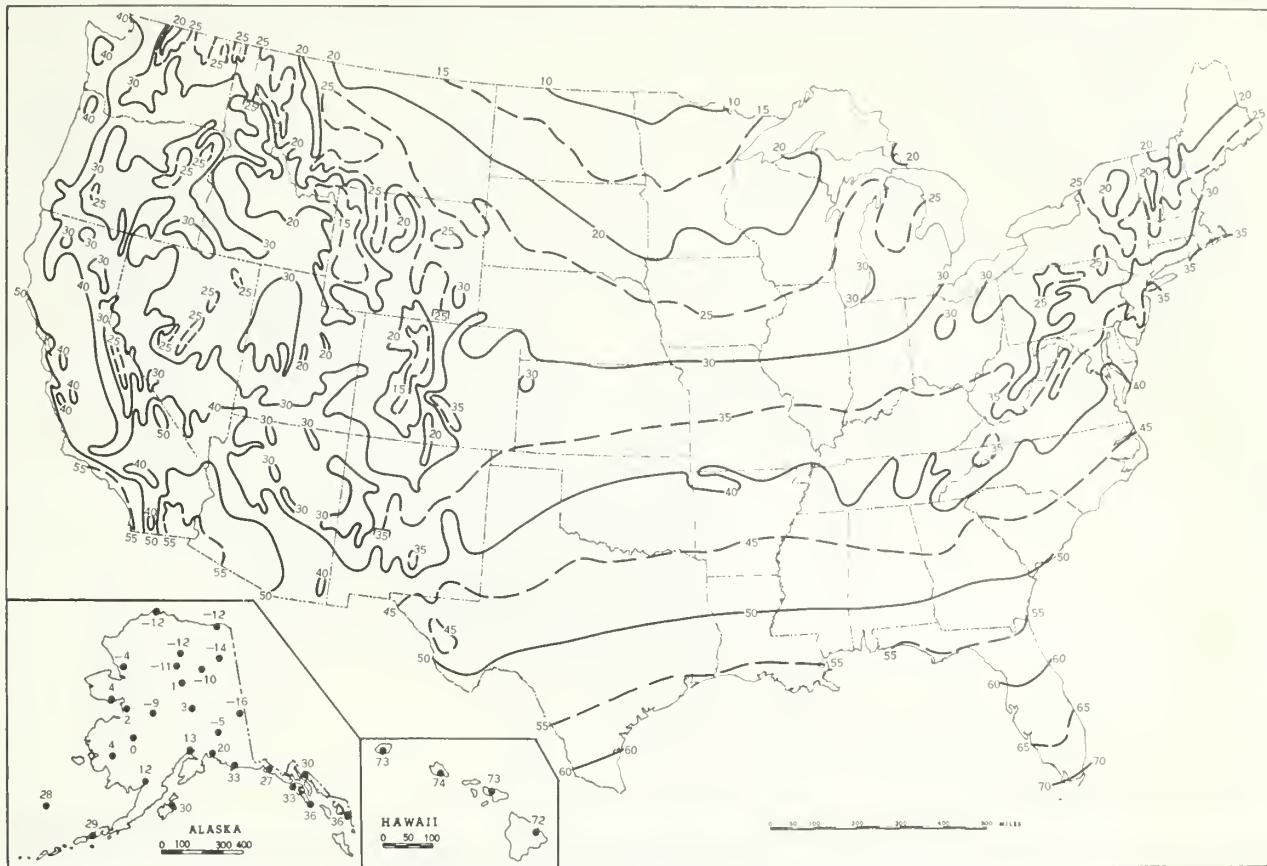
SOLAR RADIATION INTENSITIES: Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

(O)	Clouds Present	DM	Moderate Dust	HM	Moderate Haze	KS	Slight Smoke
*	Values corresponding to true solar noon	DS	Slight Dust	HS	Slight Haze	M	Moderate Haze-indeterminable
BD	Blowing Dust	F	Fog	I	Intense Haze-indeterminable	N	Sand
BN	Blowing Sand	GF	Ground Fog	K	Smoke	S	Slight Haze-indeterminable
D	Dust	H	Haze	KI	Intense Smoke		
DI	Intense Dust	HI	Intense Haze	KM	Moderate Smoke		

NET RADIATION: The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

Chart 1. A. Normal Daily Average Temperature (°F. 1941-70), December.



B. Temperature Departure from 30 - Year Mean (°F 1941-70), December 1979

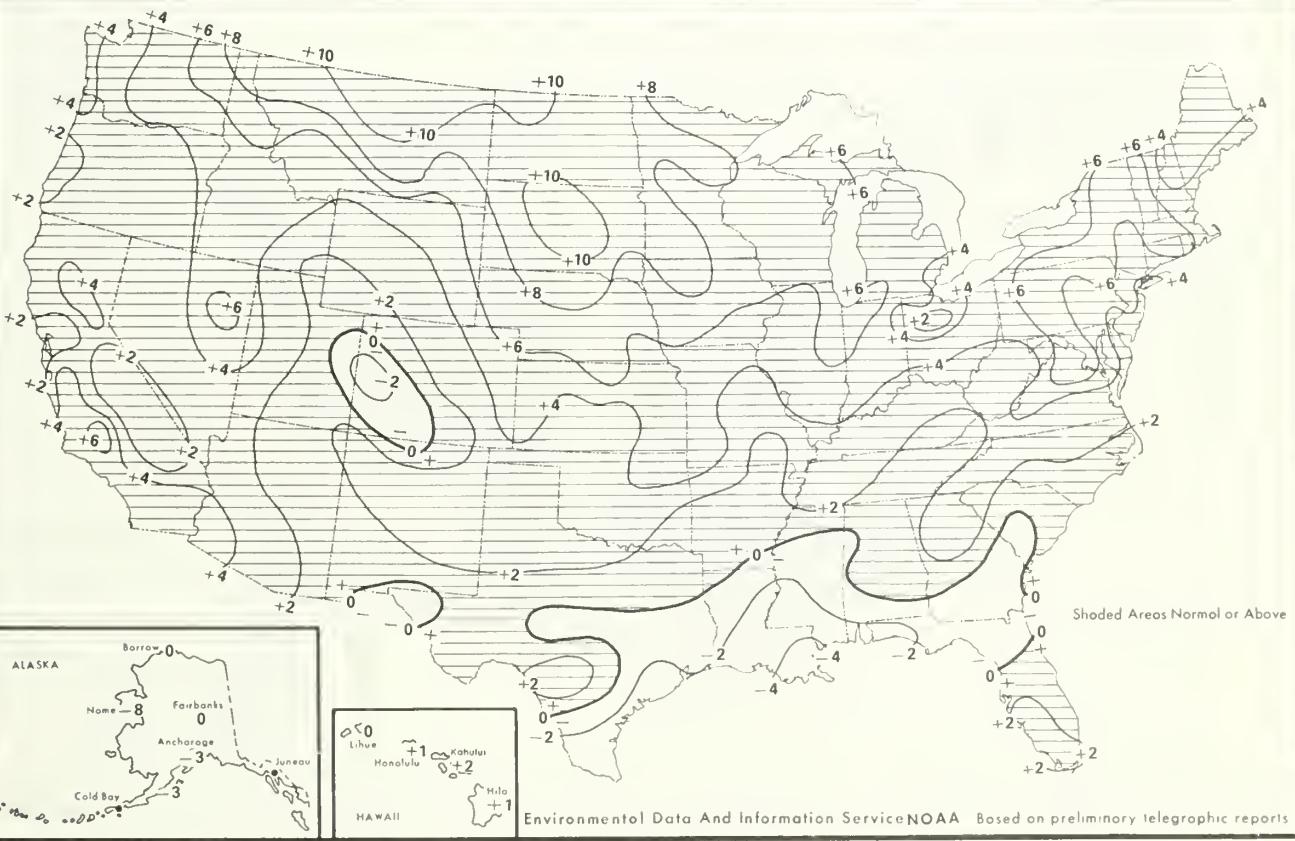
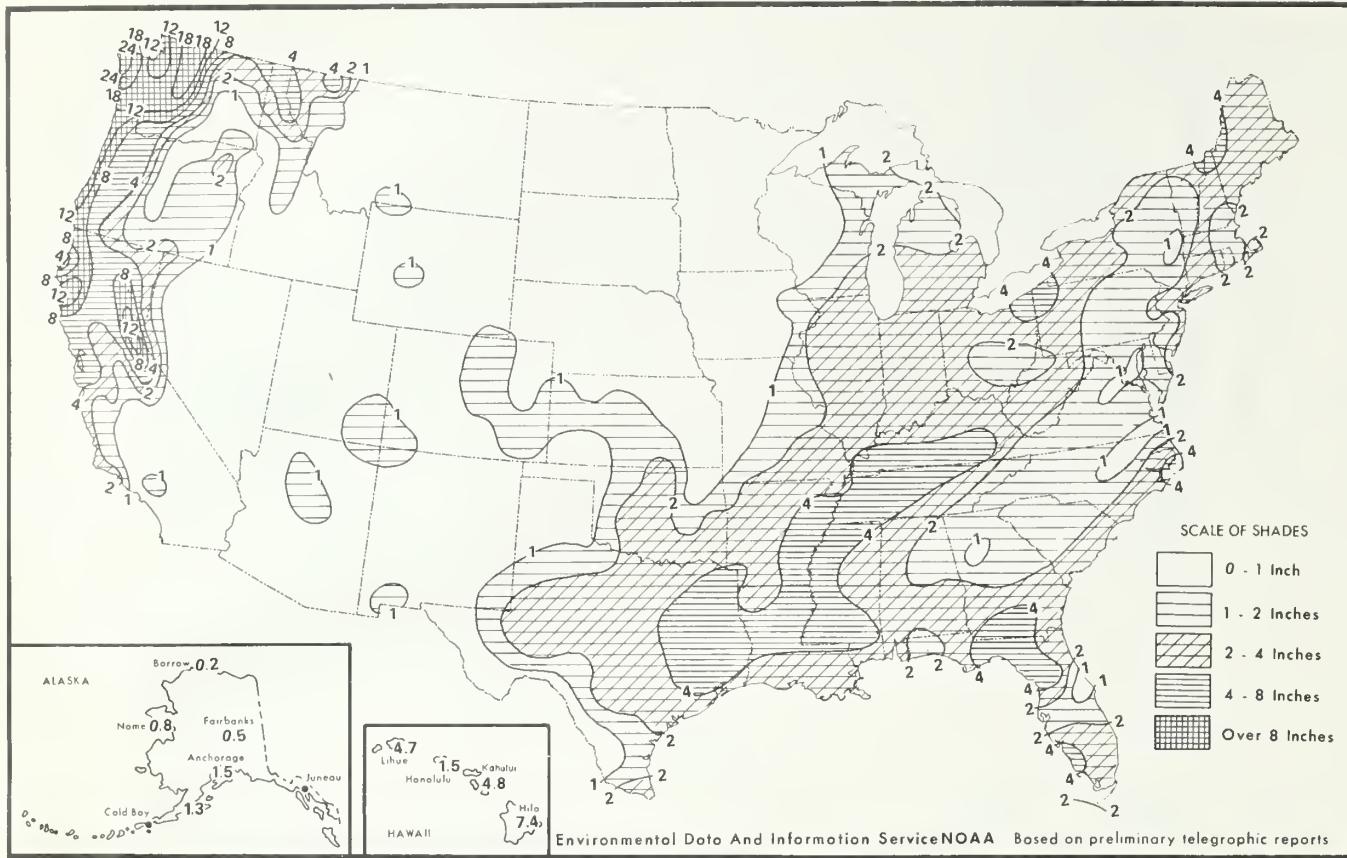


Chart II. A. Total Precipitation (Inches), December 1979



B. Percentage of Normal Precipitation, December 1979

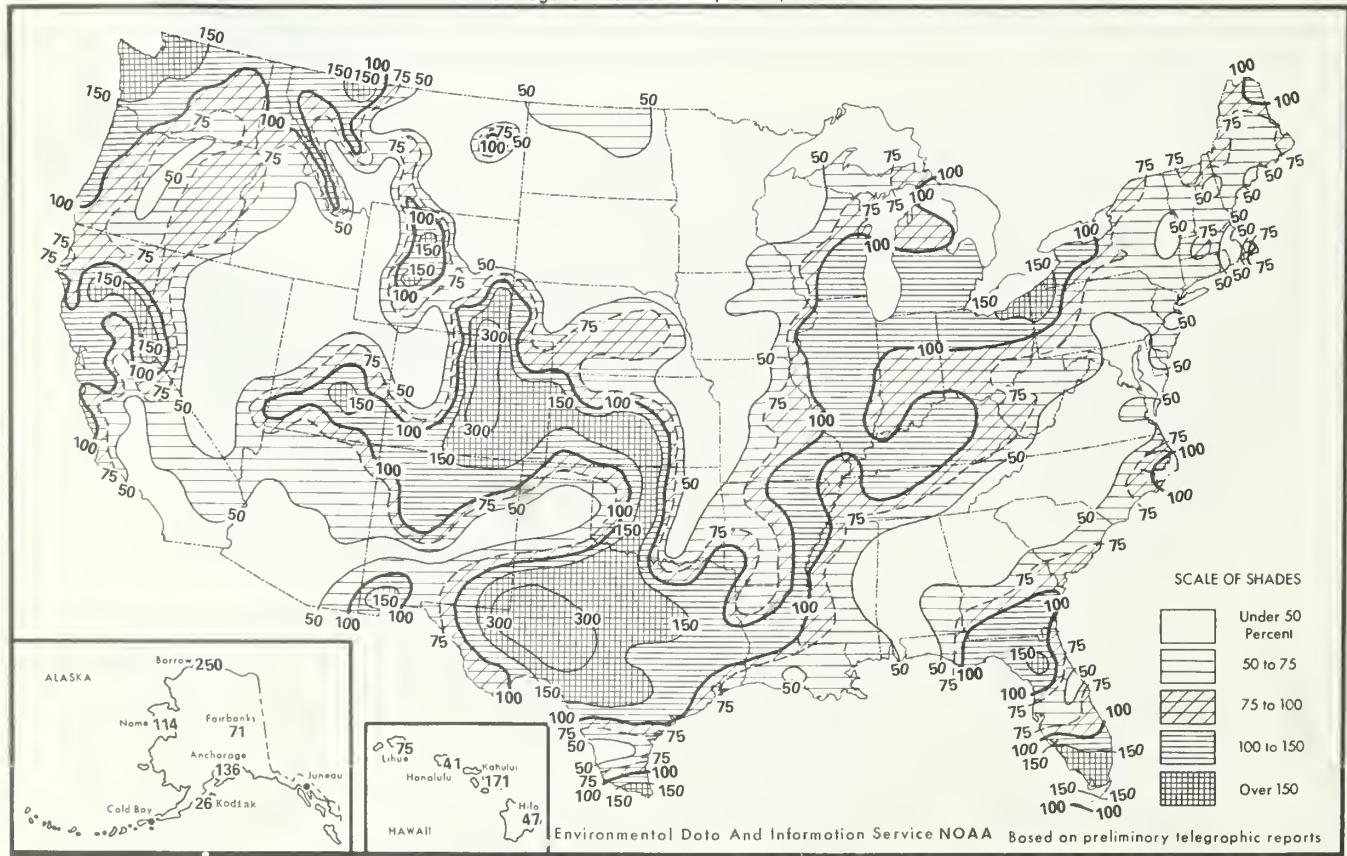
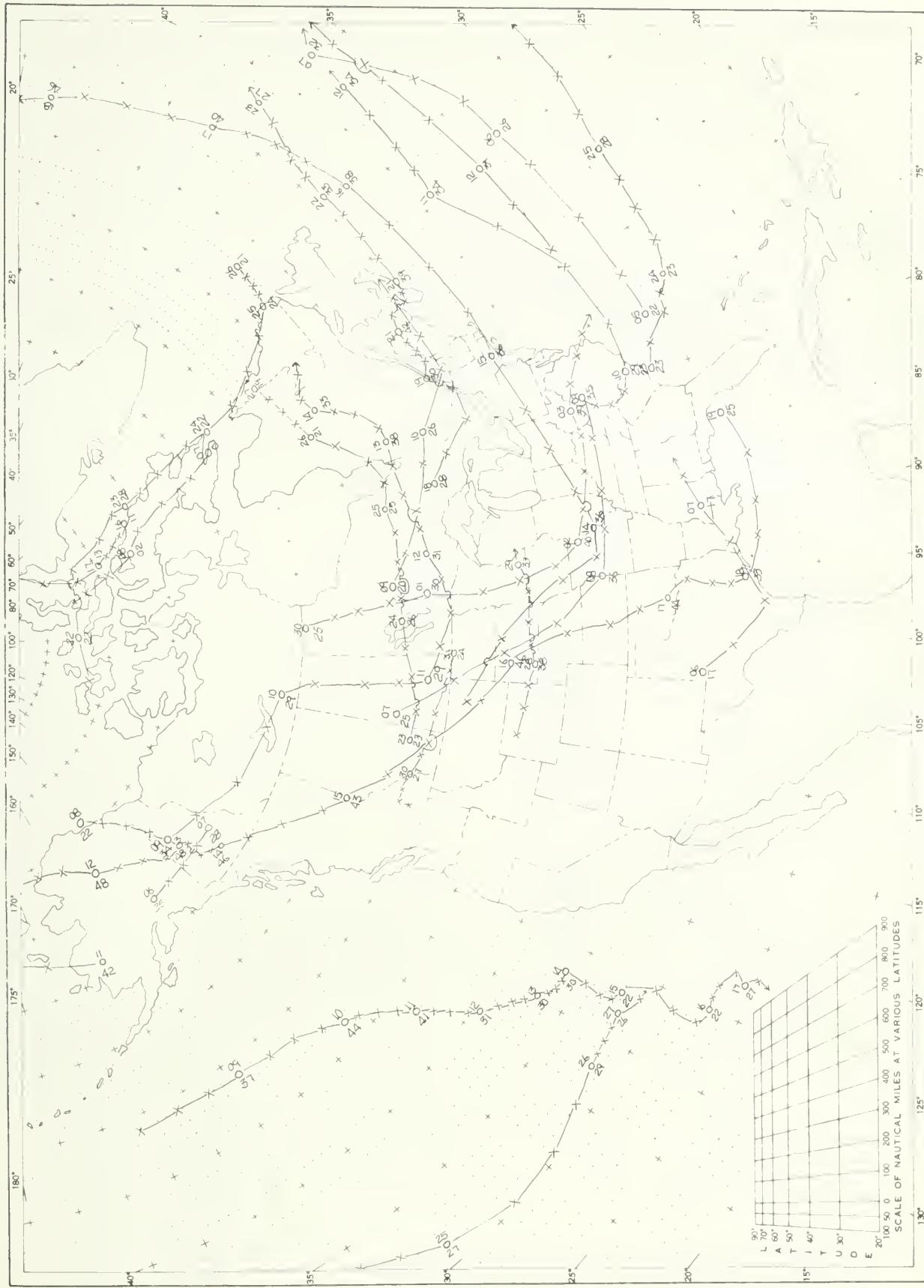
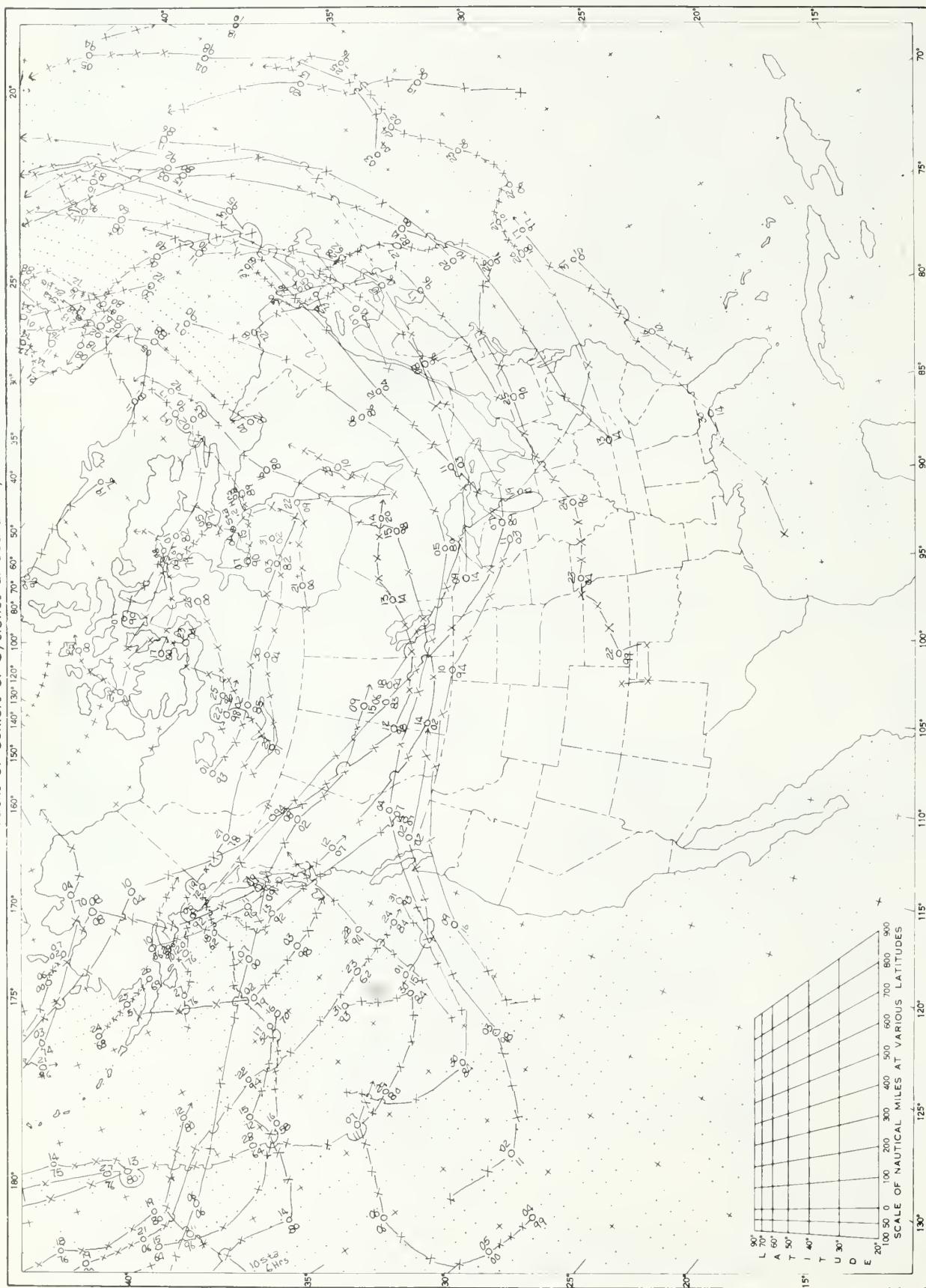


Chart III. Tracks of Centers of Anticyclones at Sea Level, December 1979



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IV. Tracks of Centers of Cyclones at Sea Level, December 1979



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar.
 X's indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

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1979

ANNUAL SUMMARY VOLUME 30 NUMBER 13

CLIMATOLOGICAL DATA

NATIONAL SUMMARY



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Daniel B. Mitchell

DIRECTOR
NATIONAL CLIMATIC CENTER

noaa

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

YEAR 1979

GENERAL SUMMARY OF WEATHER CONDITIONS

Lewis A. Blodgett, Meteorological Advisor, NCC

The year began with the third successive severely cold January over a large part of the United States, an unprecedented event in the climatological records. In contrast to the previous two Januaries, the cold weather extended west of the Rockies to the Pacific Coast, with the exception of coastal California, which with New England, averaged slightly above normal temperatures. Several midwestern stations reported their coldest January of record.

Heavy snow accompanied the cold. Again, several stations in the central United States reported their snowiest January. In fact, most of the country reported above normal amounts of precipitation. Record amounts fell in New England with attendant flooding, as successive coastal storms moved along the seaboard; the relatively mild temperatures in this area caused the precipitation to fall mostly as rain.

The cold weather of the previous month continued throughout the entire country except the southern Rockies, parts of Nevada, California, and Oregon. The Northeast, which escaped severe cold in January, was covered with Arctic air for two weeks during February, with many low temperature records established. Three consecutive severe winters went into the record books.

Precipitation during February was above normal over most of the country except the Central Plains northeastward across the Great Lakes. During the 17th-19th, a storm originating in the Gulf of Mexico spread record or near-record amounts of snow from Georgia northeastward across the Atlantic coastal states. Washington, D.C., had a record 24-hour amount for February of 18.7 inches, with deeper amounts along the coastal areas of Maryland and Delaware. In the Northern Plains, heavy snow occurred during the month with Bismarck, North Dakota, reporting a February record of 25.6 inches.

March brought a welcome turnaround in temperatures. In contrast to the previous two months, warmer than normal temperatures prevailed across the country, except for some areas in the

Northern Plains, extreme Southwest, and Florida. Records were set with temperatures in the mid-80's on the 30th in the mid-Atlantic states. Heavy precipitation occurred in the Southwest and the central states. Florida was rather dry.

Heavy rains and flooding characterized April in the Southeast, with some stations reporting their wettest April. Severe damage occurred in Jackson, Mississippi, as the Pearl River reached a record crest. The Northwest and Northern Plains also experienced above normal precipitation, with the Southwest, Southern Plains, and western Great Lakes region comparatively dry. Temperatures averaged 8° below normal in the extreme Northern Plains, with cooler than normal prevailing in most areas east of the Rockies except New England and parts of the Southeast.

In contrast to April, May was wet in the Southwest, with a record of 1.39 inches for the month at Winslow, Arizona. Sheridan, Wyoming, reported a record May snowfall amount of 12.5 inches. Rain continued heavy in the Southeast, and was above normal in New England. Temperaturewise, the West, from the Plateau to the Pacific Coast, and the Atlantic Coast, including New England, were warmer than normal. Slightly cooler than normal temperatures prevailed in most of the remainder of the nation.

June was dry west of the Rockies, with spotty heavy precipitation throughout the rest of the country. However, this sporadic pattern left many areas quite below their normal June rainfall. Warm weather prevailed in the Plateau region and extreme Southwest westward to the coast. However, cooler than normal temperatures were the rule from New England southwestward to include New Mexico. The Southeast was especially cool, with Raleigh, North Carolina, and Columbia, South Carolina, for example, reporting their coolest June.

July rainfall was much more generous than June, with ample rain in most of the country. The normally dry Southwest and Plateau area received

GENERAL SUMMARY OF WEATHER CONDITIONS

YEAR 1979

much more than normal precipitation. Two tropical storms, Bob and Claudette, caused heavy rains and flooding along the Gulf Coast, up to 35 inches for the month near Houston, Texas. Spotty dry areas persisted in the Northeast and Great Lakes area. Temperatures averaged slightly above normal in the Central Plains eastward to the middle Atlantic Coast, and warmer than normal elsewhere. One striking feature was a 5.8 inch snowfall at Stampede Pass, Washington, on the 1st, a new July record. Mount Washington, New Hampshire, also recorded snow during July, during a Northeast cool spell early in the month.

August was another wet month as most of the nation experienced above normal precipitation. Divergent locations such as Rochester, Minnesota, Columbus, Ohio, and Denver, Colorado, reported their wettest August. But some areas, such as the southern Atlantic coastal and Piedmont, were dry. Temperatures were quite variable within the month; as early in the month warm, showery conditions prevailed in the East, and again near the end, however, it was very cool with some frost in the Northeast and North Central during the third week. The month ended with the Northwest significantly warmer than normal, with the rest of the country near average, except somewhat cooler in the central United States.

Extreme precipitation contrasts characterized September. Hurricanes David and Frederic aided in heavy rainfall amounts in the East, eastward of a Texas-Michigan line. Locations such as Norfolk, Virginia, Nashville, Tennessee, Louisville, Kentucky, experienced their wettest September. However, west of this area, very dry conditions prevailed. Many stations, such as Springfield, Illinois, Milwaukee, Wisconsin, and Grand Rapids, Michigan, reported their driest month of record, with amounts in the trace-0.02 range. The entire West was dry, with the exception of the Northwest coast.

September was a warm month, except for a strip running northeast from eastern Texas to New York. The West was especially warm. San Diego, California, and Salt Lake City, Utah, for example, experienced their warmest September.

October continued warm in the West, with some stations reporting high October extremes, if not means, such as 103° on the 1st at Abilene, Texas. The area of the Northern Plains eastward across the Great Lakes to New England and extending southward to Tennessee and Louisiana were below normal temperature, as repeated polar outbreaks kept readings down. Dry weather accompanied the heat in the Southwest. Florida and southern Georgia, as well as North Dakota, were dry also. Elsewhere, especially in the North Central and Northeast, precipitation was mostly ample. An unusual snowstorm in the Northeast on the 10th gave record amounts for so early in the season. At Worcester, Massachusetts, 7.5 inches fell.

During November, temperatures were above normal in the eastern third of the country. New York City had its warmest November. In the West, colder than normal was the rule. Precipitation was heavy in the Central and Western Plains and the Southeast. Colorado Springs, Colorado, reported its snowiest November, 19.1 inches. In contrast, it was the first November of the century without even a trace of snow at Albany, New York.

The 1979-80 winter started mild as December averaged considerably warmer than normal over most of the country, up to 10° in the Northern Plains and Rockies. Only a narrow area near the Gulf Coast was colder than normal. Precipitation was deficient over a large part of the country, especially in the Northern Plains and parts of the Southeast. However, the southern Rockies and western Texas were wet.

The year ended with cities such as Jackson, Mississippi, Nashville, Tennessee, Louisville, Kentucky, and Sault St. Marie, Michigan, reporting their greatest annual amounts of precipitation.

MAXIMUM SHORT DURATION PRECIPITATION

YEAR 1979

MAXIMUM SHORT DURATION PRECIPITATION

YEAR 1979

MAXIMUM SHORT DURATION PRECIPITATION

YEAR 1979

MAXIMUM SHORT DURATION PRECIPITATION

YEAR 1979

Maximum precipitation in inches (5 to 180 minutes)																			Maximum precipitation in inches (5 to 180 minutes)			
6	10	16	20	30	60	80	100	120	150	180	6	10	16	20	30	45	60	80	100	120	150	180
CAIRO, ILLINOIS	JAN	.04	.06	.07	.08	.09	.12	.15	.17	.19	.23	.27	.28									
	DATE	23	23	23	23	23	23	23	23	23	23	23	23									
	TIME	2110	2110	2110	2110	2110	2110	2110	2110	2110	2110	2110	2110	1515	1515	1515	1515	1515	1515	1515	1515	1515
														2305	2305	2305	2305	2305	2305	2305	2305	1715
														2345	2345	2345	2345	2345	2345	2345	2345	1715
														2345	2345	2345	2345	2345	2345	2345	2345	1715
	FEB	.18	.23	.26	.38	.55	.56	.67	.75	.83	.88	1.00	1.02									
	DATE	23	23	23	23	23	23	23	23	23	23	23	23									
	TIME	0105	0110	0115	0120	0130	0127	0245	0200	0225	0245	0315	0315									
														0245	0245	0245	0245	0245	0245	0245	0245	
	MAR	.12	.19	.26	.33	.38	.44	.50	.55	.61	.70	.78	.81									
	DATE	31	23	23	23	23	23	23	23	23	23	23	23									
	TIME	0248	0102	0108	0114	0121	0123	0145	0200	0230	0249	0317	0349									
	APR	.20	.39	.44	.48	.53	.66	.72	.78	.82	.87	.94	1.00									
	DATE	11	11	11	11	11	11	08	08	08	08	08	08									
	TIME	1905	1905	1905	1912	1912	1912	1603	1620	1620	1620	1620	1620	1637								
														1622	1622	1622	1622	1622	1622	1622	1622	
	MAY	.56	.98	.99	1.03	1.08	1.11	1.19	1.36	1.45	1.48	1.57	1.57									
	DATE	18	18	18	18	18	18	18	18	18	18	18	18									
	TIME	0205	0205	0208	0215	0222	0227	0255	0315	0375	0355	0429	0455									
	JUN	.17	.26	.28	.30	.30	.30	.30	.30	.30	.30	.30	.30									
	DATE	10	10	10	10	10	10	07	07	07	07	07	07									
	TIME	1400	1400	1402	1405	1410	1415	1445	1500	1500	1500	1500	1500									
	JUL	.13	.13	.13	.14	.14	.14	.15	.16	.16	.16	.17	.17									
	DATE	12	12	12	12	12	12	12	12	12	12	12	12									
	TIME	1215	1218	1220	1245	1250	1255	1300	1305	1305	1305	1305	1305									
	AUG	.37	.67	.79	.94	.99	1.00	1.17	1.39	1.60	1.67	2.27	2.29	2.32	2.35							
	DATE	23	23	23	23	23	23	23	23	23	23	23	23									
	TIME	1805	1845	1845	1900	1900	1900	1925	1925	1925	1925	1925	1925	2057	2127							
	SEP	.09	.13	.15	.17	.20	.24	.26	.30	.33	.39	.47	.58	.63								
	DATE	21	21	21	21	21	21	21	21	21	21	21	21									
	TIME	0200	0212	0313	0310	0302	0300	0340	0255	0215	0215	0215	0215									
	OCT	.12	.18	.21	.25	.28	.45	.51	.60	.75	.87	.97	.99	1.01								
	DATE	22	22	22	22	22	22	22	22	22	22	22	22									
	TIME	1024	1030	1032	1037	1040	1040	1115	1130	1135	1135	1135	1135	1225	1225							
	NOV	.15	.20	.22	.25	.31	.35	.45	.55	.63	.71	.80	.85	.93	.95							
	DATE	16	16	16	16	16	16	16	16	16	16	16	16									
	TIME	1620	1620	1630	1630	1630	1630	1652	1712	1712	1712	1712	1712	1745	1745							
	OCT	.05	.17	.22	.28	.30	.34	.42	.45	.48	.55	.68	.70	.75	.82							
	DATE	12	12	12	12	12	12	12	12	12	12	12	12									
	TIME	0450	0450	0455	0455	0459	0511	0520	0537	0555	0615	0630	0630									
	YEAR	.56	.96	.99	1.03	1.09	1.17	1.39	1.80	2.27	2.29	2.32	2.35	2.35								
	MONT	.05	.05	.05	.05	.05	.05	.08	.08	.08	.08	.08	.08									
	MONTH	08	08	08	08	08	08	08	08	08	08	08	08									
MOLINE, ILLINOIS	JAN	.02	.06	.05	.06	.09	.10	.13	.16	.21	.27	.26	.33									
	DATE	18	18	18	18	18	18	18	18	18	18	18	18									
	TIME	2200	2250	2250	2250	2250	2250	2305	2305	2305	2305	2305	2305									
	FEB	.02	.04	.05	.06	.07	.08	.11	.13	.15	.17	.21	.26									
	DATE	22	22	22	22	22	22	20	20	20	20	20	20									
	TIME	2231	2237	2242	2242	2246	2149	2200	2215	2230	2230	2230	2230									
	MAR	.48	.68	.70	.74	.75	.81	.85	.87	.89	.91	.94	.96									
	DATE	29	29	29	29	29	29	29	29	29	29	29	29									
	TIME	0113	0113	0113	0113	0113	0113	0113	0113	0113	0113	0113	0113									
	APR	.17	.19	.20	.23	.26	.30	.36	.40	.45	.50	.56	.60									
	DATE	20	20	20	20	20	20	20	20	20	20	20	20									
	TIME	1445	1445	1445	1445	1445	1445	1450	1450	1450	1450	1450	1450									
	MAY	.34	.35	.38	.42	.45	.47	.49	.51	.53	.55	.57	.59									
	DATE	11	11	11	11	11	11	11	11	11	11	11	11									
	TIME	0007	0012	0018	0024	0030	0036	0042	0048	0054	0060	0066	0072									
	JUN	.42	.45	.46	.47	.48	.49	.50	.51	.52	.53	.54	.55									
	DATE	09	09	09	09	09	09	09	09	09	09	09	09									
	TIME	1510	1510	1510	1510	1510	1510	1510	1510	1510	1510	1510	1510									
	JUL	.38	.42	.46	.51	.56	.61	.67	.71	.76	.80	.87	.94									
	DATE	21	21	21	21	21	21	21	21	21	21	21	21									
	TIME	2113	2113	2120	2120	2120	2120	2120	2120	2120	2120	2120	2120									
	AUG	.40	.42	.44	.46	.48	.50	.52	.54	.56	.58	.60	.62									
	DATE	20	20	20	20	20	20	20	20	20	20	20	20									
	TIME	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700									
	SEP	.42	.50	.54	.58	.62	.67	.71	.75	.79	.83	.87	.91									
	DATE	07	07	07	07	07	07	07	07	07	07	07	07									
	TIME	1745	1745	1745	1745	1745	1745	1745	1745	1745	1745	1745	1745									
	OCT	.08	.12	.16	.18	.22	.24	.26	.27	.29	.32	.33	.33									
	DATE	02	02	02	02	02	02	02	02	02	02	02	02									
	TIME	1447	1454	1455	1455	1500	1510	1510	2058	2128	2158											
	FEB	.04	.06	.07	.08	.09	.10	.12	.13	.15	.17	.19	.21									
	DATE	23	23	23	23	23	23	23	23	23	23	23	23									
	TIME	0200	0225	0225	0225	0225	0225	0225	0225	0225	0225	0225	0225									
	MAR	.14	.16	.18	.20	.22	.24	.26	.28	.30	.32	.34	.36									
	DATE	11	11	11	11	11	11	11	11	11	11	11	11									
	TIME	0211	0211	0211	0211	0211	0211	0211	0211	0211	0211	0211	0211									
	JUN	.15	.18	.20	.23	.24	.25	.26</td														

MAXIMUM SHORT DURATION PRECIPITATION

Maximum precipitation in inches
(5 to 120 mm)

Maximum precipitation in inches
(5 to 100 years)

	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
SOUTH BEND, INDIANA												
JAN	.05	.04	.05	.06	.06	.12	.15	.20	.22	.24	.26	.
MAR	.13	.17	.13	.17	.17	.21	.23	.26	.28	.30	.32	.

Maximum precipitation in inches

	TIME	2200	2200	2200	0134	0150	0150	0200	0205	0246	0300	0330	0400
FEB	09	08	11	-11	-15	-25	-35	-35	-38	-25	-25	-25	-25
OATE	22	22	22	22	22	22	22	22	22	22	22	22	22
11	1620	1620	1635	1625	1625	1620	1620	1620	1620	1700	1600	1630	1700
MAR	06	10	-11	-13	-18	-25	-27	-28	-28	-28	-29	-29	-33
OATE	06	06	06	04	04	04	04	04	04	06	06	06	23
TIME	0515	0516	0517	0522	0523	0542	0547	0548	0605	0605	0605	0606	0436
APR	10	-11	-21	-23	-24	-47	-50	-53	-58	-60	-64	-64	-64
OATE	11	11	11	11	11	11	11	11	12	12	12	12	12
DATE	0924	2216	2316	2320	2324	2331	2335	2358	0017	0035	0109	0149	0200
MAY	08	11	-16	-20	-22	-23	-27	-30	-32	-34	-41	-41	-41
OATE	31	31	12	12	12	12	12	12	12	12	12	12	12
TIME	0150	0455	0904	0941	0957	1012	0947	1007	1027	1047	1117	1117	1147
JUN	20	-45	-52	-59	-70	-78	-83	-93	-95	-100	-112	-112	-112
OATE	29	29	29	29	29	29	29	29	29	29	29	29	29
DATE	1631	1631	1631	1631	1631	1631	1631	1635	1655	1715	1735	1805	1835
JUL	36	-45	-46	-69	-75	-11	-10	-11	-11	-18	-18	-18	-18
OATE	04	04	04	24	24	04	04	04	04	04	13	13	13
TIME	0244	0249	0250	0609	0610	0139	0330	0330	0340	0340	0270	0814	0802
AUG	-56	-56	-126	-151	-152	-182	-184	-184	-186	-184	-184	-184	-184
OATE	01	01	01	01	01	01	01	01	01	01	01	01	01
TIME	1515	1515	1520	1520	1520	1528	1528	1528	1528	1528	1528	1528	1528
SEP	03	-04	-05	-06	-07	-08	-09	-10	-10	-10	-11	-11	-11
OATE	13	13	13	14	14	14	14	14	14	14	14	14	14
DATE	1659	1704	1715	0100	0111	1613	0130	0131	0132	0132	0129	0200	0200
OCT	-15	-27	-31	-37	-41	-48	-50	-60	-70	-73	-75	-75	-75
OATE	22	22	22	22	22	22	22	22	22	22	22	22	22
TIME	1647	1650	1650	1650	1650	1714	1729	1749	1809	1825	1825	1825	1829

DATE	26	18	18	18	18	18	18	18	18	18	18	18	18	18	18	
TIME	00:05	2155	2155	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2320	
FE8	.04	.05	.05	.06	.07	.07	.08	.08	.09	.10	.11	.11	.11	.11	.11	
DATE	10	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
TIME	2052	2052	2052	2052	2052	2052	2052	2052	2052	2107	2107	2107	2107	2107	2215	2205
M48	-.22	-.32	-.33	-.34	-.36	-.39	-.40	-.46	-.60	-.65	-.78	-.78	-.78	-.78	-.78	
DATE	9	9	9	9	9	9	9	9	9	22	22	22	22	22	2112	2110
TIME	0555	0700	0705	0710	0720	0735	0750	0840	2112	2112	2112	2112	2112	2112	2110	2110
J-17	+.16	+.16	+.16	+.24	+.25	+.32	-.37	-.40	+.60	+.65	+.93	+.93	+.93	+.93	+.93	
DATE	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
TIME	0830	0840	0840	0840	0840	0840	0900	0915	0930	0930	0945	0945	0945	0945	0950	0950
MAY	-.00	-.35	-.52	-.58	-.64	-.65	-.65	-.64	-.64	-.64	-.64	-.64	-.64	-.64	-.64	-.64
DATE	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
TIME	1755	1800	1800	1800	1800	1815	1835	1845	1845	1845	1845	1845	1845	1845	1845	1845
JUN	+.02	-.64	-.69	-.70	-.16	-.13	-.09	-.07	-.17	-.17	-.64	-.74	-.74	-.74	-.74	-.74
DATE	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
TIME	0129	0123	0131	0133	0134	0158	0213	0233	0235	0553	0553	0553	0553	0553	0343	0343
JUL	-.20	-.36	-.42	-.46	-.82	-.96	-.99	-.01	-.01	-.02	-.05	-.07	-.07	-.07	-.07	-.07
DATE	29	29	29	29	10	10	10	10	10	10	10	10	10	10	10	10
TIME	1830	1835	1840	1840	2015	2020	2040	2055	2115	2135	2155	2155	2155	2155	2225	2225
AUG	-.25	-.47	-.56	-.68	-.95	-.95	-.95	-.16	-.16	-.17	-.32	-.40	-.40	-.40	-.40	-.40
DATE	26	26	26	26	21	21	21	21	21	21	21	21	21	21	21	21
TIME	1355	1400	1405	1410	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1600	1600
SEP	-.07	-.14	-.20	-.24	-.27	-.27	-.31	-.34	-.34	-.34	-.34	-.34	-.34	-.34	-.34	-.34
DATE	05	05	05	05	05	05	05	05	05	05	05	05	05	05	01	01
TIME	2002	2007	2012	2017	2027	2042	2047	2053	2054	2054	2114	2114	2114	2114	0008	0008
OCT	-.22	-.44	-.49	-.57	-.61	-.61	-.62	-.62	-.63	-.64	-.70	-.70	-.70	-.70	-.70	-.70
DATE	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
TIME	1945	1952	1950	1959	1950	2010	2018	2033	2050	2115	2131	2131	2131	2131	2204	2204

NOV	.07	.12	.16	.18	.21	.26	.35	.42	.58	.64	.65	+8
DATE	21	21	25	25	25	25	25	25	25	25	25	
TIME	0220	0225	2055	2100	2110	2125	2140	2200	2220	2230	2240	2130
DEC	.05	.09	.12	.13	.16	.19	.26	.29	.36	.45	.49	+9
DATE	24	24	24	24	24	24	24	24	24	24	24	
TIME	1405	1410	1415	1420	0645	0700	0700	0700	0700	0700	0700	0800
YEAR	.50	.95	1.20	1.55	1.85	2.02	2.02	2.02	2.02	2.02	2.02	
	00	06	06	06	06	06	06	06	06	06	06	
SIX104	CITY	10W										
JAN	.02	.02	.02	.03	.03	.05	.05	.07	.07	.08	.08	+4
DATE	18	18	18	18	11	11	26	25	25	26	26	
TIME	2210	2210	2215	2215	0705	0750	1500	1500	2350	2350	0000	0000

FEP	+10	+16	+26	+26	+26	+27	+26	+31	+38	+19	+42
DATE	23	23	27	23	23	23	23	23	23	21	23
TIME	0043	0053	0047	0047	0047	0047	0047	0047	0047	0047	0047
MAR	+16	+20	+26	+22	+25	+30	+35	+42	+46	+46	+49
TAKE	29	29	29	29	29	29	29	29	29	29	29
TIME	2202	2213	2213	2213	2215	0818	031	0804	0900	0900	0900
APR	+03	+06	+07	+08	+11	+16	+18	+20	+23	+24	+27
TAKE	21	21	21	21	21	21	21	25	25	25	25
TIME	1250	1255	1256	1303	1313	1350	1358	2018	2037	2056	2130
MAY	+15	+19	+20	+20	+25	+30	+32	+33	+33	+33	+35
TAKE	10	13	13	13	18	18	18	16	16	16	02
TIME	0026	0143	1438	1438	1808	1804	1829	1845	1909	1910	1808
JUN	+16	+26	+29	+35	+40	+40	+47	+46	+56	+57	+62
TAKE	28	07	07	07	07	07	20	20	29	16	16

TIME	1623	1944	1944	1944	1944	1944	1944	2315	0104	0145	0217	0450	0608
JUL	+6	+69	+75	+104	+114	+121	+131	+134	+140	+149	+149	+150	+150
OATE	03	11	11	11	11	11	11	11	11	22	22	22	22
TIME	0945	1255	1259	1302	1315	1325	1340	1400	0210	0215	0230	0230	0230
AUG	+25	+47	+55	+65	+91	+118	+121	+126	+126	+146	+149	+159	+171
DATE	17	17	17	17	28	28	28	28	28	28	28	28	28
TIME	2035	2040	2040	2045	2153	2150	2237	2237	2237	2257	2317	2349	0011
SEP	-02	-03	-03	-03	-03	-03	-03	-03	-03	-03	-03	-03	-03
OATE	13	13	13	13	13	13	13	13	13	13	13	13	13
TIME	0115	0120	0125	0130	0136	0136	0155	0160	0210	0230	0230	0230	0230
OCT	+11	+20	+21	+23	+23	+25	+26	+30	+40	+47	+55	+64	+67
DATE	31	31	31	31	31	31	19	19	19	19	19	19	19
TIME	1233	1238	1242	1249	1247	1249	1247	1247	0126	0126	0137	0142	0155
NOV	-06	-08	-08	-10	-15	-15	-20	-25	-30	-33	-38	-43	-47

TIME	0531	0535	0540	0544	0625	0702	0717	0737	0757	0717	0610	0717
JUL	-22	+42	+66	+57	-9	+76	+86	+89	+96	-99	+1.0	
DATE	22	22	22	22	22	22	22	22	22	22	22	22
TIME	0317	0322	0322	0322	0321	0323	0347	0402	0422	0402	0520	0620
AUS	+5	1.04	1.15	1.17	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
DATE	16	18	18	18	18	19	19	19	19	19	19	19
TIME	2316	2317	2317	2322	2327	2337	2352	0007	0027	0041	0107	0137
SEP	+16	+28	+29	+30	+44	+50	+52	+52	+52	+52	+52	+52
DATE	08	08	08	08	05	05	05	05	05	05	05	05
TIME	0048	0053	0056	0103	1759	1818	1836	1838	1838	1838	1838	1838
OCT	-06	+15	+19	+24	+26	+40	+51	+64	+76	+85	+1.0	+1.0
DATE	30	30	30	30	30	30	30	30	30	30	30	30
TIME	1150	1155	1200	1205	1215	1213	1245	1305	1325	1345	1415	1400
NOV	+05	+06	+07	+08	+12	+17	+24	+31	+35	+39	+51	+51

TIME	2340	2350	2341	2350	2350	0000	2356	0018	0030	0030	0030
JULY	-00	+70	+8	+100	+15	+62	+200	+2-11	+23	+24	+24
JULY	30	30	30	30	30	30	30	30	30	30	30
TIME	0305	0309	0309	0309	0311	0310	0340	0340	0340	0345	0345
AUG	-36	+55	+5*	+6*	+52	+5*	+62	+62	+63	+67	+73
JUNE	26	28	26	28	26	28	26	28	26	20	20
TIME	2050	2055	2100	2104	2115	2115	2130	2145	2005	2008	2026
SEP	-19	+18	+17	+23	+33	+36	+37	+50	+52	+53	+45*
JULY	05	05	05	05	05	05	05	05	05	05	05
TIME	1851	1856	1901	1906	1912	1920	1935	1953	2015	2016	2016
OCT	-23	+33	+34	+35	+40*	+57	+51	+61	+66	+71	+71
JUNE	21	21	21	21	21	21	21	21	21	22	22
TIME	2155	2200	2205	2210	2220	2235	2250	2310	2330	2350	0020
NOV	-09	+13	+17	+18	+26	+32	+36	+39	+42	+47	+47

DATE	20	20	20	20	20	20	20	20	20	20	20	20	20
TIME	2046	2055	2054	2103	2113	2126	2133	2203	2223	2223	2313	2311	2303
DEC	.01	.02	.03	.04	.05	.06	.07	.08	.09	.08	.09	.08	.09
DATE	22	22	22	22	22	22	22	22	29	29	29	29	29
TIME	1850	1855	1900	1905	1915	1930	1940	0545	0545	0545	0545	0545	0545
YEAR	5	10	15	1.35	1.47	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
MONTH	08	08	08	08	08	08	08	08	08	08	08	08	08
DDGGE	CITY	X	A	W	S								
JAN	-18	-29	-31	-34	-36	-42	-42	-50	-53	-58	-57	-57	-57
FEB	18	18	18	18	18	18	18	16	16	16	16	16	16
TIME	1035	1043	1050	1050	1100	1115	1130	1150	1210	1230	1300	1310	1320

DATE	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
TIME	1617	1622	1625	1630	1645	1705	1710	1715	1720	1725	1810	1815	1840	1900		
DEC	-19	-23	.26	.28	.29	.31	.32	.34	.35	.35	.35	.36	.36			
DATE	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
TIME	2252	2255	2300	2305	2311	2302	2317	2337	2357	2352	2350	2350	2350	2350	2350	2350
YEAR	+80	-10	.84	1.00	1.35	1.65	2.00	2.05	2.11	2.28	2.34	2.34	2.34	2.34	2.34	2.34
MONTH	07	07	07	07	06	07	07	07	07	07	07	07	07	07	07	07
GEOGRAPHY	KANSAS															
JAN	-02	-05	.03	.04	.06	.08	.09	.08	.11	.13	.19	.16				
DATE	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
TIME	1600	1605	1610	1615	1620	1625	1630	1635	1645	1655	1715	1745	1800			

JUL	+0	+5	-12	+12	+15	+17	+10	+62	+84	+84	+84	+84	+84
DATE	29	29	29	29	29	29	29	29	29	29	30	30	30
TIME	2235	2238	2238	2245	2250	2300	2305	2330	2350	0000	0000	0000	0000
AUG	+16	+18	+23	+24	+25	+27	+35	+47	+52	+63	+66	+74	+84
DATE	14	14	14	14	14	14	14	14	14	14	14	14	14
TIME	0841	0755	0800	0805	0815	0830	0845	0905	0925	0945	1015	1045	1115
SEP	+25	+40	+42	+42	+43	+44	+45	+45	+49	+50	+50	+50	+50
DATE	05	05	05	06	06	06	06	06	06	06	06	06	06
TIME	2349	2350	2352	0000	0007	0022	0037	0057	0115	0135	0205	0235	0235
OCT	+09	+17	+20	+24	+27	+30	+35	+45	+60	+70	+76	+79	+84
DATE	30	30	30	30	30	30	30	30	30	30	30	30	30
TIME	0850	0855	0900	0905	0915	0945	1000	1015	1035	1135	1315	1315	1315
NOV	+07	+12	+13	+15	+15	+17	+16	+21	+22	+24	+28	+31	+34
DATE	20	20	20	20	20	20	20	20	20	20	20	20	20
TIME	0845	0850	0855	0900	0905	0910	0915	0920	0925	0930	0935	0940	0945

JUL	-70	+15	+15	+15	1.5%	1.85	1.97	2.0	2.0	2.0	2.2	2.2	2.4	2.4
DATE	23	23	23	23	23	23	23	23	23	23	23	23	23	23
TIME	0037	0047	0047	0057	0052	0102	0117	0132	0152	0212	0232	0302	0312	03
AUG	+26	+92	+52	+59	.61	.62	.64	.67	.66	.68	.68	.68	.68	.68
DATE	25	25	25	25	25	25	25	25	26	26	26	26	26	26
TIME	2310	2315	2320	2314	2324	2339	2357	0014	0050	0050	0050	0050	0050	0050
SEP	+03	.04	.05	.06	.08	.09	.10	.10	.10	.10	.10	.10	.10	.10
DATE	08	08	08	08	08	08	08	08	08	08	08	08	08	08
TIME	0730	0735	0740	0745	0758	0810	0810	0810	0810	0810	0810	0810	0810	0810
OCT	-38	+96	.50	.53	.55	.60	.66	.77	.88	.99	.99	.99	.99	.99
DATE	29	29	29	29	29	29	30	30	30	30	30	30	30	30
TIME	2319	2324	2329	2334	2339	2349	0014	0034	0054	0114	0144	0144	0144	0144
NOV	-22	+28	.29	.30	.37	.47	.49	.66	.68	.70	.73	.73	.73	.73
DATE	20	20	20	20	20	20	20	20	20	20	20	20	20	20
TIME	2020	2025	2030	2035	2040	2045	2050	2055	2058	2059	2059	2059	2059	2059

MAXIMUM SHORT DURATION PRECIPITATION

MAXIMUM SHORT DURATION PRECIPITATION

YEAR 1970

MAXIMUM SHORT DURATION PRECIPITATION

YEAR 197

MAXIMUM SHORT DURATION PRECIPITATION

YEAR 1970

MAXIMUM SHORT DURATION PRECIPITATION

YEAR 1979

MAXIMUM SHORT DURATION PRECIPITATION

YEAR 1979

Maximum precipitation in inches (5 to 180 minutes)																		Maximum precipitation in inches (5 to 180 minutes)						
S	10	15	20	30	45	60	80	100	120	150	180	S	10	15	20	30	45	60	80	100	120	150	180	
NORTH	PLATTE	NEBRASKA										OMAHA	(NORTH)	TRI.	NEBRASKA									
JAN	.01	.02	.03	.04	.05	.06	.08	.11	.13	.15	.17	JAN	.02	.02	.03	.04	.05	.06	.10	.12	.14	.16	.20	.24
DATE	18	18	18	18	18	18	18	18	18	18	18	DATE	18	18	18	18	18	18	18	18	18	18	18	18
TIME	1405	1410	1415	1420	1430	1438	1438	1450	1510	1510	1510	TIME	2000	2000	2015	2020	2030	2045	2100	2120	2140	2200	2230	2300
FEB	.01	.02	.03	.04	.05	.06	.07	.08	.09	.09	.09	FEB	.01	.01	.02	.02	.02	.03	.04	.05	.06	.07	.07	.09
DATE	27	27	27	27	27	27	27	27	27	27	27	DATE	17	17	17	17	17	17	17	17	17	17	17	17
TIME	1150	1158	1158	1158	1158	1158	1158	1158	1158	1158	1158	TIME	0200	0210	0245	0220	0230	0245	0300	0320	0340	0400	0430	0500
MAR	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	MAR	.10	.19	.25	.27	.27	.27	.28	.35	.40	.45	.47	.49
DATE	18	18	18	18	18	18	18	18	18	18	18	DATE	18	18	18	18	18	18	18	18	18	18	18	18
TIME	0921	0930	0932	0932	0930	0930	0945	1000	1020	1040	1100	TIME	1935	1945	1950	1955	1955	1955	2300	2320	2340	2350	2359	2359
APR	.11	.14	.15	.16	.16	.16	.20	.23	.26	.26	.30	APR	.07	.10	.14	.18	.21	.24	.26	.33	.33	.36	.36	.38
DATE	17	26	26	26	26	26	11	11	11	11	11	DATE	11	11	11	11	11	11	25	25	25	25	28	28
TIME	2108	1659	1700	1709	1709	1709	0300	0300	0300	0300	0300	TIME	1905	1915	1920	1925	1930	1950	2015	1835	1835	1835	2030	2030
MAY	.14	.18	.22	.24	.26	.26	.40	.46	.53	.60	.64	MAY	.11	.13	.17	.20	.23	.25	.31	.36	.46	.56	.69	.64
DATE	09	09	09	09	09	09	09	29	29	29	29	DATE	18	18	18	18	18	18	02	02	02	02	02	02
TIME	0140	0151	0153	0200	0200	0228	2258	2300	2303	2313	2320	TIME	1710	1710	1710	1640	1640	2337	0010	0010	0010	0010	0010	0010
JUN	.27	.31	.42	.50	.55	.57	.55	.57	.67	.72	.73	JUN	.25	.30	.34	.42	.47	.52	.63	.75	.87	.98	.98	.98
DATE	17	17	17	17	17	17	07	07	07	07	07	DATE	19	19	19	19	19	19	19	19	19	19	19	19
TIME	0135	0139	0144	0149	0159	0210	0219	0215	0236	0255	0317	TIME	1617	1617	1617	1617	1617	1617	1617	1617	1617	1607	1607	1607
JUL	.52	.60	.64	.78	.88	.98	.10	.14	.18	.18	.18	JUL	.29	.51	.65	.70	.79	.82	.85	.87	.90	.92	.95	.97
DATE	16	27	27	27	27	27	27	27	27	27	27	DATE	15	15	15	15	15	15	15	15	15	15	15	15
TIME	1350	0053	0058	0058	0058	0058	0100	0125	0144	0202	0206	TIME	2244	2244	2244	2244	2244	2244	2244	2244	2244	2244	2244	2244
AUG	.44	.62	.79	.88	.90	.92	.93	.94	.94	.94	.94	AUG	.25	.45	.55	.60	.63	.66	.66	.66	.66	.66	.66	.66
DATE	25	25	25	25	25	25	25	25	25	25	25	DATE	09	09	09	09	09	09	09	09	09	09	09	09
TIME	1353	1356	1401	1406	1406	1431	1446	1456	1506	1526	1546	TIME	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
SEP	.05	.06	.06	.06	.07	.07	.07	.08	.09	.10	.10	SEP	.26	.46	.53	.54	.54	.54	.55	.55	.60	.60	.65	.65
DATE	11	11	11	11	11	11	11	11	12	12	12	DATE	02	02	02	02	02	02	02	02	02	02	02	02
TIME	2135	2135	2130	2120	2120	2120	0728	0728	0728	0622	0622	TIME	0015	0115	0115	0115	0115	0115	0115	0115	0115	0115	0115	0115
OCT	.03	.06	.11	.14	.20	.28	.35	.39	.44	.47	.49	OCT	.30	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.88
DATE	21	21	21	21	21	21	21	21	21	21	21	DATE	18	18	18	18	18	18	18	18	18	18	18	18
TIME	1315	1320	1320	1325	1330	1345	1345	1400	1417	1440	1445	TIME	1813	1813	1813	1813	1813	1813	1813	1740	1740	1757	1757	1757
NOV	.07	.10	.12	.15	.20	.22	.27	.34	.48	.59	.68	NOV	.07	.11	.12	.14	.17	.24	.29	.35	.44	.47	.50	.50
DATE	04	04	04	04	04	04	04	04	04	04	04	DATE	21	21	21	21	21	05	05	05	05	05	05	05
TIME	0125	0125	0125	0125	0125	0125	0125	0125	0125	0125	0125	TIME	0915	0915	0915	0915	0915	0400	0400	0400	0400	0400	0400	0400
DEC	.01	.01	.02	.02	.03	.03	.04	.06	.07	.08	.09	DEC	.02	.02	.04	.04	.04	.04	.04	.05	.05	.05	.05	.05
DATE	28	28	28	28	28	28	28	28	28	28	28	DATE	06	06	06	06	06	06	06	06	06	06	06	06
TIME	1520	1525	1525	1530	1530	1530	1700	1700	1700	1700	1700	TIME	1810	1830	1830	1830	1830	1830	1830	2015	2030	2030	2030	2030
YEAR	.52	.80	1.10	1.40	1.78	1.88	1.90	1.91	1.92	1.93	1.95	YEAR	.34	.51	.65	.80	.90	.93	.98	.98	.98	.98	.98	.98
MONTH	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	MONTH	10	07	10	10	10	10	10	10	10	10	10	10
VAL	TAINE	NEBRASKA										EKO	NEVA	A										
JAN	.02	.03	.03	.04	.05	.05	.07	.09	.10	.12	.13	JAN	.02	.03	.04	.05	.06	.08	.11	.12	.14	.15	.21	.25
DATE	18	18	18	18	18	18	18	18	18	18	18	DATE	10	10	10	10	10	10	11	11	11	11	11	11
TIME	2032	1930	1935	1933	1745	1750	1800	1755	1755	1755	1755	TIME	2211	2218	2215	2215	2215	2215	0000	0000	0000	0000	0000	0000
FEB	.01	.01	.02	.02	.02	.02	.03	.04	.05	.06	.07	FEB	.05	.05	.07	.07	.09	.11	.11	.13	.14	.16	.18	.23
DATE	15	15	15	15	15	15	15	15	15	15	15	DATE	21	21	21	21	21	21	21	21	21	21	21	21
TIME	0420	0425	0425	0425	0200	0211	0224	0239	0300	0540	0540	TIME	0605	0610	0615	0620	0630	0645	0700	0700	0700	0700	0700	0700
MAR	.03	.05	.06	.07	.08	.09	.11	.13	.15	.17	.19	MAR	.01	.02	.03	.04	.05	.06	.08	.09	.10	.11	.12	.13
DATE	18	18	18	18	18	18	18	18	18	18	18	DATE	16	16	16	16	16	16	16	16	16	16	16	16
TIME	1550	1550	1550	1550	1550	1550	1600	1620	1640	1700	1700	TIME	0105	0110	0110	0110	0110	0120	0120	0120	0120	0120	0120	0120
JUN	.40	.70	.80	.10	.13	.16	.19	.21	.23	.26	.29	JUN	.01	.02	.03	.05	.06	.08	.10	.12	.14	.16	.17	.17
DATE	15	15	16	16	16	16	16	16	16	16	16	DATE	17	17	17	17	17	17	17	17	17	17	17	17
TIME	2350	2350	0005	0015	0020	0024	0034	0040	0045	0050	0055	TIME	0730	0735	0745	0755	0755	0925	0925	0925	0925	0925	0925	0925
OCT	.02	.04	.05	.05	.06	.07	.10	.13	.16	.19	.23	OCT	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12
DATE	29	29	29	29	29	29	29	29	29	29	29	DATE	20	20	20	20	20	20	20	20	20	20	20	20
TIME	1515	1520	1525	1530	1535	1535	1535	1600	1623	1603	1700	TIME	1140	1140	1145	1200	1230	1230	1230	1230	1230	1230	1230	1230
NOV	.03	.04	.05	.05	.06	.07	.12	.17	.22	.27	.32	NOV	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13
DATE	21	21	21	21	21	21	21	21	21	21	21	DATE	25	25	25	25	25	25	25	25	25	25	25	25
TIME	2045	2050	2055	2100	2100	2125	2125	2120	2120	2120	2120	TIME	0205	0205	0210	0210	0225	0225	0225	0225	0225	0225	0225	0225
DEC	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	DEC	.02	.03	.03	.03	.03	.04	.05	.06	.07	.08	.09	.09
DATE	21	21	21	21	21	21	21	21	21	21	21	DATE	21	21	21	21	21	21	21	21	21	21	21	21
TIME	1720	1730	1735	1740	1745	1750	1755	1800	1806	1806	1806	TIME	0715	0715	0720	0720	0725	07						

MAXIMUM SHORT DURATION PRECIPITATION

YEAR 1979

MAXIMUM SHORT DURATION PRECIPITATION

JAN 1979

MAXIMUM SHORT DURATION PRECIPITATION

YEAR 1970

MAXIMUM SHORT DURATION PRECIPITATION

YEAR 1979

MAXIMUM SHORT DURATION PRECIPITATION

YEAR 1979

MAXIMUM SHORT DURATION PRECIPITATION

YEAR 1979

MAXIMUM SHORT DURATION PRECIPITATION

YEAR 197

MAXIMUM SHORT DURATION PRECIPITATION

YEAR 1979

MAXIMUM SHORT DURATION PRECIPITATION

YEAR 1979

MAXIMUM SHORT DURATION PRECIPITATION

MAXIMUM SHORT DURATION PRECIPITATION

MAXIMUM SHORT DURATION PRECIPITATION

YEAR 1970

Maximum precipitation in inches (5 to 180 minutes)																			Maximum precipitation in inches (5 to 180 minutes)																						
LANDER, WYOMING																			ANCHORAGE, ALASKA																						
5	10	15	20	20	45	60	80	80	100	120	150	180		6	10	15	20	20	40	60	80	100	120	150	180		6	10	15	20	20	40	60	80	100	120	150	180			
JAN	.01	.02	.03	.05	.04	.08	.07	.09	.12	.14	.16	.18		JAN	.01	.02	.02	.02	.03	.04	.05	.06	.08	.09	.12	.13		JAN	.01	.02	.02	.02	.02	.03	.03	.04	.06	.08	.09	.05	.06
DATE	01	02	03	04	05	06	07	08	09	10	11	12		DATE	12	12	12	12	12	12	12	12	12	12	12	12		DATE	28	28	28	28	28	28	28	28	28	28	28	28	
TIME	0605	0610	0614	0620	0630	0645	0700	0740	0800	0800	0800	0800		TIME	0130	0130	0130	0130	0130	0130	0130	0130	0130	0200	0200	0215		TIME	0045	0050	0055	0110	0125	0195	0205	0225	0225	0225	0225	0225	
FEB	T	T	.03	.01	.02	.02	.02	.02	.03	.03	.03	.03		FEB	T	.01	.01	.01	.02	.02	.03	.03	.04	.04	.05	.05		FEB	.02	.03	.04	.04	.05	.05	.05	.06	.07	.08	.09	.05	.06
DATE	01	02	03	04	05	06	07	08	09	10	11	12		DATE	19	19	19	19	19	19	19	19	19	19	19	19		DATE	10	10	10	10	10	10	10	10	10	10	10	10	
TIME	2055	2100	2100	2115	2130	2145	2210	2230	2300	2300	2300	2300		TIME	0710	0800	0800	0800	0820	0830	0830	0830	0830	0830	0830	0830		TIME	0140	0145	0150	0155	0155	0155	0155	0155	0155	0155	0155	0155	
MAR	.01	.02	.03	.05	.04	.06	.06	.06	.07	.08	.09	.09		MAR	.03	.04	.05	.06	.06	.07	.08	.09	.10	.11	.12	.13		MAR	.03	.04	.05	.06	.06	.07	.07	.08	.09	.09	.09	.05	.05
DATE	31	31	31	31	31	31	31	31	31	31	31	31		DATE	29	29	29	29	29	29	29	29	29	29	29	29		DATE	10	10	10	10	10	10	10	10	10	10	10	10	
TIME	2245	2245	2245	2245	2245	2245	2315	2340	2350	2350	2350	2350		TIME	1830	1835	1840	1845	1850	1850	1900	1950	1950	2010	2010	2015		TIME	0140	0145	0150	0155	0155	0155	0155	0155	0155	0155	0155	0155	
APR	.07	.12	.15	.17	.22	.27	.30	.32	.35	.38	.42	.42		APR	.07	.09	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10		APR	.05	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	
DATE	11	11	11	11	11	11	11	11	11	11	11	11		DATE	19	19	19	19	19	19	19	19	19	19	19	19		DATE	10	10	10	10	10	10	10	10	10	10	10	10	
TIME	1100	1100	1100	1110	1110	1125	1145	1200	1200	1230	1230	1230		TIME	0625	0630	0640	0650	0710	0720	0750	0800	0800	0800	0800	0800		TIME	0245	0245	0245	0245	0245	0245	0245	0245	0245	0245	0245	0245	
MAY	.09	.06	.08	.09	.08	.17	.20	.22	.25	.28	.30	.30		MAY	.09	.10	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11		MAY	.05	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	
DATE	28	28	28	28	28	31	31	31	31	31	31	31		DATE	27	27	27	27	27	27	27	27	27	27	27	27		DATE	29	29	29	29	29	29	29	29	29	29	29	29	
TIME	0915	0915	0915	0915	0915	1000	2030	2130	2130	2130	2130	2130		TIME	1115	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200		TIME	1215	1220	1220	1220	1220	1220	1220	1220	1220	1220	1220	1220	
JUN	.02	.04	.05	.05	.05	.06	.06	.06	.07	.08	.09	.09		JUN	.02	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03		JUN	.05	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	
DATE	07	07	07	07	07	08	08	08	08	08	08	08		DATE	27	27	27	27	27	27	27	27	27	27	27	27		DATE	29	29	29	29	29	29	29	29	29	29	29	29	
TIME	1250	1305	1310	1315	1320	1325	1330	1335	1340	1345	1350	1355		TIME	1127	1132	1137	1142	1152	1207	1210	1210	1210	1210	1210	1210		TIME	1220	1225	1225	1225	1225	1230	1230	1230	1230	1230	1230	1230	
SEP	.01	.04	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01		SEP	.01	.02	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03		SEP	.05	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	
DATE	26	26	26	26	26	26	26	26	26	26	26	26		DATE	31	31	31	31	31	31	31	31	31	31	31	31		DATE	19	19	19	19	19	19	19	19	19	19	19	19	
TIME	1029	1034	1039	1043	1048	1053	1058	1059	1059	1059	1059	1059		TIME	2047	2047	2047	2047	2047	2047	2047	2047	2047	2047	2047	2047		TIME	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330	
OCT	.02	.03	.04	.05	.05	.06	.06	.06	.07	.07	.08	.08		OCT	.02	.03	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04		OCT	.07	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	
DATE	16	16	16	16	16	16	16	16	16	16	16	16		DATE	16	16	16	16	16	16	16	16	16	16	16	16		DATE	29	29	29	29	29	29	29	29	29	29	29	29	
TIME	0350	0340	0330	0320	0310	0300	0300	0300	0300	0300	0300	0300		TIME	0200	0200	0200	0200	0200	0200	0200	0200	0200	0200	0200	0200		TIME	0310	0310	0310	0310	0310	0310	0310	0310	0310	0310	0310	0310	
DEC	.03	.04	.05	.05	.05	.06	.06	.06	.06	.06	.06	.06		DEC	.03	.04	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05		DEC	.08	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	
DATE	07	07	07	07	07	07	07	07	07	07	07	07		DATE	07	07	07	07	07	07	07	07	07	07	07	07		DATE	09	09	09	09	09	09	09	09	09	09	09	09	
TIME	0700	0700	0700	0700	0700	0700	0700	0700	0700	0700	0700	0700		TIME	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100		TIME	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	
JUNEAU, ALASKA														JUNEAU, ALASKA													JUNEAU, ALASKA														
JAN	.01	.02	.03	.04	.04	.05	.05	.06	.06	.07	.08	.08		JAN	.01	.02	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03		JAN	.01	.02	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	
DATE	16	16	16	16	16	16	16	16	16	16	16	16		DATE	16	16	16	16	16	16	16	16	16	16	16		DATE	28	28	28	28	28	28	28	28	28	28	28	28		
TIME	2130	2145	2150	2200	2215	2230	2230	2230	2230	2230	2230	2230		TIME	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200		TIME	28	28	28	28	28	28	28	28	28	28	28	28	
FEB	.04	.06	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07		FEB	.04	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05		FEB	.04	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	
DATE	01	01	01	01	01	01	01	01	01	01	01	01		DATE	12	12	12	12	12	12	12	12	12	12	12	12		DATE	28	28	28	28	28	28	28	28	28	28	28	28	
TIME	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050		TIME	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050		TIME	28	28	28	28	28	28	28	28	28	28	28	28	
MAR	.04	.05	.05	.05	.0																																				

MAXIMUM SHORT DURATION PRECIPITATION

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MAXIMUM SHORT DURATION PRECIPITATION

YEAR 1979

MAXIMUM SHORT DURATION PRECIPITATION

This table contains statistics of maximum amounts of precipitation during the calendar year indicated. Data are for stations equipped with recording gages and are from airport locations unless otherwise noted. The ending time and date is included in the table for each monthly maximum amount except in cases of zero and trace events. Maximum amounts for the year with month of occurrence are also indicated for each of the 12 time periods. Annual extremes and New records are based on available data. Some periods of record may be missing.

Beginning with data for 1973 and continuing to the present time, only the maximum amount of precipitation that occurred during the month for each of the 12 time periods shown were determined. These maximum amounts may be from different storms, and the threshold intensities required for Excessive Precipitation prior to 1973 are not a consideration. (A detailed explanation of the methods and threshold intensities used prior to 1973 can be found in the publications listed in the following paragraph.)

Publication of Data: A summary of maximum precipitation data for the years prior to 1896 was published in the annual report of the Chief of the Weather Bureau for 1895-1896. Excessive precipitation data for the period 1881-1896 were published in the annual report of the Chief of the Weather Bureau 1896-1897. Data for the years 1897 through 1934 have been published in the appropriate annual reports of the Chief of the Weather Bureau. For the years 1935 through 1949 these data were published in the appropriate issue of the United States Meteorological Yearbook. The annual issues of the Climatic Data National Summary present Excessive Precipitation each year 1950-1972 and Maximum Precipitation for 1973 and succeeding years.

U Indicates Urban sites

M No Record

T Trace event

+ Also occurred on an earlier date or dates

* Equals or exceeds previous record for duration and period of record. Period of record, updated through the current year, includes data compiled in Weather Bureau Technical Paper No. 2, revised 1963. This publication contains extreme data for 296 first order stations from beginning of record through 1961. Due to data limitations, new records are denoted only for 5, 10, 15, 30, 60, 120, and 180 minutes. (The 15 minute amount was not computed for 1936-1943.)

District of Columbia - See Virginia.

SUNSHINE, AMOUNT AND PERCENT

YEAR 1979

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible		
ALABAMA BIRMINGHAM U MONTGOMERY	107	34	109	35	230	62	228	58	236	55	289	67	233	53	292	70	137	37	279	79	211	67	197	64	2547	54
	112	35	112	36	273	74	229	59	230	54	248	58	145	42	245	59	148	40	267	76	194	61	152	49	2395	
ALASKA ANCHORAGE	42	21	200	79	167	45	226	51	276	51	268	47	248	44	202	41	178	46	57	18	34	16	65	37	1963	43
JUNEAU	133	59	158	60	132	36	292	67	351	67	393	92	392	90	369	90	352	95	336	92	248	79	3945	89		
NAME	50	30	196	83	207	56	152	33	278	48	192	30	194	32	47	9	132	34	76	25	27	14	66	52	1620	35
ARIZONA FLAGSTAFF	135	43	208	68	326	83	282	65	382	91	385	67	392	94	368	99	327	93	295	95	245	80				
PHOENIX	173	55	254	81	284	76	375	96	391	91	407	95	407	93	370	89	337	91	317	90	272	87	245	79	3827	86
TUCSON	209	65	274	88	316	85	379	97	392	92	393	92	393	90	369	90	352	95	336	92	248	79	3945	89		
YUWA	207	65	279	90	301	81	382	98	402	94	424	99	429	98	391	94	362	97	337	96	299	95	282	91	4092	92
ARKANSAS FORT SMITH	89	28	113	37	184	50	242	62	252	58	312	72	287	65	306	74	306	82	273	67	182	59	175	57	2680	60
NO. LITTLE ROCK	147	50	176	58	279	75	304	62	337	78	348	80	308	70	289	69	295	79	260	74	207	66	224	73	3183	72
CALIFORNIA EUREKA U	139	46	66	22	183	49	240	60	275	61	363	80	381	83	365	86	277	74	132	38	137	46	144	50	2703	61
FRESNO	129	42	183	60	272	73	361	92	424	97	437	99	433	97	406	97	367	99	292	84	216	70	170	57	3690	83
RED BLUFF	185	62	171	57	278	75	336	84	419	94	443	98	436	96	401	94	368	98	242	70	179	60	195	67	3651	82
SACRAMENTO	114	38	135	45	237	64	346	87	426	96	444	100	440	98	413	98	362	97	272	78	213	70	150	51	3552	80
SAN DIEGO	206	65	251	81	260	70	298	76	233	54	271	63	302	69	262	63	304	82	241	68	251	80	267	86	3144	71
COLORADO DENVER	231	77	231	77	290	78	326	82	281	63	366	82	371	62	324	76	322	86	252	73	199	66	239	82	3431	77
GRAND JUNCTION	126	35	109	36	176	47	256	64	270	61	350	78	345	76	280	66	327	88	257	74	163	54	172	59	2810	63
PUEBLO	257	84	257	85	314	85	357	90	336	77	394	89	371	87	366	87	342	92	299	86	254	84	229	77	3799	85
CONNECTICUT HARTFORD	122	41	182	61	216	58	232	58	246	54	339	74	307	67	234	55	250	67	140	41	120	41	164	58	2551	57
DIST/COLUMBIA WASHINGTON NATIONAL	126	35	127	42	240	65	191	46	263	59	290	65	272	60	278	66	224	60	188	54	148	52	160	54	2498	56
FLORIDA APPALACHICOLA U	143	44	153	49	273	73	252	65	349	82	357	85														
JACKSONVILLE	201	62	173	55	293	79	301	78	315	74	331	78	321	74	308	75	173	47	282	80	249	78	195	61	3140	71
KEY WEST	254	76	251	79	314	84	313	82	339	62	338	83	322	77	265	66	242	66	228	64	211	64	230	70	3306	75
MAMI	172	52	121	67	285	77	292	76	177	42	351	85	351	83	282	78	270	75	216	66	200	61	3120	70		
TAMPA	185	56	197	63	263	76	310	80	322	77	337	81	293	69	224	55	148	40	253	71	217	67	166	51	2933	66
GEORGIA ATLANTA	138	44	135	44	232	62	224	57	229	53	284	66	224	51	282	68	155	42	259	74	195	62	183	59	2540	57
MACON	178	56	159	51	276	74	270	69	317	74	293	69	236	54	283	69	132	36	267	76	213	68	195	63	2820	63
SAVANNAH	168	53	140	45	258	70	250	64	253	59	259	61	215	49	230	56	132	36	282	80	236	75	187	60	2610	59
HAWAII HILO	147	43	103	32	190	51	116	31	194	48	188	46	223	56	292	79	161	44	156	46	178	52	2132	48		
MONOLULU	187	55	96	30	288	77	295	78	286	70	290	72	320	78	305	77	301	77	292	63	222	66	214	63	3032	68
KAHULUI	191	56	123	38	272	73	225	59	299	73	254	62	296	72	320	80	264	72	253	70	231	69	231	68	2957	67
LIHUE	158	47	129	40	245	66	241	63	308	75	276	68	304	74	314	79	294	80	242	67	154	46	132	39	2797	63
IDAHO ECISE	77	26	87	30	285	77	239	59	352	77	329	71	395	85	320	74	350	93	235	69	138	47	79	28	3001	67
POCATELLO	126	43	119	40	266	72	282	70	265	58	371	81														
ILLINOIS CAIRO U	126	41	111	37	166	45	232	59	243	55	313	71	207	46	251	54	161	51	188	54	151	49	138	46	2391	54
CHICAGO MIDWAY	119	40	121	41	166	45	213	53	348	77	321	73	321	70	251	58	297	79	173	50	109	37	156	55	2605	58
MOLINE	100	34	127	43	120	32	176	44	293	65	237	52	204	44	245	57	296	79	181	53	120	40	145	51	2245	50
PEDRIA	152	51	149	50	110	30	184	46	329	73	336	74	260	57	257	60	318	85	203	59	139	47	153	53	2589	58
SPRINGFIELD	119	40	137	46	95	26	193	48	324	73	332	74	291	64	304	72	319	85	194	56	121	40	139	48	2569	58
INDIANA EVANSVILLE	123	40	95	32	171	46	207	52	261	59	339	76	224	50	230	55	297	80	227	65	142	47	153	52	2469	55
FORT WAYNE	144	48	180	60	204	55	246	61	368	82	378	84	367	80	307	72	317	85	202	59	147	49	156	54	3015	68
INDIANAPOLIS	105	35	109	36	126	34	159	40	298	67	266	59	215	47	214	50	274	73	156	45	117	39	125	43	2163	49
IOWA DES MOINES	122	41	156	52	127	34	199	50	311	69	322	71	314	66	296	69	337	90	225	65	163	55	150	53	2722	61
SIOUX CITY	182	62	175	59	161	44	224	56	278	61	305	67	263	57	266	62	317	85	187	55	128	44	163	57	2649	59
KANSAS CONCORDIA	195	65	212	71	234	63	260	70	371	83	371	83	309	68	356	84	350	94	290	78	230	76	215	73	3413	77
ODDGE CITY	185	60	226	75	226	61	226	57	245	56	311	70	285	64	314	74	331	74	272	78	207	68	211	71	3037	68
TOPEKA	160	53	162	54	173	47	217	55	320	72	305	68	212	47	283	67	312	83	219	63	184	61	162	55	2710	61
WICHITA	153	50	158	52	190	51	257	65	319	72	309	70	296	66	329	78	321	86	258	74	202	66	201	67	2995	67
KENTUCKY LOUISVILLE	120	39	133	44	122	33	161	41	232	52	243	55	175	39	230	54	234	63	192	55	149	49	164	55	2154	48
LOUISIANA NEW ORLEANS	186	57	130	42	249	67	178	46	248	58	260	62	206	48	224	55	173	47	283	80	216	68	174	55	2527	57
SHREVEPORT	99	31	110	35	187	50	186	48	243	57	295	69	256	59	307	74	277	75	252	71	225	72	171	55	2608	59
MAINE PORTLAND	118	41	183	62	151	41	166	41	182	40	306	66	278	59	210	49	271	72	147	43	131	45				

SUNSHINE, AMOUNT AND PERCENT

YEAR 1979

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible
MINNESOTA DULUTH	176	63	131	46	129	35	215	53	233	50	295	62	267	56	219	50	189	50	111	33	90	32	119	45	2175	49
MINNEAPOLIS	201	70	189	65	137	37	210	52	262	57	270	58	281	59	206	47	258	69	167	49	110	38	115	42	2406	54
MISSISSIPPI JACKSON	100	31	105	34	222	60	175	45	215	50	338	79	213	49	271	66	236	64	296	84	221	70	190	61	2581	58
MISSOURI COLUMBIA REGIONAL	152	50	135	45	136	37	152	38	267	60	288	65	223	49	313	74	308	83	195	56	150	50	165	56	2483	56
KANSAS CITY	224	74	222	74	280	76	294	74	281	63	275	62	201	44	276	65	321	86	219	63	174	58	156	53	2924	66
ST LOUIS	153	50	124	41	137	37	159	40	289	65	305	69	238	53	294	70	296	79	182	52	136	45	161	55	2474	56
SPRINGFIELD	117	38	126	42	194	52	259	65	242	55	296	67	251	56	301	72	311	83	221	63	149	44	162	54	2629	59
MONTANA BILLINGS	139	49	116	41	183	50	217	53	243	52	285	61	307	65	226	52	321	85	216	64	151	53	126	47	2532	57
CRAFET FALLS	162	58	127	44	195	53	173	42	291	62	349	73	365	76	268	61	309	82	142	42	122	43	78	29	2580	58
HAVRE	174	64	152	53	275	74	281	68	338	72	425	88	417	86	384	67	328	87	224	67	157	57	112	43	3267	73
HELENA	149	53	127	44	246	67	181	44	293	63	327	69	349	73	282	64	315	84	174	62	142	50	74	28	2660	60
MISSOULA	124	44	57	20	204	55	190	46	258	55	311	66	359	75	323	74	327	87	213	63	150	53	70	26	2585	58
NEBRASKA LINCOLN	160	54	158	53	207	56	214	54	269	60	305	67	281	61	315	74	341	91	214	62	177	59	178	62	2819	63
NORTH PLATTE	201	67	177	59	219	59	264	66	297	66	321	71	316	69	333	78	335	89	233	66	199	67	195	68	3088	69
OMAHA (INDRTH)	150	51	156	53	175	47	176	44	283	63	302	67	244	53	271	63	330	86	167	48	156	52	147	51	2560	57
VALENTINE	206	70	205	69	200	54	247	61	310	68	334	73	329	71	303	70	330	88	203	59	170	58	206	73	3041	68
NEVADA ELY	185	61	186	62	234	63	284	72	324	73	386	86	366	81	291	69	340	91	228	66	193	64	225	77	3243	73
LAS VEGAS	163	53	246	81	294	79	357	91	390	89	418	95	401	90	348	83	338	91	310	89	257	84	246	82	3773	85
reno	155	51	198	66	333	90	374	94	470	97	446	98	438	96	403	95	370	99	296	85	234	78	201	69	3871	87
INNEMUCCA	158	53	146	49	237	64	249	62	339	76	377	83	378	83	293	69	356	95	209	61	187	63	162	56	3092	69
NEW HAMPSHIRE CONCORD	101	35	197	67	149	40	193	48	214	47	325	71	297	64	242	56	261	70	152	44	117	40	128	45	2376	53
MT WASHINGTON OBS	51	17	157	53	99	26	140	34	114	25	189	40	155	33	93	21	187	49	87	25	84	29	93	33	1449	32
NEW JERSEY ATLANTIC CITY	121	33	130	45	244	66	189	48	219	49	222	50	170	57	302	71	251	67	172	50	151	50	194	66	2351	53
TRENTON U	125	35	135	45	225	61	187	47	208	47	250	56	246	54	226	53	267	55	156	45	130	43	170	59	2245	50
NEW MEXICO ALBUQUERQUE	181	58	222	73	243	66	275	70	295	68	342	79	348	79	329	79	289	78	293	84	233	75	243	80	3292	74
ROSWELL	194	61	245	80	261	70	303	78	327	76	330	77	309	71	306	74	260	70	234	66	188	60	161	52	3118	70
NEW YORK ALBANY	81	27	169	57	145	39	197	49	212	47	273	60	263	57	224	52	229	61	108	31	88	30	107	38	2095	47
ELMHAMPTON	72	24	141	48	168	45	185	46	206	44	259	57	272	59	207	48	233	62	102	30	101	34	84	30	2023	45
BUFFALO	60	21	122	41	168	45	164	41	251	55	291	63	377	66	224	52	264	73	105	34	92	32	92	33	2141	48
ROCHESTER	55	19	136	46	178	48	173	43	253	56	305	66	315	68	240	56	273	73	94	28	66	23	95	34	2183	49
SYRACUSE	57	19	134	46	142	38	158	39	172	38	192	58	272	58	178	41	222	59	87	25	60	21	78	28	1751	39
NORTH CAROLINA ASHEVILLE	179	58	167	55	219	59	244	62	229	52	233	53	189	43	221	53	107	29	223	64	179	58	196	65	2386	54
CAPE HATTERAS R	192	61	148	49	244	66	159	48	180	41	192	44	200	57	100	27	238	68	165	53	172	57	2258	51		
CHARLOTTE	178	57	175	57	254	69	270	69	275	63	287	66	294	67	304	73	174	47	256	73	134	59	188	62	2839	64
GREENSBORO	172	55	146	48	272	73	254	64	196	49	238	54	220	50	276	66	171	46	256	73	201	65	208	69	2610	59
PALMELTON	168	54	172	56	237	64	196	50	200	46	215	49	207	47	237	57	149	40	255	73	191	62	179	59	2406	54
WILMINGTON	200	63	132	47	257	69	215	55	233	54	244	56	240	54	313	75	182	49	316	90	247	79	233	76	2811	63
NORTH DAKOTA BISMARCK	164	59	116	41	198	54	184	45	278	60	356	75	366	77	373	85	323	66	172	51	124	44	149	56	2004	63
FARGO	174	64	125	43	165	50	163	45	248	53	317	67	333	70	302	69	298	79	153	45	103	37	111	42	2536	57
WILLISTON	187	68	153	53	211	57	235	57	281	60	369	77	369	83	322	85	206	61	127	46	147	56	2980	67		
OHIO CINCINNATI ABBE OBS	80	26	73	24	144	39	207	52	168	38	306	69	170	38	227	54	241	64	124	36	100	33	133	45	1974	44
CLEVELAND	104	35	96	30	126	34	135	34	180	40	316	70	243	55	166	43	223	60	79	23	89	30	72	25	1843	41
COLUMBUS	75	25	108	36	134	36	117	29	157	245	238	53	230	51	206	48	235	63	134	39	110	37	101	35	1933	43
DAYTON	102	34	93	31	164	44	157	40	303	68	305	66	230	50	212	50	253	68	138	40	93	31	127	44	2177	49
TOLEDO	97	33	134	45	154	41	177	44	274	61	307	68	264	57	154	36	251	67	90	26	122	41	112	39	2136	48
OKLAHOMA OKLAHOMA CITY	173	55	151	49	256	69	268	68	309	71	321	74	338	76	355	85	318	86	260	74	206	67	185	61	3139	71
OKLAHOMA CITY TULSA	102	33	125	41	246	66	208	53	239	55	240	55	255	57	301	72	279	75	208	60	166	54	142	47	2510	56
OREGON PORTLAND	112	39	54	18	208	56	221	55	379	82	383	82	396	84	336	77	290	77	166	49	144	50	125	46	2814	63
PACIFIC AREA GLAM TAGUAC R	167	47	226	67	199	53	232	62	228	58	166	43	140	35	145	37	117	32	60	16	110	32	198	56	1983	45
JOHNSTON	240	69	225	69	307	62	295	78	327	82	332	84	351	87	340	86	327	89	300	82	225	66	247	72	3515	79
KODOR R	223	61	206	42	287	77	248	67	257	67	166	44	184	47	192	50	227	62	100	27	177	50	157	43	224	55
MAJURO	249	68	212	64	275	73	131	36	228	59	239	64	265	66	226	59	263	72	251	68	242	66	250	69	2831	64
PAGO PAGO																										

SUNSHINE, AMOUNT AND PERCENT

YEAR 1979

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Hour	Percent of possible	Hour	Percent of possible	Hour	Percent of possible	Hour	Percent of possible	Hour	Percent of possible	Hour	Percent of possible	Hour	Percent of possible	Hour	Percent of possible	Hour	Percent of possible	Hour	Percent of possible	Hour	Percent of possible	Hour	Percent of possible	Hour	Percent of possible
SOUTH DAKOTA																										
HURON	175	61	141	48	198	54	230	57	324	71	329	66	253	62	284	58	323	86	174	51	201	69	190	69	2830	63
RAPID CITY	239	83	208	71	223	60	205	51	216	47	307	66	323	69	284	66	324	86	201	51	155	56	2832	63		
TENNESSEE																										
CHATTANOOGA	128	35	101	33	196	53	223	57	198	46	283	65	145	33	246	59	162	44	237	68	185	60	192	63	2277	51
KNOXVILLE	141	45	145	47	261	70	311	79	327	75	295	68	219	49	303	72	199	54	227	65	164	53	175	58	2767	62
MEMPHIS	125	43	114	37	224	60	254	65	304	70	348	80	306	69	332	80	277	75	269	77	217	70	181	59	2961	67
NASHVILLE	98	32	109	36	188	51	209	53	214	49	259	59	182	41	217	52	203	55	243	69	170	55	145	48	2236	56
TEXAS																										
ABILENE	179	56	184	59	217	58	269	69	283	66	300	70	325	75	311	75	296	80	268	82	227	72	185	59	3063	69
AMARILLO	100	61	240	78	237	64	300	76	267	61	323	74	307	69	315	75	309	83	292	63	226	73	196	64	3202	72
AUSTIN	106	33	117	38	171	46	179	46	185	44	261	62	240	56	281	68	267	72	247	70	229	72	172	54	2455	55
BEDFORD	101	30	131	41	184	49	218	57	279	67	329	80	325	77	284	70	256	69	275	77	154	47	114	35	2649	60
CORPUS CHRISTI	141	43	130	41	224	60	219	57	288	69	355	85	332	78	348	86	276	75	304	85	228	70	144	44	2988	67
CALLAS FT WORTH	112	35	121	39	191	51	214	55	258	60	298	70	327	75	321	78	296	80	265	75	198	62	192	62	2791	57
EL PASO	197	62	252	81	344	92	372	96	380	89	370	87	363	84	366	89	328	88	315	90	284	84	266	84	3865	87
GALVESTON	114	35	115	37	245	66	158	41	286	68	336	80	289	67	308	75	245	66	324	91	227	71	159	50	2805	63
Houston INTERCON	117	36	88	28	194	52	151	39	252	59	281	67	270	54	256	63	239	65	294	83	221	69	176	55	2500	56
LUBBOCK	160	57	239	68	257	69	294	75	312	72	355	82	353	80	364	88	321	86	298	65	221	74	207	67	3381	76
PORT ARTHUR	127	39	101	32	218	59	169	44	259	61	303	72	255	59	210	51	227	61	292	82	252	79	194	61	2606	59
SAN ANTONIO	94	29	125	40	161	43	177	46	216	51	295	70	258	60	291	71	268	72	261	73	184	57	149	47	2479	56
UTAH																										
MILFORC	116	38	167	55	228	62	282	71	317	72	413	93	398	88	339	80	342	92	266	77	210	69	217	73	3296	74
SALT LAKE CITY	112	38	104	35	228	62	271	64	323	72	394	87	406	69	331	78	345	92	243	71	181	61	171	59	3109	70
VERMONT																										
BURLINGTON	78	27	172	59	157	42	170	42	217	47	245	53	267	57	177	41	201	54	85	25	70	24	87	32	1926	43
VIRGINIA																										
LYNCHBURG	161	52	155	51	272	73	265	67	294	67	282	64	246	55	268	64	160	43	220	63	172	56	205	68	2698	61
NOFOLK	148	48	155	51	257	69	221	56	213	48	245	56	200	45	236	56	212	57	220	63	172	56	205	68	2698	61
FICHMOND	164	53	176	58	268	72	256	65	307	70	325	74	297	66	303	72	217	58	262	75	206	67	189	63	2970	67
WASHINGTON																										
QUILLAYUTE	91	33	42	15	173	47	144	35	181	38	178	37	161	33	150	34	153	40	111	33	81	29	22	8	1488	33
SEATTLE-TACOMA	125	45	46	14	224	61	213	52	268	57	349	73	405	84	262	59	190	50	145	43	79	26	41	15	2340	52
SPokane	113	41	79	28	250	68	270	66	359	77	390	82	425	88	383	67	335	89	229	68	102	36	33	12	2968	66
WALLA WALLA U	71	11	47	16	230	62	216	53	327	71	364	77	413	87	311	71	303	81	183	54	46	16	49	18	2521	56
EST INDIES																										
SAN JUAN P.R.	233	67	231	71	211	56	131	35	174	43	222	56	311	77	277	70	227	62	306	84	247	73	254	74	2824	64
EST VIRGINIA																										
PARKERSBURG U	123	41	188	63	264	71	187	47	252	57	267	60	263	58	212	50	273	73	221	64	158	52	124	42	2531	57
WISCONSIN																										
GREEN BAY	146	51	166	64	142	38	178	44	277	60	278	60	324	69	280	64	279	74	171	38	117	41	144	52	2481	56
MADISON	141	48	172	58	130	35	164	41	283	62	284	62	303	65	194	45	274	73	110	32	84	29	165	59	2305	52
MILWAUKEE	152	52	156	54	157	42	175	44	303	67	305	67	310	67	225	52	280	62	142	41	102	35	126	45	2436	54
WYOMING																										
CHEYENNE	201	67	198	66	251	68	309	77	280	62	342	75	307	67	295	69	309	83	214	62	177	60	165	57	3048	68
LAJER	130	45	167	57	219	59	216	54	243	54	384	84	380	82	318	74	334	89	227	66	187	64	136	49	2943	66
SHERIDAN	160	56	149	51	221	60	197	49	240	52	300	64	313	67	224	52	304	81	185	54	155	54	167	61	2614	59

Data from airport unless otherwise specified.
 "U" indicates Urban, "R" indicates Rural, sites.

ANNUAL CLIMATOLOGICAL DATA

METRIC UNITS

YEAR 1979 *

State and Station	Temperature			Precipitation			Relative humidity			Wind			Number of days		
	Averages		Extremes	Date	Total	24 hours	24 hours	Total	24 hours	24 hours	Average speed	Resultant speed	Direction	Date	Tents
	Daily maximum	Daily minimum	Annual	Highest	Lowest	Days	Cooling degree days	Heating degree days	Days	Days	m/s	m/s	/6 kilometers)		
ALABAMA	°C	°C	°C	JUL	JUN	1677	959	1756	130	12-13	1	25+			
BIRMINGHAM U	21.8	10.6	16.2	36.7	5	-10.6	9.9							129	0
BIRMINGHAM	22.1	10.7	16.4	37.2	5	-11.1	9.9	1609	955	177C	1	FE8	81	84	65
HUNTSVILLE	20.5	9.2	14.9	35.6	3	-12.8	9	1993	798	1472	91	12-3	36	1718	61
MOBILE	24.5	13.5	19.0	36.1	5	-7.8	16.0	1051	1357	2013	24.1	12-13	29+	82	65
MONTGOMERY	21.4	12.3	17.9	35.6	5	-7.8	3							57	66
ANCHORAGE	7.6	0	3.8	26.1	3	-26.7	31	5250	2	537	24	24-25	1971	1718	74
ANNETTE	10.8	4.7	7.6	28.3	20	-15.0	5	3794	5	2557	65	13-4	1715	165	80
BARROW	-7.7	-13.6	-10.6	21.1	24	-41.1	6+	10520	0	76	8	4	389	28	6
BARTER ISLAND	-7.7	-12.8	-10.2	20.0	14+	-43.4	3	10441	0	167	17	3-4	1166	142	13
BETHEL	2.7	-8.3	-8	24.4	22	-31.7	29	6897	0	496	24	19-20	991	86	9
PETTLES	* 1	-9.8	-4.8	27.8	15	-50.0	6	8375	7	323	20	22	2357	165	4
616 DELTA	3.7	-6.2	-1.2	29.4	4	-46.7	7	7076	16	253	31	21-22	551	99	12
COLORADO	7.4	2.4	4.9	19.4	18+	-18.3	30	4635	0	1335	55	24-25	1440	160	16
FAIRBANKS	2.9	-8.2	-2.6	27.6	26+	-46.1	7	7568	13	262	19	5-6	1090	157	30
GULAKA	3.8		27.2	4						323	30	1-2	1417	191	1
HOMER	7.5	* 2	3.0	22.8	22	-21.1	31	5204	0	616	54	27-28	2398	513	12
JUNEAU	6.4	* 7	4.6	26.7	23	-23.3	13+	4942	1	1252	66	19-20	2565	239	17
KING SALMON	7.1	-1.2	2.9	26.1	17	-39.3	29	5624	0	444	27	5-6	607	127	16
KODIAK	9.7	3.4	6.6	26.1	21	-16.1	42	4235	4	1737	92	31	1201	213	19
KOZEBUE	-8.7	-7.4	-4.1	22.8	7	-36.7	31	6099	1	251	13	19	671	94	29
MC GRATH	2.6	-6.1	-2.7	26.7	20	-46.7	6	7568	1	466	30	5-6	2250	236	15
NOME	1.9	-6.8	-1.4	22.8	13	-35.0	13	5294	0	560	27	21-23	1651	221	14
ST. PAUL ISLAND	6.4	2.2	4.3	16.1	10+	-16.7	28	5069	0	769	24	4-5	1217	229	12
TALKEETNA	6.8	-3.7	1.6	28.9	5	-35.4	31+	6039	1	676	44	15-16	2939	336	15
VALDEZ	6.9	* 4	3.7	29.4	2	-17.2	13	5294	2	1665	70	30-31	5578	549	19
YAKUTAT	7.9	* 7	4.3	25.6	22	-23.9	12+	5043	0	3794	198	19	3576	267	10
ARIZONA	14.8	-2.1	6.3	32.2	AUG	-28.3	JAN	4363	47	500	53	16-17	1452	417	1
FLAGSTAFF	30.0	14.0	22.4	47.2	JUN	-1.7	JUN	2326	173	21	2	16-17	0	31	25
PHOENIX	27.6	12.7	20.2	43.3	JUL	-4.4	NOV	977	1696	29	19-20	30	29	49	14
TUCSON	21.2	3.4	12.3	39.4	AUG	-17.8	JAN	2781	658	32	15-16	206	99	24-25	14
WINDSOR	31.1	15.8	23.4	46.7	JUL	* 0	30+	507	2434	113	16-17	0	0	14-3	14
YUMA															
ARKANSAS	20.2	8.6	14.4	35.0	JUL	-20.6	FE8	915	1264	111	20-21	411	114	25	5-6
FORT SMITH	21.3	10.6	15.9	36.7	JUL	-12.2	9	1865	1070	1638	87	ARR	284	77	61
LITTLE ROCK	20.3	9.9	15.1	36.7	JUL	-15.0	9	2059	946	1336	87	22-23	485	231	67

See reference notes at end of table

**ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS**

YEAR 1912

State and Station	Temperature			Precipitation			Relative humidity			Wind			Number of days			
	Averages	Extremes	Daily	Daily	0°te	Total	Snowfall	Total	Relative humidity	Resultant speed	Directon	Date	Tents	Clouds to sunset		
CALIFORNIA	°C	°C	°C	°C	Base	Base	mm	mm	%	m/s	m/s					
BAKERSFIELD	26.6	13.2	19.9	40.4	1	-1.3	1	15.18	52	37	57	179	84	0	3	
BISHOP	23.4	3.2	13.3	41.1	3+	-16.4	29	23.66	586	14	24	30	35	4.2	0	
BLUE CANYON								1894	136	24-25	44	49	58	54	4.0	
EUREKA U	15.3	8.7	12.0	29.4	12	-2.2	2	22.59	9	51	24-25	0	0	17	4	
FRESNO	25.5	10.9	18.2	43.9	1	-2.3	28+	12.13	253	23	14-15	1	13+	32	0	
LONG BEACH	23.9	12.3	18.1	41.1	10	-2.6	29	6.85	668	123	30-31	0	0	30	0	
LOS ANGELES	21.7	13.2	17.4	39.4	10	1.1	29	75.0	469	43	26-27	0	0	28	1	
LOS ANGELES U	23.7	13.4	18.6	40.6	11	0	29	6.44	781	55	5-6	0	0	4.7	0	
MT SHASTA R	17.0	1.9	9.5	37.8	19	-17.8	29	3.05	131	107	91	12-13	2896	587	0	
OAKLAND	18.6	11.1	14.9	36.7	12	1.1	2	1.1	604	76	23-24	0	0	5.0	0	
PED BLUFF	24.7	11.2	17.9	44.4	18	-2.8	1+	12.88	1227	61	23-24	0	0	4.8	0	
SACRAFNTIO	23.1	9.0	16.1	40.0	14+	-5.0	1	15.05	719	45	14-15	0	0	4.1	0	
SAN DIEGO	22.3	15.0	18.7	39.3	10	4.4	29	501	675	67	30-31	0	0	29	0	
SAN FRANCISCO	16.8	9.7	14.2	37.8	12	-2.6	29	15.63	101	73	23-24	1	15	4.9	0	
SAN FRANCISCO U	17.5	11.5	14.5	34.7	11	5.6	31+	14.14	69	52	10-11	15	70	2.9	0	
SANTA MARIA	20.0	7.3	14.1	35.6	9	-4.4	29+	15.67	63	32	26-27	0	0	4.6	0	
STOCKTON	24.7	10.0	17.4	42.2	12	-8.4	29+	12.99	996	39	10-11	0	0	6.0	0	
COLORADO																
ALAMOSA	13.0	-6.5	3.7	31.7	13	-39.4	JUL	19	1.6	23	10	892	130	26-27	0	
COLORADO SPRINGS	15.7	1.8	9.7	35.6	6	-25.0	JAN	3.69	263	37	19-20	41	42	5.4	0	
DURHAM	17.0	2.4	9.7	37.2	6	-23.9	JAN	3.40	367	43	9-10	2309	356	19-20	0	
GRAND JUNCTION	17.1	3.7	10.4	38.9	5+	-23.3	JAN	3.51	702	17	11	1257	127	8	0	
FUEBLIC	19.3	1.8	10.6	38.9	6	-26.9	JAN	3.277	502	40	0	57	23-24	8	0	
CONNECTICUT																
BRIDGEPORT	14.0	7.6	11.2	32.2	8	-17.8	FEB	29.4	406	116	20-21	396	119	FE-B	0	
HARFORD	15.6	4.8	10.2	36.1	9	-25.6	FLB	33.6	451	118	26-27	610	163	7-8	0	
DELAWARE																
WILMINGTON	17.1	6.8	11.9	34.4	10	-21.1	FLB	27.92	550	135	64	1107	419	18-19	0	
DIST OF COLUMBIA																
WASHINGTON DULLES	18.1	6.1	12.1	35.0	11	-25.6	FLB	27.54	542	1406	105	30-31	66	18-19	0	
WASHINGTON NATIONAL	19.0	9.9	14.5	35.1	1C	-14.4	FLB	21.69	622	1272	94	5-6	886	475	18-19	0
FLORIDA																
APPALACHICOLA U	24.5	14.2	19.4	35.6	20	-6.7	JAN	9.07	1349	164	16-17	0	0	6.6	0	
MAYPORT BEACH	26.2	16.5	21.3	34.4	15+	-2.2	JUL	4.01	1645	1753	148	1-2	0	87	6.3	0

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA METRIC UNITS

YEAR 1979

State and Station	Temperature				Precipitation				Wind				Number of days							
	Averages		Extremes		Snow †		Total		Resultant speed		Farthest mile (1.6 kilometers)		Max. temp.		Min. temp.					
	Daily maximum	Daily minimum	Highest†	Lowest†	Date	Date	24 hours	Total	Date (s)	Date (s)	mi/s	mi/s	Sept.	Sept.	Oct.	Oct.				
FLORIDA	°C	°C	°C	°C	AUG 1	JAN 3	1.66	2154	1701	1.36	0.9	7	114.2	28	3116	0				
FORT MYERS	29.4	16.9	24.2	3.6	JUL 4	JAN 1	-1.1	JAN 1	0	0	83	84	54	70	3.5	0.9	91	115	0	0
JACKSONVILLE	25.4	13.7	19.6	35.6	JUL 6	JAN 7	-7.2	JAN 7	870	1380	1569	97	5EP	0	89	90	61	78	3.2	0.1
KELLOGG WEST	26.3	23.2	25.8	33.9	JUN 11	JAN 7	10.1	JAN 7	22	2781	716	69	48.0	0	81	83	70	76	5.7	3.0
MILAM	23.7	20.8	24.3	34.4	JUN 4	JAN 4	4.4	JAN 4	108	2344	1527	412	2+25	0	79	81	60	70	4.7	2.3
ORLANDO	28.0	16.4	22.2	35.6	JUN 4	JAN 4	4+	JAN 4	378	1842	1276	94	5EP	3-4	80	90	56	73	3.9	0.6
PENSACOLA	26.3	14.4	19.4	36.4	JUL 30	JAN 6	-6.7	JAN 6	981	1422	2022	282	5AR	0	83	86	61	70	4.0	0.7
TALLAHASSEE	25.2	12.0	18.6	37.2	JUL 4	JAN 7	-7.2	JAN 7	1072	1221	2033	114	5AY	0	90	93	56	72	2.7	0.5
TAMPA	23.0	17.0	22.4	34.4	JUL 3	JAN 3	-2+2	JAN 3	359	1910	1658	301	7-8	0	86	91	63	71	3.6	0.8
WEST PALM BEACH	27.8	18.9	23.4	34.4	SEP 1	JAN 3	1.7	JAN 3	179	2081	1554	186	2+25	0	82	83	63	74	4.9	2.0
GEORGIA																				
ATLANTIC	21.8	10.7	16.3	36.1	AUG 20	JAN 11	-11.1	JAN 11	1580	897	1245	98	1+13	119	89	18	70	86	5.5	3.4
ATLANTA	21.7	11.1	16.4	36.1	JUL 7	JAN 12	-12+2	JAN 12	1610	979	1350	142	1+13	117	107	17-18	76	82	6.0	3.4
AUGUSTA	23.3	10.4	16.9	37.2	JUL 15	JAN 8	-8+9	JAN 8	1485	1016	1256	94	2+22	86	86	18	84	88	5.7	2.9
COLUMBUS	23.8	12.4	16.1	38.9	JUL 5	JAN 9	-9+4	JAN 9	1261	1246	1357	115	3-4	51	51	18	84	88	6.0	3.5
MACON	24.1	11.7	17.9	38.3	JUL 4	JAN 9	-9+4	JAN 9	1264	1175	1339	68	25-26	86	86	18	84	88	5.4	3.4
SAVANNAH	24.4	13.3	16.9	37.2	JUL 4	JAN 6	-6.7	JAN 6	1062	1328	1573	173	4-5	1	16	80	84	66	3.3	0.2
HAWAII																				
Hilo	27.3	18.8	23.1	32.8	OCT 8	JAN 13	8+	JAN 13	461	566	1+20	0	0	81	70	83	86	2.7	0.2	15
HONOLULU	29.3	20.7	24.0	33.9	OCT 11	JAN 13	3+	JAN 13	536	461	3-4	69	FE8	0	74	57	72	79	5.1	3.6
WAIKIKI	29.1	20.6	24.6	34.0	OCT 18	JAN 13	2+	JAN 13	2334	681	4-5	0	0	76	60	75	55	4.1	5.5	1.1
LIHUE	27.6	20.6	24.2	31.7	OCT 29	JAN 7	14+4	JAN 7	2196	942	130	9	0	81	66	78	63	5.2	3.7	6
IDAHO																				
BELISE	16.9	10.2	18.6	39.9	JUL 17	JAN 25	-25.0	JAN 25	3323	418	357	41	113	640	102	2526	47	57	3.4	0.0
LEWISTON	17.1	5.5	11.3	41.1	JUL 20	JAN 21	-21.1	JAN 21	3041	536	359	17	4-5	340	114	11-12	62	50	74	21.0
POCATELLO	14.9	3	7.6	38.1	AUG 4	JAN 33	-33.3	JAN 33	4104	266	224	13	21-22	1105	76	2526	53	43	71	17.0
ILLINOIS																				
CAIRO U	18.5	9.8	14.2	36.7	AUG 7	JAN 16	-16+1	JAN 16	2430	980	1373	68	3-4	462	69	6-7	59	60	4.9	1.1
CHICAGO O HARE	14.2	3.6	8.9	34.4	JUL 23	JAN 27	-27+2	JAN 27	3618	448	57	2029	1222	359	15	78	60	62	76	20.6
CHICAGO MIDWAY	13.5	4.3	8.9	33.3	JUL 7	JAN 28	-28+3	JAN 28	3608	451	966	72	12-18	1045	419	15	78	64	70	25.9
MOLINE	14.3	2.6	6.4	34.0	JUL 7	JAN 32	-32.9	JAN 32	4028	504	876	63	1+20	963	384	12-13	77	61	21	1.1
FLORIDA	14.5	3.2	8.8	34.4	AUG 7	JAN 30	-30.0	JAN 30	3684	572	736	61	2+25	907	310	13	79	62	65	1.5
POCKORDO	12.9	1.7	7.3	33.3	JUL 7	JAN 31	-31.1	JAN 31	4315	377	917	58	2+26	285	251	12-13	82	66	23	20.6
SPRINGFIELD	16.2	4.7	10.4	36.1	JUN 9	JAN 28	-28.9	JAN 28	3466	667	745	113	11	749	150	9	74	61	64	4.8

ANNUAL CLIMATOLOGICAL DATA METRIC UNITS

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State and Station	Temperature			Precipitation			Relative humidity			Wind			Number of days		
	Averages	Extremes	Dates	Heating degree days	24 hours	24 hours	24 hours	Relative	Humidity	Speed	Direction	Fastest mile	Max. Temp.	Min. Temp.	
INDIANA	°C	°C	°C	Base	Base	Base	mm	mm	%	m/s	m/s	km/h	°C	°C	
EVANSTON	17.6	6.5	12.1	35.6	19	-22.8	9	2904	6.8	1326	58	30-31	12	22	
FOOT WAYNE	14.0	3.7	8.9	32.2	7	-25.6	5	3739	376	787	51	24	139	8	11
INDIANAPOLIS	15.5	4.7	10.1	33.3	8	-26.7	5	3421	490	1113	110	11-13	20	24	
SOUTH BEND	14.2	4.7	9.4	33.3	7	-25.6	15	3596	445	1159	71	10	2248	155	21
10-A															
BURLINGTON	14.6	3.7	9.2	32.9	9	AUG	7	3779	517	74	894	JUN	70	57	20
DETROIT	14.2	3.5	8.8	31.0	7	-28.9	9	3779	517	74	894	JAN	25	14.3	25
DUBUQUE	12.2	1.9	7.0	31.6	2*	-32.6	5	4388	333	901	50	11-18	19	25.0	31
SIOUX CITY	13.3	1.6	7.4	31.2	14	-31.1	1	4375	481	825	116	28-30	15	1.2	31
WATERLOO	12.8	1.8	7.3	32.8	6	-31.1	5	4371	428	968	73	17-18	808	11	40
KANSAS															
CONCORDIA	17.2	4.1	10.7	36.3	13	-26.1	1	3440	711	675	105	28-30	676	203	28
ODORE CITY	16.2	4.5	11.4	36.3	8	-24.4	14	3193	731	600	72	21-23	605	97	22
GOODLAND	17.7	2.9	10.3	46.0	11	-26.1	14	3384	522	675	55	1-2	2179	305	14
TOPEKA	17.0	4.4	10.7	36.7	13	-30.6	1	3399	708	681	64	28	608	180	41
WICHITA	18.9	6.2	12.6	36.3	19*	-23.9	8	2960	924	729	66	7-8	559	117	17
KENTUCKY															
COVINGTON	15.9	5.6	10.8	35.3	8	-22.8	5	3150	469	1340	115	29-34	810	137	15
LEXINGTON	17.0	6.7	11.9	35.3	8	-19.4	15	2823	518	1372	110	20-21	589	127	14
LOUISVILLE	17.9	7.5	12.7	35.0	8	-17.6	15	2655	607	1519	139	25-26	516	119	1
LOUISIANA															
MONROVIA	24.1	12.0	18.6	36.7	5	-8.1	14.5	3460	145	21-22	7	7	299	66	0
LAKE CHARLES	24.0	13.0	18.9	35.6	16	-6.2	14.5	1627	1358	1975	284	2-20	874	173	0
NEW ORLEANS	25.1	14.0	20.0	36.1	5	-5.0	14.1	950	1608	1510	133	5-6	1662	1718	0
SHREVEPORT	21.3	11.7	17.5	35.0	6*	-11.1	1.2	1422	1176	1624	97	21	38	25	0
MAINE															
CARIBOU	10.3	5.4	33.3	16	-32.0	17	4789	161	1062	78	6-7	2423	227	76	32
PORTLAND	12.4	2.6	7.5	33.3	9	-25.0	18*	4044	176	1553	91	27	1662	688	19
MARYLAND															
PALM ISLAND	10.1	7.7	12.9	34.4	10	-19.4	10*	2633	632	1496	112	5-6	996	506	1819
MASSACHUSETTS															
BLUE HILL OBS R	16.2	4.9	9.6	34.4	14	-22.2	14*	3445	324	1420	110	26-27	874	173	10
BOSTON	15.3	6.9	11.2	35.0	16*	-19.4	11	2975	438	1122	69	21-21	500	107	11
W. OXFORD	13.2	4.1	8.6	32.8	14	-23.9	14*	3733	268	134	74	24-25	986	191	11

ANNUAL CLIMATOLOGICAL DATA METRIC UNITS

YEAR 1979

State and Station	Temperature				Precipitation				Wind				Relative humidity				Number of days						
	Averages		Extremes		Total		Snow†		Farthest mile (1.6 kilometers)		Max temp		Min. temp.		Precipitation		Sunrise to sunset						
	Daily minimum	Annual	Highest	Lowest	Date	°C	24 hours	Date†	Total	mm	mm	m/s	m/s	%	%	0-0.7	Cloudy,	0-0.7	Cloudy,				
MICHIGAN	-	-	-	-	Boss	18.3	C	Boss	2014	229	JAN 13-14	66	66	73	4.0	0.8	25 APR	56 96	213 141	26 35			
ALPENA	10.9	1.1	5.5	33.9	JUL 24	-38.3	JUL 17	4761	151	681	40 24-25	229	JAN 13-14	66	66	73	4.0	0.8	25 APR	56 96	213 141	26 35	
DETROIT	-	-	-	-	JAN 15	-23.9	AUG 7	3886	290	839	7 JUL	721	JAN 13-14	63	84	63	4.4	1.3	24 APR	57 95	192 203	21 10	
DETROIT METRO	13.6	1.0	6.1	33.3	AUG 15	FE 8	3900	283	641	43 30-1	1217	JAN 13-14	82	84	64	70	4.6	1.2	26 APR	57 95	192 203	21 10	
FLINT	12.9	1.1	7.9	32.2	AUG 7	-28.3	JUL 17	3855	341	829	46 24-25	1824	JAN 13-14	82	84	64	70	4.4	1.1	23 APR	57 95	192 203	21 10
GRAND RAPIDS	13.7	1.2	6.4	32.2	AUG 7	-29.4	JUL 11	4726	151	662	69 9-10	1568	JUN 5-6	86	85	86	70	4.4	1.0	23 APR	57 95	192 203	21 10
HOUGHTON LAKE	11.1	*1	5.6	31.1	JUL 13*	-36.7	AUG 17	4039	321	656	74 29-30	1201	JAN 13-14	84	66	71	4.3	1.4	24 APR	57 95	192 203	21 10	
LANSING	13.3	2.6	7.9	33.3	AUG 7	-28.9	JUL 17	4170	211	789	44 3-4	2716	JAN 13	82	84	67	71	4.7	1.0	24 APR	57 95	192 203	21 10
MUSKEGON	11.8	2.7	7.3	30.0	JUL 13	-25.0	JUL 17	4170	211	789	44 3-4	2716	JAN 13	82	84	67	71	4.7	1.0	24 APR	57 95	192 203	21 10
Sault Ste Marie	8.9	-1.4	3.8	32.2	JUL 12	-37.2	JUL 17	5318	81	1101	68	86	86	70	76	3.7	0.3	32 APR	57 95	192 203	21 10		
MINNESOTA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
DULUTH	7.9	-1.8	3.1	31.1	JUL 11	-35.6	JAN 11	5595	94	785	83 9-10	1692	JAN 22-23	74	76	61	62	4.5	0.4	31 APR	57 95	192 203	21 10
INTERNATIONAL FALLS	6.6	-6.8	0.9	31.7	JUL 21*	-42.2	JAN 16	6359	73	557	67 10-11	1577	JUN 12-13	77	81	64	64	3.8	0.5	27 APR	57 95	192 203	21 10
MINNEAPOLIS	11.4	1.2	6.3	35.6	JUL 6	-33.3	JAN 11	4679	362	769	56 20-21	1173	JUN 12-13	70	74	59	59	4.4	0.4	28 APR	57 95	192 203	21 10
ROCHESTER	10.9	*3	5.6	33.9	JUL 12	-33.9	JAN 5	4900	339	839	69 21-22	1511	JUN 12-13	80	82	66	69	5.9	1.2	25 APR	57 95	192 203	21 10
ST CLOUD	9.8	-1.9	3.9	35.0	JUL 14	-37.8	JAN 11	5353	180	792	94 9-10	1303	JAN 13	63	65	65	65	5.9	1.2	25 APR	57 95	192 203	21 10
MISSISSIPPI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
JACKSON	23.1	10.6	16.9	36.7	JUL 5	-10.6	JAN 9	1557	1082	2156	24 11-12	1582	JUN 17*	90	93	61	70	2.6	0.1	7 JUL	5.6 129	86 150	112 0
Kosciusko	23.3	10.7	17.0	37.2	JUL 5	-11.7	JAN 3	1508	1079	1856	178 2-3	1	JUL 25*	87	90	59	66	2.9	0.1	32 JUL	5.6 129	96 170	120 0
MISSOURI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
COLUMBIA REGIONAL	11.0	5.5	11.3	35.6	AUG 6*	-26.1	JUL 5	3149	647	816	65 10-11	902	JAN 11-12	76	82	59	61	4.3	0.7	21 APR	5.6 129	108 112	111 0
KANSAS CITY	16.2	5.4	10.8	34.4	JUL 7*	-24.4	JUL 5*	3335	652	806	45 7-8	586	JAN 12-13	73	79	59	59	5.0	1.0	19 APR	5.6 129	114 118	116 0
ST JOSEPH	15.9	4.1	10.0	35.0	JUL 5	-30.6	JUL 1	3571	609	793	50 28-29	569	JAN 12-13	71	73	57	53	5.0	1.0	19 APR	5.6 129	114 118	116 0
ST LOUIS	17.6	6.9	12.3	36.7	JUL 14	-23.3	JUL 9	3006	877	749	15 1C-11	648	JAN 12-13	78	84	61	62	4.6	0.8	24 APR	5.6 129	114 118	119 0
SPRINGFIELD	18.2	5.7	11.9	34.4	JUL 8	-27.2	JUL 9	2881	623	1243	102 23	653	JAN 12	80	83	59	63	4.4	1.2	18 APR	5.6 129	82 160	107 0
MONTANA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
BILLINGS	14.5	1.8	8.2	37.2	SEP 8	-27.2	JUL 14	4033	398	214	47 6-7	1703	JUN 19	50	52	55	63	4.6	1.7	26 APR	5.6 129	86 100	111 0
GLASGO	10.7	-2.0	4.4	36.7	JUL 15	-36.1	JUL 15	5306	296	206	42 6	935	JAN 24	61	57	72	80	4.6	0.7	5 APR	5.6 129	96 114	112 0
CHEAT FALLS	13.8	-1.1	6.9	37.8	JUL 5	-33.3	JAN 16	4320	220	252	29 6-7	134	JUN 27	46	52	55	50	2.6	23 APR	5.6 129	108 114	118 0	
HAVRE	12.9	-2.1	5.4	38.3	20	-41.1	JAN 14	4895	286	225	24 19	1176	JUN 27	51	46	73	73	4.6	1.1	24 APR	5.6 129	108 114	118 0
HELLENA	13.4	-1.2	6.2	36.7	JUL 5	-31.7	JAN 10	4557	179	264	45 18-19	1217	JUN 23	50	42	59	69	3.2	1.7	28 APR	5.6 129	107 114	118 0
KALISPELL	12.9	-1.1	5.9	37.2	20	-38.3	JAN 1	4614	143	333	23 5-6	1626	JUN 3	59	51	73	80	2.5	0.4	17 APR	5.6 129	96 114	118 0
MILES CITY	13.1	-2	6.4	39.4	22*	-33.3	JAN 14	4721	446	220	605	1189	JAN 14-15	64	51	66	74	4.5	0.7	32 APR	5.6 129	72 9	24 9
MISSOULA	13.4	*2	6.8	37.2	19	-33.3	JAN 1	4353	217	263	16 27-28	1189	JAN 14-15	64	51	67	76	2.6	0.7	31 JUL	5.6 129	80 192	117 17
NEBRASKA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
GRAND ISLAND	15.1	2.2	8.7	38.9	JUN 14	-26.3	FEB 1	3994	543	726	80 21-22	919	JAN 259	3	76	56	57	5.3	0.3	27 JUN	5.6 129	86 111	123 0
LINCOLN	15.6	2.8	9.2	37.8	JUN 14	-31.1	FEB 1	3856	610	740	105 29-30	686	JUL 107	1+	76	63	59	4.7	0.4	30 JUL	5.6 129	89 137	90 10

See reference notes at end of table

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YEAR 1979

State and Station	Temperature			Precipitation			Wind			Relative humidity			Snow †			Sumrise to sunset			Number of days			
	Averages		Extremes	Date		Date	Date		Date	Date		Date	Date		Date	Date		Date	Date			
	Daily maximum	Daily minimum	Average	Highest	Lowest	Date	High	Low	Total	24 hours	24 hours	24 hours	24 hours	24 hours	24 hours	24 hours	24 hours	24 hours	24 hours	24 hours	24 hours	
NORTH CAROLINA	°C	°C	°C	°C	°C	FEB 8	18.3	18.3	Base	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	
GREENSBORO	14.9	8.1	14.1	35.0	10*	2155	656	1303	144	21-2	414	236	1819	82	58	66	3+3	0.5	27	194	21	
RALEIGH	21.0	6.6	14.8	36.7	8	1934	758	1152	65	4-5	447	264	1819	88	59	72	3+1	0.4	25	130	22	
WILMINGTON	23.7	11.5	17.3	37.2	9	-8+9	10	1415	1092	1424	161	4-5	5	18	83	84	59	73	3+5	0.3	22	
NORTH DAKOTA																						
BLISMARK	10.1	-3.2	3.4	35.0	8*	-34+4	1	5555	203	310	21	20+1	1490	226	22	75	57	56	4+2	0+9	33	210
FARGO	8.8	-2.2	3.3	36.7	4	-34+4	17	5679	280	507	52	23+4	1116	163	22	74	78	63	5+2	0+3	29	237
MILLISION	10.5	-3.7	3.8	39.4	13	-34+4	16*	5470	231	286	30	27+8	986	183	12	74	80	58	5+2	0+9	30	197
OHIO																						
BARKN	13.6	3.9	8.9	32.2	12	-25+0	17	3682	313	998	160	13+4	1224	137	7	75	78	61	4+2	1+3	23	156
CINCINNATI ARGE OB	16.4	6.1	11.3	34+4	8	-20+6	5*	3024	517	1223	63	24+5	980	175	26	77	62	68	4+6	1+7	23	179
CLEVELAND	14.6	4.5	9.6	32.8	7*	-22+8	11	3526	397	1012	449	1249	892	168	12	60	82	64	3+6	0+9	23	215
COLUMBUS	15.1	5.2	10.3	32.2	7	-21+7	17	3302	449	1234	123	13+4	892	168	12	60	82	64	3+6	0+9	23	215
DAYTON	15.7	4.9	10.3	33.3	8	-23+9	17	3335	474	1100	60	13+4	986	213	7	79	62	65	4+5	1+3	23	197
FANSFIELD	13.4	3.6	8.6	30+6	7	-23+9	17*	3787	295	1171	104	13+4	988	152	7	61	64	66	4+7	1+6	23	165
TULD	4.4	1.3	6.6	33.3	7	-25+6	11	3623	314	919	60	13+4	533	66	4	83	85	64	7+1	6+1	25	201
YOUNGSTOWN	13.7	3.5	6.6	31.1	31*	-25+6	17	3736	278	1077	102	13+4	955	135	7	78	79	61	6+4	1+2	23	174
OKLAHOMA																						
OKLAHOMA CITY	20.7	8.3	14.5	36.1	14*	-19+4	9	2333	1003	1044	121	5+6	257	155	6	73	79	54	5+0	0+8	15	201
TULSA	21.1	9.2	15.2	38.3	30	-21+7	1	2286	1198	1076	122	20+1	409	81	6	73	80	57	5+5	1+2	18	161
OREGON																						
ASTORIA	15.1	6.6	11.1	31.1	13	-10+0	1	2677	15	1679	62	1-2	20	8	18*	80	73	87	4+0	0+7	21	210
BURS U	15.1	*9	8.0	36.7	17	-26+1	2	3916	204	373	26	10+1	1730	246	2324	57	71	71	5+6	1+1	228	195
EUGENE	17.4	5.1	11.3	38.9	16	-13+9	16	2623	101	1303	83	16+9	T	T	11+	73	59	81	14+3	11	21	179
WADFORD	19.7	5.3	12.5	40.6	17	-10+0	2*	2434	366	514	53	10+11	18	15	27	67	68	80	2+1	0+8	31	130
PENDLETON	16.4	4.7	10.6	40+6	JUL	-24+4	1	3142	361	305	20	18+9	538	104	11	59	51	52	6+4	1+3	19+7	197
PORTLAND	17.4	7.7	12.6	40+0	16	-10+0	JAN	2302	257	908	42	0+2	76	28	3	73	59	76	4+0	0+5	13	197
Salem	17.4	5.3	11.4	39.4	16	-12+2	JUL	2606	122	963	42	18+9	71	43	4	74	60	81	2+9	0+7	22	134
SEXTON SUMMIT R	13.8	5.1	9.4	35.3	17	-8+3	29	3308	127	928	52	24+5	1654	292	2324	66	58	66	2+1	0+2	241	302
PACIFIC AREA	29.7	22.3	26.0	32.8	JUL	17+2	FEB	2850	2104	OCT	0	0	76	89	76	82	75	83	7+5	6+8	5+0	126
GUAM TAJUAC R	30.5	23.9	26.2	31.1	12*	19+4	JAN	2920	136	APR	0	0	72	87	79	83	74	83	7+6	6+8	5+0	269
JOHNSTON	28.4	24.1	27.9	32.2	13*	20+4	JAN	3415	4066	JAN	0	0	73	87	80	82	85	87	7+5	6+8	5+0	133
KROR R	31.1	24.1	27.6	33.3	NOV	17+2	JAN	258	2104	NOV	0	0	74	87	80	83	87	87	7+5	6+8	5+0	264
MALALEIN	30.5	25.3	27.9	32.2	13*	20+0	JAN	3510	2776	OCT	0	0	75	87	83	87	87	87	7+5	6+8	5+0	244
M JURO	30.2	24.6	27+4	32.2	12*	21+1	AUG	3355	2776	SEP	0	0	76	87	82	84	86	87	7+5	6+8	5+0	260
PAGO PAGO	29.6	24.1	26+9	32.6	12*	17+8	JAN	3194	2818	DEC	0	0	87	85	86	85	87	87	7+5	6+8	5+0	232
PUNAPE R	31.3	23.6	27+4	33.9	9*	20+6	JAN	3375	4979	DEC	0	0	79	88	77	85	85	85	7+5	6+8	5+0	260

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA METRIC UNITS

YEAR 1975

State and Station	Temperature				Precipitation				Relative humidity				Wind				Number of days					
	Averages		Extremes		Snow†		Rain		Relative humidity		Fog		Speed		Dewpoint		Max temp.		Min. temp.			
	Daily Minimum	Daily Maximum	Annual	Annual	Date	Lowest	Date	Highest	Date	Lowest	Date	Highest	Date	Lowest	High	Low	High	Low	High	Low	High	
PACIFIC AREA	°C	°C	°C	°C	AUG 26	21.1	DEC 6	16.7	APR 7	77	JUL 19	9.4	OCT 9	26.1	31	333	261	0	31	0	0	
TRUMAN MOEN ISLAND	30.6	24.7	27.7	33.3	SEP 18	19.4	JUL 1	13.8	AUG 7	85	JUL 7	76	NOV 5	112	113	0	9	0	57	0	0	
WAHKEE	29.9	24.4	27.2	34.4	SEP 5	21.1	JUL 21	11.7	JUL 3-4	0	JUL 26	84	MAR 24	112	113	0	9	0	57	0	0	
YAP R	30.3	23.4	27.2	33.3	SEP 5	21.1	OCT 2	11.7	OCT 2	0	OCT 27	78	OCT 2	117	240	237	0	14	0	21	0	0
PENNSYLVANIA																						
ALLENTOWN	15.8	6.1	1C-9	33.3	AUG 10	-21.1	FEB 16*	451	SEP 21-2	904	FEB 30	19	OCT 20	26*	27	26*	26*	6-6	86	13	9	33
ERIE	12.6	3.9	8-3	31-7	AUG 10	-20.6	FEB 18	273	SEP 15	155	SEP 11-14	2316	NOV 22	19-2	22	19-2	19-2	6-6	7-2	65	81	28
HARRISBURG	16.4	6.0	11-2	31-3	AUG 10	-20.6	FEB 18	273	SEP 15	155	SEP 11-14	2316	OCT 22	20-6	20-6	20-6	20-6	10-5	12-5	127	8	21
PHILADELPHIA	17.3	7.7	12-5	34-6	JUL 13	-18.9	FEB 11	2657	OCT 6	609	JAN 6	69	APR 26	26*	26*	26*	26*	5-5	6-5	87	91	187
PITTSBURGH	14.7	4.6	9-7	31-1	AUG 8*	-24.4	FEB 11	3432	OCT 10	53	JAN 10-11	953	MAY 155	18-19	18-19	18-19	18-19	6-6	7-1	94	92	209
SCRANTON	14.3	4.7	9-5	32-3	JUL 25	-26-7	FEB 18	3493	OCT 10	58	JAN 23-24	965	MAY 155	7-8	7-8	7-8	7-8	6-6	7-0	16-6	13	27
WILLIAMSPORT	15.0	5.2	1C-1	31-7	JUL 15*	-24-4	FEB 18	3115	OCT 12	51	JAN 20-25	848	MAY 178	7-7	7-7	7-7	7-7	6-6	7-0	13-9	12	27
PHOENIX ISLAND																						
BLOCK ISLAND	13.8	7.6	10-7	30-0	AUG 2	-17-8	FEB 18*	2699	OCT 28	170	JAN 17-18	384	MAY 114	7-8	7-8	7-8	7-8	6-6	6-4	175	130	209
PROVIDENCE	15.1	5.7	10-4	33-3	JUL 13*	-21-7	FEB 14*	3167	OCT 28	170	JAN 17-18	356	MAY 114	7-8	7-8	7-8	7-8	6-6	6-4	95	95	157
SOUTH CAROLINA																						
CHARLESTON	24.0	12.3	18-2	36-7	AUG 7	-6-7	FEB 10*	1217	OCT 12	1225	JAN 14-13	46	MAY 4-5	17-18	17-18	17-18	17-18	4-4	5-4	110	98	157
CHARLESTON U	22.5	14-2	18-4	35-6	AUG 7	-6-1	FEB 19	1133	OCT 12	1205	JAN 12-9	53	MAY 4-5	17-18	17-18	17-18	17-18	4-4	5-4	116	116	1
COLUMBIA	23.2	9.7	16-5	37-2	JUL 20*	-8-9	FEB 14*	1545	OCT 14	160	JAN 16-8	67	MAY 140	17-18	17-18	17-18	17-18	4-4	5-4	117	117	157
GROSVILLE SPRINGS	20-7	9.7	15-2	35-0	SEP 9	-11-1	FEB 19	1786	OCT 17	720	JAN 16-8	87	MAY 13-13	13-14	13-14	13-14	13-14	5-5	5-7	126	85	154
SOUTH CAROLINA																						
BERKLEY	10-7	-1-2	4-8	35-6	SEP 4*	-32-2	FEB 4*	5150	OCT 27	467	JAN 11-12	1158	MAY 36	18-19	18-19	18-19	18-19	5-5	6-5	85	99	181
MURSON	12-4	-3-3	6-1	41-1	JUN 14	-31-7	JAN 5*	4335	OCT 4-5	405	JAN 11	1077	MAY 36	18-19	18-19	18-19	18-19	5-5	6-1	102	103	160
RAPID CITY	10-4	-5	7-4	30-4	JUL 13	-30-2	FEB 14*	4156	OCT 4-5	4048	JAN 11-12	53	MAY 303	11-12	11-12	11-12	11-12	5-5	6-1	108	108	149
SIOUX FALLS	11-8	-6	6-2	36-1	JUN 14	-32-2	FEB 1	4141	OCT 4-5	402	JAN 11-12	53	MAY 300	11-12	11-12	11-12	11-12	5-5	6-1	115	94	156
TENNESSEE																						
BRISTOL	16-3	6-3	12-3	31-7	AUG 9	-17-2	FEB 10	2510	OCT 400	1110	JAN 41	10-20	MAY 782	10-21	10-21	10-21	10-21	6-6	6-5	83	105	177
CHATTANOOGA	20-2	6-4	14-8	35-6	AUG 4*	-32-2	FEB 10	2602	OCT 796	17-18	JUL 14-15	467	MAY 17-18	82	82	82	82	6-6	6-5	16-5	16-5	21
KNOXVILLE	10-8	9-3	14-6	35-6	JUL 6	-15-6	FEB 10	2048	OCT 753	13-6	JUL 6-10	587	MAY 18-18	81	81	81	81	6-6	6-5	104	104	139
MEMPHIS	21-0	11-3	16-2	36-1	JUL 4	-12-8	FEB 9	1873	OCT 1160	1801	JUL 9-12	264	MAY 71	76	58	4-1	16	20-6	11	5-8	123	119
NASHVILLE	10-6	8-5	14-1	35-5	JUL 20	-19-4	FEB 10	2666	OCT 765	1781	JUL 17-14	699	MAY 21	6-7	83	66	3-5	13-3	35	6-3	100	87
OAK RIDGE	19-4	7-2	13-3	33-9	AUG 9*	-15-6	FEB 10	2341	OCT 580	1709	JUL 20-21	556	MAY 185	6-7	185	6-7	22	14-3	35	13	22	16
TEXAS																						
ABILENE	24-2	11-0	17-6	39-4	OCT 1	-13-9	JAN 2	1603	OCT 1396	517	MAR 40	20-10	MAR 170	114	FEB 62	71	43	5-5	17	20-1	151	
AMARILLO	20-1	5-4	12-7	37-2	OCT 1	-22-2	JAN 2	2311	OCT 649	520	MAR 9-1	302	MAY 48	9-10	FEB 66	76	46	6-0	1-7	21	25-9	
AUSTIN	24-6	13-4	19-0	36-1	OCT 1	-10-6	JAN 2	1511	OCT 1462	935	MAY 144	2-5	MAY 22	76	FEB 83	83	56	3-9	0-5	11	17-9	
FRONSVILLE	27-3	17-6	22-5	37-2	JUL 23	-3-3	JAN 3+	473	OCT 2050	717	MAY 105	17-18	OCT 105	17-18	FEB 0	0	86	89	61	4-5	17-13	

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA METRIC UNITS

YEAR 1979

State and Station	Temperature				Precipitation				Relative Humidity				Wind				Number of days														
	Averages		Extremes		Total		Snow†		Relative Humidity		Resultant speed		Fastest mile (16 kilometers)		Max. temp.		Min. temp.														
	Annual Degree Days	Maximum Degree Days	High Heat	Low Heat	Total Degree Days	Cooling Degree Days	Total Degree Days	24 Hours Degree Days	Total Degree Days	24 Hours Degree Days	Total Degree Days	24 Hours Degree Days	Total Degree Days	24 Hours Degree Days	Oct 1 Temp	Sept Temp	Oct 1 Temp	Sept Temp													
TEXAS	27.2	16.4	21.8	37.8	2.4	JUL	°C	°C	JAN	2	18.1	19.8	23	84	19	5.7	11.4	14.0	8	0											
CORPUS CHRISTI	23.8	11.6	17.7	39.4	3.0	JUN	-5.6	2	617	1956	922	33	29	20	23.7	2.8	1.0	32	104	0											
DALLAS FT WORTH	26.9	13.9	20.4	41.1	3.0	OCT	-10.6	2	1553	1394	823	51	3	55	4.3	9.0	14.2	85	1	7											
DEL RIO	25.4	6.3	16.9	44.4	1.0	JUL	-7.8	2	958	1783	356	59	4.0	64	70	54	4.2	2.3	12	16	109	7									
EL PASO	22.5	17.1	19.8	33.3	6.0	JAN	-10.0	1	1662	1198	148	19	1.7	30	5	27	45	59	3.6	0.4	25	126	67	0							
GALVESTON	25.2	13.1	19.2	36.1	3.0	JUN	-8.3	2	1053	1472	1498	180	19.2	20	94	62	70	3.6	0.8	9	111	0	26								
HOUSTON INTERCON	22.6	8.4	15.5	39.4	1.1	JUL	-18.9	2	1996	1043	529	79	21.2	184	178	16	59	46	39	4.6	1.0	19	16.5	31	0						
LUBBOCK	24.2	9.4	16.8	38.9	1.1	JUL	-17.8	2	1650	1172	408	55	31.1	104	53	13	61	73	43	3.7	5.3	1.3	25.9	0.5	82						
MIDLAND	24.4	14.3	19.4	33.9	6.0	JAN	-5.0	2	663	1461	15C7	330	25.2	0	NOV	77	82	70	21.9	TEN	JAN	20	114	0	0						
PORT ARTHUR	24.5	10.5	17.5	37.8	1.1	JUL	-14.4	2	1539	1310	410	32	4.5	FEB	29	90	94	11.1	152	111	0	5	0	0							
SAN ANGELO	25.6	14.6	20.1	36.7	3.0	OCT	-9.4	2	920	1666	931	98	1	JUN	17*	63	76	4.8	15.8	88	11.9	62	0	27							
SAN ANTONIO	25.3	14.7	20.0	34.4	3.0	AUG	-8.3	2	987	1372	1252	150	18.9	JAN	22*	75	82	5.3	4.5	1.1	9	21.5	0.9	24							
VICTORIA	23.4	11.8	17.6	38.3	3.0	JAN	-11.7	2	1441	1287	1076	103	10.1	JUL	22	87	90	4.4	1.3	10	20.4	0.9	97	0							
WACO	23.6	9.6	16.6	42.2	3.0	JUL	-14.4	31	1895	1342	772	128	4.5	JAN	102	10	73	82	51	5.7	1.2	16	20.6	3.0	27						
WICHITA FALLS	18.2	0	9.1	36.3	8.0	JAN	-34.1	30	3664	327	192	20	27.8	MAR	130	5-6	68	4.0	1.0	17	1.9	105	0.5	22							
UTAH	19.3	4.6	11.4	40.0	4.0	JUL	-22.2	31	3151	708	221	27	19.2	OCT	185	21-22	46	4.3	6.3	68	4.0	1.0	17	1.9	105	0.5					
HILFOORD	18.6	7.2	12.9	34.4	10.0	AUG	-16.7	11	2468	546	1328	94	21-22	FEB	81	56	3.1	0.7	28	15.6	W	5.6	112	160	134						
SALT LAKE CITY	17.4	9.7	13.6	34.4	10.0	JUL	-10.2	10	1952	796	1650	111	5-6	SEP	170	77	58	4.4	0.3	30	20.6	35	8	111	38	57					
VERMONT	12.2	2.7	7.4	33.9	2.5	JUL	-34.4	12	4179	295	802	42	6-7	SEP	1585	264	78	6.0	4.1	21	17.9	5	15*	7.2	5.8	94					
BURLINGTON	18.6	7.2	12.9	34.4	10.0	AUG	-16.7	11	2468	546	1328	94	21-22	FEB	81	56	3.1	0.7	28	15.6	W	5.6	112	160	134						
VIRGINIA	20.2	8.3	14.3	36.1	10.0	JUL	-22.2	10	2163	764	1451	83	21-22	SEP	513	277	11-19	88	74	3.3	0.4	26	19.2	N	8	102	90	173			
ROANOKE	18.3	6.9	12.7	35.9	10.0	JUL	-15.6	3	2505	501	1306	97	21	JUL	579	249	11-19	79	83	5.7	1.0	30	14.3	31	6-4	84	102	179			
WALLOPS ISLAND	17.4	9.7	13.6	34.4	10.0	JUL	-14.4	18	2320	659	1490	100	21-22	SEP	429	147	16-19	67	67	3.7	1.0	30	14.3	28.2	7	119	4	36	28		
WASHINGTON	16.3	3.9	10.1	36.7	16	JUL	-22.2	1	2992	52	1189	76	14-15	DEC	41	20	2-3	77	62	90	2.8	1.2	21	13.0	19	7	223	50	92		
OLYMPIA	14.6	5.1	9.8	35.0	16	JUL	-10.2	1	3023	8	2515	144	16-17	DEC	13	13	2-5	80	72	89	2.5	0.5	18	13.4	SE	17	45	91	229	0	
QUILLAYUTE	15.7	7.8	11.8	32.2	16	JUL	-6.3	1	2426	77	886	54	16-17	DEC	1	15*	0	0	0	0	21.5	55*	13	143	0	1	1	66	0		
SEATTLE	16.0	7.3	11.7	36.7	16	JUL	-6.7	1	2421	95	811	66	14-15	DEC	53	30	15	68	57	70	7.7	1.0	17.0	SW	13	7.1	63	205	1		
SEATTLE-TACOMA	14.1	2.4	8.1	38.9	20	JUL	-30.0	1	3879	276	364	23	18-19	DEC	1138	155	9-10	61	50	75	3.8	1.5	19	23.1	5W	6	101	79	185	16	
SPOKANE	7.9	8	4.3	29.4	17	JUL	-22.8	1	5052	18	1783	115	14-15	DEC	1415	107	10-11	67	67	76	8.6	1.0	14	18.4	SE	2.3	6-2	109	74	162	107
STAMPEDE PASS R	17.6	6.8	12.2	41.7	20	JUL	-23.3	1	2754	573	400	32	18-19	DEC	1415	107	10-11	638	142	11-12	3.7	1.0	14	18.4	SE	2.3	6-2	109	74	162	107
WALLA WALLA U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

See reference notes at end of table.

**ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS**

YEAR 1979

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites
precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis.

And also on an earlier date or dates

Number of days missing 31 1% on about 60 Alaskans

Number of

Peak χ_{MSST}

FEAR GHOST.

"Fastest Mile" is the highest observed 1-minute wind speed value entered in column "Fastest Mile".

— 22 —

Sun below horizon November 24 - January 17, inclusive.

Data in this table are obtained by conversion from data in the English units table.

NORMALS, MEANS AND EXTREMES

YEAR 1979

State and Station	Temperature (°C)		Precipitation (Millimeters)				Relative Humidity (Percent)				Wind Speed (m.p.s.)				Annual Mean Number of Days					
	Normal (1941-1970)		Extremes (1941-1970)		Normal Total		Snow @ Extreme		January		Mean Speed		Max		Min					
	January	July	Extremes	Extremes	Seasonal	Annual	Month	Month	January	July	Month	Month	Cloudy	Sunshine (Percent)	Cloudy	Sunshine (Percent)				
ALABAMA																				
BIRMINGHAM U	20.7	12.7	2.8	32.8	21.8	9.6	44.9	32.8	139.3	162	6.5	369	37	19.0	1	21.3	2.529.1			
SUMMITMONT H	18.9	12.0	1.2	32.3	20.4	16.9	36.7	17.8	36.3	15.80	157	6.5	1252	179	17.9	1	21.3	2.529.1		
HUNTSVILLE	19.0	10.3	0.4	32.4	20.4	16.0	36.4	18.8	41.5	18.34	147	6.5	1252	179	17.9	1	21.3	2.529.1		
MOBILE	6.4	16.2	5.2	32.5	22.6	19.7	38	40.0	13.9	251	935	225	6.5	1701	490	1	21.3	2.529.1		
MONROVIEY	5.9	14.4	2.6	32.5	18.2	18.2	35	40.6	15.0	309	1260	153	5.7	1266	542	1	21.3	2.529.1		
ANCHORAGE	35	-6.7	-15.8	18.7	10.1	1.7	96	37.8	62.2	916	60	14	374	0	359	1	26.7	3.227.3		
ANNEVILLE	34	3.3	-1.7	17.8	10.9	7.6	32	32.2	17.2	543	3918	453	12.0	2003	886	14	19.3	3.626.8		
BARRON X	9	-22.2	-2.6	25.6	12.6	5.9	137.1	1260	26	9	124	71	25	56	716	516	5.2	5.255.9		
BARRIER ISLAND A	12.2	-22.5	-2.9	7.5	1.9	-12.2	30	25.6	148.9	3700	1107	33	6	179	125	1	57	1.0	11.5	
BETHLEHEM	18.6	10.9	19.0	20.5	19.5	20.1	8.6	-1.8	9.2	30.3	143.3	101	16	360	150	0	51	1.32	1.92	
BETTLES	19.8	12.0	7.3	36.7	29	33.3	56.7	1.3	137	8846	16	304	49	1.5	157	157	1	5.027.7		
R16 DELTA	38.6	-6.4	-2.6	10.0	-2.5	8.6	5.9	35.3	52.8	1204	709	6.3	291	157	1	54	1.029	1.92		
COLD BAY	2.9	0.3	-4.6	12.4	7.6	-3.5	35.6	52.2	6.3	634	109	10.9	844	253	124	1436	1.4	2.34.3		
FAIRBANKS	13.3	19.0	-2.8	22.1	9.8	-3.5	28	35.6	52.2	1324	7969	56	8	285	157	1	87	1.73	1.92	
GULIKANA	47.9	16.7	2.6	29.9	20.1	7.6	36	32.8	53.9	7473	47	282	110	0	52	1209	1.2	1.92		
HOKIAR	19	-11.2	9.0	15.6	6.9	2.5	36	32.6	7.7	86	218	0	77	1562	622	77	1.2	1.92		
JUNEAU	4	-1.6	-7.9	17.6	6.7	4.6	36	32.2	30.3	715	5003	199	74	1889	387	1	118	1.2	1.92	
KING SALMON	1.5	-1.4	-1.1	14.6	6.9	0.4	37	31.1	4.3	889	6434	88	23	502	185	0	51	1.16	1.92	
KODIAK	4	1.4	-3.2	1.5	9.5	4.8	31.0	30.0	24.4	596	922	160	0	401	51	1	136	1.2	1.92	
KOZEBIE	3	16.0	-2.1	17.4	8.4	-6.2	37	29.4	46.7	1183	8910	57	57	223	132	0	45	1.171	1.92	
MC GRAH	10.5	17.5	2.9	19.8	7.3	-3.8	37	32.1	55.2	1053	9048	83	17	425	159	1	65	1.209	1.92	
NOME	4	10.3	18.7	13.2	6.9	-3.6	33	30.0	43.3	1016	11.6	91	18	418	199	1	76	2.4	1.92	
S. PAUL ISLAND	7	-1.1	-5.6	9.7	6.3	1.4	36	32.1	32.2	670	6177	237	62	797	797	0	71	1.32	1.92	
SHIMYA	3.7	1.3	-1.7	9.7	6.3	3.5	27	17.2	13.9	556	5048	84	38	716	221	4	134	2.50	1.92	
SUMMIT	73.1	13.4	20.0	15.7	6.6	-3.6	35	31.1	42.8	109	7981	84	17	510	171	1	71	1.305.2	1.92	
TALKEETNA	10.5	-7.2	-18.0	19.7	9.0	-0.4	40	32.8	44.6	958	6504	124	28	727	303	1	79	1.450	1.92	
UNALASKA T	9.5	-12.1	-19.7	15.5	8.6	-0.3	1	28	30.0	44.6	1061	7792	99	10	360	205	1	79	1.356	1.92
VALDEZ	11	-3.9	11.9	16.2	7.5	1.2	8	29.4	28.9	813	5858	197	69	1506	523	1	70	1.57	1.92	
YAKUTAT	9	-0.9	-8.3	15.2	8.6	3.8	33	30.0	31.1	703	5296	496	1464	3364	1115	13	198	1.094	1.92	
A. FLAGSTAFF	213.5	5.2	-9.8	27.1	10.2	7.4	85	52.8	40.0	639	4067	67	14	990	250	0	290	1.94	1.92	
PHOENIX	33.6	18.2	3.1	30.4	25.3	21.3	47.8	-8.3	238	862	31	3	179	141	0	78	1.171	1.92		
TUCSON	7.8	17.5	3.4	36.8	23.9	19.9	39	43.9	-8.9	973	660	428	201	100	8	36	1.172	1.92		
WILLOW	14.9	7.6	-6.9	34.2	1.2	12.9	48	42.7	46.6	558	627	186	142	0	56	1.173	1.92			
YUKON	5.9	19.7	6.3	41.1	27.4	23.9	48.3	-24.9	171	558	11	0	68	75	0	69	1.174	1.92		
ARKANSAS	13.6	9.9	-2.7	34.3	21.4	16.3	89	48.9	33.9	1853	139	60	1074	356	0	311	1.175	1.92		
FORT SMITH	78	10.0	0.3	33.1	21.7	16.6	2	39.4	15.0	408	1715	137	72	1208	243	23	175	1.176	1.92	
LITTLE ROCK	165	10.0	0.3	33.1	21.7	16.6	2	39.4	15.0	408	1715	137	72	1208	243	23	175	1.176	1.92	
CALIFORNIA	14.5	14.2	3.0	37.3	20.4	18.0	43.2	95	56.7	42.8	702	1214	26	1	145	119	0	663	1.177	1.92
BAKERSFIELD	12.5	12.0	-6.4	36.4	13.2	32.2	42.8	-6.7	302	1214	26	1	145	119	0	77	1.178	1.92		
BLUES CANYON M	16.0	6.1	-1.2	25.5	15.6	11.2	11.2	6.9	305	2599	188	10.0	621	148	5	76	1.179	1.92		
EUREKA U	13	11.9	5.1	15.3	12.5	10.1	35.6	1.6	1.1	146	1146	1146	0	237	1216	1	148	1.180	1.92	
FRESNO	10.2	12.7	2.1	16.8	17.2	16.4	17.4	3.2	33.9	1472	47	0	260	217	0	66	1.181	1.92		
LONG BEACH	18.8	17.4	6.2	28.3	18.6	16.4	17.7	4.2	30.3	2396	30	2	145	119	0	77	1.182	1.92		
LOS ANGELES	30.7	17.5	7.4	28.1	16.5	16.5	16.5	4.7	30.3	2982	56	3	170	660	16	3.0	1.183	1.92		
LOS ANGELES U	82	19.2	8.2	31.8	17.5	18.2	18.2	3.9	30.3	2982	56	3	170	660	16	3.0	1.184	1.92		
MT SHASTA R	10.2	12.5	5.4	29.4	10.3	9.8	39.4	20.6	501	1272	165	8	952	538	0	177	1.185	1.92		
OAKLAND	10.4	12.0	2.6	36.7	19.2	17.1	35	48.3	-6.7	341	1493	119	1	142	287	0	138	1.186	1.92	
REO RUFF	10.4	11.7	2.8	33.8	14.8	15.7	15.7	3.9	34.1	1579	95	1	142	321	0	102	1.187	1.92		
SACRAMENTO	5	11.7	1.1	30.4	16.7	15.7	15.7	3.9	31.5	1579	95	1	142	321	0	102	1.188	1.92		
SANDOBERG R	13.7	8.0	1.1	29.5	17.2	12.8	12.8	3.9	30.8	2459	62	1	142	304	0	174	1.189	1.92		
1979	13.77	8.0	1.1	29.5	17.2	12.8	12.8	3.9	30.8	2459	62	1	142	304	0	174	1.190	1.92		

NORMALS, MEANS AND EXTREMES

YEAR 1929

State and Station	Temperature (°C)		Precipitation (Millimeters)				Relative Humidity (Percent)				Wind Speed (m.p.s.)				Annual Mean Number of Days					
	Normal (1941-1970)		Extremes		Normal (1941-1970)		Extremes		Snow @		January		July		Mean Speed		Temperature			
	January	July	Daily Maximum	Daily Minimum	Seasonal	Annual	Month	Year	Mean Total	Ex-treme	January	July	January	July	Max	Min				
CALIFORNIA	4 18.1	7.7	24.0	17.7	17.2	39	43.9	-1.7	174	837	48	1	240	193	0	78	1	1		
SAN DIEGO	2 12.9	5.1	21.6	12.2	13.8	52	41.1	-6.7	268	1690	111	1	496	312	0	116	1	1		
SAN FRANCISCO U	1 6.1	3.3	7.6	17.7	11.8	43	38.3	-1.1	243	1711	115	1	525	291	0	93	1	1		
SAN FRANCISCO U	1 7.7	1.7	17.1	5.5	22.0	11.3	33.8	-0.7	251	1696	61	1	311	204	0	80	1	1		
SANTA MARIA	7 11.6	2.4	34.8	1.8	15.9	20	37.40	-6.7	251	1559	74	1	360	204	0	76	0	1		
STOCKTON	7 11.6	2.4	34.8	1.8	15.9	20	45.6	-7.2	251	1559	74	1	360	204	0	76	0	1		
COLORADO	2297	1.7	18.2	27.8	8.8	5.3	34	45.5	-6	823	4782	30	6	176	89	0	281	0	1	
ALAMOSA	1873	6.0	20.0	-8.6	29.1	1.1	30.8	14.9	1.1	31	31.8	1.2	627	3596	79	7	400	1	1	
COLORADO SPRINGS	1611	6.4	20.6	-8.6	30.8	14.8	10.1	45.0	0	34.4	604	33	33.4	26	67	11	95	1	1	
DENVER	1710	6.4	20.6	-8.6	33.9	17.7	11.5	33.0	40.6	30.6	661	3114	27	12	214	88	0	40	1	1
GRAND JUNCTION	1476	2.6	8.6	32.8	16.4	11.6	32.8	16.4	11.6	39	40.6	35.0	601	2996	50	7	303	157	1	
PUEBLO	1428	7.5	-9.6	32.8	16.4	11.6	39	40.6	35.0	601	2996	50	7	96	137	1	308	0	1	
CONNECTICUT	2 2.7	-4.8	27.5	18.9	11.1	31	49.4	20.6	599	3034	97	65	981	450	2	175	198	693	1	
BROOKFIELD HARTFORD	52	0.8	-8.8	28.9	16.2	9.5	25	38.9	32.2	692	3527	110	77	1102	555	9	308	323	1344	1
DELAWARE	23	4.6	-4.6	29.7	18.9	12.2	32	38.9	21.1	568	2744	109	66	1022	307	4	216	158	157	1
WILLINGTON																				
DIST. OF COLUMBIA																				
WASHINGTON DULLES	88	5.1	-5.0	30.2	17.8	12.1	17	39.4	25.6	567	2783	108	66	1019	462	1	302	157	587	1
WASHINGTON NATIONAL	3 6.4	-2.4	31.4	20.6	14.1	38	39.4	27.2	516	2339	119	62	988	363	1	183	122	429	1	
FLORIDA	6 16.2	7.9	30.6	24.0	20.3	50	36.9	10.6	204	756	229	68	1453	573	0	983	1	1		
APPALACHICOLA U	9 20.6	8.7	32.0	22.4	21.4	36	40.8	-6.1	134	498	180	50	1276	236	1	297	1	1		
DAYTONA BEACH	5 23.7	11.3	32.8	23.0	23.2	40	38.3	-3.3	71	254	226	33	33.70	511	0	276	0	1		
FORT MYERS	8 16.1	6.9	32.8	22.0	22.2	38	40.6	-11.1	193	737	200	193	31	1384	492	0	258	0	1	
JACKSONVILLE	1 24.2	1.2	18.8	31.8	26.2	7.5	27	35.0	7.8	9	186	310	16	548	0	226	0	1		
KEY WEST INL AP	65 21.4	10.6	32.4	22.3	22.3	37	38.3	-6.7	104	377	205	41	1256	398	0	257	1	1		
LAKELAND U	24 24.2	14.8	31.7	24.2	23.7	37	37.7	-0.6	29	42	1519	620	41	1519	412	0	412	0	1	
MIAMI INL AP	29 21.4	10.4	32.0	22.7	22.1	37	33.9	-6.7	109	407	211	40	1301	497	1	246	1	1		
ORLANDO	34 16.2	6.1	32.1	23.0	20.0	16	31.8	12.2	237	876	207	80	1631	517	0	282	5	1		
PENSACOLA 1/	17 19.9	5.3	32.6	22.0	19.8	19	37.8	12.2	227	866	227	71	1564	511	1	241	179	1336	1	
TALLAHASSEE	6 21.4	10.1	32.3	32.3	22.3	33	36.7	-7.8	113	399	214	45	1254	523	1	308	1	1		
WEST PALM BEACH	5 23.9	13.3	32.0	23.4	23.6	4.3	35.3	-2.8	46	166	250	56	1576	631	1	387	1	1		
GEORGIA	24 11.8	0.8	31.1	9	20.4	16.4	36	45.0	18.2	372	1653	69	1285	380	0	457	1	1		
ATLANTA	30 8 10.8	0.8	30.3	20.8	16.0	31	39.4	19.4	389	1719	148	64	1226	399	1	144	144	111	1	
AUGUSTA	136 14.3	2.1	1.2	32.7	21.1	17.4	29	41.1	15.0	334	1080	155	50	1083	290	0	152	5	1	
COLUMBUS	108 14.8	2.7	33.4	21.5	18.4	31	41.1	16.1	310	2424	131	51	1294	336	0	173	1	1		
MACON	194 11.2	-1.1	32.4	19.5	15.7	31	41.1	20.6	412	1856	157	74	1336	441	1	191	18	1		
ROME	14 16.2	3.7	32.7	21.8	18.8	29	40.0	12.8	268	1084	200	49	1299	511	1	179	1	1		
SAVANNAH																				
HAWAII	8 26.4	17.1	26.3	19.7	23.0	33.4	34.4	11.7	0	400	168	393	1291	9	566	0	0	0	0	
HONOLULU	2 26.3	18.5	30.4	23.0	24.8	10	33.9	11.7	0	112	8	582	1	434	0	0	0	0		
KAHULUI	15 26.4	17.7	31.0	22.2	21.1	24.0	15	35.6	8.9	0	91	5	468	3715	5	0	0	0		
LIHUE	31 25.5	18.0	28.9	22.6	23.9	29	32.2	10.0	0	161	40	1122	582	8	293	0	0	0		
101 OH	865	2.5	-5.9	32.5	14.7	10.5	40	47.8	51.1	87	3240	37	4	292	102	0	182	544	1	
801SE	431	3.3	-4.2	31.8	14.2	10.5	33	46.1	10.6	582	3035	46	13	336	122	1	143	32	1	
LEWISION	1358	0.2-10.0	31.6	12.3	8.2	30	40.0	-3.4	720	3933	33	9	274	101	0	46	25	1013	1	
POCAITELLO																				

NORMALS, MEANS AND EXTREMES

YEAR 1979

State and Station	Temperature (°C)		Precipitation (Millimeters)				Relative Humidity (Percent)				Wind Speed (m.p.s.)				Annual Mean Number of Days											
	Normal (1941-1970)		Extremes (1941-1970)		Normal (1941-1970)		Extremes (1941-1970)		Mean Total		Ex-treme		January		July		Mean Speed		Max		Min					
	January	July	Daily Maximum	Daily Minimum	Seasonal	Monthly	Wettest Month	Driest Month	Monthly	24 Hours	Seasonal	January	July	January	July	July	July	Max	Min	Max	Min					
ILLINOIS	9.6	18.5	22.0	15.2	9.0	47.2	37.2	4.0	50.0	49.4	212.9	132	6.8	119.7	360	0	42.0	9.4	26.2	2.9	26.5	7	47.6			
CAIRO U	-0.5	-1.8	32.0	28.4	21	37.2	28.9	4.0	50.0	47.3	72.5	36.0	10.5	33	80.6	1	117	2.2	1.1	3.0	2.5	1.1	16.3			
CHIAGO O HAGE	-0.6	-0.6	28.4	15.9	9.4	31.0	10.3	4.0	50.0	47.3	70.1	36.0	10.5	33	80.6	1	117	2.2	1.1	3.0	2.5	1.1	14.1			
CHICAGO MID DAY	-0.3	-0.3	29.1	18.3	9.3	31.7	10.7	4.0	50.0	47.3	70.1	36.0	10.5	33	80.6	1	117	2.2	1.1	3.0	2.5	1.1	14.1			
MOLINE	17.7	-1.1	21.1	16.0	9.9	46.6	17.7	4.1	5.1	32.8	74.9	35.5	11.6	33	70.9	1	16.0	2.6	1.1	3.0	2.5	1.1	12.0			
FLORIDA	19.9	-0.1	21.1	-1.1	9.1	40.9	11.0	4.0	50.0	47.3	70.1	33.8	11.1	38	89.1	1	12.9	1.6	0.8	1.0	1.0	0.8	19.2			
ROCHESTER	22.1	-1.7	11.4	29.0	16.3	39.4	31.1	4.0	50.0	47.3	70.1	32.9	11.2	33	93.3	1	14.1	2.6	1.1	3.0	2.5	1.1	14.1			
SPRINGFIELD	1.6	-7.4	30.3	11.5	32	44.4	30.0	4.0	50.0	47.3	70.1	30.8	11.2	33	106.4	1	13.0	1.5	0.8	1.0	1.0	0.8	24.3			
INDIANA	11.6	5.3	31.6	19.3	13.3	39.0	6.3	5.0	55.8	56.0	11.9	64	10.6	34.3	0	30.9	0	3.2	1.1	0.8	1.0	0.8	5			
FORT WAYNE	24.1	0.3	47.2	16.9	9.9	33	39.4	26.3	34.0	50.0	47.3	70.1	30.9	10.6	60	98.4	1	12.0	1.5	0.8	1.0	1.0	0.8	13.3		
INDIANAPOLIS	24.1	2.2	47.2	16.9	9.9	30.8	31.7	4.0	50.0	47.3	70.1	30.9	10.6	60	98.4	1	12.0	1.5	0.8	1.0	1.0	0.8	13.3			
SOUTH BEND	23.6	-0.3	-8.6	28.2	16.5	9.5	38.0	30.0	30.6	50.0	47.3	70.1	35.9	10.2	49.1	24.8	1	11.9	1.1	0.8	1.0	1.0	0.8	12.4		
IOWA	19.7	-0.2	-0.9	30.1	18.1	10.4	47.2	8.8	4.0	50.0	47.3	70.1	34.0	11.9	55.8	0	30.9	0	3.2	1.1	0.8	1.0	0.8	5		
BURLINGTON	21.1	-0.2	-0.9	30.1	18.1	10.4	47.2	8.8	4.0	50.0	47.3	70.1	34.0	11.9	55.8	0	30.9	0	3.2	1.1	0.8	1.0	0.8	5		
DES MOINES	28.6	-2.6	-11.5	29.4	18.5	9.4	37.2	11.1	4.0	50.0	47.3	70.1	34.0	11.9	55.8	0	30.9	0	3.2	1.1	0.8	1.0	0.8	5		
DUBUQUE	32.2	-3.3	-11.6	27.8	16.3	8.1	39.7	23.2	3.3	40.0	47.3	70.1	34.0	11.9	55.8	0	30.9	0	3.2	1.1	0.8	1.0	0.8	5		
SIOUX CITY	33.4	-2.1	-13.5	30.4	17.7	9.1	39.7	41.7	3.2	32.2	47.3	70.1	34.0	11.7	55.8	0	30.9	0	3.2	1.1	0.8	1.0	0.8	5		
WATERLOO	26.5	-3.5	-13.9	28.7	16.4	8.0	31.9	36.6	7	31.9	47.3	70.1	34.0	11.9	55.8	0	30.9	0	3.2	1.1	0.8	1.0	0.8	5		
KANSAS	44.8	2.7	-7.2	32.0	18.9	11.1	40.9	6.2	6.6	31.2	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5		
CORONADO	78.7	5.9	-7.2	33.0	19.4	12.7	42.2	2.7	7.2	78.4	37.2	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5		
DODGE CITY	11.14	5.6	-1.2	32.5	16.1	10.3	43.9	9.2	4.0	30.4	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5		
GODDARD	11.14	5.6	-1.2	32.5	16.1	10.3	43.9	9.2	4.0	30.4	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5		
TOPKA	26.7	3.5	-7.9	31.5	19.6	12.4	33.2	17.7	3.2	32.2	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5		
WICHITA	40.3	5.2	-6.0	20.9	13.7	27	45.0	24.6	4.0	26.0	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5		
KENTUCKY	26.5	4.3	-5.3	30.3	18.1	12.2	42.2	2.7	6.6	31.2	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5		
COVINGTON	28.1	4.3	-5.3	30.3	18.1	12.2	42.2	2.7	6.6	31.2	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5		
LEXINGTON	29.4	5.2	-4.2	30.7	19.1	13.1	32.0	1.1	4.0	27.8	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5		
LOUISVILLE	14.5	5.6	-4.2	30.7	19.1	13.1	32.0	1.1	4.0	27.8	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5		
ALEXANDRIA	10.77	2.8	14.8	2.6	33.0	18.3	18.7	47.2	8.7	45.6	36.7	80.5	11.3	5.0	30.4	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5
BATON ROUGE	20.0	16.4	6.1	32.4	19.8	23.1	20.2	15.7	16.6	31.2	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5		
NEW ORLEANS INT'L AP	11.6	8.8	6.4	32.4	19.8	20.2	20.2	15.7	16.6	31.2	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5		
SHREVEPORT	77	13.7	3.2	34.2	22.7	18.8	27	41.7	16.1	30.7	12.0	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5	
MAINE	19.0	-6.8	16.9	24.2	12.3	3.8	40.6	44.4	9.0	35.6	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5		
CARIBOU	13	-0.4	-11.3	26.2	13.8	7.2	39	39.4	39.4	7.0	41.6	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5	
PORTLAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MARYLAND	4.5	5.5	-3.9	30.4	19.2	12.8	39.8	21.7	84	42.8	40.0	70.7	54.4	26.27	107	102	4.5	3.7	3.0	2.8	2.6	2.4	2.2	2.0		
HALTIMORE INT'L AP	4.5	5.5	-3.9	30.4	19.2	12.8	39.8	21.7	84	42.8	40.0	70.7	54.4	26.27	107	102	4.5	3.7	3.0	2.8	2.6	2.4	2.2	2.0		
MASSACHUSETTS	BLUE HILL OBS R	19.2	0.9	-7.1	28.4	17.4	9.3	45.0	36.2	9.3	45.0	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5	
ROSTON	5	2.2	-2.3	27.4	18.4	10.7	45.0	36.2	9.3	45.0	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5		
WORCESTER	30.1	-0.6	-8.8	26.3	16.0	8.4	24	35.6	28.3	7.1	38.0	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5	
MICHIGAN	ALPENA	21.0	-2.8	12.9	26.1	11.1	5.6	44.4	46.1	9.3	43.7	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5	
DETROIT CITY AP	18.9	-0.2	-7.1	28.4	17.4	9.3	45.0	36.2	9.3	45.0	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5		
DETROIT METRO AP	19.3	-0.1	-8.2	28.6	16.2	9.5	45.0	36.2	9.3	45.0	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5		
FLINT	23.5	-1.2	-7.1	27.3	14.6	8.2	23	37.2	31.1	7.3	39.1	47.3	70.1	34.0	12.7	52.8	0	32.0	0	3.2	1.1	0.8	1.0	0.8	5	

NORMALS, MEANS AND EXTREMES

YEAR 1979

State and Station	Temperature (°C)		Normal (1941-1970)		Extremes		Normal Heating Degree Days (1941-1970)		Record Highs (Yrs.)		Record Lows (Yrs.)		Annual Daily Maximum Daily Minimum		Annual Daily Maximum Daily Minimum		Annual Daily Maximum Daily Minimum		Annual Heating Degree Days (1941-1970)		Normal (1941-1970)		Extremes		Snow @ Mean Total		Relative Humidity (Percent)		Wind Speed (m.p.s.)		Annual Mean Number of Days	
MICHIGAN	-0.9	-8.9	28.5	15.8	8.8	16	37.8	29.4	72.0	37.78	8.7	38	82.3	20.9	1	83	594	1956	409817277625456	5.2	3.8	29	53265	67	95203145	25	36	27	11148	10		
GRAND RAPIDS	35.0	-3.4	-12.8	26.0	12.0	5.9	15	35.6	36.7	82.0	46.37	8.5	30	72.1	24.9	1	69	511	2106	391937478685558	4.5	3.4	17	9	69	991927144	14	27	37	2174	25	
LAWRENCE LAKE	25.6	-1.2	-6.3	28.1	15.1	8.6	21	31.0	31.1	73.0	33.5	8.8	4	77.2	24.9	1	110	307	1342	516837578956595	5.5	3	28	23570	75	105185140	16	34	23	1150	14	
MARQUETTE U	20.6	-4.1	-11.1	24.1	14.5	9.9	42	37.9	39.4	60.3	43.9	8.2	78.3	25.1	5	118	316	2404	5508177882736595	5.7	3	22	43587	61	10187144	32	19	21	5160	11		
MUSKEGO	19.1	-1.1	-7.9	26.9	15.1	8.5	45	37.2	26.1	70.6	32.7	6.5	80.1	25.1	3	94	319	2404	5508177882736595	5.7	3	29	206	60	88197144	32	19	21	5160	5		
SAULT STE MARIE	22.0	-5.6	-14.2	23.9	11.4	4.4	39	36.7	37.2	87.5	5107	98	38	805	241	4	150	693	2843	36352780956257	4.5	3	27	63563	68	88209165	37	30	46	1179	30	
MINNESOTA	43.5	-8.0	-18.1	24.7	12.6	3.7	38	36.1	39.4	97.3	5419	113	22	767	262	0	275	477	1956	64574668825858	5.0	3	33	54966	77	10187135	22	34	54	2185	52	
OUTLAIR	35.9	10.0	-22.8	25.7	11.9	2.5	40	36.7	43.3	108.1	5859	101	18	652	286	3	124	295	1534	455726768815757	4.0	3	52	23.2	70	10183133	18	31	15	4199	69	
INTERNATIONAL FALLS	25.4	-6.0	-16.0	26.0	16.0	6.7	41	40.0	56.7	90.9	4532	100	19	659	236	1	187	236	1161	411726671945	4.6	4	24	1571	71	99156114	14	37	11	15157	36	
MINNEAPOLIS	35.9	-5.0	-15.6	21.1	15.3	6.4	20	38.9	35.6	89.7	59.9	11.7	118	31.3	1	171	244	1151	3917358175595	6.3	4	8	25.7	86	8917811714	42	33	38	7163	38		
ROCHESTER	31.3	-7.1	-18.6	27.7	14.8	5.4	40	33.9	41.7	96.6	4926	118	19	682	237	1	117	221	1100	368166671945	3.7	3	31	1	96	9101681080	14	36	20	11178	47	
ST CLOUD	31.3	-4.2	-13.3	31.3	20.4	13.5	22	41.1	25.6	58.0	2639	112	47	912	231	1	125	137	495	3098367195757	4.6	3	24	81571	70	04215911	17	45	12	38106	4	
JACKSON, MISSISSIPPI	8.9	14.7	2.1	33.7	21.4	9.1	46.1	28.3	31.6	127.8	143	56	1249	384	0	214	13	25	13687667293667	3.9	2	620	14761	71	1402149112	*	65	24	7851	0		
MERIDIAN	8.8	14.7	1.9	33.6	21.1	8.1	40.0	17.8	31.9	132.7	158	55	1310	427	0	207	13	33	3818561694915666	3.1	2	120.1	104	1013142104	*	58	26	74	56			
MISSOURI	27.0	3.5	-6.3	30.8	19.5	12.4	92	47.6	40.0	97.2	4036	8.0	950	256	5	101	465	1045	327461566639391	4.5	4	37	25	95371	98	92175111	9	52	23	36106	8	
COLUMBIA REGIONAL	29.7	2.1	-7.6	31.1	19.4	2.1	7	41.0	45.0	63.3	2976	14.1	32	940	288	1	224	152	506	2376565856555	4.8	3	31	36.7	64	9414102	102	53	24	37109	11	
KANSAS CITY	22.6	4.4	-8.9	33.5	21.7	1.8	31.1	21.3	13.1	60.8	2695	11.6	31	865	203	1	189	150	526	3257462585655	4.7	3	52	6.6	12184	78	12184	102	61	26	13167	29
KANSAS CITY	1971	2.2	-8.7	31.7	19.7	1.2	31.1	20.1	13.1	68.8	3022	16.5	306	949	1	181	155	526	37147462585655	4.7	3	52	6.6	12184	78	12184	102	61	26	13167	29	
ST JOSEPH	24.7	2.2	-8.7	31.7	19.7	1.2	31.1	20.1	13.1	68.8	3022	16.5	306	949	1	181	155	526	37147462585655	4.7	3	52	6.6	12184	78	12184	102	61	26	13167	29	
ST LOUIS	16.3	4.2	-5.2	31.3	20.4	13.5	22	41.1	25.2	58.0	2639	112	47	912	231	1	125	137	495	3098367195757	4.6	3	24	81571	70	04215911	17	45	12	38106	4	
SPRINGFIELD	38.6	6.2	-5.2	31.7	19.2	13.4	34	45.0	57.2	55.3	2539	12.5	42	1008	476	2	174	152	406	393787616565655	5.4	3	29	55672	17	98156108	58	58	21	4515	4	
MONTANA	108.7	-0.4	-10.8	29.8	14.4	7.9	45	41.1	38.9	74.2	4036	6.6	16	359	194	0	292	249	1435	672646156639391	5.9	4	33	35.7	77	89116160	95	19	28	28151	19	
BILLINGS	69.6	-1.1	-18.1	29.1	13.7	5.3	24	41.1	43.9	96.1	4982	6.9	8	276	136	1	101	101	168	656536555	5.5	4	6	21	52	8511169	91	9	27	21180	45	
GLASGOW	11.1	-1.5	-11.3	28.1	12.7	7.2	41.1	42.7	76.7	6251	7.9	17	381	207	1	201	181	207	421766562585655	6.9	4	53	78080	74	861218102	102	61	26	13167	29		
GREAT FALLS	78.8	-5.5	-17.5	28.9	24.9	12.7	57.9	43.9	46.7	92.5	4826	7.5	10	289	203	1	127	129	249	1153	6.9	3	17	649717328	48	4	231	8160	45			
HAVRE	78.8	-2.1	-11.4	28.7	11.2	3.2	39	40.6	41.1	80.8	4550	6.0	10	289	220	1	120	120	249	1234	52	3	17	35.6	728	721812131	96	14	33	17187	22	
HELLSPRING	90.4	-2.7	-11.7	27.1	21.1	8.6	54.0	46.8	54.0	79.0	4752	6.5	24	42	120	1	60	473	1702	3917878173814747	2.9	3	0	25.2	78	721812131	96	14	33	17187	22	
KALISPELL	80.1	-3.1	-15.2	31.6	15.4	7.4	42	43.3	38.3	85.4	4382	8.4	12	354	248	1	69	160	473	1702	39178465632919	2.9	3	0	25.2	78	721812131	96	14	33	17187	22
WILLISTON	97.2	-1.0	-10.6	29.1	9.4	6.5	35	40.6	36.1	76.1	4406	5.4	1	339	130	1	136	136	43	36.685817744350	2.3	3	0	32.2	79	7561205123	16	24	23	18187	11	
MISSOURI	56.1	0.7	-11.6	31.6	17.7	10.1	34	47.8	43.9	73.5	3566	112	13	595	355	0	149	147	757	30775676725456	5.3	4	825	5	77	23102140	68	9	49	1149	17	
GRAND ISLAND	35.9	0.4	-11.3	31.6	18.7	10.6	8	41.1	36.1	73.7	3458	131	12	727	191	1	109	109	166	42646748741845	5.9	4	6	226	45	8741587	93	9	49	1149	22	
LINCOLN, IL	47.1	1.1	-8.8	35.5	19.9	1.1	6.6	40.6	22.8	74.3	2575	114	12	381	223	1	137	137	166	42646557515	5.5	4	6	226	45	8741587	93	9	49	1149	22	
NORTHLAKE	84.6	-2.0	-12.2	30.6	17.9	1.1	34	40.6	22.8	79.4	3817	124	16	618	310	1	140	140	165	3075635156	5.5	4	6	226	45	8741587	93	9	49	1149	22	
OMAHA (EPPLEY)	29.8	0.4	-10.9	31.4	18.8	4.8	43.3	40.6	38.9	79.0	4752	6.0	15	767	196	1	105	105	165	3075635156	5.5	4	6	226	45	8741587	93	9	49	1149	22	
OMAHA (NORTH)	39.9	-1.6	-11.6	29.7	18.2	9.7	25	41.1	30.0	77.2	3667	125	18	748	158	1	94	94	158	36683757625456	5.4	4	6	226	45	8741587	93	9	49	1149	22	
SCOTTSBLUFF	120.6	3.0	-11.5	31.6	14.8	8.0	35	42.8	33.9	76.0	4055	91	8	452	228	1	86	119	765	61077565825456	3.7	4	2	33	8	472262517	87	10	40169	16		
VANTLINE	78.9	0.7	-13.6	31.3	15.4	8.0	35	42.8	33.9	76.0	4055	91	8	452	228	1	86	119	765	61077565825456	3.7	4	2	33	8	472262517	87	10	40177	28		
NEVADA	153.9	2.2	-12.3	32.4	9.2	7.4	49	41.1	41.7	72.0	4157	29																				

NORMALS, MEANS AND EXTREMES

State and Station	Temperature (°C)		Precipitation (Millimeters)				Relative Humidity (Percent)				Wind Speed (m.p.s.)				Annual Mean Number of Days					
	Normal (1941-1970)		Extremes (1941-1970)		Normal		Extremes		Snow @ Extreme		January		July		Mean Speed		Max Min			
	January	July	Daily Maximum	Daily Minimum	Seasonal	Annual	Month	Month	Mean Total	Ex-treme	January	July	January	July	July	January	VI	VII		
NEW JERSEY TRINITY U	17	3.6	-3.7	29.4	19.3	12.0	4.7	41.1	25.6	567	2748	120	64	1020	358	1	192	5.9	4.22	
NEW MEXICO ALBUQUERQUE	1619	8.3	-4.7	33.4	18.4	13.0	6.6	46.7	45.6	513	2384	35	7	197	85	0	287	6.1	26.9	
CLAYTON	1515	8.6	-7.4	30.5	15.5	11.5	3.5	40.6	27.2	549	2892	70	7	404	197	0	119	8.6	50.3	
ROSWELL	1972	11.01	12.8	-6.3	35.2	16.5	14.7	1.2	43.3	22.2	467	2107	46	9	295	143	0	108	6.9	282
ROSWELL	1112	13.0	-6.2	34.8	17.6	15.1	7.1	41.7	22.6	463	2054	43	7	269	165	0	100	6.6	274	
NEW YORK ALBANY	6.4	-0.9	-10.6	28.8	15.6	8.7	2.8	37.8	35.3	74.9	3826	8.3	54	847	228	0	284	5.1	1671	
ALBANY	4.85	-1.6	-9.3	25.8	15.5	8.4	2.6	35.6	28.3	74.0	4047	9.7	57	949	245	0	287	5.1	1671	
BUFFALO	215	-1.2	-8.0	26.4	15.9	8.4	3.6	37.2	28.9	71.1	295	95	95	917	271	3	125	6.2	2380	
NEW YORK CENTRAL PK.	4.0	3.6	-3.4	29.0	12.0	5.5	1.1	41.1	26.1	65.5	2693	102	69	1021	428	1	284	1.6	1671	
NEW YORK KENNEDY	4.9	3.3	-4.0	28.4	19.9	11.7	1.9	40.0	18.9	57.9	2880	109	68	1055	442	1	167	1.8	635	
NEW YORK LA GUARDIA	167	-0.4	-8.5	28.9	17.9	10.7	8.8	37.8	28.3	70.6	3732	75	57	796	246	6	98	5.2	170	
ROCHESTER	125	-0.3	-9.0	27.8	16.1	8.9	3.0	36.7	32.2	71.3	3710	89	68	925	312	5	108	7.9	2830	
SYRACUSE	125	-0.3	-9.0	27.8	16.1	8.9	3.0	36.7	32.2	71.3	3710	89	68	925	312	5	108	7.9	2830	
NORTH CAROLINA ASHEVILLE	652	9.1	-2.6	29.1	17.0	9.3	4.2	48.6	33.9	467	2354	124	75	1148	287	0	564	1.0	122	
CAPT. HATTERAS R	2	11.1	3.4	28.8	22.3	16.5	2.2	35.0	21.7	339	1517	171	78	143	372	10	206	8.0	457	
CHARLOTTE	224	11.2	0.1	31.3	20.4	15.8	4.0	40.0	19.4	394	1788	116	68	1085	317	1	136	5.1	140	
GREENSBORO	273	9.3	-1.9	30.8	19.4	14.5	5.1	33.9	21.7	453	2125	12	67	1051	337	3	190	7.9	226	
RALEIGH	132	10.6	-1.1	31.9	19.6	11.1	3.5	40.6	18.3	422	1952	129	71	1081	329	6	132	6.4	185	
DURHAM	9	13.7	2.3	31.6	22.2	17.6	2.8	40.0	12.2	326	1352	212	75	1361	394	4	209	8	41	
NORTH DAKOTA FISHBACK	562	-7.2	-19.3	29.1	16.0	1.5	0.2	13.0	2.2	467	2354	124	75	1148	287	0	564	1.0	122	
FARGO	273	-9.2	-19.8	28.2	19.8	9.0	4.9	37.8	27.2	1018	5150	81	11	410	211	1	83	10.0	103	
WILLISTON	579	-7.1	-19.3	28.9	13.4	4.9	1.8	41.7	40.6	977	5089	83	12	364	187	1	128	16.8	945	
OHIO AKRON	36.9	1.1	-7.4	28.1	16.0	9.6	1.0	106	45.0	39.4	667	3457	98	55	892	290	C	267	5.0	120
CINCINNATI ABBE OBS.	232	4.3	-4.3	30.3	18.8	12.0	6.4	42.8	28.2	656	3419	89	55	889	241	9	102	2.9	130	
CLEVELAND	23.7	0.8	-6.5	27.1	16.9	10.8	4.0	36.7	28.4	635	3419	107	48	940	248	3	123	7.2	1321	
COLUMBUS	24.7	2.4	-6.4	29.3	16.9	10.8	4.0	38.9	29.4	635	3134	99	49	873	277	3	109	2.1	134	
DAYTON	30.3	2.1	-6.4	29.3	18.0	11.1	3.6	38.9	29.4	637	3232	96	50	855	205	7	129	2.0	1069	
MANSFIELD	39.5	0.8	-6.3	28.7	17.4	10.7	2.0	36.1	27.2	637	3232	96	44	800	215	7	112	2.4	973	
TOLEDO	20.4	0.2	-8.2	28.8	16.0	8.6	2.0	38.3	27.2	637	3232	96	50	868	215	7	112	2.4	973	
YOUNGSTOWN	359	0.6	-7.6	27.7	15.3	9.3	3.6	37.8	27.8	677	3570	99	61	965	251	7	109	14.8	5268	
OKLAHOMA OKLAHOMA CITY	392	8.7	-3.3	33.7	21.3	15.5	2.6	48.9	32.8	88	2053	132	28	274	774	0	398	1.6	236	
TULSA	198	8.3	-3.3	33.8	21.9	15.7	4.1	44.4	22.2	489	2044	130	36	937	478	1	192	8.6	241	
OREGON ASTORIA	2	8.1	1.4	19.6	11.2	10.3	2.6	37.8	11.4	42.0	2941	268	24	1685	556	0	258	1.0	152	
BURNS U	1262	1.9	-9.4	29.8	10.6	3.7	2.9	41.8	22.2	685	4045	8	300	481	277	0	55	12.1	1214	
EUGENE	1059	7.6	0.6	28.1	10.6	11.4	3.7	41.1	24.4	461	2633	198	53	1081	533	0	124	11.9	183	
MELCHAM	1235	0.1	-6.6	5.5	1.9	6.5	3.1	0.6	30.6	6.6	4368	117	14	630	262	0	75	12.0	2053	
MEOFORO	396	6.8	-8.7	31.1	9.9	11.1	1.1	46.1	21.1	489	2739	94	6	95	197	0	95	1.7	1171	
PENOBLOC	452	3.5	-3.7	31.2	14.9	11.1	3.4	45.5	30.4	568	2911	41	7	313	119	0	39	1.9	148	
PORLANT	6	6.4	0.3	26.1	12.9	11.4	3.9	41.7	19.4	463	2662	153	12	955	326	0	183	1.4	152	
SALEM	60	4.0	0.1	28.0	10.4	3.4	4.2	42.2	24.4	451	2695	175	9	1033	801	0	80	1.7	170	
SEXTON SUMMIT R	1169	4.3	-1.6	24.3	10.8	8.7	3.5	37.6	18.9	526	3572	166	8	934	612	0	152	6.05	2629	

NORMALS, MEANS AND EXTREMES

State and Station	Temperature (°C)		Normal (1941-1970)		Extremes (1941-1970)		Normal Heating Days (1941-1970)		Extremes		Precipitation (Millimeters)		Relative Humidity (Percent)		Wind Speed (m.p.s.)		Annual Mean Number of Days			
	January	July	January	July	January	July	January	July	January	July	January	July	January	July	January	July	Max	Min		
PACIFIC AREA																				
GUAM TAGAC R	11.0	28.4	21.9	30.1	22.6	25.9	23	35.0	12.2	0	366	75	2303	1019	13	686	0	0		
KORON R	2.9	30.2	23.8	30.6	24.0	27.5	20.7	35.0	16.7	0	411	18.9	3650	684	31	431	0	0		
KUAJALEFIN	2.2	29.4	25.2	30.4	25.3	27.7	27	36.1	20.0	0	304	60	2573	772	1	436	0	0		
MAJURO R	3.9	29.3	25.0	29.7	27.4	32	24	32.0	20.6	0	406	17.7	3629	790	10	454	0	0		
PAGO PAGO	4.0	30.6	23.3	30.2	22.8	26.4	20	33.3	16.7	0	377	15.4	3265	830	18	460	0	0		
PONAPE R	3.7	29.9	24.2	30.7	22.0	26.2	29	35.6	18.9	0	497	29.1	4920	982	27	571	0	0		
TRUK MOEN ISLAND	2.7	29.6	24.9	30.3	23.9	27.3	20	34.9	17.8	0	400	16.3	3701	686	21	379	0	0		
WAKE	3.2	27.6	22.5	30.6	25.0	26.6	32	34.4	17.8	0	161	2.7	950	449	2	381	0	0		
YAP R	1.3	29.6	24.2	30.7	24.0	27.3	31	36.1	18.3	0	385	13.7	3087	882	23	265	0	0		
PENNSYLVANIA																				
ALLENTOWN	11.8	2.1	-6.8	29.7	17.1	40.6	36	40.9	-41.1	640	3237	111	69	1079	307	0	876	0	0	
ERIE	22.3	-0.2	-7.5	25.2	15.6	38.4	26	34.4	-27.2	687	3806	94	54	970	281	14	155	569	2131	
HARRISBURG	10.3	4.5	-5.3	30.4	18.6	41.1	19.1	41.1	-20.2	601	2902	96	471	1026	119	1.1	119	537	518	
PHILADELPHIA GRP.	34.7	1.8	-6.2	28.1	16.3	40.2	12.0	32.7	-27.8	635	3224	98	60	920	208	4	90	320	1158	
PITTSBURGH GRP. AP	22.8	3.0	-6.2	28.9	18.4	41.1	39.4	35.9	-25.6	592	2924	96	58	920	225	9	91	206	762	
SCRANTON AVOCAT	28.3	0.8	-7.6	28.3	16.5	41.7	24	38.3	-26.7	672	3487	104	50	884	206	1	92	300	1293	
WILLIAMSPORT	16.0	1.7	-7.0	29.1	16.3	40.2	35	38.9	-27.2	651	3322	106	64	1016	427	5	220	269	1123	
RHODE ISLAND	3.4	3.0	-3.7	24.2	17.4	40.0	9	40.0	-30.6	92	40	0	308	0	0	308	130	526		
SLOCUM ISLAND	1.6	2.3	-6.3	27.3	17.2	40.0	10.0	26	40.0	-28.0	630	3317	115	67	1086	302	10	170	251	910
PROVIDENCE																				
SOUTH CAROLINA																				
CHARLESTON	12.5	1.9	31.7	21.8	18.2	37.2	10.1	39.4	-11.3	289	1192	209	54	1324	692	1	257	1	15	
COLUMBIA	6.5	13.8	1.1	33.3	21.3	32	17.5	32	41.1	5.6	338	143	144	59	1178	425	1	195	8	93
GRAYVILLE SPRINGS	29.2	10.9	0.6	30.9	20.3	32	15.9	17	38.3	-21.1	391	1757	135	75	1208	266	6	155	42	155
SIOUX FALLS	43.7	-4.1	15.7	29.5	16.4	41.4	7.4	34	42.2	-37.8	875	4354	110	14	628	231	1	117	165	1006
SOUTH DAKOTA	39.5	-6.4	18.6	29.5	14.7	6.0	20	44.4	-39.4	90	48.9	-50.0	51	485	226	0	203	185	922	
ABERDEEN	39.7	-4.8	16.9	30.4	15.9	7.1	38	44.4	-39.4	904	4475	96	11	494	211	1	139	183	996	
HURON	9.6	1.2	-2.8	31.1	20.2	15.4	8.1	37	43.4	-38.8	742	4088	93	10	435	187	1	102	137	986
RAPID CITY	43.7	-4.1	15.7	29.5	16.4	7.4	34	42.2	-37.8	875	4354	110	14	628	231	1	117	165	1006	
SIOUX FALLS																				
TENNESSEE																				
ARISTOL	45.9	7.8	-2.9	29.9	18.0	44.4	13.4	38.9	-30.6	97	45.0	-35.6	52	1053	2392	126	57	247	279	
CHATTANOOGA	20.3	9.9	-0.8	31.9	20.1	15.4	40	41.1	-26.3	42.7	19.7	14.3	75	1319	360	5	168	139	104	
KNOXVILLE	29.6	9.7	0.0	31.1	20.2	15.4	38	39.4	-22.8	42.0	19.3	12.3	68	1247	333	6	129	129	103	
MEMPHIS	7.9	9.7	-0.1	31.1	20.1	15.4	8.1	37	43.4	-38.8	742	4088	93	10	435	187	1	102	137	986
NASHVILLE	18.0	8.7	-1.7	32.3	20.6	15.2	40	41.1	-26.1	46.0	2053	127	55	1168	354	1	170	159	297	
OAK RIDGE R	27.6	8.4	-1.6	30.8	19.1	14.3	32	40.6	-25.5	463	2191	144	69	1336	489	7	190	186	282	
TEXAS																				
ABILENE	54.0	13.2	-0.2	35.2	22.4	18.1	40	43.3	-22.8	367	1450	98	25	599	335	0	170	46	117	
AMARILLO	10.9	9.7	-5.3	33.0	18.8	41.1	39	42.2	-25.6	499	2349	88	13	515	273	0	171	91	211	
AUSTIN	18.2	1.6	4.0	35.2	24.0	23.2	41	40.6	-7.0	268	3665	104	48	315	313	1	308	183	310	
BROWNSVILLE	6.0	20.8	10.6	33.8	24.2	23.0	42.3	41	40.6	-7.0	3613	133	18	637	489	1	310	131	310	
CORPUS CHRISTI	17.1	19.2	7.8	34.7	24.0	23.2	41	40.6	-25.5	420	1793	123	68	1247	333	1	223	125	310	
DALLAS FT WORTH	14.7	13.2	1.1	35.3	23.3	18.6	38	41.1	-25.5	348	1322	14	66	820	321	1	150	41	93	
DALLAS	31.1	1.4	3.4	37.4	24.1	21.4	21.1	44.2	-22.0	349	1313	123	39	878	391	1	233	30	121	
DEL RIO	11.9	13.9	-1.0	34.8	21.1	17.4	40	41.1	-22.0	368	1488	77	13	405	193	0	193	13	121	
EL PASO	2.7	15.2	9.1	30.8	26.1	21.1	14.3	38.9	-20.6	203	38.3	153	38	61	177	1	67	33	114	
GALVESTON U																				

NORMALS, MEANS AND EXTREMES

YEAR 1979

State and Station	Temperature (°C)		Normal Heating Days (1941-1970)		Extremes (1941-1970)		Normal Heating Days (1941-1970)		Extremes		Precipitation (Millimeters)		Relative Humidity (Percent)		Annual Mean Number of Days		
	Normal (1941-1970)		January		July		Normal (1941-1970)		Extremes		Mean Total		Snow @		Temperature		
TEXAS	29	17.0	5.3	34.3	22.7	20.5	10	38.9	-9.3	231	797	130	68	1224	366	1	
LUFKIN	92	11.9	4.0	33.6	19.4	15.4	33	41.7	-6.6	231	646	196	31	42.5	249	1	
WILANIA	86.9	14.9	-0.4	35.0	20.6	11.7	32	42.8	-2.2	368	1456	55	12	46.8	245	0	
PORT ARTHUR	58.0	15.1	0.9	36.1	23.3	20.8	30	43.9	-1.7	231	843	150	12	39.3	233	0	
SAN ANGELO	24.0	16.4	4.3	35.5	23.2	19.0	32	43.9	-1.7	321	1244	70	18	44.5	234	0	
SAN ANTONIO	32.0	17.4	6.0	34.6	21.4	19.1	30	43.1	-1.7	251	872	94	37	40.1	204	0	
VICTORIA	15.3	14.1	2.6	35.7	23.9	19.5	37	44.4	-2.6	310	1143	117	45	48.1	207	0	
WACO	30.3	11.9	-1.4	37.3	22.4	17.8	33	45.6	-20.6	405	1613	116	27	691	306	0	
WICHITA FALLS	UTAH	3.6	-10.6	33.8	13.2	9.6	89	46.7	-45.6	3562	26	13	213	66	0		
MILFORD	153.3	3.0	-7.5	33.9	15.8	10.6	51	41.7	-4.4	373	324	54	17	38.5	124	0	
SALT LAKE CITY	128.7	2.2	-7.3	33.3	19.2	11.2	38	44.4	-28.3	3200	19	6	124	76	0		
WENOVER	1976	1.0	-3.4	13.6	27.2	14.7	6.9	92	40.6	45.6	4375	94	43	827	293	0	
VERMONT	PURINGTON	5.3	-1.4	27.2	22.4	17.8	33	45.6	-20.6	405	1613	116	27	691	306	0	
VIRGINIA	LYNCHBURG	7.7	-2.6	30.1	18.6	13.5	35	39.4	-33.9	2351	103	66	972	290	0		
NORFOLK	5.0	0.1	30.3	21.1	15.2	31	39.4	-22.2	422	1938	150	69	1135	351	9		
BIRMINGHAM	5.0	8.6	-2.4	31.2	19.7	14.3	50	40.6	-24.4	474	1881	143	70	1082	479	7	
ROANOKE	35.0	7.6	-2.7	29.9	18.0	13.3	32	40.0	-20.0	493	2393	105	63	991	247	5	
AASHINGTOM	OLYMPIA	5.9	6.7	-0.9	25.8	9.3	10.1	38	34.9	-22.2	479	3072	208	18	1289	504	0
OUILLALUATE	6.6	7.1	1.5	24.3	13.1	11.4	43	36.1	-13.9	436	2626	136	22	906	707	9	
SEATTLE FMSU U	122.0	6.3	0.6	23.9	12.1	10.6	35	37.2	-17.8	462	2887	151	18	985	328	1	
SPokane PASS R	71.8	-0.5	-0.9	18.6	8.3	8.0	36	42.2	-31.7	682	3717	63	41	145	245	1	
WALLA WALLA U	28.9	4.1	-7.5	31.6	16.8	12.3	65	45.0	-26.7	722	5222	363	39	2313	773	5	
YAKIMA	32.1	2.4	-7.4	31.2	11.8	9.9	33	43.3	-31.7	550	2686	53	8	407	149	0	
WEST INDIES	SAN JUAN P.H.	4.2	27.7	20.4	30.6	23.8	25.9	9	15.6	0	177	52	1502	405	11		
SAN ISLAND	9	28.1	23.3	30.7	25.3	27.2	27	33.3	17.8	0	188	16	1311	801	1		
WEST VIRGINIA	CHARLESTON	7.63	4.4	-5.1	26.7	15.5	10.5	16	89	44.4	38.2	526	2550	128	62		
ELAINS	5.94	4.8	-7.1	29.8	13.9	9.8	35	36.1	-30.0	603	3119	125	69	1098	236	0	
HUNTINGTON	25.2	6.1	-3.6	29.8	18.2	12.6	91	41.1	-32.8	526	2569	106	53	988	235	0	
PARKERSBURG U	18.7	5.2	-4.0	29.8	18.1	12.6	91	41.1	-32.8	553	2676	109	54	207	109	2	
WISCONSIN	GREEN BAY	20.8	-4.5	13.9	27.1	14.3	6.5	30	37.2	-35.0	89	45.6	-47.8	87	26		
LA CROSSE	19.8	-3.2	13.8	28.3	16.9	8.0	22	39.4	-38.3	462	4120	113	12	419	267	0	
MAISON	26.2	-3.7	13.2	27.4	14.9	7.4	40	38.3	-38.3	620	4294	110	24	768	278	1	
MILWAUKEE	20.5	-2.0	11.4	26.9	15.2	7.6	39	38.3	-31.1	785	4135	91	29	1189	251	1	
WYOMING	CASPER	16.27	0.9	-10.7	30.6	12.7	7.4	47	37.8	-6.7	661	4030	64	9	285	149	0
CHEYENNE	18.67	3.4	-5.5	28.7	12.5	7.7	44	37.8	-6.7	661	4371	66	11	352	173	0	
LANDER	16.96	-0.5	13.3	30.0	12.8	6.9	33	38.3	-38.3	782	4282	76	16	410	242	1	
SHERIDAN	120.8	0.8	-13.1	30.1	12.6	7.2	39	41.1	-37.2	758	4282	76	18	1788	282	1	

NORMALS, MEANS AND EXTREMES

YEAR 1979

State and Station	Temperature (°C)		Precipitation (Millimeters)		Relative Humidity (Percent)		Wind Speed (m.p.s.)		Annual Mean Number of Days		
	Normal (1941-1970)	Heating Degree Days (1941-1970)	Extremes	Normal (1941-1970)	Extremes	Mean Total	Extreme	January	July	Max	Min
	January	July									
Elevation Ground (Meters)			Daily Maximum	Daily Minimum	Daily Maximum	Daily Minimum	Daily Maximum	Daily Minimum	Daily Maximum	Daily Minimum	
State and Station											

Data from airport or from airport and Urban site records combined.

U indicates Urban; R indicates Rural Sites.

Data for this table are based on records through 1979 except as indicated in notes.

Date after station name indicates last year included in summarization of data.

Normal values are based on the period 1941-1970, and are means adjusted to represent observations taken at the present standard location, except that stations closed before 1971 are based on the 1931-1960 period.

Degree days are based on a daily average of 18.3°C.

For detailed periods of record see ANNUAL LOCAL CLIMATOLOGICAL DATA, 1979.

Clear day averages 0-3 tenths sky cover, Partly Cloudy 4-7 tenths and Cloudy 8-10 tenths.

Heavy Fog includes data formerly referred to as "Dense" or "Thick".

* Less than one-half.

B Number of days Maximum 21.1° or above (Alaskan stations).

1' Sun below horizon continuously Nov. 19 - Jan. 23.
Sun below horizon continuously Nov. 24 - Jan. 17.
(x) Yearly totals for period sun above horizon.
m Mean wind speed record for 1949-1951, 1958-1962.
@ Includes all forms of frozen precipitation, except
hail occurring alone.

1' Means and extremes are from post office location through 1962.
c Relative Humidity readings 8:00 a.m. and NOON Local time.

x Sun below horizon continuously Nov. 19 - Jan. 23.
v Sun below horizon continuously Nov. 24 - Jan. 17.

m

@

Includes all forms of frozen precipitation, except
hail occurring alone.

ELEVATIONS

State and Station			State and Station			State and Station			State and Station		
	Ft	Mtrs		FT	Mtrs		Ft	Mtrs		Ft	Mtrs
ALABAMA			IDAHO			NEVADA			TENNESSEE		
Birmingham	630	192	Boise	2868	871	Elko	5077	1547	Bristol	1525	465
Huntsville	644	196	Lewiston	1436	438	Ely	6262	1909	Chattanooga	688	210
Mobile	221	67	Pocatello	4478	1365	Las Vegas	2180	664	Knoxville	980	299
Montgomery	202	62				Reno	4400	1341	Memphis	284	87
ALASKA			ILLINOIS			Winnemucca	4314	1314	Nashville	605	184
Anchorage	132	40	Cairo	U 357	109				Oak Ridge	R 914	279
Annette	110	34	Chicago (O'Hare)	674	205	NEW HAMPSHIRE			TEXAS		
Sarrow	13	4	Chicago (Midway)	623	190	Concord	346	105	Abilene	1753	534
Sarter Island	50	15	Moline	594	181	Mt. Washington	6267	2056	Amarillo	3604	1099
Bethel	150	46	Peoria	662	202				Austin	621	189
Settles	672	205	Rockford	743	226	NEW JERSEY			Brownsville	20	6
Big Delta	1274	389	Springfield	613	187	Atlantic City	67	20	Corpus Christi	44	13
Cold Bay	103	31				Newark	30	9	Dallas/Fort Worth	576	176
Fairbanks	454	138	Evansville	388	118	Trenton	U 190	58	El Paso	1027	313
Gulkana	1579	481	Fort Wayne	828	252				Galveston	3916	1194
Homer	73	22	Indianapolis	808	246	NEW MEXICO			Houston Intercom	108	33
Juneau	24	7	South Bend	773	236	Albuquerque	5314	1620	Lubbock	3241	988
King Salmon	49	15				Clayton	4972	1515	Midland	2862	872
Kodiak	111	34	IOWA			Roswell	3619	1103	Port Arthur	22	7
Kotzebue	16	5	Burlington	702	214				San Angelo	1908	582
Mc Grath	338	103	Des Moines	963	294	NEW YORK			San Antonio	794	242
Nome	22	7	Dubuque	1080	329	Albany	292	89	Victoria	117	36
St. Paul Island	28	9	Sioux City	1103	336	Binghamton	1638	499	Waco	508	155
Summit	2405	733	Waterloo	878	268	Buffalo	706	215	Wichita Falls	1030	314
Talkeetna	356	180				New York	U 87	27			
Unalakleet	21	6	KANSAS			New York Kennedy AP	22	7	UTAH		
Yakutat	31	9	Concordia	1484	452	New York LaGuardia	31	9	Milford	5033	1534
ARIZONA			Dodge City	2592	790	Rochester	555	169	Salt Lake City	4227	1288
Flagstaff	7018	2139	Goodland	3688	1124	Syracuse	408	124	Wendover	4239	1292
Phoenix	1107	337	Topeka	885	270						
Tucson	2555	779	Wichita	1340	408	NORTH CAROLINA			VERMONT		
Winslow	4883	1488				Asheville	2170	661	Burlington	340	104
Yuma	206	63	KENTUCKY			Cape Hatteras	R 11	3			
ARKANSAS			Covington	877	267	Charlotte	769	234	CHARLOTTE		
Fort Smith	463	141	Lexington	989	301	Greensboro	886	270	GREENSBORO		
Little Rock	265	81	Louisville	488	149	Raleigh	441	134	LYNCHBURG	937	286
CALIFORNIA						Wilmington	38	12	NORFOLK	30	9
Bakersfield	492	150	LOUISIANA						RICHLIEMOND	177	54
Bishop	4145	1263	Alexandria	118	36				ROANOKE	1176	358
Blue Canyon	5283	1610	Baton Rouge	76	23	NORTH DAKOTA					
Eureka	U 60	18	Lake Charles	32	10	Bismarck	1660	506	VERMONT		
Fresno	327	100	New Orleans	30	9	Fargo	899	274	BURLINGTON	340	104
Long Beach	40	12	Shreveport	259	79	Williston	1905	581			
Los Angeles	104	32									
Los Angeles	U 512	156	MAINE			OHIO			WASHINGTON		
Mt. Shasta	R 3587	1093	Caribou	628	191	Akron	1236	377	OLYMPIA	200	61
Oakland	7	2	Portland	63	19	Cincinnati Abbe Ob.	627	191	QUILLAYATE	205	62
Red Bluff	353	108	MARYLAND			Cleveland	805	245	SEATTLE-TACOMA	450	137
Sacramento	25	8	Baltimore	155	47	Columbus	833	254	SEATTLE	28	9
Sandberg	R 4523	1379	MASSACHUSETTS			Dayton	1003	306	SPokane	2365	721
San Diego	28	9	Blue Hill Obs.	R 640	195	Mansfield	1312	400	STAMPEDE PASS	R 3967	1209
San Francisco	U 155	47	Boston	29	9	Toledo	692	211	WALLA WALLA	U 991	302
San Francisco	18	5	Worcester	1017	310	Youngstown	1186	361	YAKIMA	1066	325
Santa Maria	238	73							WEST INDIES		
Stockton	27	8	MICHIGAN						SAN JUAN, P. R.	62	19
COLORADO			Alpena	693	211	OREGON			WEST VIRGINIA		
Alamosa	7541	2298	Detroit	626	191	Astoria	22	7	BECKLEY	2514	766
Colorado Springs	6170	1881	Detroit Metro.	664	202	Burns	U 4170	1271	CHARLESTON	951	290
Denver	5332	1625	Grand Rapids	766	233	Eugene	373	114	ELKINS	1997	608
Grand Junction	4839	1475	Houghton Lake	803	245	Meacham	4056	1236	HUNTINGTON	838	255
Pueblo	4720	1439	Lansing	1160	354	Medford	1329	405	PARKERSBURG	U 637	194
CONNECTICUT			Marquette	874	266	Pendleton	1495	456	GREEN BAY	702	214
Bridgeport	17	5	Muskegon	734	224	Portland	39	12	LA CROSSE	672	205
Hartford	179	55	Sault Ste. Marie	633	193	Salem	201	61	MADISON	866	264
DELAWARE				724	221	Sexton Summit	R 3841	1171	MILWAUKEE	693	211
Wilmington	80	24	MINNESOTA						WYOMING		
DISTRICT OF COLUMBIA			Duluth	1417	432	PACIFIC AREA			CASPER	5290	1612
Wash. Dulles Int. AP	323	98	International Falls	1183	361	Guam Taguac	R 365	111	CHEYENNE	6141	1872
Wash. Nat'l AP	65	20	Minneapolis	838	255	Johnston	17	5	LANDER	5558	1694
FLORIDA			Rochester	1320	402	Korer	R 109	33	SHERIDAN	3968	1209
Apalachicola	U 35	11	St. Cloud	1043	318	Kwajalein	26	8			
Daytona Beach	41	12				Majuro	10	3			
Fort Myers	12	4	MISSOURI			Pago Pago	10	3			
Jacksonville	31	9	Columbia, Regional	898	274	Ponape	R 151	46			
Key West	21	6	Kansas City	750	229	Truk Moen Island	8	2			
Lakeland	U 236	72	St. Joseph	817	249	Wake Island	12	4			
Miami	12	4	Springfield	1270	387	Yap	R 56	17			
Orlando	119	36									
Pensacola	118	36	MONTANA								
Tallahassee	68	21	Billings	3570	1088	PENNSYLVANIA					
Tampa	11	3	Glasgow	2298	700	Allentown	385	117			
West Palm Beach	21	6	Great Falls	3657	1115	Erie	737	225			
GEORGIA			Harve	2599	792	Harrisburg	351	107			
Athens	811	247	Helena	3898	1188	Philadelphia	28	9			
Atlanta	1034	315	Kalispell	2973	906	Pittsburgh	1225	373			
Augusta	148	45	Miles City	2634	803	Scranton	948	289			
Columbus	394	120	Missoula	3189	972	Williamsport	525	160			
Macon	362	110	NEBRASKA			RHODE ISLAND					
Rome	643	196	Grand Island	1856	566	Block Island	118	36			
Savannah	51	16	Lincoln	1189	362	Providence	62	19			
HAWAII			Norfolk	1551	473	SOUTH CAROLINA					
Hilo	36	11	North Platte	2787	849	Charleston	48	15			
Honolulu	15	5	Omaha	982	299	Columbia	225	69			
Kahului	67	20	Scottsbluff	3958	1206	Grove City	971	296			
Lihue	148	45	Valentine	2598	792	Sioux Falls	1427	435			

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

These are the elevations of the barometer (in feet and meters above mean sea level) to which station pressure values pertain in the

"Climatological Data" table in the monthly publication CLIMATOLOGICAL DATA NATIONAL SUMMARY.

GENERAL SUMMARY OF TORNADOES, 1979

HENRY N. VIGANSKY
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 ENVIRONMENTAL DATA AND INFORMATION SERVICE
 NATIONAL CLIMATIC CENTER

A total of 852 tornadoes was reported in the United States and its territories in 1979. Tornadoes occurred on 186 days, killed 84 people, injured 3,077 others, and caused property losses well in excess of one billion dollars. Twenty-one of these storms were killer tornadoes. In 1979 tornadoes destroyed or damaged 1,061 mobile homes resulting in 9 deaths and injuries to 130 persons.

New monthly records of tornado occurrences by state, territory, and nation, state to state border crossings, and location of killer tornadoes are shown in the following three tables:

NEW MONTHLY TORNADO RECORDS

<u>Month</u>	<u>State</u>	<u>New Record</u>	<u>Previous Record</u>
January	California	3	2 (1958)
	Florida	12	11 (1978)
April	Arkansas	29	19 (1973)
May	Florida	27	25 (1978)
June	Minnesota	17	13 (1968)
	Wyoming	14	12 (1976)
July	Alabama	4	2 (1977)
	Colorado	21	12 (1958)
	Wyoming	18	8 (1958)
August	United States	127	107 (1974)
	Iowa	16	10 (1964)
	Nevada	2	1 (1975)
	Oklahoma	13	5 (1976)
	Virgin Islands	1	0
	Wisconsin	15	10 (1968)
	Wyoming	7	5 (1975)
September	Florida	24	11 (1947)
	Georgia	4	2 (1956)
	Maryland	7	2 (1935)
	Virginia	8	6 (1935)
	Wyoming	2	1 (1973)
October	Pennsylvania	6	1 (1975)
	Virginia	2	1 (1976)
	West Virginia	1	0
November	Pennsylvania	3	2 (1957)

STATE TO STATE BORDER CROSSINGS

<u>DATE</u>	<u>NUMBER</u>	<u>STATE</u>	<u>STATE</u>
March 19	1	from	Missouri
			into
		Iowa	
April 10	3	from	Texas
			into
		Oklahoma	
April 11	1	from	Oklahoma
			into
		Arkansas	

GENERAL SUMMARY OF TORNADOES

KILLER TORNADOES

<u>Date</u>		<u>State</u>	<u>County</u>	<u>Total Deaths</u>
March	31	Kentucky	Barren	1
April	10	Oklahoma	Comanche	3
	10	Texas	Wichita	42
	10	Texas	Wilbarger	11
	10	Texas	Wilbarger	1
	12	Indiana	Warrick	1
May	2	Oklahoma	Woodward	1
	8	Florida	Polk	1
June	19	South Dakota	Roberts	1
	28	Iowa	Calhoun	3
	28	Iowa	Kossuth	2
	30	Tennessee	Jackson	2
July	16	Wyoming	Laramie	1
August	9	Wisconsin	Calumet	1
	10	Massachusetts	Worcester	2
	28	Iowa	Page	1
			Fremont	1
September	5	Pennsylvania	Chester	1
	5	Virginia	Fairfax	1
October	3	Connecticut	Hartford	3
	22	Arkansas	Chicot	1
	30	Oklahoma	Carter	3

Some of the more significant tornadoes are described briefly in the following annual summary:

On New Years Day at 2:05 p.m., the first tornado of the 1979 season touched down briefly in Jay, Florida, damaging power lines and uprooting a few trees.

At 4:30 p.m., on March 31, a tornado touched down 4 miles (6.4 km) east of Hays, Kentucky, and left an 8 mile (12.9 km) path of destruction. This storm was responsible for the first fatality of the 1979 season.

During the afternoon of April 10, a line of fast moving thunderstorms spawned 10 destructive tornadoes in northern Texas. At 3:20 p.m., a large tornado touched down in the Lockett area and moved northeastward through Vernon, Texas, and then crossed the Red River into Oklahoma. This storm was responsible for one death in Lockett, 10 in Vernon, and for injuries to 67 people. Total property damage was estimated to be in excess of 27 million dollars. This same afternoon a violent tornado touched down at 5:50 p.m. 3 miles (4.8 km) northeast of Halliday, Texas, and then moved northeastward leaving a path of destruction from 1/4 mile (.4 km) up to one mile (1.6 km) wide as it passed through 8 miles (12.9 km) of residential area in Wichita Falls, Texas. Three thousand and ninety-five suburban homes, 1,062 apartment units and 93 mobile homes were demolished. Six hundred homes and 130 condominium units sustained major damage. The Ben Milam Elementary and the Joe B. McNeil Junior High Schools were damaged beyond repair, and the city's eight other elementary schools received minor damage. Numerous business establishments and two shopping centers were heavily damaged. It was estimated that about 20,000 people were left homeless, 1,740 people were injured and 42 lost their lives. Twenty-five of the fatalities were automobile related; sixteen people were killed while attempting to evade the storm. Eleven of these 16 people left homes that were not damaged by the tornado. This tornado ranks fifth in being the most destructive tornado in the nation's history. This same storm system also spawned the tornado having the longest path for the 1979 season. The tornado touched down near Harrold, Texas, and then crossed the Red River into Oklahoma. This twister was on the ground 9 miles (14.5 km) in Texas and 55 miles (88.5 km) in Oklahoma. Damage was light in Texas, but the storm was responsible for the death of one woman. The airport in Grandfield, Oklahoma was demolished, 8 airplanes were destroyed and one was badly damaged. The storm continued on its northeastward course destroying 18 homes, 9 mobile homes and 2 grain elevators before it subsided in the northwestern corner of Stephens County, Oklahoma.

GENERAL SUMMARY OF TORNADOES

On May 8, about 2:15 p.m., a tornado touched down southwest of Auburndale, Florida. The storm demolished a 200-unit trailer park, destroyed several homes, severely damaged a citrus processing plant, and ripped off the roofs from the Auburndale Senior, Junior and Middle School complex. The school children took refuge in the interior hallways and by taking this safety precaution, averted a major disaster. Thirteen students and 27 other people were injured. One elderly lady was killed when the storm demolished a concrete block shed in which she had sought shelter from the oncoming tornado.

During the early evening hours of June 28, an outbreak of 10 tornadoes swept through north-central Iowa. One of the two most destructive of these tornadoes touched down 3 miles (4.8 km) southwest of Bancroft and moved south-southeast to one mile (1.6 km) northeast of Irvington, Iowa. The city of Algona was in the direct path of the storm resulting in 104 destroyed homes, 349 damaged homes and 20 razed business establishments. Two people lost their lives and 34 were injured. The other destructive twister touched down 6 miles (9.7 km) west of Palmer and left a 30 mile (48.3 km) long path of rubble 1/2 mile (.8 km) northwest of Knierim, Iowa. As the tornado passed through Manson, the path widened to 1,000 feet (305 m) and destroyed 110 homes, the junior high school and 25 businesses. The storm was responsible for 26 injuries and three fatalities.

At 3:25 p.m. on July 16, the most devastating tornado in the history of Wyoming developed from a moderate thunderstorm and moved through the northern section of Cheyenne, destroying 140 homes, 17 mobile homes and damaging 325 homes. Also, this storm caused major damage to the Cheyenne Municipal Airport including four C-130 airplanes. A 14 month old boy was killed, his mother and another child were seriously injured, and 38 other people received minor injuries.

During the period September 3 through September 6, Hurricane David spawned 34 tornadoes along the eastern coast of the United States. The following states reported tornadoes: Delaware 1; Florida 10; Maryland 7; New Jersey 1; Pennsylvania 2; South Carolina 5; and, Virginia 8. Two of these tornadoes are classified as killer tornadoes, each causing the death of one person, and they were recorded in Pennsylvania and Virginia.

On October 3, a huge tornado struck without warning at the Bradley International Airport, Connecticut, and caused considerable damage to the Bradley Air Museum. Sixteen of the vintage airplanes stored at the museum were demolished and 13 others badly damaged. Also, 17 corporate aircraft received extensive damage. Another area hard hit by the storm was between Bradley International Airport and Windsor Locks, where scores of businesses and homes were reduced to rubble. Damage exceeded 200 million dollars and the tornado left a toll of three dead and 500 injured. This was the first killer tornado in the state of Connecticut during the month of October since records have been kept.

On December 23 at 8:20 p.m., the final tornado of the 1979 season touched down in the northeastern section of Dermott, Arkansas. The storm demolished one mobile home and a frame house and caused considerable damage to four other houses. No fatalities or injuries were reported.

Additional tornado information is presented in the following charts and tables. More detailed information about tornadic activity can be obtained from the monthly Storm Data publications. The National Severe Storms Forecast Center has developed a magnetic tape containing tornado statistics for the period 1950-1979. The tape contains the date/time (year, month, day and hour), location (latitude-longitude, state and county), path (length and width), number of fatalities, number of injuries and amount of property damage. A copy of this tape can be obtained by contacting the National Climatic Center, Federal Building, Asheville, NC 28801.

TORNADO SUMMARY 1979

TORNADO SUMMARY 1979

STATE	STATE											STATE													
	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANN
NEBRASKA	3	6	6	2	1								20												
Number	2	4	4	1	1								12												
Days													0												
Deaths													1												
Injuries													1												
NEVADA	2	2	1										2												
Number													2												
Days													2												
Deaths													0												
Injuries													0												
NEW HAMPSHIRE	(None)																								
NEW JERSEY																									
Number	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	
Days													2	2	2	2	2	2	2	2	2	2	2	2	
Deaths													0	0	0	0	0	0	0	0	0	0	0	0	
Injuries													0	0	0	0	0	0	0	0	0	0	0	0	
NEW MEXICO	1	2	1	4	5								13	33	39	14	12	10	4	15	3	157			
Number	1	2	1	3	4								11	8	7	10	6	9	5	2	3	?	55		
Days													0	0	0	0	0	0	0	0	0	0	0	0	
Deaths													0	0	0	0	0	0	0	0	0	0	0	0	
Injuries													0	0	0	0	0	0	0	0	0	0	0	0	
NEW YORK	1	1	1	1	1	1	1	1	1	1	1	1	3	3	0	1	1	1	1	1	1	1	1	1	
Number																									
Days																									
Deaths																									
Injuries																									
North Carolina	1	1	4	1	1	1	1	1	1	1	1	1	12	8	8	12	1	1	1	1	1	1	1	1	
Number																									
Days																									
Deaths																									
Injuries																									
NORTH DAKOTA																									
Number																									
Days																									
Deaths																									
Injuries																									
OHIO	2	1	1	1	1	1	1	1	1	1	1	1	4	4	4	4	1	1	1	1	1	1	1	1	
Number																									
Days																									
Deaths																									
Injuries																									
OKLAHOMA	5	17	7	3	2	13	1	2	1	1	2	1	51	22	22	22	1	1	1	1	1	1	1	1	
Number	3	3	2	3	2	5	1	3	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	
Days																									
Deaths																									
Injuries																									
OREGON																									
Number																									
Days																									
Deaths																									
Injuries																									
PACIFIC																									
Number																									
Days																									
Deaths																									
Injuries																									
PENNSYLVANIA	1	1	1	1	1	1	1	1	1	1	1	1	14	18	17	17	1	1	1	1	1	1	1	1	
Number																									
Days																									
Deaths																									
Injuries																									
PUERTO RICO																									
Number																									
Days																									
Deaths																									
Injuries																									

* Corrected for boundary-crossing tornadoes.

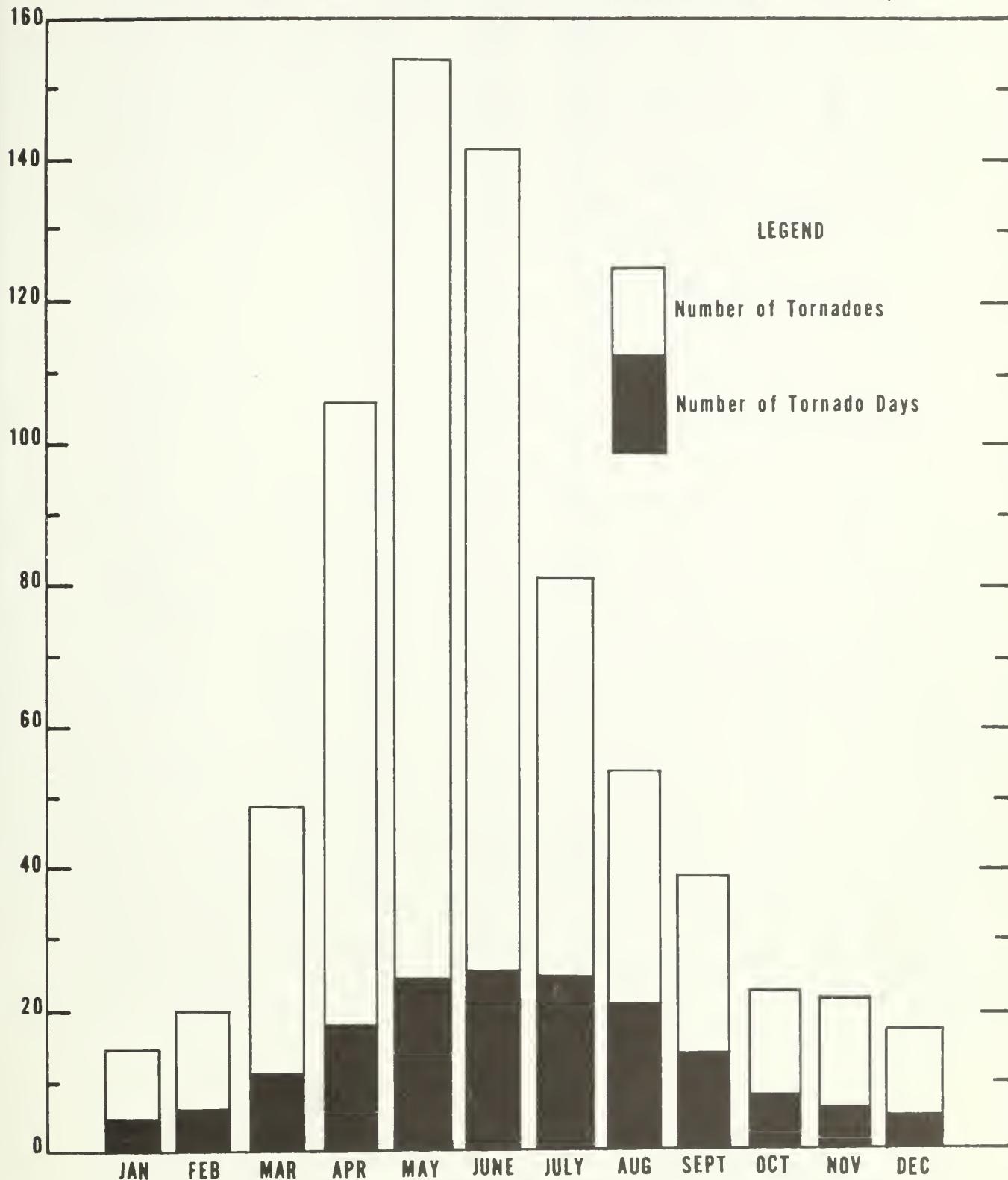
† Tornado Days for count v.s. a month.

NUMBER OF TORNADOES, TORNADO DAYS, AND DEATHS BY MONTHS, 1953 - 1979

Year	January			February			March			April			May			June			July			August			September			October			November			December			Annual		
	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number			
1953	6	0	16	3	40	10	24	47	16	34	94	21	111	24	244	31	19	0	24	15	0	5	4	0	12	6	0	21	8	49	421	136	515						
1954	2	1	0	9	2	63	13	10	112	22	9	107	26	5	45	23	0	49	21	1	3	14	8	2	2	0	17	3	1	1	3	2	0	173	36	516			
1955	3	2	0	4	3	15	5	15	99	18	7	147	26	15	28	21	5	21	5	33	18	0	15	8	2	2	0	20	4	1	1	3	2	0	170	36	517		
1956	2	2	0	47	12	8	31	7	1	85	15	67	79	24	4	65	21	0	91	26	1	43	20	2	16	10	0	23	7	0	7	0	504	155	83				
1957	17	3	13	5	3	0	38	7	1	216	21	29	227	26	87	147	25	14	55	19	0	20	14	0	17	10	2	18	11	2	58	11	38	4	19	856	154	192	
1958	12	7	0	20	5	13	15	10	0	76	19	4	68	21	0	127	42	121	30	1	46	20	1	24	14	1	9	6	4	45	6	4	0	1	0	564	166	66	
1959	16	2	20	5	21	43	11	9	30	12	8	226	28	2	63	24	2	38	18	0	47	23	0	22	13	0	18	10	1	24	10	0	1	1	0	604	156	58	
1960	9	4	0	28	10	0	28	10	0	70	20	7	201	26	34	124	27	3	43	22	0	47	23	0	22	13	0	18	10	1	25	6	0	1	1	0	616	172	46
1961	1	1	0	31	8	0	124	17	7	74	19	3	137	25	23	107	23	2	77	27	0	27	16	0	53	16	15	14	5	0	36	7	4	16	1	0	679	169	51
1962	12	3	1	25	7	0	37	9	17	41	8	1	200	22	3	171	29	0	78	26	0	51	21	6	24	11	0	11	10	0	5	4	0	2	2	0	657	152	28
1963	15	5	1	3	0	48	12	8	84	14	16	71	21	1	91	23	0	62	26	0	26	13	2	33	13	3	13	5	0	15	6	0	0	0	0	0	464	141	31
1964	14	3	10	2	2	0	36	11	6	157	23	16	135	20	16	136	24	0	63	23	0	79	23	2	25	10	0	22	4	22	17	8	0	18	5	2	704	156	73
1965	21	11	0	32	4	9	34	9	2	129	20	264	275	25	17	147	28	6	86	26	0	61	23	1	64	21	0	16	4	1	34	6	5	0	4	0	906	181	296
1966	1	1	0	28	5	0	12	5	0	80	12	98	17	0	126	28	19	100	27	3	58	21	0	22	13	0	20	6	6	3	0	11	3	0	585	150	98		
1967	39	4	7	8	5	0	42	14	3	149	18	73	116	25	3	210	28	6	90	25	1	28	16	2	139	16	5	36	7	4	8	5	0	61	10	926	173	114	
1968	5	3	0	7	3	0	28	8	0	102	15	40	145	26	72	136	27	11	56	22	0	66	23	2	25	14	0	14	9	0	44	12	3	32	9	1	660	171	131
1969	3	32	5	5	0	8	1	5	68	15	245	25	4	137	28	7	99	27	0	69	21	19	0	26	11	0	26	10	0	23	7	1	608	155	66				
1970	9	16	3	0	25	12	2	117	16	29	88	19	26	134	24	6	81	26	3	55	21	0	54	20	0	50	13	6	10	4	1	653	171	69					
1971	18	1	83	12	131	40	13	2	75	14	11	166	24	27	199	28	1	100	30	1	50	21	0	47	15	0	38	12	0	16	7	2	8	6	0	888	192	156	
1972	33	10	5	7	4	0	69	17	0	96	20	16	140	27	0	114	25	2	115	29	0	59	23	2	49	19	0	34	10	0	17	4	2	8	6	0	741	194	27
1973	33	7	1	10	4	0	80	16	17	250	26	35	224	26	2	80	26	1	51	23	4	69	22	3	25	11	0	81	11	2	49	12	3	206	87	206			
1974	24	8	2	23	9	0	36	12	1	269	22	313	144	28	10	194	26	31	59	0	107	26	0	25	11	0	45	10	4	13	8	0	8	5	0	947	184	361	
1975	52	7	12	45	12	7	84	16	12	108	20	13	188	30	5	196	28	6	79	26	2	60	25	2	34	17	0	40	8	0	22	8	1	920	204	60			
1976	12	5	0	37	6	6	180	18	21	113	23	1	155	24	8	169	26	3	84	28	2	38	18	1	35	15	3	11	5	1	24	10	0	81	1	0	835	169	44
1977	5	4	0	17	3	2	64	15	0	88	15	26	228	29	4	132	27	0	99	27	1	82	26	6	65	21	1	25	1	1	5	1	0	24	10	0	852	189	43
1978	23	7	2	6	3	0	17	8	0	107	17	4	213	27	7	148	28	17	143	30	11	65	24	1	20	10	6	7	5	0	30	9	5	788	173	53			
1979	16	9	0	4	3	0	53	13	1	120	17	58	112	23	2	150	24	8	132	30	1	127	27	5	68	19	2	47	12	7	21	8	0	2	1	0	852	186	84
3-79	15	5	3	20	6	7	49	12	8	106	18	39	154	24	24	142	26	16	81	25	1	54	21	2	39	14	2	23	8	2	22	6	2	18	5	4	722	169	111
TOTAL	411	128	90	549	151	192	1318	311	208	2862	481	1059	4149	657	649	3829	703	439	2181	684	34	1459	560	60	1049	378	60	616	214	61	595	164	49	475	136	96	19493	4567	2997
MEAN	15	5	3	20	6	7	49	12	8	106	18	39	154	24	24	142	26	16	81	25	1	54	21	2	39	14	2	23	8	2	22	6	2	18	5	4	722	169	111

AVERAGE NUMBER OF TORNADOES AND TORNADO DAYS EACH MONTH IN THE UNITED STATES

(BASED ON 19,493 TORNADOES THAT OCCURRED FROM 1953-1979)



NUMBER OF TORNADOES, TORNADO DAYS, DEATHS, AND RESULTING LOSSES BY YEARS, 1916 - 79

YEAR	Number Tornadoes	Tornado Days	Total Deaths	Most Deaths in Single Tornado	Total Property Losses †	PROPERTY LOSS FREQUENCY*		
						Category 5	Category 6	Category 7 and Over
1916	90	36	150	30	6	7	1	0
1917	121	38	551	101	7	21	9	0
1918	81	45	136	36	7	20	5	0
1919	64	35	206	59	7	10	2	0
1920	87	50	499	87	7	14	10	0
1921	105	55	202	61	7	22	3	0
1922	108	64	135	16	7	27	5	0
1923	102	59	110	23	6	21	1	0
1924	130	57	376	85	7	26	11	1
1925	119	65	794	689	7	34	2	1
1926	111	57	144	23	6	28	0	0
1927	163	62	540	92	7	42	9	1
1928	203	79	95	14	7	40	7	0
1929	197	74	274	40	7	48	4	0
1930	192	72	179	41	7	38	6	0
1931	94	57	36	6	6	14	1	0
1932	151	67	394	37	7	23	1	1
1933	258	96	362	34	7	46	9	0
1934	147	77	47	6	6	10	3	0
1935	180	77	71	11	6	29	0	0
1936	151	71	552	216	7	17	5	1
1937	147	75	29	5	6	24	0	0
1938	213	76	183	32	7	29	6	0
1939	152	75	91	27	7	21	3	0
1940	124	62	65	18	7	13	2	0
1941	118	57	53	25	6	24	1	0
1942	167	66	384	65	7	42	10	0
1943	152	61	58	5	7	28	8	0
1944	169	68	275	100	7	50	9	0
1945	121	66	210	69	7	21	10	1
1946	106	65	78	15	7	29	7	0
1947	165	78	313	169	7	46	7	1
1948	183	68	139	33	7	62	11	2
1949	249	80	211	58	7	54	13	0
1950	200	88	70	18	7	47	9	0
1951	262	113	34	6	7	35	11	2
1952	240	98	229	57	7	53	19	0
1953	421	136	515	116	8	63	18	7
1954	550	160	36	6	7	63	8	1
1955	593	152	126	80	7	74	13	1
1956	504	155	83	25	7	83	24	1
1957	856	154	192	44	8	129	26	3
1958	564	166	66	19	7	70	8	1
1959	604	156	58	21	7	70	4	1
1960	616	172	46	16	7	65	11	1
1961	697	169	51	16	7	103	21	1
1962	657	152	28	17	7	51	10	0
1963	464	141	31	5	7	77	15	1
1964	704	156	73	22	7	113	17	5
1965	906	181	296	44	8	126	30	11
1966	585	150	98	58	8	79	13	4
1967	926	173	114	33	8	125	33	8
1968	660	171	131	34	8	82	26	6
1969	608	155	66	32	8	98	16	3
1970	653	171	72	26	8	97	24	6
1971	888	192	156	58	8	71	30	5
1972	741	194	27	6	8	100	28	1
1973	1102	206	87	7	9	219	67	9
1974	947	184	361	34	9	166	82	25
1975	920	204	60	9	9	189	31	11
1976	835	169	44	5	8	145	41	5
1977	852	189	43	22	8	173	40	6
1978	788	173	53	16	9	153	53	6
1979	852	186	84	42	9	169	62	11
Means: 1953-79	722	169	111	---	---	109	28	5

NOTE: -- The above estimated losses are based on values at time of occurrence.

† Storm damages in categories:

- 5. \$50,000 to \$500,000
- 6. \$500,000 to \$5 million
- 7. \$5 million to \$50 million

- 8. \$50 million to \$500 million
- 9. \$500 million and over

*Number of times property losses reported in Storm Data in Categories 5, 6, 7 and over.

NUMBER OF TORNADOES, TORNADO DAYS, AND DEATHS BY STATES, 1953-79

STATE	TORNADOES							DAYS		DEATHS		
	TOTAL	AVER- AGE	GREAT- EST	YEAR	LEAST	YEAR	Per # 10,000 Sq.Mi.	TOTAL	AVER- AGE	TOTAL	AVER- AGE	Per @ 10,000 Sq.Mi.
Alabama	536	20	45	1973+	5	1956	3.85	291	11	202	7	39
Alaska	1	0	1	1959	0	1979+	.00	1	0	0	0	0
Arizona	99	4	17	1972	0	1965+	.32	82	3	3	0	0
Arkansas	549	20	50	1973	2	1969	3.83	278	10	121	4	23
California	88	3	13	1978	0	1968+	.21	64	2	0	0	0
Colorado	435	16	42	1976	1	1959	1.55	284	11	2	0	0
Connecticut	41	2	8	1973	0	1978+	3.03	37	1	4	0	8
Delaware	26	1	5	1975	0	1978+	4.68	24	1	0	0	0
District of Columbia	0	0	0	-	0	1978+	.00	0	0	0	0	0
Florida	1095	41	97	1975	10	1956	6.93	697	26	51	2	9
Georgia	562	21	46	1971+	7	1960	3.54	326	12	72	3	12
Hawaii	16	1	4	1971	0	1978+	.92	13	0	0	0	0
Idaho	36	1	5	1967	0	1977	.16	28	1	0	0	0
Illinois	736	27	107	1974	4	1953	4.83	342	13	129	5	23
Indiana	603	22	48	1973	6	1972+	6.15	290	11	200	7	55
Iowa	726	27	54	1964	7	1956+	4.78	339	13	54	2	10
Kansas	1194	44	97	1955	14	1976	5.38	555	21	162	6	20
Kentucky	214	8	34	1974	0	1953	1.96	121	4	99	4	25
Louisiana	530	20	55	1974	3	1955	4.05	334	12	86	3	18
Maine	70	3	11	1971	0	1979+	.78	62	2	1	0	0
Maryland	75	3	10	1975	0	1970+	2.63	60	2	1	0	1
Massachusetts	107	4	12	1958	0	1959	4.80	77	3	99	4	120
Michigan	425	16	39	1974	2	1959	2.70	246	9	226	8	39
Minnesota	453	17	34	1968	5	1972	2.00	273	10	73	3	9
Mississippi	578	21	44	1973	1	1979	4.49	311	12	314	12	66
Missouri	750	28	79	1973	6	1953	3.99	359	13	120	4	17
Montana	109	4	13	1978	0	1974+	.27	81	3	0	0	0
Nebraska	947	35	78	1975	10	1966	4.54	471	17	44	2	6
Nevada	18	1	4	1964	0	1978+	.06	17	1	0	0	0
New Hampshire	59	2	9	1963	0	1979+	2.35	53	2	0	0	0
New Jersey	43	2	8	1973	0	1978+	2.03	35	1	0	0	0
New Mexico	229	8	18	1972	0	1953	.70	172	6	3	0	0
New York	96	4	8	1978	0	1953	.72	81	3	2	0	0
North Carolina	314	12	38	1973	2	1970	2.21	197	7	22	1	4
North Dakota	444	16	52	1976	2	1961	2.33	259	10	21	1	3
Ohio	367	14	43	1973	3	1976	3.30	203	8	147	5	36
Oklahoma	1452	54	107	1957	21	1978	7.69	613	23	177	7	25
Oregon	24	1	3	1975+	0	1979+	.09	20	1	0	0	0
Pacific	1	0	1	1975	0	1979+	.52	1	0	0	0	0
Pennsylvania	201	7	23	1976	0	1959	1.64	145	5	8	0	2
Puerto Rico	9	0	2	1979+	0	1978+	.97	8	0	0	0	0
Rhode Island	1	0	1	1972	0	1979+	.31	1	0	0	0	0
South Carolina	246	9	23	1973	1	1970+	2.93	169	6	24	1	8
South Dakota	632	23	64	1965	1	1959	3.04	320	12	8	0	1
Tennessee	298	11	44	1974	1	1962	2.61	161	6	74	3	18
Texas	3192	118	232	1967	32	1953	4.42	1322	49	370	14	14
Utah	32	1	5	1970+	0	1979+	.14	25	1	0	0	0
Vermont	25	1	5	1962	0	1979+	.96	21	1	0	0	0
Virginia	156	6	22	1975	1	1963	1.42	107	4	16	1	4
Virgin Islands	2	0	1	1979+	0	1978+	5.57	2	0	0	0	0
Washington	30	1	4	1978+	0	1977+	.16	24	1	6	0	1
West Virginia	54	2	6	1974	0	1960+	.83	43	2	1	0	0
Wisconsin	471	17	33	1964	3	1953	3.11	261	10	53	2	9
Wyoming	239	9	42	1979	0	1970	.90	168	6	2	0	0
TOTAL: UNITED STATES	*19493	722	1102	1973	421	1953	2.00	4567	169	2997	111	8

+ Also in earlier year(s).

* Corrected for boundary-crossing tornadoes.

† Tornado Days for Country as a whole.

Mean annual tornadoes per 10,000 square miles.

① Number of deaths per 10,000 square miles -- 1953-79.

NUMBER OF FUNNEL CLOUDS 1979

STATE	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANN
Alabama	2			2	2			3		2	5		16
Alaska		2						1					0
Arizona		2	3	13	12		8	3					3
Arkansas	1												41
California													1
Colorado					4	11	15	1					31
Connecticut													0
Delaware													0
District of Columbia													0
Florida	1	1		2	24	9	15	15	16	1	2		86
Georgia													3
Hawaii	1	1	3	1									6
Idaho					1								1
Illinois						4	4	18					0
Indiana													29
Iowa						2	20	1					23
Kansas					2	1	6	2	5	5			26
Kentucky													0
Louisiana													0
Maine													0
Maryland													0
Massachusetts													0
Michigan					2	1	1	2	4				22
Minnesota						7	50	12	18	1			88
Mississippi													0
Missouri													8
Montana													0
Nebraska						7	1	26	11	4	3		52
Nevada													0
New Hampshire													0
New Jersey													0
New Mexico						1	6		6				13
New York													0
North Carolina						1	2	11	3				4
North Dakota							2	39	11				63
Ohio													0
Oklahoma							7	14	6	1			61
Oregon								4					4
Pacific													0
Pennsylvania													5
Puerto Rico													0
Rhode Island													1
South Carolina													0
South Dakota													11
Tennessee													3
Texas													263
Utah													0
Vermont													0
Virginia													0
Virgin Islands													1
Washington													5
West Virginia													3
Wisconsin													0
Wyoming													5
United States	7	12	23	68	149	177	203	158	51	20	10	0	878

TRACKS OF TORNADOES, 1979



GENERAL SUMMARY OF LIGHTNING, 1959-79

Henry N. Vigansky
National Oceanic and Atmospheric Administration
Environmental Data and Information Service
National Climatic Center

During the period 1959 through 1979, of the 2,210 lightning deaths reported in the United States, there were 19 incidents of three or more deaths caused by a single lightning strike. Also, there were 106 cases of six or more injuries associated with a single bolt of lightning. Fifteen percent of the fatalities occurred while people were under trees; 12 percent while boating, fishing or swimming; five percent while golfing; six percent while driving tractors, farm machinery or heavy road equipment; 26 percent of the fatalities occurred in open fields, ball fields and playgrounds; one percent while talking on telephones and 34 percent at various other and unknown locations.

Alaska and Hawaii are the only states that did not record a single fatality or injury for the entire period of record.

Some of the most unusual lightning associated deaths and injuries are described in the following paragraphs:

JULY 1959. In New York City on the 19th, lightning struck a tree killing four people and injuring four others. On the 20th, one soldier was killed and 17 others were injured by lightning at Fort Devins, Massachusetts.

JUNE 1960. At Warner Robins, Georgia, on the 25th, lightning struck a tin roofed shed located on a golf course, two people were killed and 20 injured.

APRIL 1961. Near Northboro, Massachusetts, on the 26th, a premature explosion of five pounds of dynamite caused by lightning resulting in one death and 11 injuries.

JUNE 1961. At Lake Champlain, Vermont, on the 25th, lightning struck and killed four men, while they were fishing from a boat.

JULY 1961. On the 7th, at Fort Benning, Georgia, four soldiers were killed and 15 injured as a result of a lightning strike within a group of soldiers on the rifle range. Three miles (4.8 km) north of Clinton, North Carolina, on the 12th, nine tobacco workers were struck by lightning while taking shelter in a tobacco barn from a thunderstorm. Only one person survived. On the 19th, in Cambridge, Ohio, four construction workers sought shelter from a storm under a tree and were killed when lightning struck the tree.

AUGUST 1961. At Camp A.P. Hill, Virginia, at 3:40 p.m., on the 3rd, lightning struck a field kitchen, two soldiers were killed and 10 others were injured.

JUNE 1963. In Gadsden County, Florida, on the 10th, lightning killed two and injured 21 tobacco workers as they took refuge from a storm in a tobacco barn. On the 12th, lightning struck the Livingston Manor located in Sullivan County, New York, resulting in \$100,000 damage and claiming the lives of three people and injuring eight others.

DECEMBER 1963. The crash of a Jet Airliner, killing 81 persons, at Elkton, Maryland, on the 8th, was attributed to lightning by the Civil Aeronautics Board Investigators.

MARCH 1964. At 9:30 p.m., on the 3rd, in Saint Francis County, Arkansas, lightning struck a house, the building burned rapidly and seven people perished.

JULY 1964. At Fort Jackson, South Carolina, on the 24th, at 3:00 p.m., 28 soldiers on a training exercise were injured by lightning.

JUNE 1965. In Madison County, Tennessee, on the 8th, at approximately 9:30 p.m., six small children perished in a house fire resulting from a lightning strike. On the 23rd, four men were killed and six others injured on a golf course near Butler, Pennsylvania. Lightning struck a wooden shelter under which they were standing.

MAY 1966. At 5:24 p.m., on the 31st, at the ball park in Clovis, New Mexico, lightning struck a tree injuring 10 people.

JUNE 1966. On the 5th, in Gibraltar, Michigan, eleven teenagers taking shelter from a storm under a large tree were struck by lightning. They were taken to a hospital and treated for flash burns, cuts and bruises. Some of the children were sent sprawling up to 25 feet (7.6 m) from where they were standing at the time of the lightning strike.

GENERAL SUMMARY OF LIGHTNING

SEPTEMBER 1966. Five miles (8 km) northeast of Elfrida, Arizona, on the 1st, at 11:30 a.m., lightning struck in the midst of 35 field workers killing three and injuring 10 others.

JULY 1968. On the 1st, seventeen National Guardsmen were injured by lightning at Camp Shelby, Mississippi. Some of the men were in a chow line and some were sitting in a PX tent. A man serving food was knocked unconscious and he bled at the ears; another man was knocked off a metal chair, receiving second degree burns and split trousers. On the 18th, at Fort Polk, Louisiana, 50 military recruits received treatment for minor burns and lacerations after lightning struck the ground near where they were training.

AUGUST 1968. At about 5 p.m., on the 1st, a 16 year old boy was killed instantly, while making an emergency telephone call, when lightning struck the telephone lines near his home located 3 miles (4.8 km) east of Poteau, Oklahoma. On the 24th, lightning struck the tent poles at the Crawford County Fairgrounds, Pennsylvania, killing two people and injuring 72 others. Lightning struck in a camping area of the Baxter State Park, Maine, on the 25th. One person was killed and 28 injured.

JUNE 1969. At Fort Knox, Kentucky, the National Guard Communications Center was struck by lightning on the 20th. Two soldiers were admitted to the hospital for shock and burns and 16 others were treated for minor injuries.

JUNE 1970. On the 29th, one soldier was killed and 16 injured when struck by lightning while undergoing basic training at Fort Dix, New Jersey.

SEPTEMBER 1970. At the Gibbs Comprehensive High School, Saint Petersburg, Florida, on the 7th, a lightning bolt struck in a group of football players, killing two and injuring 22. All 38 players and four coaches were knocked off their feet.

JULY 1971. At 12:05 p.m., on the 18th, near the entrance of Black Copper Canyon, New Mexico, four cyclists were killed and two injured when lightning struck a tree in a grove where they took shelter from a storm. On the 21st at Camp Shelby, Mississippi, 13 Alabama National Guardsmen were injured when lightning struck a field radio antenna. One soldier was killed and 15 injured on the 26th, at Fort Dix, New Jersey, when they were struck by lightning while taking a refresher training course.

SEPTEMBER 1971. In the Fountain Run Area near Tompkinsville, Kentucky, on the 6th, at 3:00 p.m., four men hanging tobacco were killed instantly when lightning struck the metal roof of the barn. The lightning apparently hit the man standing near the roof and passed through the tobacco sticks to the other victims. A teenage daughter of one of the victims was standing on the truck bed being unloaded but was not hurt. A similar incident occurred on the same day near Lafayette, Tennessee. Four men working in a barn hanging tobacco were killed. Again it was reported that lightning struck the metal roof of the barn.

JULY 1972. In Appleton, Wisconsin, on the 20th, at 4:30 p.m., a lightning strike caused power failure at a paper mill permitting trichlorethylene gas to escape. One person was killed and 13 injured. On the 23rd, near Solon, Ohio, lightning killed three and seriously hurt two other fishermen standing on the shore of a small lake.

AUGUST 1972. On the 8th, in Raleigh, North Carolina, five people perished in a house fire that was caused by lightning.

JULY 1973. On the 21st, at Wiggins, Mississippi, lightning struck within a baseball field filled with people. Thirty people received minor injuries and burns.

AUGUST 1973. At the Petit Jean State Park, Arkansas, on the 9th, at 5:30 p.m., 13 people took refuge from a storm in a cave-like rock formation. They were injured when lightning passed through a one-foot (.30 m) opening at the top of the formation. On the 12th, in Madison County, Illinois, 10 persons were injured when lightning struck a tree under which they were standing.

MAY 1974. On the 30th, at 1:00 p.m., in Saint Louis, Missouri, four teenage girls and one woman golfer were killed by lightning while standing under a tree. Also, one other person was injured.

JULY 1975. Near Mayo, Florida, on the 8th, three persons were killed and six injured by lightning while stringing tobacco under a tin shelter. The lightning first struck a nearby walnut tree. On the 20th, near Annandale, Virginia, 16 persons were injured by lightning while attending a picnic. One man was seriously injured but because of prompt first aid applications his life was saved. During the afternoon of the 24th, near Rochester, New York, lightning struck a tree under which 30 people sought shelter from the rain. Twelve of them were injured and one girl was killed.

AUGUST 1975. On the 3rd, at 5:00 p.m., lightning struck a tin roofed pavilion near Jamestown, New York.

GENERAL SUMMARY OF LIGHTNING

One man was killed and 11 others were injured. Ninety people were injured by lightning on the 23rd, at a campground near Leslie, Michigan.

SEPTEMBER 1975. During the afternoon of the 30th, in Miami, Florida, a bolt of lightning struck the Columbus High School Athletic Field injuring 14 football players and three coaches. A fifteen year old boy apparently was struck directly in the chest and was critically injured. He died three days later.

JULY 1976. On the 27th at Fort Benning, Georgia, 19 soldiers were injured as lightning struck the ground near their shelter.

AUGUST 1977. In the Buck Creek area of Delaware County, Iowa, at 12:30 a.m., on the 8th, lightning struck a roof mounted citizens band antenna which started a house fire, six people perished.

SEPTEMBER 1977. On the 5th, at 2:55 p.m., in Van Wert County, Ohio, lightning struck a fence at the county fairgrounds injuring the 25 people who were leaning on the fence.

JUNE 1978. In Old Lyme, Connecticut, on the 19th, lightning struck a tree near a ball field and injured 12 softball players. During a training exercise at Camp Blanding, Florida, on the 30th, at 6:00 p.m., 27 National Guardsmen were injured by lightning.

JULY 1978. On the 26th, at 7:30 a.m., at Palo, Iowa, Nuclear Power Plant, 10 men were injured by a bolt of lightning while replacing a deteriorated pipe.

SEPTEMBER 1978. In Whitman, Massachusetts, on the 11th, a bolt of lightning struck a field where football practice was being held. The players and coaches ran for shelter, but while running a young coach was hit in the head by lightning and killed instantly. Sixteen of the players were injured.

APRIL 1979. On the 19th, at 9:45 p.m., lightning hit a Liberian Tanker while it was docked at the Sun Oil Terminal in Nederland, Texas, and 16 crewmen were injured.

JUNE 1979. At Camp Grayling, Michigan, on the 20th, at 9:00 p.m., lightning struck a mess tent injuring 45 National Guardsmen.

Additional lightning information is presented in the following tables. The National Climatic Center has developed a magnetic tape containing lightning statistics for the period 1959-1979. The tape contains the date/time (year, month, day and hour), location (state and county), number of fatalities, number of injuries and amount of property damage. A copy of this tape can be obtained by contacting the National Climatic Center, Federal Building, Asheville, North Carolina 28801.

LIGHTNING FATALITIES, 1979

STATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ALABAMA	0	0	0	0	0	0	0	1	0	0	0	0	1
ALASKA	0	0	0	0	0	0	0	0	0	0	0	0	0
ARIZONA	0	0	0	0	0	0	0	0	0	0	0	0	0
ARKANSAS	0	0	0	0	1	0	2	2	0	0	0	0	5
CALIFORNIA	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORADO	0	0	0	0	0	2	0	1	0	0	0	0	3
CONNECTICUT	0	0	0	0	0	0	0	0	0	0	0	0	0
DELAWARE	0	0	0	0	0	0	0	0	0	0	0	0	0
DISTRICT OF COLUMBIA	0	0	0	0	0	0	0	1	0	0	0	0	1
FLORIDA	0	0	0	0	1	0	0	3	0	0	0	0	4
GEORGIA	0	0	0	0	0	1	0	0	0	0	0	0	2
HAWAII	0	0	0	0	0	0	0	0	0	0	0	0	0
IDAHO	0	0	0	0	0	0	0	0	0	0	0	0	0
ILLINOIS	0	0	0	0	0	0	0	1	0	0	0	0	1
INDIANA	0	0	0	0	0	0	0	0	0	0	0	0	0
IOWA	0	0	0	0	0	0	0	0	0	0	0	0	0
KANSAS	0	0	0	0	0	0	0	0	0	0	0	0	0
KENTUCKY	0	0	0	0	0	0	0	0	0	0	0	0	0
LOUISIANA	0	0	0	1	0	0	0	0	0	0	0	0	4
MAINE	0	0	0	0	0	0	0	0	0	0	0	0	2
MARYLAND	0	0	0	0	0	0	0	1	0	0	0	0	1
MASSACHUSETTS	0	0	0	0	1	0	0	2	1	0	0	0	3
MICHIGAN	0	0	0	0	0	0	0	0	0	0	0	0	2
MINNESOTA	0	0	0	0	0	0	0	0	0	0	0	0	1
MISSISSIPPI	0	0	0	0	0	0	0	1	0	0	0	0	2
MISSOURI	0	0	0	0	0	0	0	0	0	0	0	0	0
MONTANA	0	0	0	0	0	0	0	0	0	0	0	0	0
NEBRASKA	0	0	0	0	0	0	0	0	0	0	0	0	0
NEVADA	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW HAMPSHIRE	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW JERSEY	0	0	0	0	0	1	0	0	0	0	0	0	3
NEW MEXICO	0	0	0	0	0	0	0	2	0	0	0	0	2
NEW YORK	0	0	0	0	0	0	0	0	0	0	0	0	0
NORTH CAROLINA	0	0	0	0	0	2	0	0	0	0	0	0	3
NORTH DAKOTA	0	0	0	0	0	0	0	0	0	0	0	0	0
OHIO	0	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	0	0	0	0	0	0	1	0	0	0	1	0	0
OREGON	0	0	0	0	0	0	0	0	0	0	0	0	1
PENNSYLVANIA	0	0	0	0	0	0	0	0	0	0	0	0	0
PUERTO RICO	0	0	0	0	0	0	0	0	0	0	0	0	0
RHODE ISLAND	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH CAROLINA	0	0	0	0	0	0	0	1	0	1	0	0	4
SOUTH DAKOTA	0	0	0	0	0	0	0	0	0	0	0	0	2
TENNESSEE	0	0	0	0	0	0	1	1	0	0	0	0	2
TEXAS	0	0	0	0	0	0	0	0	0	0	0	1	0
UTAH	0	0	0	0	0	0	0	0	0	0	0	0	0
VERMONT	0	0	0	0	0	0	0	0	0	0	0	0	0
VIRGINIA	0	0	0	0	0	0	0	0	0	0	0	0	0
WASHINGTON	0	0	0	0	0	0	0	0	0	0	0	0	0
WEST VIRGINIA	0	0	0	0	0	0	0	0	0	0	0	0	0
WISCONSIN	0	0	0	0	0	0	0	0	0	0	0	0	2
WYOMING	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL	0	0	0	3	11	4	20	16	4	3	2	0	63

LIGHTNING INJURIES, 1979

STATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
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ALABAMA	0	0	0	1	0	0	0	7	0	0	0	0	8
ALASKA	0	0	0	0	0	0	0	0	0	0	0	0	0
ARIZONA	0	0	0	0	2	0	2	0	0	0	0	0	4
ARKANSAS	0	1	0	0	1	0	1	2	0	0	0	0	5
CALIFORNIA	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORADO	0	0	0	0	5	0	2	2	0	0	0	0	9
CONNECTICUT	0	0	0	0	0	0	0	0	0	0	0	0	0
DELAWARE	0	0	0	0	0	0	0	0	0	0	0	0	0
DISTRICT OF COLUMBIA	0	0	0	0	0	0	0	1	0	0	0	0	1
FLORIDA	0	0	0	0	1	0	10	8	6	0	0	0	25
GEORGIA	0	0	0	0	0	0	7	4	0	1	0	0	12
HAWAII	0	0	0	0	0	0	0	0	0	0	0	0	0
IDAHO	0	0	0	0	0	0	0	0	0	0	0	0	0
ILLINOIS	0	0	0	0	0	0	9	2	0	0	0	0	11
INDIANA	0	0	0	0	0	0	3	4	0	0	0	0	7
IOWA	0	0	0	0	0	0	0	3	0	0	0	0	3
KANSAS	0	0	0	0	0	0	0	0	0	0	0	0	0
KENTUCKY	0	0	0	0	0	0	0	0	0	0	0	0	1
LOUISIANA	0	0	1	0	0	0	0	0	0	0	0	0	3
MAINE	0	0	0	0	0	0	0	0	0	0	0	0	0
MARYLAND	0	0	0	0	0	0	0	3	1	0	0	0	4
MASSACHUSETTS	0	0	1	0	0	0	2	4	0	0	0	0	7
MICHIGAN	0	0	0	0	1	0	0	0	0	0	0	0	48
MINNESOTA	0	0	0	0	0	0	47	0	0	0	0	0	0
MISSISSIPPI	0	1	0	1	0	0	1	6	1	0	0	0	10
MISSOURI	0	0	0	0	3	0	0	0	0	0	0	0	4
MONTANA	0	0	0	0	0	2	0	0	0	0	0	0	0
NEBRASKA	0	0	0	0	0	0	0	0	0	1	0	0	3
NEVADA	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW HAMPSHIRE	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW JERSEY	0	0	0	0	0	1	0	1	1	0	0	0	3
NEW MEXICO	0	0	0	0	0	0	1	0	1	0	0	0	2
NEW YORK	0	0	0	0	0	0	0	0	0	0	0	0	0
NORTH CAROLINA	0	0	0	0	0	0	0	0	0	0	0	0	14
NORTH DAKOTA	0	0	0	0	0	0	0	0	0	0	0	0	0
OHIO	0	0	0	0	0	0	7	0	0	0	0	0	7
OKLAHOMA	0	0	0	0	0	0	2	6	0	0	0	0	14
OREGON	0	0	0	0	0	0	0	4	0	0	0	0	0
PENNSYLVANIA	0	0	0	0	0	0	3	0	0	0	0	0	5
PUERTO RICO	0	0	0	0	0	0	0	0	0	0	0	0	0
RHODE ISLAND	0	0	0	0	0	0	1	0	0	0	0	0	1
SOUTH CAROLINA	0	0	0	0	0	4	0	1	0	0	0	0	5
SOUTH DAKOTA	0	0	0	0	0	0	0	0	0	0	0	0	0
TENNESSEE	0	0	0	0	1	0	0	0	0	0	0	0	2
TEXAS	0	0	0	1	0	0	10	0	0	0	0	0	32
UTAH	0	0	0	0	0	0	0	0	0	0	0	0	0
VERMONT	0	0	0	0	0	0	0	0	0	0	0	0	0
VIRGINIA	0	0	0	0	0	0	0	0	1	0	0	0	1
WASHINGTON	0	0	0	0	0	0	0	0	0	0	0	0	0
WEST VIRGINIA	0	0	0	0	0	0	0	0	2	0	0	0	2
WISCONSIN	0	0	0	0	0	0	1	0	0	0	0	0	1
WYOMING	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	2	4	26	32	73	55	49	9	2	2	0	254

TOTAL LIGHTNING FATALITIES BY STATE FOR PERIOD, 1959-79

STATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ALABAMA	0	0	2	2	4	15	18	11	1	1	0	0	54
ALASKA	0	0	0	0	0	0	0	0	0	0	0	0	0
ARIZONA	0	0	0	0	1	1	12	11	6	0	0	0	31
ARKANSAS	0	0	8	0	10	26	19	15	3	0	0	0	81
CALIFORNIA	0	0	0	0	0	2	1	5	3	0	0	0	11
COLORADO	0	0	0	0	6	8	26	11	0	1	0	0	52
CONNECTICUT	0	0	0	0	0	3	5	3	0	0	0	0	11
DELAWARE	0	0	0	0	0	1	3	3	0	0	0	0	7
DISTRICT OF COLUMBIA	0	0	0	0	0	1	1	1	0	0	0	0	3
FLORIDA	0	0	3	3	17	56	62	50	28	2	1	1	223
GEORGIA	0	0	2	3	4	15	19	8	2	1	0	0	54
HAWAII	0	0	0	0	0	0	0	0	0	0	0	0	0
IDAHO	0	0	0	1	1	5	5	5	1	0	0	0	18
ILLINOIS	0	0	0	3	7	18	12	10	7	2	0	0	59
INDIANA	0	0	1	2	6	17	15	10	4	2	0	0	57
IOWA	0	0	1	3	9	14	6	11	4	4	0	0	52
KANSAS	0	0	0	3	8	5	10	6	4	1	1	0	38
KENTUCKY	1	0	0	2	5	15	13	7	10	0	0	0	53
LOUISIANA	0	0	1	5	6	16	28	12	10	0	1	1	80
MAINE	0	0	0	0	0	3	3	6	0	3	0	0	15
MARYLAND	0	0	0	0	0	5	5	6	1	0	0	0	81
MASSACHUSETTS	0	0	0	1	3	2	3	7	1	0	0	0	17
MICHIGAN	0	0	0	0	6	16	14	15	3	0	0	0	54
MINNESOTA	0	0	0	2	2	6	4	10	8	1	0	0	33
MISSISSIPPI	1	0	4	0	9	7	17	15	4	0	0	0	57
MISSOURI	0	0	5	4	17	17	10	7	3	1	0	0	64
MONTANA	0	0	0	0	2	6	6	1	0	0	0	0	15
NEBRASKA	0	0	0	1	3	12	6	5	4	0	0	0	31
NEVADA	0	0	0	0	0	1	0	2	0	0	0	0	3
NEW HAMPSHIRE	0	0	0	0	0	3	1	0	0	0	0	0	4
NEW JERSEY	0	0	0	1	2	5	16	14	3	0	0	0	41
NEW MEXICO	0	0	0	1	3	8	17	20	3	0	0	0	52
NEW YORK	0	0	0	0	5	18	38	21	4	2	0	0	88
NORTH CAROLINA	0	1	3	2	18	22	36	29	2	0	0	0	113
NORTH DAKOTA	0	0	0	0	0	4	3	3	0	0	0	0	10
OHIO	0	0	0	3	6	15	33	11	7	2	1	0	78
OKLAHOMA	0	1	1	9	11	9	7	13	11	2	1	0	65
OREGON	0	0	0	0	1	0	0	1	2	0	0	0	4
PENNSYLVANIA	0	1	0	0	7	24	26	24	6	1	0	0	89
PUERTO RICO	0	0	0	0	0	3	2	4	5	3	0	0	17
RHODE ISLAND	0	0	0	0	0	0	1	0	2	0	0	0	3
SOUTH CAROLINA	0	0	1	0	5	9	23	8	3	0	0	0	49
SOUTH DAKOTA	0	0	0	0	2	1	4	0	3	2	0	0	12
TENNESSEE	0	1	1	4	12	29	12	11	11	2	2	0	85
TEXAS	0	0	0	9	20	10	35	21	11	4	1	0	111
UTAH	0	0	0	0	0	5	1	3	2	0	0	0	11
VERMONT	0	0	0	0	0	4	5	3	0	0	0	0	12
VIRGINIA	0	0	0	0	9	4	7	8	2	0	0	0	30
WASHINGTON	0	0	0	0	0	1	0	0	0	0	0	0	1
WEST VIRGINIA	0	0	0	0	4	2	6	2	1	0	0	0	15
WISCONSIN	0	0	0	0	0	8	11	7	2	1	0	0	30
WYOMING	0	0	0	0	2	3	7	5	2	0	0	0	19
TOTAL	2	4	33	64	233	480	614	461	189	38	8	84	2210

TOTAL LIGHTNING INJURIES BY STATE FOR PERIOD, 1959-79

STATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ALABAMA	6	1	6	2	1	10	40	27	0	2	0	0	95
ALASKA	0	0	0	0	0	0	0	0	0	0	0	0	0
ARIZONA	2	0	0	0	6	1	22	15	12	0	0	0	58
ARKANSAS	1	2	2	9	22	12	28	45	9	0	0	0	130
CALIFORNIA	0	0	0	0	0	0	6	7	1	0	0	1	15
COLORADO	0	0	0	0	8	24	39	35	4	0	0	0	110
CONNECTICUT	0	0	0	0	3	14	10	10	4	0	0	0	41
DELAWARE	0	0	0	0	1	8	0	1	2	0	0	0	12
DISTRICT OF COLUMBIA	0	0	0	0	0	4	1	1	0	0	1	0	7
FLORIDA	0	1	11	2	19	136	142	135	107	12	0	1	566
GEORGIA	0	0	2	2	12	37	78	29	3	5	0	0	168
HAWAII	0	0	0	0	0	0	0	0	0	0	0	0	0
IDAHO	0	0	0	1	6	15	12	15	4	1	0	0	54
ILLINOIS	0	0	0	2	12	34	22	25	9	1	0	0	105
INDIANA	0	0	0	4	16	30	26	16	1	0	0	0	93
IOWA	0	0	1	5	21	39	32	15	16	2	1	0	132
KANSAS	0	0	4	9	10	18	35	18	20	4	1	0	119
KENTUCKY	0	0	0	2	15	45	42	13	10	1	0	0	128
LOUISIANA	1	0	6	2	12	8	81	32	13	0	1	1	157
MAINE	0	0	0	0	3	5	17	43	0	0	1	0	69
MARYLAND	0	0	0	0	14	14	22	13	3	0	0	0	66
MASSACHUSETTS	0	0	1	11	8	30	89	58	21	4	2	1	225
MICHIGAN	0	0	1	7	31	112	55	174	18	6	0	0	404
MINNESOTA	0	0	0	0	6	17	11	13	5	3	0	0	55
MISSISSIPPI	1	2	3	2	10	8	90	22	6	1	1	1	147
MISSOURI	0	1	1	8	12	16	4	13	3	2	0	0	60
MONTANA	0	0	0	0	5	8	10	6	0	0	0	0	29
NEBRASKA	0	0	0	2	9	6	7	9	5	0	0	0	38
NEVADA	0	0	0	0	0	0	0	2	0	0	0	0	2
NEW HAMPSHIRE	0	0	0	0	2	17	3	0	2	0	0	0	24
NEW JERSEY	0	0	0	0	3	11	48	18	14	0	0	0	94
NEW MEXICO	0	0	0	1	17	8	28	14	6	0	0	0	74
NEW YORK	0	0	0	0	4	42	60	76	16	3	1	0	202
NORTH CAROLINA	0	2	8	12	37	48	66	66	16	2	1	0	258
NORTH DAKOTA	0	0	0	0	1	0	0	3	2	0	0	0	6
OHIO	0	0	0	1	13	33	30	40	40	3	0	0	160
OKLAHOMA	0	1	3	12	24	34	30	30	16	2	5	1	158
OREGON	0	0	0	2	2	2	0	9	3	0	0	0	16
PENNSYLVANIA	0	5	0	0	9	59	60	119	10	2	0	0	264
PUERTO RICO	0	0	0	0	0	0	1	0	2	1	0	0	4
RHODE ISLAND	0	2	0	0	1	5	3	6	2	0	1	0	20
SOUTH CAROLINA	0	0	0	1	15	5	65	12	13	0	0	0	111
SOUTH DAKOTA	0	0	0	1	2	12	4	5	1	0	0	0	25
TENNESSEE	0	1	4	2	22	27	54	25	16	4	0	0	155
TEXAS	0	1	3	26	35	30	28	33	18	5	2	0	181
UTAH	0	0	0	0	1	18	1	6	4	0	0	0	30
VERMONT	0	0	0	0	0	7	10	1	0	0	0	0	14
VIRGINIA	0	0	0	1	4	10	32	21	0	0	0	0	68
WASHINGTON	0	0	0	0	4	1	5	7	0	0	0	0	17
WEST VIRGINIA	0	0	0	0	0	2	18	5	1	1	0	0	27
WISCONSIN	0	1	2	2	4	19	27	6	6	1	1	0	71
WYOMING	0	0	0	0	4	32	16	20	6	0	0	0	78
TOTAL	11	20	58	129	466	1069	1510	1316	470	68	19	6	5142

LIGHTNING FATALITIES AND INJURIES BY YEAR, 1959-79

LIGHTNING FATALITIES

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
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1959	1	0	1	4	18	25	50	39	13	7	0	0	158
1960	0	0	1	5	7	33	25	17	9	0	0	0	97
1961	0	0	1	2	9	23	47	20	10	1	0	0	113
1962	0	0	3	6	27	20	26	28	9	1	0	0	120
1963	0	0	4	3	11	37	42	20	10	2	0	81	210
1964	0	0	9	6	15	21	29	19	7	1	1	0	108
1965	0	0	2	4	12	34	39	28	4	2	0	0	125
1966	0	0	1	1	8	15	21	16	11	3	0	0	76
1967	1	0	1	2	3	26	21	14	1	2	1	1	73
1968	0	0	0	1	5	24	30	29	9	3	1	1	103
1969	0	0	1	5	13	17	27	13	14	3	0	0	93
1970	0	0	0	1	17	25	27	19	21	1	0	0	111
1971	0	0	2	1	12	27	33	19	19	0	0	0	113
1972	0	0	1	1	5	21	31	28	3	1	0	0	91
1973	0	1	2	3	10	24	31	18	13	2	1	0	105
1974	0	2	0	7	12	21	28	24	6	0	2	0	102
1975	0	1	3	3	11	19	28	18	6	2	0	0	91
1976	0	0	0	1	9	19	19	19	3	2	0	0	72
1977	0	0	0	4	9	19	16	35	14	1	0	0	98
1978	0	0	1	1	9	26	24	22	3	1	0	1	88
1979	0	0	0	3	11	4	20	16	4	3	2	0	63
TOTAL AVERAGE	2	4	33	64	233	480	614	461	189	38	8	84	2210
	0	0	2	3	11	23	29	22	9	2	0	4	105

LIGHTNING INJURIES

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
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1959	0	0	0	5	27	52	110	103	23	3	1	1	325
1960	0	0	2	11	12	70	28	50	16	9	4	0	202
1961	0	0	7	14	15	49	83	50	31	5	1	1	256
1962	0	0	3	5	39	38	90	49	12	6	0	0	242
1963	7	0	0	6	14	64	55	44	18	1	0	0	209
1964	0	0	10	15	14	38	99	53	8	1	1	0	239
1965	3	2	2	4	26	42	59	59	19	1	0	0	217
1966	0	2	1	2	37	39	42	44	15	1	0	0	183
1967	0	0	0	4	7	35	59	33	4	2	0	1	145
1968	0	0	4	2	16	52	117	155	14	9	1	0	370
1969	0	0	0	4	19	75	39	23	12	0	0	1	173
1970	0	0	1	5	40	40	82	43	43	4	1	0	259
1971	0	1	0	1	24	71	79	54	22	1	1	0	254
1972	0	0	8	6	12	24	72	54	24	2	1	0	203
1973	0	0	10	2	20	23	74	59	29	9	2	0	228
1974	1	9	1	3	12	27	56	51	12	1	0	0	173
1975	0	3	0	1	30	60	107	154	42	1	0	1	399
1976	0	1	0	7	16	39	73	68	13	1	0	1	219
1977	0	0	0	3	35	58	58	67	62	4	4	0	291
1978	0	0	5	3	19	100	73	54	42	5	0	0	301
1979	0	2	4	26	32	73	55	49	9	2	2	0	254
TOTAL AVERAGE	11	20	58	129	466	1069	1510	1316	470	68	19	6	5142
	1	1	3	6	22	51	72	63	22	3	1	0	245

HAILSTORMS LOSSES FOR PAST YEARS

Year	Property (exclusive of crops)	Crops	Total	Year	Property (exclusive of crops)	Crops	Total
1933	-	-	7	1959	.	6	7
1934	-	-	7	1960	.	7	7
1935	-	-	7	1961	.	8	8
1936	6	7	7	1962	.	9	9
1937	6	7	7	1963	.	8	8
1938	6	7	7	1964	.	8	8
1939	5	6	6	1965	.	8	8
1940	6	7	7	1966	.	8	8
1941	6	7	7	1967	.	8	8
1942	6	7	7	1968	.	8	8
1943	6	7	7	1969	.	8	8
1944	7	7	8	1970	.	8	8
1945	6	7	7	1971	.	7	8
1946	7	7	7	1972	.	7	8
1947	6	8	8	1973	.	7	8
1948	7	8	8	1974	.	7	8
1949	7	7	7	1975	.	7	8
1950	7	7	7	1976	.	7	8
1951	7	7	8	1977	.	7	8
1952	7	7	7	1978	.	8	8
1953	7	7	7	1979	.	7	8
1954	7	8	8				
1955	7	7	8				
1956	7	8	8				
1957	7	8	8				
1958	7	8	8				

+ Storm damages are placed in categories varying from 1 to 9 as follows:

- | | | |
|--------------------|----------------------------|---------------------------------|
| 1 Less than \$50 | 4 \$5,000 to \$50,000 | 7 \$5 million to \$50 million |
| 2 \$50 to \$500 | 5 \$50,000 to \$500,000 | 8 \$50 million to \$500 million |
| 3 \$500 to \$5,000 | 6 \$500,000 to \$5 million | 9 \$500 million to \$5 billion. |

NOTE.--The above estimated losses are based on values at time of occurrence.

WINDSTORM LOSSES PAST YEARS

(Windstorms other than tornadoes)

Year	Total loss of life	Total property loss	Year	Total loss of life	Total property loss
1916	65	7	1951	289	8
1917	25	6	1952	137	8
1918	79	7	1953	118	8
1919	344	7	1954	292	9
1920	42	6	1955	301	8
1921	65	7	1956	196	8
1922	133	7	1957	553	8
1923	68	7	1958	129	8
1924	78	7	1959	145	7
1925	88	7	1960	85	8
1926	357	8	1961	64	8
1927	64	7	1962	124	9
1928	1,947	8	1963	54	9
1929	46	7	1964	64	9
1930	49	7	1965	107	9
1931	17	7	1966	74	8
1932	306	7	1967	48	8
1933	156	8	1968	49	8
1934	109	7	1969	194	9
1935	461	7	1970	64	8
1936	121	7	1971	76	8
1937	43	7	1972	103	8
1938	630	8	1973	80	8
1939	60	6	1974	30	9
1940	251	7	1975	103	8
1941	43	7	1976	127	8
1942	68	7	1977	65	8
1943	61	7	1978	71	8
1944	448	8	1979	51	9
1945	85	7		Total 10,663	
1946	70	7			
1947	117	8			
1948	52	8			
1949	102	8			
1950	210	8			

+ Storm damages are placed in categories varying from 1 to 9 as follows:

- | | | |
|--------------------|----------------------------|---------------------------------|
| 1 Less than \$50 | 4 \$5,000 to \$50,000 | 7 \$5 million to \$50 million |
| 2 \$50 to \$500 | 5 \$50,000 to \$500,000 | 8 \$50 million to \$500 million |
| 3 \$500 to \$5,000 | 6 \$500,000 to \$5 million | 9 \$500 million to \$5 billion. |

NOTE.--The above estimated losses are based on values at time of occurrence.

NORTH ATLANTIC TROPICAL CYCLONES, 1979

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The 1979 tropical cyclone season showed some signs of returning to what is considered normal; that is, lower latitude origins and tracks, more U. S. landfalls, and more intense hurricanes striking land areas in the western North Atlantic. There were eight named storms, five of which became hurricanes, and one subtropical storm this season. The most recent 30-yr average is 10 named storms and 6 hurricanes, so this past year continues the generally below-normal activity of the recent decade. This was the tenth consecutive year that the number of hurricanes has been average or below. Figure 1 gives the tracks of the 1979 named tropical cyclones and the subtropical cyclone, Table 1 gives a statistical summary, and Tables 2 and 3 show past years' data.

Even though there were fewer storms in 1979 than in 1978, the number of hurricane hours (each hour that a storm has windspeeds greater than 63 kn) reached 522. This was up markedly from last year's 307 and close to the 30-yr average of 620 hurricane hours. As one would expect, the large number of storms affecting the Gulf of Mexico, eastern Caribbean Sea, and the Atlantic seaboard also resulted in a larger number of ships reporting gale-force winds. There were 95 ships which reported winds of gale force on 144 observations received and plotted at the National Hurricane Center during the storms. Oddly enough, the only ship report of hurricane-force winds came from the KAPUS-KASING as the subtropical storm crossed the North Atlantic shipping lanes on October 24.

Three ships had the misfortune to encounter more than one tropical cyclone this year. The American ship TEXACO WISCONSIN encountered Bob and David, the American ship EL PASO ARZEW encountered David and Gloria, and the Dutch ship WINSUM encountered Frederic and Gloria. However, dubious top honors go to the American ship WALTER RICE, which encountered David, Frederic, and Henri while traveling down the U.S. East Coast and through the Gulf of Mexico. Twenty-two ships reported gale force winds more than once, with eight reporting gales more than three times, attesting especially to the large size of David and Frederic. Only the short-lived and minimal tropical storm Elena had no gale reports.

The lull in landfalling U.S. and eastern Caribbean hurricanes ended this year. Bob affected New Orleans, David the Miami-Fort Lauderdale area northward to Savannah, and Frederic the Mobile, AL-Pascagoula, MS, area. In addition, David devastated the Dominican Republic capital of Santo Domingo and seriously affected Dominica. The five landfalls of storms and hurricanes in the United States with three hurricanes and one major hurricane were near or

above the long-term averages of three, two, and one, respectively. Nevertheless, the decade of the seventies had both the lowest number of landfalling hurricanes, 12, and landfalling major hurricanes, 4, in this century. The previous lowest totals were 14 and 5, respectively.

The outstanding features of the 1979 hurricane season were:

(1) Hurricane David, the most intense hurricane of this century in the eastern Caribbean Sea, which devastated the island of Dominica, killing 56 and leaving 60,000 of the 80,000 residents homeless, and then killing an estimated 1,200 in the Dominican Republic with that country's government estimating damage in excess of \$1 billion and 200,000 homeless;

(2) Hurricane Frederic, which was the first hurricane to strike Mobile, AL, since 1926, caused an estimated \$2.3 billion damage in the United States;

(3) A reported 42 in of rain in 24 hr near Alvin, TX, during Claudette, which if confirmed would be a U.S. 24-hr rainfall record; and

(4) The greatest combined damage total in the United States in 1 yr from tropical cyclones.

TROPICAL STORM ANA, JUNE 19-23

Mariners were probably surprised to hear advisories being issued on a tropical cyclone east of the Lesser Antilles in June. Ana was the first June storm to form east of the Lesser Antilles since 1933 and only the second during the past 100 yr. Ana developed a few days earlier than the 1933 storm, which developed somewhat farther to the east of the islands.

The first evidence of something unusual came on the 19th at 0000 when the Mexican ship DRAGAMINAS reported southwest winds of 35 kn near 7.2°N, 42.6°W. Satellite pictures the next morning indicated that a depression was forming near 10°N, 45°W. Postanalysis showed that Ana reached tropical-storm strength about 0000 on June 22. However, the storm was not named until 1600, when the first reconnaissance flight indicated winds of 50 kn. Gale warnings were then issued for the islands from Martinique to Guadeloupe because of the proximity of the storm. Strong westerly winds at high levels separated the convective energy source from the low-level circulation center, however, and Ana weakened to a minimal tropical storm before passing through the islands during the evening of June 22. Further weakening took place, and Ana degenerated into a tropical wave in the eastern Caribbean Sea early

NORTH ATLANTIC TROPICAL CYCLONES

on the 24th.

There were no reports of gale-force winds or heavy rains in the islands and no deaths or damage.

HURRICANE BOB, July 9-16

Bob developed from one of the many disturbances that originate over Africa each year. He was the first of five named storms in the Gulf of Mexico during 1979. A depression formed in the southwest Gulf of Mexico on July 9 and began moving northeastward in advance of a low-pressure trough approaching from the west. Reconnaissance reports indicated the depression had reached tropical-storm strength the next morning, and gale warnings were issued at 1600 for the central Gulf Coast from Vermilion Bay, LA, to Biloxi, MS. Bob was upgraded to a hurricane at 2200 on July 10 as winds reached 65 kn. He was the first July hurricane in the Gulf since 1959.

The storm's center crossed the Louisiana coast near Grand Isle about daybreak on the 11th, passing just west of New Orleans later that morning, and weakening rapidly after crossing Lake Pontchartrain. The remnants of Bob produced some flooding from locally heavy rains in southern Indiana and Ohio and West Virginia.

Along the coast the statistics associated with Bob were typical of a minimal hurricane. The maximum sustained winds of 65 kn and minimum pressure of 986 mb occurred about the time of landfall. Highest measured winds on the coast were 45 to 55 kn with a few gusts to 65 kn. Tides were generally 3 to 5 ft above normal from the landfall point eastward to Mobile Bay. Rainfall totals were between 3 and 4 in. Eight tornadoes were reported but only one, in Biloxi, MS, produced significant damage. There was one death in Louisiana. Coastal damage was less than \$5 million, but it exceeded \$15 million in the Indiana floods.

TROPICAL STORM CLAUDETTE, JULY 16-29

Claudette was a tropical storm for two brief periods separated by a 5-day interval during which she weakened to a disorganized wave. A surface circulation was first evident on July 16 about 450 mi east of the Leeward Islands. A reconnaissance aircraft indicated that winds had reached 45 kn the next morning, and the depression was upgraded to tropical storm Claudette at 1600, even though the minimum sea-level pressure was 1011 mb. As had been the case with Ana, gale warnings were required in the first advisory because of the proximity of the storm to the islands, this time for the Leeward Islands, the Virgin Islands, and Puerto Rico. This was the third consecutive storm in which gale warnings were issued in the first advisory. Once again, however, strong high-level westerly winds caused Claudette to weaken to a depression over Puerto Rico and to a tropical wave over Hispaniola. Some flooding resulted from 7 to

8 in of rain over Guadeloupe, and amounts exceeding 9 in. in southern Puerto Rico caused one death and an estimated \$750,000 damage from river floods.

Part two of tropical storm Claudette began as the tropical wave remnants moved into the southeastern Gulf of Mexico on the morning of July 21. A depression formed later that day and reached tropical-storm strength on the 23rd. Once again, gale warnings were issued with the first advisory at 1300 from Biloxi, MS, to Freeport, TX. The center of Claudette was poorly defined and elongated in a north-south direction. The storm had been moving steadily towards the northwest, and late on the 23d it appeared that it had weakened to a depression again. Gale warnings were discontinued. However, a dominant center formed to the north and began drifting northward shortly before daybreak on the 24th. Offshore oil rigs began reporting gale-force winds, and gale warnings were issued once again at 1430, this time from Grand Isle, LA, to Galveston, TX. The center crossed the coast near the Texas-Louisiana border about 1800 and was expected to continue northward and spread heavy rains through the lower Mississippi Valley. The development of a high-pressure system aloft to the north of the center blocked Claudette and caused it to turn slowly toward the west, describing a tight loop over extreme southeastern Texas during the next 24 hr, before finally moving off to the north. Claudette did not weaken because of the proximity of the center to the water, and offshore oil rigs reported winds of gale force for 30 hr after the center moved inland. Claudette's lowest central pressure of 997 mb occurred at Beaumont, TX, after the center had moved inland. Maximum sustained winds of 45 kn were observed by reconnaissance aircraft east of the Leeward Islands and in the northwestern Gulf of Mexico.

In spite of her disorganized life, Claudette will be remembered along coastal southeastern Texas for the torrential rains which occurred while the center was making a loop in that area. An unofficial report of 42 in of rain in 24 hr from an observer near Alvin, TX, will be a U.S. 24-hr rainfall record if verified. There were also several reports of storm rainfall exceeding 30 in from Alvin, Freeport, and Sargent, TX, making Claudette one of the wettest tropical cyclones ever to affect the United States.

The highest winds on the coast were estimated to be 45 to 55 kn in gusts at Cameron, LA, around the time of landfall. Tides of 2 to 4 ft above normal caused minor damage along the Louisiana coast. There was one death in Texas attributed to Claudette, and damage from the flooding produced by her heavy rains will likely exceed \$400 million.

HURRICANE DAVID, AUGUST 25-SEPTEMBER 7

David was the most intense hurricane of this century to affect the islands of the eastern

NORTH ATLANTIC TROPICAL CYCLONES

Caribbean Sea. The central pressure of 924 mb while south of Puerto Rico on August 30 is the lowest measured central pressure in that region. David may be regarded as a typical Cape Verde hurricane. Characteristics of this type of hurricane are:

(1) Attaining hurricane intensity well east of the Lesser Antilles.

(2) Following a parabolic track around the periphery of the Azores-Bermuda High and frequently affecting the Lesser Antilles, the Greater Antilles, and the United States;

(3) Maintaining major hurricane intensity for the duration of the hurricane, unless weakened by landfall; and

(4) Expanding in size with movement to higher latitudes to become both large and intense before reaching the United States.

In David's case, this trajectory resulted in an impact on a large number of people both on land and at sea. Hurricane warnings were posted in advance of the center for most of the Lesser Antilles, Puerto Rico, Hispaniola, the Bahamas, and from the middle Florida Keys northward to southern North Carolina. Gale warnings were extended ahead of the inland storm from North Carolina northward to Eastport, ME. Historically, there have been few storms whose effects were so widespread.

While many ships were affected by David's 2-week journey, the Liberian ROBERTSBANK and the British CAUSEWAY had the dubious distinction of accompanying the developing David from the African coast to the Leeward Islands. The ships frequently reported easterly winds of 30 kn and 8-ft seas, but they did not report winds of gale force until the strengthening David had reached the islands. David had 210 hurricane hours, mostly at sea, and accounted for 68 gale-force observations or about half of the total for 1979.

David was the most intense hurricane of the season. Maximum strength of 150 kn and minimum pressure of 924 mb were reached south of Puerto Rico on August 30, but there was little difference in strength when David struck Dominica and Santo Domingo. He was the strongest hurricane at Dominica since 1834 and at Santo Domingo since 1930. David was not a major hurricane when it struck the United States. The landfall pressure of 972 mb just north of Palm Beach, FL, around midday on September 3 and estimated winds of 85 kn changed little before the second landfall near Savannah Beach, GA, approximately 24 hr later. Savannah reported a minimum pressure of 970 mb. David was the first hurricane to strike the Cape Canaveral, FL, area directly since 1926. Cape Canaveral was tied with Mobile, AL, for having gone the longest of any location south of Cape Hatteras, NC, without a hurricane. Even though the center of David stayed inland after moving

into Georgia, the proximity of the track to the coast produced gale-force winds well out to sea along the Atlantic seaboard and affected a large number of ships.

The death toll in Dominica was 56, and 60,000 of the 80,000 residents were left homeless. In Puerto Rico there were seven deaths. The Dominican Republic government estimated their death toll in excess of 1,200 with damage over \$1 billion U.S. dollars. In the United States there were 5 deaths directly attributed to David with about 10 more indirect deaths. Damage in the United States was not great at any particular location, but the cumulative total caused by winds, tides, floods, and tornadoes over the large area affected will likely exceed \$300 million.

TROPICAL STORM ELENA AUGUST 29-SEPTEMBER 1

Elena was named a tropical storm at the same time as Frederic, which was the most noteworthy aspect of the storm. A depression formed in the central Gulf of Mexico on August 29 and reached minimal tropical-storm strength about 24 hr later during the afternoon of the 30th. For the fourth time out of the first five named storms, the first advisory on a storm had gale warnings--this time for Port O'Connor, TX, to Morgan City, LA. Little change in strength occurred before landfall on the central Texas coast during the afternoon of September 1, and the storm lost its identity entirely less than 12 hr after landfall.

Maximum sustained winds associated with Elena were 35 kn, and the minimum pressure of 1004 mb occurred during the evening of the 30th. The highest wind reported on land was a 40-kn gust at Galveston, TX, on the evening of September 1. Highest tides were about 3 ft above mean sea level at Galveston and Baytown, TX. The only heavy rain of consequence fell on downtown Houston, which recorded 4.6 in., and Beaumont, TX, which had 3 in. Two persons drowned in Houston from floods caused by the heavy rains, and three crewmen were killed on the CHEVRON HAWAII, when it was struck by lightning and caught fire while thunderstorms associated with Elena were in the vicinity. Except for the ship, damage along the coast was not great.

HURRICANE FREDERIC AUGUST 29-SEPTEMBER 14

The similarity of the initial development of Frederic to that of David caused much apprehension in the eastern Caribbean Sea area. It appeared that a second Cape Verde hurricane would shortly move through that area even as David was still wreaking havoc. However, the very strength of David caused the weakening of Frederic as the warm outflowing air aloft from David descended onto Frederic and stifled his development. As the weakening Frederic approached, gale warnings were issued for the Leeward Islands, Virgin Islands, Puerto Rico, most of Hispaniola, and the southeast

NORTH ATLANTIC TROPICAL CYCLONES

Bahamas, Turks, and Caicos Islands. The main consequence of Frederic in the islands of the eastern Caribbean Sea was heavy rains, especially over the Dominican Republic. However, seven deaths were reported from St. Maarten when a fishing boat sank.

Once Frederic regained strength in the Gulf of Mexico, earlier apprehension during the initial development became well-founded. The presence of David to the east just a week earlier and of Frederic over Cuba left few people unaware of the threat from Frederic. Hurricane warnings went into effect from Grand Isle, LA, to Panama City, FL, at 0230 September 11 with gale warnings east of Panama City to Cedar Key, FL. It didn't take much urging for people to evacuate early the next day. Of the 41 gale-force observations received at the National Hurricane Center during Frederic, 32 came as the hurricane plowed through the Gulf of Mexico.

Frederic was the first hurricane to strike Mobile, AL, directly since 1926. As mentioned previously, Mobile, and the Cape Canaveral, FL, area had gone the longest time of any location south of Cape Hatteras without a hurricane. The central pressure of 946 mb and estimated maximum sustained winds of 115 kn at landfall made Frederic the most intense hurricane of this century to affect the Mobile, AL-Pascagoula, MS, area. The highest wind reported in the United States was a gust to 126 kn on Dauphin Island bridge in Alabama, while a gust to 119 kn was observed at the Dauphin Island Sea Lab before the equipment was destroyed. The peak storm surge of 12 ft over Gulf Shores, AL, destroyed much of the island. An 11-ft surge at Dauphin Island destroyed the causeway leading to the island. Five deaths have been attributed directly to Frederic. The estimated damage total of \$2.3 billion makes Frederic the costliest U.S. hurricane in history.

HURRICANE GLORIA, SEPTEMBER 4-15

Gloria was the first storm of the 1979 season not to affect any land areas. The disturbance which produced Gloria became a depression soon after moving off the northwest coast of Africa on September 4. It passed just north of the Cape Verde Islands, following a northwesterly course instead of the usual westerly course for early September. Satellite pictures indicated that Gloria reached tropical-storm strength on the 6th and hurricane strength early the following day while about 1,000 mi south-southwest of the Azores. The hurricane moved steadily northwestward at about 10 kn for the next 2 days before turning southwest and weakening briefly to a tropical storm late on the 10th. The weakening and blocking of the hurricane was associated with a higher latitude frontal system and its following high-pressure area. After the HIGH passed to the north, Gloria turned northeastward and accelerated in advance of the next frontal system, losing tropical characteristics about 300 mi northwest of

the Azores late on the 14th.

Satellite classifications of strength indicate that Gloria reached maximum intensity of 85 kn on the 13th with an estimated minimum central pressure of 975 mb. Gloria was a threat only to shipping, but there were no reports of damage.

HURRICANE HENRI, SEPTEMBER 14-24

While Henri existed as a tropical cyclone for almost 10 days, only 3 of these were as a storm or hurricane. At one time or another during his life, Henri headed in each direction of the compass. In addition, he was the second hurricane of this century to form in the Gulf of Mexico and not make landfall as a storm, further, destroying the old saying that a landfall is inevitable once a hurricane is in the Gulf of Mexico. Because Henri remained in the southwest Gulf of Mexico while a storm, few ships were affected.

Late on September 14, reports from NOAA reconnaissance aircraft indicated a depression had formed near Cozumel, MX. On the morning of the 15th Air Force reconnaissance located the center north of the northeastern tip of the Yucatan Peninsula. It was moving westward, since a large high-pressure system to the north blocked any northward motion. Winds reached tropical-storm strength on the morning of the 16th as the center turned southwestward under the continued blocking influence of the large high-pressure system to the north. Henri became a hurricane early on the 17th as the center turned toward the northwest in response to the weakening ridge of high pressure over the northwest Gulf of Mexico. As a broad area of low pressure developed over the western Gulf of Mexico, Henri's movement became slow and erratic. He reached maximum strength of 75 kn and minimum sea-level pressure of 983 mb in the Bay of Campeche on the 17th, then weakened steadily for the next 48 hr to become a tropical depression on the afternoon of the 19th. The depression moved slowly east-northeastward for the next 5 days, remaining just south of a cold front which had moved into the northern Gulf of Mexico, and finally became part of the frontal low-pressure trough on the 24th.

Henri threatened the southwest coastline of Mexico in the Bay of Campeche for a time and also hampered efforts to control a runaway oil well in the Bay of Campeche. There have been no reports of casualties or monetary losses caused by Henri.

SUBTROPICAL STORM, OCTOBER 23-25

A low-pressure system which developed on a front south of Bermuda about midday on October 23 strengthened rapidly as it moved north-northeastward and acquired some tropical characteristics. Bermuda reported a minimum pressure of 1002 mb at 2100 on the 23d, and the first visible satellite picture on the morning of the 24th suggested winds had reached 40 kn. The

NORTH ATLANTIC TROPICAL CYCLONES

LOW accelerated to a forward speed of 25 kn during the afternoon, while continuing towards the north-northeast, passing through the North Atlantic shipping lanes south of Nova Scotia. The KAPUSKASING, east of the center, reported south-southeasterly winds of 65 kn with seas of 20 ft, and several other ships within 125 mi of the center reported winds of 45 to 50 kn. This was a

typical example of the rapidity with which this type of storm can form and move. Sable Island reported a pressure of 984 mb during the evening of the 24th, and the minimum pressure of the storm was estimated to be 980 mb about this time. The storm lost tropical characteristics near Newfoundland. No effects on maritime interests have been received.

Table 1.--Summary of North Atlantic tropical and subtropical cyclone statistics, 1979

No.	Name	Class	Dates	Maximum sustained winds (kn)	Lowest pressure (mb)	U.S. damage (\$ million) ¹	Deaths
1	Ana	T	June 19-23	50	1005		
2	Bob	H	July 9-16	65	986	20	1-U.S.
3	Claudette	T	July 16-29	45	997	400	1-U.S.
4	David	H	Aug. 25-Sept. 7	150	924	320	5-U.S. 7-Puerto Rico 56-Dominica 1,200-Dom. Rep.
5	Elena	T	Aug. 29-Sept. 1	35	1004	< 10	2-U.S.
6	Frederic	H	Aug. 29-Sept. 14	115	943	2,300	5-U.S. 7-St. Maarten
7	Gloria	H	Sept. 4-15	85	975		
8	Henri	H	Sept. 14-24	75	983		
9	--	ST	Oct. 23-25	65	980		

T - tropical storm (winds 34-63 kn)

H - hurricane (winds 64 kn or higher)

ST - subtropical storm (winds 34 kn or higher)

¹ includes Puerto Rico and U.S. Virgin Islands

Table 2
NORTH ATLANTIC TROPICAL CYCLONES FOR PAST YEARS

TOTAL NUMBER OF TROPICAL CYCLONES, LOSS OF LIFE AND DAMAGE								
Total Number Tropical Cyclones*			Total Number Hurricanes		Loss of Life		Damage by Categories**	
Year	All Areas	Reaching U.S. Coast	All Areas	Reaching U.S. Coast	Total All Areas	United States	Total All Areas	United States
1931	9	2	2	0		0		#
1932	11	5	6	2		0		#
1933	21	7	9	5		63		7
1934	11	5	6	3		17		6
1935	6	2	5	2		414		7
	58	21	28	12				
1936	16	7	7	3		9		6
1937	9	4	3	0		0		4
1938	8	4	3	2		600		8
1939	5	3	3	1		3		3
1940	8	3	4	2		51		6
	46	21	20	8				
1941	6	4	4	2		10		7
1942	10	3	4	2	17	8	7	7
1943	10	4	5	1	19	16	7	7
1944	11	4	7	3	1,076	64	8	8
1945	11	5	5	3	29	7	8	8
	48	20	25	11				
1946	6	4	3	1	5	0	7	7
1947	9	7	5	3	72	53	8	8
1948	9	4	6	3	24	3	7	7
1949	13	3	7	2	4	4	8	8
1950	13	4	11	3	27	19	7	7
	50	22	32	12				
1951	10	1	8	0	244	0	7	6
1952	7	2	6	1	16	3	6	6
1953	14	6	6	2	3	2	7	7
1954	11	4	8	3	720+	193	9	9
1955	12	5	9	3	1,518+	218	9	9
	54	18	37	9				
1956	8	2	4	1	76	21	8	7
1957	8	5	3	1	475	395	8	8
1958	10	1	7	0	49	2	7	7
1959	11	7	7	3	57	24	7	7
1960	7	5	4	2	185	65	8	8
	44	20	25	7				
1961	11	3	8	1	345	46	8	8
1962	5	1	3	0	4	4	6	6
1963	9	1	7	1	7,218+	11	9	7
1964	12	6	6	4	266	49	9	9
1965	6	2	4	1	76	75	9	9
	43	13	28	7				
1966	11	2	7	2	1,040	54	8	7
1967	8	2	6	1	68	18	8	8
1968	8	3	5	1	11	9	7	7
1969	18	3	12	2	364	256	9	9
1970	10	3	5	1	74	11	9	8
	55	13	35	7				
1971	13	5	6	3	44	8	8	8
1972	7	3	3	1	128	121	9	9
1973	8	1	4	0	16	5	7	7
1974	11	2	4	1	3,000+	1	8	8
1975	9	1	6	1	80	21	9	9
	48	12	23	6				
1976	10	4	6	1	77	9	8	8
1977	6	1	5	1	10	0	7	7
1978	12	2	5	0	41	35	7	7
1979	9	5	5	4	1,285	22	9	9
Total	483	172	274	84				
Mean	9.9	3.5	5.6	1.7				

*The Environmental Data Service has for some time recognized that, without detailed expert appraisal of damage, all figures published are merely approximations. Since errors in dollar estimates vary in proportion of the total damage, storms are placed in categories varying from 1 to 9 as follows:

1 Less than \$50

4 \$5,000 to \$50,000

7 \$5,000,000 to \$50,000,000

2 \$50 to \$500

5 \$50,000 to \$500,000

8 \$50,000,000 to \$500,000,000

3 \$500 to \$5,000

6 \$500,000 to \$5,000,000

9 \$500,000,000 to \$5,000,000,000

* Including hurricanes and after 1967 subtropical cyclones

Not reported in literature, believed minor.

+ Additional deaths for which figures are not available.

NORTH ATLANTIC TROPICAL CYCLONES FOR PAST YEARS

Frequency of Tropical Cyclones (including Hurricane*)
by Months and Years

Frequency of Tropical Cyclones Reaching Hurricane
Intensity by Months and Years

Table 3

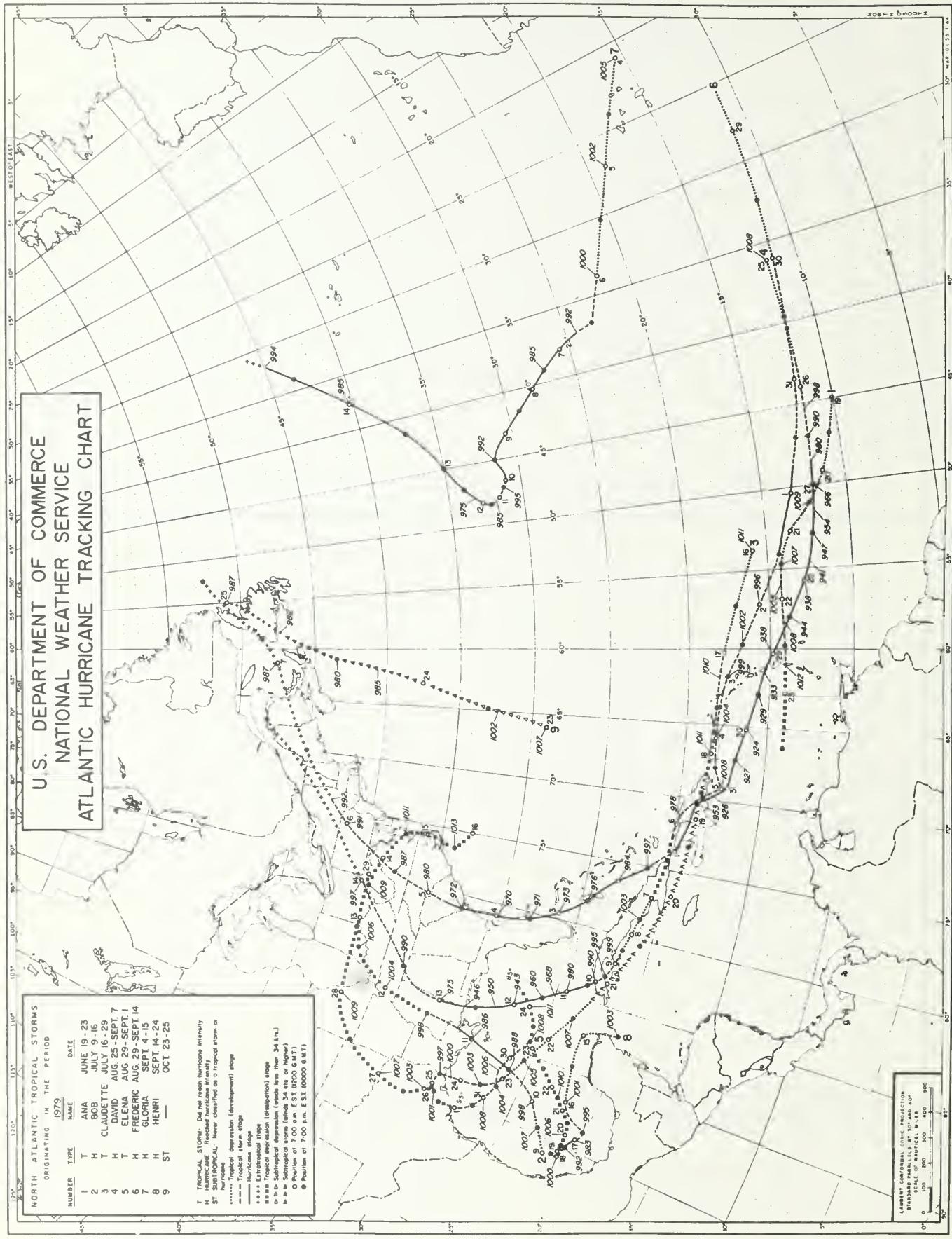
		May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1931		1	1	2	3	1	1	9	1931	2
1932		1	1	3	3	1	11	1932	1	6
1933		1	1	7	5	3	21	1933	1	6
1934		1	1	2	2	3	11	1934	1	9
1935		1	1	3	1	2	6	1935	1	6
1936		3	2	6	4	1	16	1936	1	5
1937		1	1	2	6	1	9	1937	2	7
1938		1	1	3	1	3	8	1938	3	3
1939		1	1	1	1	2	5	1939	1	3
1940		1	1	3	2	2	8	1940	3	3
1941							6	1941	3	4
1942							10	1942	1	4
1943							10	1943	2	5
1944							11	1944	1	7
1945							11	1945	1	5
1946		1	1	1	2	1	6	1946	1	4
1947		1	1	2	3	3	9	1947	2	5
1948		1	1	2	4	2	1	1948	1	6
1949		1	1	3	2	1	13	1949	2	7
1950							13	1950	4	11
1951		1	1	1	2	1	10	1951	1	8
1952	(Feb.)	1		2	2	2	7	1952	2	6
1953		1		3	4	1	14	1953	2	6
1954		1		2	4	1	11	1954	2	8
1955				4	3	2	12	1955	3	9
1956				3	4	2	10	1956	1	4
1957				2	2	2	7	1957	1	3
1958				1	1	1	14	1958	3	7
1959				1	2	4	11	1959	2	7
1960				1	4	5	12	1960	1	4
1961				1	1	4	1	1961	5	8
1962				2	1	4	5	1962	1	6
1963				1	1	5	9	1963	1	3
1964				1	1	4	12	1964	2	6
1965				1	2	1	7	1965	2	12
1966				1	1	6	2	1966	1	5
1967				4	1	4	8	1967	3	7
1968				3	1	3	6	1968	1	6
1969				1	1	5	5	1969	4	5
1970				1	1	3	2	1970	1	5
1971				1	4	6	1	1971	2	6
1972		1		2	2	2	1	1972	1	3
1973				2	2	2	8	1973	1	4
1974		1		1	4	1	11	1974	2	6
1975				1	1	2	9	1975	1	12
1976		1		5	2	1	10	1976	4	6
1977				1	1	3	6	1977	1	5
1978	(Jan)	1		1	4	3	12	1978	2	5
1979				1	2	2	9	1979	1	5
Totals	(Jan)	11	27	41	127	166	92	483	Totals	274
	(Feb.)									

U. S. DEPARTMENT OF COMMERCE
NATIONAL WEATHER SERVICE
ATLANTIC HURRICANE TRACKING CHART

NORTH ATLANTIC TROPICAL STORMS ORIGINATING IN THE PERIOD <u>1979</u>			
NUMBER	TYPE	NAME	DATE
1	T	ANA	JUNE 19-23
2	H	BOB	JULY 9-16
3	H	CLAUDETTE	JULY 16-29
4	H	DAVID	AUG 25-SEPT 7
5	H	ELLENIA	AUG 29-SEPT 1
6	H	FREDERIC	AUG 29-SEPT 14
7	H	GLORIA	SEPT 4-15
8	H	HENRI	SEPT 14-24
9	C		

TROPICAL STORMS - Did not reach hurricane intensity
STORM - Reached minimum sustained winds of 39 mph or less
HURRICANE - Winds classified as a tropical storm or higher

- - - Tropical depression (embryonic) stage
- - - Tropical storm stage
- **** Hurricane stage
- **** Extratropical stage
- as a Tropical cyclone depression (extratropical) stage
- **** Tropical cyclone depressions form when 34-41 mph
- **** Subtropical cyclones form when 34-41 mph or higher
- **** Hurricane force winds 70 mph or higher
- **** Typhoon force winds 100 mph or higher
- **** Super Typhoon force winds 110 mph or higher
- **** Hurricane force winds 115 mph or higher
- **** Typhoon force winds 120 mph or higher
- **** Super Typhoon force winds 125 mph or higher



EASTERN NORTH PACIFIC TROPICAL CYCLONES, 1979

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The 1979 eastern North Pacific tropical cyclone season began on May 31 and ended November 18. Spanning 172 days, the season was 28 days longer than the 1978 season, but it was less active. There were only 13 cyclones in 1979, compared to 21 in 1978. Of the 13, 3 were tropical depressions, 4 were tropical storms, and 6 were hurricanes. Hurricane hours (326) in 1979 were down 61 percent from the 1978 season, and tropical storm hours (482) were down 45 percent. The highest sustained windspeed during the 1979 season was 125 kn. Two-thirds (4) of the 1979 hurricanes had windspeeds of 100 kn or more compared to only half of the 1978 hurricanes (6). Table 1 shows the monthly distribution of 1979 tropical-cyclone activity and tables 2 and 3 compare this activity with that of recent years. The 1966-79 period was chosen for comparison, since it probably includes all tropical-cyclone activity in the area owing to excellent satellite coverage. Prior to 1966 some activity was undetected because of the sparsity of data. Cyclone tracks are shown in Figures 1 and 2.

The Eastern Pacific Hurricane Center issued 198 tropical-cyclone advisories during the 1979 season, a 50-percent decrease from the previous season. Advisories were issued four times daily on a regular schedule for cyclone positions at 0000, 0600, 1200, and 1800.

Although several ships passed close to the centers of tropical cyclones and undoubtedly experienced heavy weather and seas, no reports of casualties or damage were received.

Three tropical cyclones moved onshore, all into Mexico. The first was hurricane Andres with 65-kn winds 90 mi southeast of Manzanillo at 1300 June 4. The second was tropical depression Nine with 25-kn winds 145 mi east-southeast of Acapulco at 1800 on September 4, and the last to move onshore was hurricane Ignacio with 30-kn winds 140 mi east-southeast of Manzanillo at 1200 October 30. No reports of casualties or damage were received.

The National Environmental Satellite Service Field Station, collocated with the Eastern Pacific Hurricane Center, provided excellent satellite coverage during the 1979 season. Movie loops, GOES visual and infrared data, and polar-orbiting satellite data were available. Cyclonic intensity was calculated using the Dvorak technique of satellite cyclone analysis.

The U.S. Air Force made three reconnaissance

flights into hurricane Ignacio off the central Mexican coast during October 27 to 29.

Although satellite imagery continues to improve and is probably one of the most important tools used by the tropical forecaster today, aircraft reconnaissance and synoptic ship reports retain their importance as invaluable comparative ground-truth observations.

Several computer-derived forecasts of tropical-cyclone tracks for the eastern North Pacific were provided by the National Hurricane Center in Miami. The forecast tracks included an analog model (EPANA-LOG), a statistical synoptic model (EPHC77), a simulated analog model (CLIPER), and a barotropic model (SANBAR).

Only named tropical cyclones are described in the following paragraphs. There were three numbered cyclones that did not develop to tropical-storm strength. None of these moved into the central North Pacific area west of 140°W.

HURRICANE ANDRES - MAY 31-JUNE 4

The first cyclone of the season only reached depression strength. Andres, the second cyclone of the season, began as a tropical disturbance 200 mi south of the Gulf of Tehuantepec on May 31. By 1800 cyclonic circulation had developed and he was upgraded to a tropical depression near 11°N, 95.5°W, with winds between 25 and 30 kn. The cyclone turned north-northwestward and slowly began to intensify. At 1800 June 1 the cargo ship ATLANTIC NEPTUNE, 105 mi west of the depression, reported north-northwesterly 25-kn winds, 15-ft seas, and a sea-surface temperature of 86°F. At 0600 on June 2 winds near the center had increased to 35 kn, and the cyclone was upgraded to tropical storm Andres near 12.8°N, 98.8°W, about 250 mi south of Acapulco, Mexico. Winds had reached 55 kn by June 3. The cargo ships SATURN DIAMOND and MAMMOTH FIR and the tankers OVERSEAS ALEUTIAN and ATIGUN PASS were helpful in locating the center of Andres between 1800 June 2 and 0000 June 3. At 1200 on the 3rd another tanker, the TEXACO GEORGIA, 140 mi east of Andres, reported east-southeasterly 32-kn winds, heavy rains, and 14-ft seas. The ATIGUN PASS was now 100 mi east-southeast of Andres and reported east-southeasterly 60 to 65-kn winds, heavy rains, high seas, and a pressure of 992 mb. At 1500 winds on the TEXACO GEORGIA, which was now 100 mi east of the storm's center, had shifted to the south-southeast at 44 kn and the seas had increased to 18 ft. At 1800 the storm was upgraded to a hurricane near 16.7°N, 100.7°W just

EASTERN NORTH PACIFIC TROPICAL CYCLONES

50 mi west of Acapulco. Andres now turned west-northwestward and continued intensification. At 2300 the TEXACO GEORGIA, 25 mi east of Andres, reported 77-kn winds and 30-ft seas. The ship also reported the apparent center of the hurricane as a violent circular squall area, 18 mi in radius, converging from all quadrants. By June 4 winds near the center of the hurricane had reached maximum intensity of 85 kn. The TEXACO GEORGIA, 6 mi to the east, reported southerly 80-kn winds, heavy continuous rain, sea-surface temperature of 81°F, and a pressure of 997.6 mb. At 0230 June 4 the tanker KEYSTONEER reported the hurricane eye at 17.2°N, 101.9°W. The ship, 90 mi south of Andres, reported 70-kn winds, 20-ft seas, and 995-mb pressure. The hurricane was 25 mi from the Mexican coast, midway between Acapulco and Manzanillo. Andres turned northwestward and began to weaken. By 1200 winds had decreased to 65 kn, and at 1300 Andres moved onshore 215 mi west-northwest of Acapulco and 90 mi southeast of Manzanillo and weakened rapidly.

TROPICAL STORM BLANCA - JUNE 21-25

An Atlantic tropical disturbance crossed the Isthmus of Panama and Costa Rica and moved into the eastern North Pacific on June 17. On the 21st satellite imagery showed cyclonic circulation, and the disturbance was upgraded to a tropical depression about 400 mi east of Clipperton Island. Winds near the center increased to 35 kn by the 22nd, and the depression was upgraded to tropical storm Blanca near 9.3°N, 107°W. Moving westward, the storm continued to intensify over 84°F water. Blanca reached maximum intensity of 45 kn by 0600 about 80 mi east-southeast of Clipperton Island. The storm passed 30 mi south of Clipperton Island at 1300, then turned west-northwestward and weakened. On the 24th the winds had diminished to 35 kn. On the 25th they were down to 25 kn, and the storm was downgraded to a tropical depression near 12.8°N, 122.8°W. The cyclone was now over 80°F water and weakening rapidly.

TROPICAL STORM CARLOS - JULY 14-16

The fourth cyclone of the season developed near the Gulf of Tehuantepec on July 11. It moved across the Gulf at 8 kn and began to slowly intensify. Late on the 14th satellite pictures showed cyclonic circulation, and the disturbance was upgraded to a tropical depression 220 mi west of Acapulco, Mexico. The depression turned west-northwestward and began to intensify rapidly, while moving over a ridge of warm 86°F water. On the 15th the depression was upgraded to tropical storm Carlos at 17.4°N, 104.4°W. Winds near the center increased to maximum intensity of 45 kn from 1200 through 1800, then began to decrease as the storm accelerated to 18 kn over 82°F water. The cargo ship HIRATSUKA MARU helped locate the center of the storm between 0600 and 1800. By 0000 on the 16th winds had diminished to 30 kn, and Carlos was downgraded to a tropical depression about 40 mi east-southeast of Socorro Island. The cyclone then turned westward and passed 15 mi south of Socorro Island between 0100 and 0200. Moving toward cooler water and low clouds to the

west, the depression weakened rapidly.

HURRICANE DOLORES - JULY 17-23

Hurricane Dolores was spawned 350 mi south of the Guatemalan coast on July 14. Moving west at 10 kn, the disturbance began to intensify. At 0600 on the 17th the disturbance was upgraded to a tropical depression near 10.5°N, 103.7°W. Winds near the center increased to 35 kn by 1800, and the depression was upgraded to tropical storm Dolores near 11.2°N, 107°W. The RODE ZEE reported in while 160 mi to the northeast of the center. Dolores continued to intensify over 85°F water as she moved around the southern side of an upper level high-pressure area centered over Baja, California. On the 18th her winds had increased to 65 kn, and she was upgraded to a hurricane near 12.4°N, 112.6°W. Satellite pictures showed Dolores with a well-defined eye by 1800 on the 19th. Winds increased to 100 kn by 0600 on the 20th and reached maximum intensity of 105 kn by 0000 on the 21st. Increasing in forward speed to 11 kn, Dolores continued to move northwestward around the upper level high-pressure area, which had moved to northern Mexico. She was 600 mi offshore and moving parallel to the Baja California coast. The cyclone began to weaken over colder 78°F water. At 0000 on the 22nd her winds had decreased to 60 kn, and the hurricane was downgraded to a tropical storm near 20.3°N, 121.8°W. Low clouds feeding into the cyclonic circulation from the north and west rapidly weakened the cyclone. By 1800 her winds had diminished to 30 kn, and the storm was downgraded to a tropical depression near 23.3°N, 124.2°W.

HURRICANE ENRIQUE - AUGUST 17-24

Three and one-half weeks elapsed before the next cyclone, which began as a tropical disturbance near 11°N, 107°W. Moving westward, it began to intensify over 86°F water. At 1800 on the 17th the disturbance was upgraded to tropical depression, and 6 hr later it was upgraded to tropical storm Enrique near 11.2°N, 114.9°W. The cyclone turned west-northwestward with winds increasing to 55 kn by 1800 on the 18th. Enrique then turned westward and was upgraded to a hurricane at 0000 on the 19th near 12.8°N, 119°W. Satellite pictures were beginning to show an eye near the center of the cyclone. A report at 1800 from the CHAMPLAIN was especially useful in the analysis. Winds had increased to 70 kn, but decreased to 65 kn as the storm moved over 81°F water on the 20th. Enrique then turned northwestward and continued to weaken as low clouds to the north began to feed into the cyclonic circulation. On the 21st winds had diminished to 55 kn, and Enrique was downgraded to a tropical storm. About 1,300 mi to the east the next cyclone of the season had just been upgraded to tropical storm Fefa, 250 mi southwest of Acapulco, Mexico. Still moving northwestward, Enrique passed beyond the field of low clouds and once again began to intensify. By 1700 on the 21st his winds had increased to 70 kn, and he was again upgraded to a hurricane. Continuing northwestward, Enrique intensified rapidly. By

EASTERN NORTH PACIFIC TROPICAL CYCLONES

0000 on the 22nd the winds had reached 110 kn; by 1200 Enrique reached maximum intensity of 125 kn. The cargo ship AUSTRAL MOON, 70 mi to the west, reported northwesterly 50-kn winds, 35-ft seas, an air temperature of 75°F, and a sea-surface temperature of 72°F. By 1800 Enrique was near 18.9°N, 129.9°W, and the AUSTRAL MOON, 180 mi to the south-southwest, reported northwesterly 35-kn winds and 24-ft seas. The CRYSTAL AZALEA, 230 mi west of Enrique, reported northeasterly 35-kn winds, 13-ft seas, an air temperature of 75°F, and a sea-surface temperature of 72°F. Continuing northwestward, Enrique began to move over progressively colder water and weakened. With low clouds feeding into the cyclone his winds diminished to 55 kn on the 23rd, and he was downgraded to a tropical storm near 20.4°N, 132°W. On the 24th the winds were only 30 kn, and the storm was downgraded to a tropical depression at 21.1°N, 133.5°W.

HURRICANE FEFA - AUGUST 21-25

Hurricane Fefa began 340 mi south-southeast of Acapulco on August 19. On the 21st the disturbance was upgraded to a tropical depression near 13.9°N, 101.8°W. By 0600 winds had increased to 35 kn, and the cyclone was upgraded to tropical storm Fefa 250 mi southwest of Acapulco. As the storm moved west-northwestward, the tanker ANCO SCEPTRE and the cargo ship ALPS MARU aided the analysts. Fefa had turned westward and, with 55-kn winds increasing to 75 kn, was upgraded to a hurricane near 15.8°N, 109.6°W, at 0600 on the 22nd. Winds reached 90 kn by 1200 as Fefa passed 150 mi south of Socorro Island. She reached maximum intensity of 100 kn at 1200 on the 23rd. Turning westward, Fefa began to slow and weaken over 78°F water. At 0600 on the 24th the hurricane was downgraded to a tropical storm with 55-kn winds near the center. Weakening rapidly, Fefa was downgraded to a tropical depression at 1800.

HURRICANE GUILLERMO - SEPTEMBER 8-13

Guillermo, the tenth cyclone of the season, began as a tropical disturbance 130 mi south of the Gulf of Tehuantepec on September 7. The PISCES, 170 mi southeast of the center, was helpful in locating the center of the depression. Winds increased to 40 kn by 0600 on the 9th, and the depression was upgraded to tropical storm Guillermo near 16.8°N, 103.9°W. The KEELONG and HOHKOKUSAN MARU were useful on the 1800 analysis. Guillermo turned northwestward and began to move around the southwestern side of an upper level HIGH centered over central Mexico. The cargo ship AMERICAN HIGHWAY reported in the area at 1800 on the 10th. The cargo ships AMERICAN LEGION and KUROBE MARU reported on the 11th. The cargo ship CHU FUJINO, 20 mi southeast of the storm at 1600, found 60-kn winds, rough seas, and a pressure of 994 mb. Winds near the center of Guillermo reached maximum intensity of 65 kn by 1800, and the storm was upgraded to a hurricane near 21.1°N, 110.5°W. Guillermo slowly weakened over 79°F water and winds decreased. He was downgraded to a tropical storm at 0600 on the 12th and to a

tropical depression on the 13th. In the 30 hr between 1800 September 11 and 0000 on the 13th, the AGNES FOSS, DANWOOD ICE, HAITI MARU, LEDA, OGDEN DANUBE, and FIREBUSH helped to locate the storm.

TROPICAL STORM HILDA - OCTOBER 4-6

Tropical cyclone eleven began 200 mi south of the Guatemalan coast on October 1. Moving westward over 82°F water, the disturbance intensified to a tropical depression by the 4th. Tuna fishing boats north and south of the cyclone aided in locating the cyclone. Moving westward over 85°F water, the depression continued to intensify, then turned west-northwestward, and was upgraded to tropical storm Hilda with 40-kn winds near 14.6°N, 110.4°W, on the 5th. Hilda turned westward again and passed 250 mi south of Socorro Island at 0900. By 0000 on the 6th her winds had decreased to 30 kn, and the storm was downgraded to a depression.

HURRICANE IGNACIO - OCTOBER 23-30

Two weeks elapsed before the next cyclone, which began 200 mi southwest of the Guatemalan coast on October 22. The disturbance began to intensify and was upgraded to a depression near 11.7°N, 95.3°W, at 1800 on the 23rd. The winds increased to 35 kn by 1200 on the 24th, and the depression was upgraded to tropical storm Ignacio near 11.4°N, 97.9°W. At 1800 on the 26th winds were found to have increased to 70 kn over 87°F water, and the storm was upgraded to a hurricane. At 1742 on the 27th U.S. Air Force reconnaissance aircraft located the center of Ignacio near 17°N, 107.3°W. Winds near the center of the cyclone had increased to their maximum intensity of 125 kn. The hurricane eye had a well-defined, closed wall 20 mi in diameter. Surface pressure was estimated at 938 mb. Reconnaissance aircraft made a second and third penetration of the cyclone at 1930 and 2022. Surface pressure was estimated at 937 mb, and the eye was reported covered with broken clouds. At the same time the BODENA, LUTSK, PIONEER COMMANDER, and VERRANZANO BRIDGE were penetrating the storm. At 1755 on the 28th reconnaissance aircraft flew into Ignacio again and located the center near 17.7°N, 108.1°W. Surface pressure was now estimated at 969 mb and the eye, filled with low clouds, had decreased to a diameter of 5 mi. A second penetration of the cyclone at 1930 showed little change. The cyclone now turned eastward, and with 80-kn winds continued to weaken. The following ships reported on the storm: the TOYOTA MARU No. 19, NEDLLOYD KINGSTON, PANGUEON, PACIFIC ACE, and FAIRSEA. Winds near the center of the cyclone diminished to 55 kn by 1800 on the 29th, and the hurricane was downgraded to a tropical storm. Reconnaissance aircraft again flew through Ignacio at 2137 on the 29th. Surface winds were verified at 55 kn, and the surface pressure was 995 mb. The eye had expanded to a diameter of 20 mi, but it was poorly defined and filled with midlevel clouds. A second penetration at 2252 estimated the winds at 50 kn with a pressure of 997 mb and the eye open to the north and south. A third and fourth penetration

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at 0003 and 0038 on the 30th showed little change. Ignacio was now 75 mi southwest of Manzanillo, Mexico. He moved rapidly eastward toward the Mexican coast and moved onshore 140 mi east-south-east of Manzanillo. Remnants of Ignacio drifted across southern Mexico, dissipating over the Yucatan Peninsula on October 31.

TROPICAL STORM JIMENA - NOVEMBER 15-18

The thirteenth and final cyclone of the season was discovered 80 mi south of Panama on November 13. It began to intensify over 84°F water, and by 0600 on the 15th satellite imagery showed cyclonic circulation. The winds increased to 35 kn by 2100, and the depression was upgraded

to tropical storm Jimena. By 0000 on the 16th Jimena was near 8.5°N, 91°W. She turned west-northwestward and continued to intensify. The cargo ship NORSE PILOT and the passenger liner ISLAND PRINCESS reported on the cyclone near 9°N, 93°W, at 1200. The winds reached maximum intensity of 55 kn by 1800. The storm then began to weaken over 82° F water and under the influence of the Tehuantepec winds flowing in from the north. By 0000 on the 18th winds had decreased to 30 kn, and the cyclone was downgraded to a depression. The final advisory was issued at 0600 with the center 370 mi south of Acapulco, Mexico. Remnants of Jimena drifted westward for another 72 hr before disappearing from satellite view.

Table 1.--Monthly distribution of eastern North Pacific tropical cyclones, 1979*

	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
Tropical depressions	1	0	1	0	1	0	0	3
Tropical storms	0	1	1	0	0	1	1	4
Hurricanes	0	1	1	2	1	1	0	6
Total	1	2	3	2	2	2	1	13

*Cyclones are ascribed to the month in which they began.

Table 2.--Frequency of eastern North Pacific tropical storms and hurricanes combined by months and years*

Year	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
1966	0	1	0	4	6	2	0	13
1967	0	3	4	4	3	3	0	17
1968	0	1	4	8	3	3	0	19
1969	0	0	3	2	4	1	0	10
1970	1	3	6	4	1	2	1	18
1971	1	1	7	4	2	2	1	18
1972	1	0	1	6	2	1	1	12
1973	0	3	4	1	3	1	0	12
1974	1	3	3	6	2	2	0	17
1975	0	2	4	5	3	1	1	16
1976	0	2	4	4	3	1	0	14
1977	1	1	1	1	3	1	0	8
1978	1	3	4	6	2	2	0	18
1979	0	2	2	2	1	2	1	10
Total	6	25	47	57	38	24	5	202
Average	0.4	1.8	3.4	4.1	2.7	1.7	0.4	14.4

*Cyclones are ascribed to the month in which they began.

Table 3.--Number of eastern North Pacific tropical storms reaching hurricane intensity by months and years*

Year	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
1966	0	1	0	4	2	0	0	7
1967	0	1	0	2	1	2	0	6
1968	0	0	0	3	2	1	0	6
1969	0	0	1	1	1	1	0	4
1970	1	0	1	1	0	1	0	4
1971	1	1	5	2	2	1	0	12
1972	1	0	0	6	1	0	0	8
1973	0	1	3	0	2	1	0	7
1974	0	2	2	4	2	1	0	11
1975	0	1	2	3	1	1	0	8
1976	0	2	1	2	3	0	0	8
1977	0	0	1	1	1	1	0	4
1978	1	2	3	4	1	1	0	12
1979	0	1	1	2	1	1	0	6
Total	4	12	20	35	20	12	0	103
Average	0.3	0.9	1.4	2.5	1.4	0.9	0.0	7.4

*Cyclones are ascribed to the month in which they began.

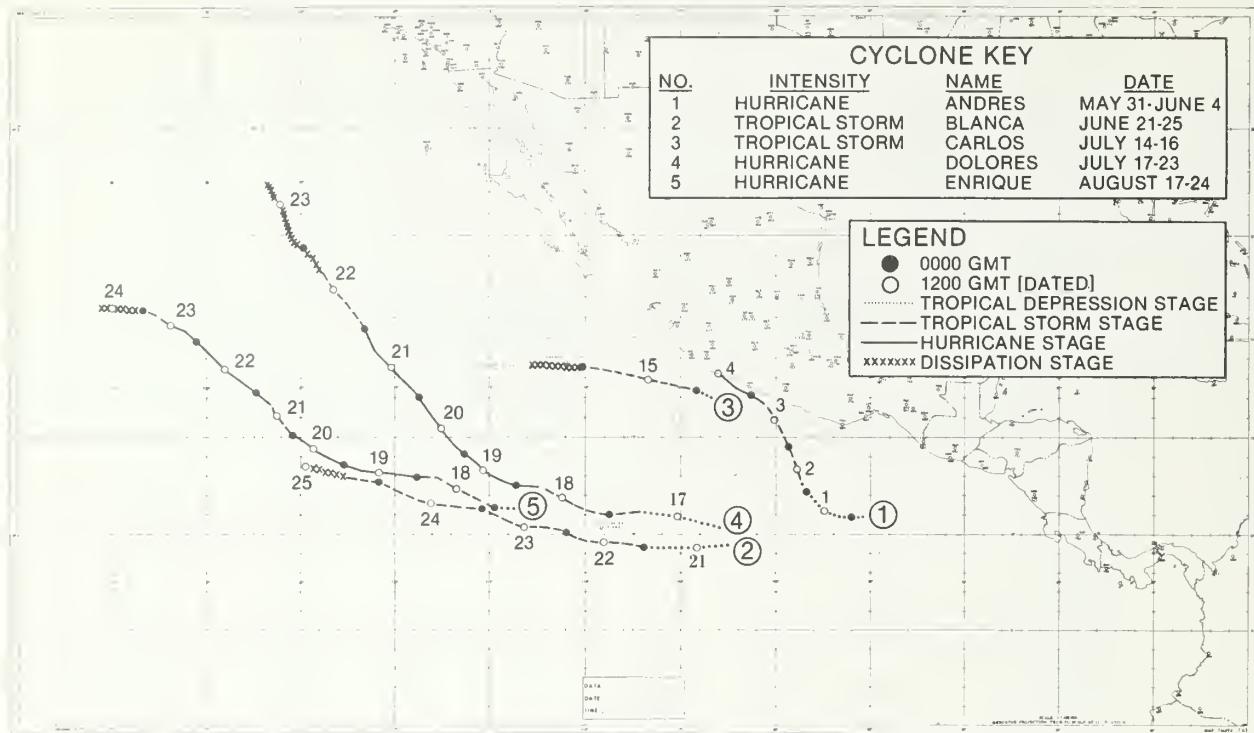


Figure 1.---Tracks of eastern North Pacific tropical cyclones, May 31 to August 24, 1979.

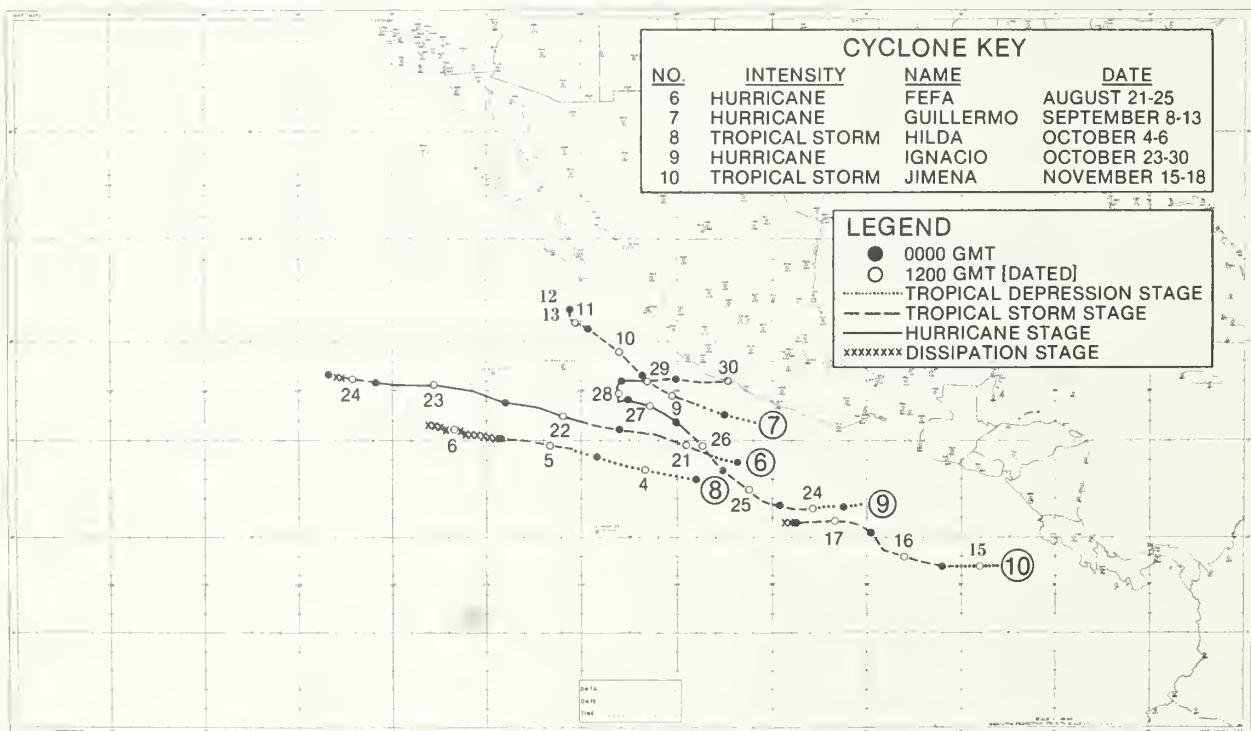


Figure 2.---Tracks of eastern North Pacific tropical cyclones, August 21 to November 18, 1979.

WESTERN NORTH PACIFIC TYPHOONS, 1979

Extracted from Annual Typhoon Report, 1979, U.S.
Fleet Weather Central, Joint Typhoon Warning Center,
Guam, Mariana Islands

The western North Pacific experienced a below-normal year of tropical-cyclone activity with 28 cyclones during 1979 (Table 1). By comparison, 1978 was a nearly normal year with 32 cyclones, and 1977 was a near record-low year with 21 cyclones. Five significant tropical cyclones never developed beyond the tropical-depression stage, and nine developed into tropical storms. Of the 14 cyclones that developed to typhoon stage, only 4 reached the 130-kn intensity necessary to be classified as a supertyphoon. This season, beginning with typhoon Bess, tropical cyclones attaining tropical-storm strength or greater were assigned names on an alternating male/female basis. This change was a result of the 1979 Tropical Cyclone Conference. Each tropical cyclone's maximum surface wind (kn) and minimum observed sea-level pressure (mb) were obtained from best estimates of all available data. The distance traveled (mi) was calculated from the Joint Typhoon Warning Center's (JTWC) official best track.

Tables 2 and 3 provide further information on the monthly distribution of tropical cyclones. Even though there were four fewer cyclones this season compared to last season, there were 18 more warning days for a total of 149. There were 38 warning days with two cyclones and 5 warning days with three or more cyclones.

The cyclone tracks are shown in Figures 1, 2, and 3. The tracks are indicated from first detection until dissipation or becoming extratropical. In Tables 2 and 3 the storms are credited in the month that the first warning was issued.

TYPHOON ALICE

Typhoon Alice, the first tropical cyclone of the 1979 season, was actually first sighted as a tropical disturbance on December 27, 1978. The potential for development was considered poor as it was so near the Equator. On January 1, 1979, the disturbance accelerated to higher latitudes and was named Alice. She meandered through the Marshall Islands, causing much damage as an upper air, short-wave trough temporarily steered her on a northeasterly track. On the 4th she turned back on a normal westerly track.

From the 6th to the 11th, Alice traveled due west. On the 8th she attained 110-kn intensity and simultaneously accelerated to a speed of 14 kn whereupon she began weakening slowly.

During the 9th, Alice began an unexpected northward movement and showed further weakening. Postanalysis of low-level synoptic data and satellite imagery indicated that an approaching frontal shear-line was the responsible agent. The

shear-line began interacting with Alice while she was southeast of Guam. As Alice neared Guam, radar data from Andersen Air Force Base and aircraft data indicated that Alice's previously well-defined wall cloud had become larger and somewhat less organized. Cooler, drier air north of the shear line probably was responsible for this weakening trend. A weakness in the subtropical ridge vertically above the shear-line apparently allowed for Alice's northward deviation.

The most unusual portion of Alice's track occurred during the final 3 days of Alice's life. Based on interpretation of computer prognoses, the subtropical ridge was expected to persist and maintain Alice in the easterlies. As a result, the JTWC forecasts indicated a westward movement until 0000 on the 12th, 18 hr after Alice had actually begun tracking northwestward. The subtropical ridge weakened in response to a long-wave trough deepening over eastern Asia. Easterly steering currents in Alice's vicinity diminished and veered in direction, permitting a more northward track. Alice reached a secondary intensity maximum of 100 kn during this period due to her slowing in speed of movement, the increased absolute vorticity of higher latitudes, and good outflow aloft.

By the 13th, Alice turned northeastward and began weakening rapidly. The subtropical ridge was now completely severed and upper air westerlies were shearing Alice significantly in the vertical. Close proximity of yet another frontal shear-line contributed to further weakening. The biggest surprise, however, came when Alice's low-level circulation turned almost 180° back toward the west at about 1200 on the 13th under the influence of strong, low-level easterlies. Alice weakened rapidly in the strong, vertical-shear environment and dissipated during the next 12 hr.

TYPHOON BESS

Since 1959, only three typhoons have developed over the western Pacific in March. Of these, only Bess developed in the last decade with Tess developing in 1961 and Sally in 1967. Tropical-cyclone development in March is usually inhibited by a southward adjustment in the subtropical ridge axis. Although not recognized in advance, typhoon Bess' development paralleled that of typhoon Tess, which developed in the eastern Caroline Islands and reached tropical-depression strength near Woleai Atoll. Continuing northwestward between Guam and Yap, both recurred northward near 135°E before dissipating north of 20°N under the influence of a strong vertical shear.

Synoptic data at 0000 on March 16 suggested

WESTERN NORTH PACIFIC TYPHOONS

the existence of a weak surface circulation near 3°N, 152.5°E at the base of a wave in the easterly flow. Satellite imagery at 0119 showed an ill-defined area of convection near the surface circulation. By 1109 increased upper level organization suggested development of a weak 200-mb anticyclone. Increased curvature in the midlevel convective cloud pattern hinted at the possibility of tropical cyclone formation. Continuing to pulsate, the suspect area presented a curious, but intensified, upper level convective pattern on satellite imagery on the 17th. Synoptic analysis on the 18th indicated that, in addition to the circulation near 3.5°N, 147.5°E, a secondary LOW had developed on the slow-moving wave axis near 7.1°N, 150°E, and that the earlier ill-defined convection had been associated with these two circulations. As this secondary LOW tracked northward up the wave axis, increased cyclonic shear between strong easterly flow north of the wave and weak equatorial westerlies south of the wave caused the northern circulation to become the dominant center as the initial LOW weakened. Simultaneously, the upper level anticyclone intensified, producing an excellent outflow signature on satellite imagery. Aircraft data at 0259 on the 20th found strong enhanced easterly flow of 20 to 30 kn to the northeast, but only weak cyclonic flow to the south and east. Aircraft reports finally confirmed tropical-storm strength early on the 21st, 5 days after Bess was first observed.

Sea-surface temperature (SST) plays a vital role in the development and maintenance of tropical cyclones. A study indicates that tropical cyclones which move over water cooler than 26°C are less likely to intensify due to a reduction in latent heat. The study further states that tropical cyclones which develop prior to June intensify up to 10 kn after recurvature. This intensification, if experienced, will occur within the 12 to 24 hr following recurvature. Typhoon Bess followed this recurvature pattern. The axis of recurvature was crossed at 0000 on the 23d. Slow intensification occurred over the next 18 hr with Bess reaching maximum intensity of 90 kn at 1800. She maintained 90 kn for 18 hr, then rapidly weakened and dissipated by the 25th. SST analyses during March 24 to 27 indicate that the area in which Bess weakened from 90 to 60 kn in a 6-hr period corresponds closely to the location of water cooler than 26°C. The reduction of latent heat input, coupled with increased vertical shear produced by strong westerlies aloft, literally sheared Bess apart during the final 12 to 18 hr.

TYPHOON CECIL

Typhoon Cecil, the first tropical cyclone in the northwest Pacific given a male name, generated in mid-April from an easterly wave over the Philippine Sea. Cecil was forecast very well while on a climatological west-northwestward track toward the central Philippines. Overall, postanalysis statistics showed that mean forecast errors were better than long-term averages. Nevertheless, JTWC warnings failed to forecast the crucial recurvature point in Cecil's track. Was

there sufficient evidence to forecast this recurvature 24 to 48 hr in advance?

Postanalysis showed that recurvature occurred 36 hr after the 1200 April 15 best-track position. Satellite imagery located Cecil just south of Samar. At this time the 500-mb subtropical ridge axis was at 17°N with a small high-pressure cell over northern Luzon. The 500-mb 36-hr prognosis maintained this ridge. Steering techniques based on the synoptic situation indicated westward movement for 72 hr. Analog techniques indicated west-northwestward movement. In fact, no objective forecast technique indicated recurvature prior to entrance into the South China Sea. The climatological average location of the 500-mb ridge axis is along 15°N over the Philippines for April, and the climatological recurvature point is 15° to 17°N. Both synoptic and climatological data indicated a west-northwestward track over the Philippines with recurvature late in the forecast period in South China Sea as Cecil tracked to the vicinity of 15°N. Postanalysis however, revealed that the ridge axis east of the Philippines abruptly shifted south late on the 16th with westerly winds intruding far to the south over the South China Sea. This pattern shift caused Cecil to recurve much earlier than anticipated. Within 48 hr, Cecil was well east of Luzon. The ridge axis shift was the vital piece of information not present in any of the available prognostic tools. Thus, it appears even in postanalysis that forecasting of Cecil's recurvature 36 hr in advance was beyond the state-of-the-art capabilities.

TYPHOON ELLIS

The tropical disturbance which later became typhoon Ellis was first noted on June 25. The surface/gradient-level analysis showed that a broad monsoon trough had developed between Guam and the Philippine Islands. At upper levels, a Tropical Upper Tropospheric Trough (TUTT) was oriented northeast-southwest between the Volcano Islands and the central Philippine Islands. This TUTT allowed excellent upper level outflow to the northeast and was expected to induce intensification of the tropical disturbance southeast of the TUTT axis. However, significant development did not occur. Reconnaissance aircraft could find only a very broad surface circulation with relatively high surface pressures. The surface circulation drifted under the TUTT, and the associated convection was suppressed.

The area was closely monitored. On the 30th satellite imagery showed increased convective development, and surface data showed decreasing pressures and increasing winds. Subsequent aircraft investigation revealed a minimum sea-level pressure of 1000 mb and surface winds in excess of 35 kn. The first warning on tropical storm Ellis was issued at 0000 July 1. Ellis was in a favorable position at that time, and steady intensification occurred over the next 2 days. For his lifetime, Ellis followed an uncomplicated, classic west-northwestward track at near

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climatological speeds. Post analysis shows that Ellis moved under the influence of the east-southeasterly steering flow on the southern edge of the subtropical midtropospheric ridge. His nearly straight track was primarily because this ridge did not change in intensity or orientation during the period.

Ellis reached typhoon strength on July 2 and maximum intensity of 85 kn on the 3d. Continued intensification was anticipated, but a slow weakening trend was actually observed.

By the time Ellis reached the South China Sea, he had weakened to tropical-storm strength and was a completely exposed low-level circulation. With winds of 54 kn, Ellis made landfall on the Chinese coast on the 6th, 164 mi southwest of Hong Kong.

SUPERTYPOHO HOPE

The disturbance which eventually developed into the first supertyphoon of 1979 became evident on July 25 on satellite imagery as a focal point of cumulus banding. Future intensification was indicated as the disturbance was situated within an area of strong upper level diffluence associated with the southern periphery of an east-west oriented TUTT.

On the 25th and 26th the depression tracked to the west-northwest, the TUTT axis shifted northward, and strong upper level northeast flow dominated the area. The resultant shear produced by this unidirectional upper level flow displaced the convective activity to the southwest of the surface circulation. By 0600 on the 27th, the center of convective activity was displaced 120 mi southwest of the low-level circulation center. Surface analyses at this time indicated the southwest monsoonal flow was being channeled principally into tropical storm Gordon about 750 mi northwest of the depression. Further weakening was expected. Aircraft investigation on the morning of the 28th showed a surface pressure of 999 mb with 45- to 50-kn winds in the heavy convective activity to the southwest of the surface center.

By the 28th tropical storm Gordon had moved into the Luzon Straits. Due to the orographic blocking of the Philippine land mass, the majority of the strong southwest monsoonal flow was diverted into the depression. This increased low-level inflow coupled with a decreasing upper level shear resulted in a much improved vertical structure with feederband activity developing in the south. On the 29th the depression was upgraded to tropical storm Hope with 35- to 45-kn winds reported in feederband activity. By 0920 a well-defined eye with a central surface pressure of 972 mb and 65- to 70-kn surface winds were reported by aircraft. At 1200 Hope was upgraded to a typhoon.

Aircraft reconnaissance at 2031 indicated a sharp decrease in surface pressure to 961 mb with the temperature/dewpoint data correlating to an equivalent potential temperature (θ_e) of 359K. An empirically derived forecast aid that relates pressure and θ_e indicates that once the traces

intersect, rapid intensification can be expected within 18 to 30 hr. The intensification equates to a possible mean pressure decrease of 44 mb and a mean windspeed increase of 50 to 60 kn. Typhoon Hope verified this study 36 hr after the intersection occurred; reconnaissance aircraft reported a surface pressure of 898 mb and windspeeds of 100 to 120 kn. By 1200 on the 31st, Hope attained supertyphoon intensity of 130 kn.

Hope entered the Luzon Straits approximately 4 days after tropical storm Gordon. Her compact wind structure and a slight weakening trend were noted as Heng Chun on the southern tip of Taiwan reported sustained winds of 40 kn with gusts to 86 kn as Hope passed 45 mi south of the station. Two persons on the Batanes Islands and one person on Taiwan were killed as a result of the torrential rainfall experienced as Hope tracked through the Luzon Straits.

Typhoon Hope made landfall less than 10 mi north of Hong Kong at 0530 August 2 with maximum sustained winds of 70 kn and gusts to 110 kn. Extensive wind and rain damage, 3 deaths, and over 258 injuries were reported. In Hong Kong harbor 17 ships broke their moorings, and 8 ships collided.

After passage over Hong Kong, Hope moved into southern China and weakened. Although weakened considerably during passage over southeast Asia, Hope did maintain a satellite signature and exited into the northern Bay of Bengal 110 mi southeast of Dacca, Pakistan, on the 6th. Strengthened once again by pre-existing strong southwest monsoonal flow, Hope reintensified on the 7th with maximum sustained winds of 35 kn.

TYPHOON IRVING

Surges in the southwest monsoon frequent the western North Pacific during the early tropical cyclone season and produce widespread convection from the Malay Peninsula to as far east as Guam. During the same period, the 500-mb monsoon trough fluctuates eastward across the South China Sea and occasionally into the Philippine Sea. By late July, an eastward extension of the midlevel monsoon trough was the main synoptic feature west of Guam. The 500-mb trough axis extended along 15°N from northern Vietnam through the central South China Sea and then eastward into a quasi-stationary low-pressure center over the Philippine Sea.

On August 7 a developing surface circulation was observed at the eastern end of the monsoon trough near 14.1°N, 137.7°E. This weak circulation tracked cyclonically around the eastern periphery of the broad 500-mb low-pressure center in the Philippine Sea. Taking on the characteristics of a monsoon depression, Irving was described in aircraft reconnaissance data received from August 9 to 11 as a weak depression with poor vertical alignment and maximum surface winds 150 to 180 mi west of the surface center. Ship synoptic data during this period indicated that 25- to 35-kn winds extended outward 120 mi south of the surface center.

By the 11th the monsoon surge had weakened and receded westward, leaving a cut-off 500-mb LOW

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over the Philippine Sea in the vicinity of Irving's surface circulation. The vertical alignment between the surface and the 500-mb center improved, and Irving intensified to a tropical storm. Simultaneously, a break developed in the 500-mb subtropical ridge to the north and Irving tracked north-northwestward towards the Ryukyu Islands while intensifying to typhoon strength. Strengthening of the 500-mb ridge southeast of Japan caused typhoon Irving to track over the western East China Sea and accelerate north-northeastward across Korea before merging with an extratropical frontal boundary north of Japan.

Aircraft and synoptic data between the 9th and the 12th indicated that Irving's maximum wind band actually existed 150 to 200 mi west of the large, calm-wind surface center. Irving never became a tight, well-developed tropical cyclone.

Typhoon Irving was the first tropical cyclone to strike Korea this year. Rapidly weakening as he made landfall, Irving spared southern Korea from the destructive typhoon-force winds he had maintained through most of the East China Sea. Korea, however, did receive torrential rains which produced widespread flooding. The hardest hit area was the island of Cheju Do, where 4.3 in. of rain was reported at Cheju. Official estimates reported 150 dead or missing, 1,000 to 2,000 homeless, and approximately \$10 to \$20 million damage to food and agriculture. Some 30 fishing and other small vessels, many of which were anchored in Gamchun Bay near Pusan, were severely damaged by collision, grounding, and capsizing.

SUPERTYPOON JUDY

Of all the typhoons of 1979, Judy's significance was only surpassed by supertyphoon Tip. Judy eventually developed into the year's second supertyphoon, but more importantly, she served as a reminder of how rapidly a minor tropical disturbance can develop into a dangerous tropical cyclone.

Surface synoptic data from the beginning to the middle of August showed that the area south and east of Guam was fairly inactive. By August 15, however, synoptic and satellite data revealed a tropical disturbance about 120 mi east-northeast of Truk, which was eventually to become typhoon Judy. No significant pressure falls were observed over the area as the disturbance drifted slowly west-northwestward.

Rapid intensification was not expected, but at 1635 on August 16, less than 10 hr after an aircraft investigation, weather radar at Andersen Air Force Base, Guam, located a well-defined circulation center moving west-northwest toward Guam at 15 kn. The disturbance continued tracking toward Guam and at 1800 the center passed over the Naval Oceanography Command Center on Nimitz Hill, which reported a mean sea-level pressure of 1001 mb and a wind gust of 51 kn. Based on this firsthand information, JTWC issued the first warning on tropical storm Judy at 1900.

Judy intensified steadily while following a nearly climatological west-northwestward track at 10 to 12 kn for the next 24 hr. She reached

typhoon strength at approximately 0300 on the 18th. During the next 36 hr after reaching typhoon strength, Judy's central pressure dropped 69 mb, and she attained supertyphoon intensity by 0000 on the 20th. Her lowest central pressure of 887 mb was measured by reconnaissance aircraft at 2145 on the 19th. Three distinct, concentric wall clouds were also noted at that time. Supertyphoon intensity was maintained until 1500 on the 20th, with gradual weakening thereafter. Judy passed south of Okinawa before beginning to recurve into the East China Sea.

A rapidly intensifying ridge was expected to drive Judy into the Asian mainland south of Shanghai, but just off the Chinese coast she recurved to the northeast. As Judy recurved, she was downgraded to tropical-storm strength, based on land synoptic data. Transition to an extratropical system occurred at 1200 on the 26th, while Judy passed through the Korea Strait.

Judy was still relatively weak while passing over Guam, and damage there was insignificant. Damage to Okinawa was also minimal, even though sustained winds of 40 kn were experienced for 28 hr. Southern Korea did not fare as well; 111 people were killed, over 8,000 homes were inundated, 57 vessels were destroyed, and many thousands of acres of crops were ruined by Judy's torrential rains and strong winds.

TYPHOON LOLA

Tropical storm Ken and typhoon Lola developed almost concurrently. Satellite imagery on September 1 showed a number of disturbances organized into a line of convection from north of Kadena to south of Marcus. Ken developed from a disturbance just east of Kadena. At this same time, the disturbance which developed into Lola was south of Marcus and appeared quite weak. The largest and most menacing disturbance northwest of Guam did not develop.

During the next 48 hr, the tropical upper tropospheric trough deepened southwestward over the middle disturbance and suppressed its convection. At the same time, it divided the convective line into the two distinct systems, Ken and Lola.

After forming, Ken and Lola began to move in similar recurvature tracks. Ken tracked northward into the Sea of Japan reaching a maximum intensity of 60 kn. Lola intensified into a typhoon and eventually transitioned into an extratropical system over the cooler waters east of Japan.

TYPHOON MAC

Typhoon Mac developed from a weak surface circulation northeast of Yap during September. This circulation tracked westward, reaching tropical-storm intensity by the 16th. Mac followed the climatological intensification rate for tropical cyclones approaching the Philippines and reached typhoon intensity prior to making landfall. Frictional effects caused the storm to weaken as it tracked across southern Luzon towards the South China Sea. The unexpected development of tropical storm Nancy east of Hai-nan Island influenced Mac's track in the South China Sea.

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Real-time forecasts do not always reflect the actual intensity of a tropical cyclone. Rapid intensification or weakening, peripheral data unavailable due to geographical restrictions, and tight maximum wind bands, which are not initially detected, all reduce the accuracy of intensity estimates provided in tropical-cyclone warnings. These discrepancies often are not recognized until post-analysis, as in the case of typhoon Mac.

Reanalysis of aircraft reconnaissance data for September 16 to 18 shows that most probably Mac reached typhoon intensity by 1800 on the 16th. Aircraft reconnaissance at 0503 on the 16th reported 68 kn at 1,500 ft and 60 kn at the surface. Reconnaissance data at 0810 on the 17th confirmed typhoon intensity by locating 80- to 90-kn surface winds in a 10-mi-wide band tucked under a strong eastern feederband. Mac made landfall prior to the next scheduled aircraft fix with geographical constraints severely reducing peripheral data collection.

Although real-time data were available which indicated Mac had possibly reached typhoon intensity, the isolated reports of strong winds were dismissed as gusts associated with lower velocity sustained winds. Reanalysis of the period between 1800 on the 15th and 0000 on the 18th shows that Mac reached typhoon intensity before weakening from frictional effects over Catanduanes Island on September 18.

The unexpected development of a second tropical cyclone in the South China Sea produced a series of track and intensity modifications in typhoon Mac. On exiting the Philippines, Mac was originally forecast to track west-northwestward into the South China Sea, but instead he began a Fujiwhara interaction with the rapidly developing tropical storm Nancy located near Hai-nan Island. Mac tracked toward the north-northwest, skirting Cubi Point Naval Air Station in the Philippines on his new track toward Hong Kong. Strong anticyclonic outflow from Nancy sheared Mac's convection towards the southwest with aircraft reconnaissance reporting an exposed low-level circulation of 30- to 35-kn intensity on the 20th.

Weak steering currents allowed Nancy to take a cyclonic track across southern Hai-nan Island before heading southwestward into Vietnam. Nancy's southwestward track forced Mac farther north. Mac eventually passed just south of Hong Kong. Ironically, Nancy's development, which caused Mac to track towards Hong Kong, also helped to spare Hong Kong from potential typhoon-force winds. Nancy's upper level outflow, which dominated the South China Sea from September 19 to 23, produced strong vertical shear over Mac and slowed his rate of intensification. Typhoon Mac reached only minimal tropical-storm intensity prior to landfall west of Hong Kong.

TYPHOON OWEN

Typhoon Owen developed from a disturbance which tracked south of Guam on September 20. Two days later, satellite imagery showed that the system was organizing at the same time that aircraft reconnaissance data indicated a definite surface circulation with a 1000-mb central

pressure.

The system moved on a generally westward track until the 23rd, at which time it unexpectedly turned sharply to the north. Postanalysis revealed a possible reason for this movement. An upper level trough was evident on the 200-mb analysis just west of the cyclone. Southerly winds of 50 kn were observed on the eastern periphery of the trough. Considerable vertical shear existed in the layer from 500 mb to 200 mb. It appeared that the steering and depth of this upper level trough rather than the 500-mb steering was the dominant feature in Owen's movement. Under its influence, Owen tracked generally northward throughout his lifetime, although undergoing major changes in speed. He slowed to a barely perceptible 1-kn movement just northeast of Okinawa (at the latitude of the subtropical ridge axis) and then dramatically accelerated to 24 kn 36 hr later under vertically consistent westerly steering. At this time, Owen made landfall near Osaka, Japan, and began weakening in intensity while still accelerating to 47 kn. Eventually, he transitioned into an extratropical system but not before reaching a maximum intensity of 110 kn on the 26th.

TYPHOON SARAH

Typhoon Sarah was spawned in the monsoonal trough during late September. During the last few days of the month, the circulation meandered slowly toward Luzon under the influence of the southwest monsoon, then looped over Luzon during the first 3 days of October as a midtropospheric short-wave trough moved eastward north of Luzon. Once the short-wave trough had moved east of the circulation, the northeasterly flow intensified and became more of an influence as the circulation finished its loop and began a south-southwestward track.

Sarah intensified to typhoon strength while tracking southward, which is quite unusual for a tropical cyclone. Several aircraft reconnaissance flights reported that Sarah had attained typhoon strength, even though her cloud structure was not well organized.

During the first several days of October, when Sarah was slowly developing to typhoon strength and moving south, Palawan Island and the central Philippines were battered by high winds and rain. These areas were inundated by flooding and landslides, which caused massive crop damage and death. Many villages were cut off from any source of food, fresh water, and other necessities for survival. Four deaths were attributed to Sarah. On the 8th, Sarah finally began to track westward, and the weather cleared over Palawan Island and the central Philippines. Aircraft reconnaissance early on the 9th reported that Sarah's structure had become better organized. Previous reports had shown that Sarah was not vertically aligned, but on the 9th the midlevel center had become vertically aligned with the surface center, upper level outflow improved, and Sarah's intensity increased to 110 kn. In contrast to her unusual origin, Sarah had become a most impressive storm.

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Sarah reached peak intensity early on the 10th, then began to weaken slowly as she tracked west-northwestward. She continued on a west-northwestward track until dissipation over Vietnam on the 17th. After 20 days, she dissipated within 300 mi of her origin as a monsoon depression on October 28.

SUPERTYPOHON TIP

Supertyphoon Tip was the most significant typhoon of the 1979 season and possibly the most significant tropical cyclone this century. Forty aircraft reconnaissance missions were flown on Tip, which produced 60 fixes, and thus made it one of the most closely watched cyclones in recent memory. Aircraft and synoptic data showed that Tip achieved the lowest sea-level pressure ever observed in a tropical cyclone (870 mb) and also had the largest circulation pattern on record (nearly 1,200 mi in diameter).

Satellite and synoptic data during the early part of October revealed an active monsoon trough that extended from the Marshall Islands through the Caroline Islands to Luzon. Three distinct circulations developed in this trough: one near Manila, which would become typhoon Sarah; another southwest of Guam, which would become tropical storm Roger; and the last between Truk and Ponape, which was destined to become supertyphoon Tip.

The surface analysis for 0000 on the 3rd showed the three circulations in the monsoon trough with strong cross-equatorial flow, most of which was feeding into tropical storm Roger. This situation was enhanced by an extratropical trough north of Roger over southern Japan. The split in the surface flow pattern near Guam tended to keep Tip from developing rapidly while southeast of Guam. The satellite signature of the tropical disturbance near Truk continued to show improvement despite an initially unfavorable upper air pattern. At 0900 on the 4th reconnaissance aircraft found a closed surface circulation about 120 mi southeast of Truk with a mean sea-level pressure of 1003.9 mb and a maximum observed surface wind of 25 kn.

On the 5th reconnaissance aircraft fixed the disturbance about 100 mi southeast of the previous position. Although the surface pressure had not dropped significantly, the observed surface winds had increased, and as a result the tropical depression was upgraded to tropical storm Tip at 0000 on the 6th.

Tip moved erratically until the 8th. He first executed a cyclonic loop southeast of Truk, then accelerated to the northwest, only to stall and meander to a position south of Truk. It was difficult to keep track of the surface position during this period. The best track is based almost entirely on aircraft surface positions, because the satellite fixes were based on upper level outflow centers, and even the 700-mb center, as observed by aircraft reconnaissance, was considerably displaced from the surface center. Changes in the surface wind direction reported by Truk assisted JTWC in monitoring tropical storm Tip during this period of erratic behavior.

On the 8th the expected northwesterly

movement began. Roger was far to the north becoming extratropical, and the southerly winds that had been flowing north began to veer toward Tip. The upper air outflow channel improved. The 0208 aircraft fix confirmed that Tip was heading toward Guam at approximately 13 kn. The minimum sea-level pressure had dropped to 995 mb, and the surface winds were 40 kn.

Tip continued to intensify and accelerate toward Guam. Six hours before expected landfall, however, reconnaissance aircraft and radar positions from Andersen Air Force Base showed that he had turned westward. Tip actually passed south of Guam, reaching the closest point of approach about 25 mi south of southern end of the island at 1015 on the 9th. Maximum winds of 48 kn with gusts to 64 kn were recorded at the Naval Oceanography Command Center on Nimitz Hill. Andersen Air Force Base recorded a total of 9.1 in of rain.

Shortly after passing Guam, Tip reached typhoon strength and continued on a basic west-northwestward track. The analyses over the next few days showed that typhoon Tip was moving into an area of strong upper level divergence which covered most of the western Pacific. Rapid intensification was forecast, but it was much more rapid than expected as the pressure between the 9th and 11th dropped 98 mb to 898 mb. Tip reached supertyphoon strength at that time with maximum winds of 130 kn reported by aircraft reconnaissance. The circulation pattern associated with typhoon Tip had increased to a diameter of 1,200 mi, which exceeds the previous record of 720 mi set by typhoon Marge in August 1951.

Supertyphoon Tip intensified still further, and at 0353 on the 12th a reconnaissance aircraft recorded the lowest sea-level pressure ever observed in a tropical cyclone: 870 mb. This was 6 mb lower than the previous record set by supertyphoon June in November 1975. The 700-mb height was 1,944 m, and the 700-mb temperature within the eye was an exceptionally high 30°C. The Aerial Reconnaissance Weather Officer (ARWO) reported that an unusual feature was the spiral striations on the wall cloud. It looked like a double helix spiraling from the base of the wall cloud to the top, making about two revolutions in climbing. Tip maintained supertyphoon strength for the next 54 hr while moving northwestward at 3 to 7 kn. An estimated maximum wind of 165 kn was reached at 0600 on the 12th.

From the 13th to the 17th, the radius of surface and gradient-level 30-kn or greater winds extended over 600 mi from Tip's center. The radius of over 50-kn winds was over 150 mi. Aircraft reconnaissance data likewise showed that 700-mb winds of 105 kn existed more than 120 mi from Tip's center during this period.

After the 17th Tip began to weaken as the large circulation pattern began to shrink and turned northward. By the 18th Tip was accelerating to the northeast. During recurvature, Tip passed within 35 mi of Kadena Air Base on Okinawa, which reported maximum sustained winds of 38 kn with gusts to 61 kn.

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Early on the 19th Tip made landfall on the Japanese island of Honshu, about 60 mi south of Osaka, with maximum winds of 70 kn. Synoptic and radar data from stations on the island showed that Tip had a speed over 45 kn as he passed to the north of Tokyo and eastward into the Pacific Ocean. Tip became extratropical over Honshu.

The extratropical low-pressure center maintained winds of storm force (48 kn) until the 21st, when it moved to a position east of Kamchatka and finally began to fill rapidly.

The majority of the severe damage occurred in Japan, where the agricultural and fishing industries sustained losses into the millions of dollars. Flooding from Tip's rains also breached a fuel retaining wall at Camp Fuji, west-northwest of Yokosuka. The fuel caught fire causing 68 casualties, including 11 deaths, among the U.S. Marines stationed there.

Considering the size and strength of supertyphoon Tip, the western Pacific fared well. Luckily, maximum intensity was reached while the system was still far from any inhabited areas, but the potential for mass destruction was always there. From a strictly meteorological standpoint, Tip was also a thing of great beauty. Another ARWO stated upon returning from a mission that the second penetration was beyond description. This is unquestionably the most awe-inspiring storm I have ever observed....The moon had risen sufficiently to shine into the eye through an 8-mi clear area at the top of the eyewall. To say it was spectacular is totally inadequate...'awesome' is a little closer.

SUPERTYPOON VERA

Vera, the fourth and final supertyphoon of the season, originated in an active near-equatorial trough which extended through the Caroline and Marshall Islands. Vera was first analyzed as a weak surface circulation 100 mi southeast of Ponape on October 27.

Synoptic data on the 30th indicated that low-level inflow was now concentrated into the developing cyclone. The convective activity increased rapidly on the 31st. On November 1 aircraft reconnaissance found an ill-defined circulation center with a central pressure of 1004 mb. On November 2 rapid intensification occurred, and Vera was upgraded to a tropical storm. She reached typhoon strength by the 3rd, while 190 mi south-southeast of Yap.

From the first warning until her approach to the Philippines northeast of Samar, Vera moved on a virtually straight west-northwest track. She continued to intensify during her west-northwestward acceleration and reached supertyphoon intensity only 18 hr after being upgraded to a typhoon. Reconnaissance aircraft reports indicated Vera maintained supertyphoon intensity for over 24 hr before weakening as she approached Catanduanes Island. The peak wind reported on Catanduanes Island was 50 kn at 1200 on the 5th as Vera passed just off the coast. Vera made landfall north of Tarigtig Point packing winds of 90 kn.

After landfall, the onset of enhanced

low-level northeasterly flow over the Taiwan Straits coupled with strong upper-level southwesterlies over the Philippines resulted in vertical disorganization and rapid weakening of Vera. Radar and aircraft reports indicated the low-level circulation continued to track to the northwest over the Cagayan River Valley and exited into the South China Sea near Culili Point south of Laoag. The upper level circulation sheared off near Tuguegarao and was tracked using satellite imagery northward over Aparri then east-northeastward into the Philippine Sea. Surface synoptic and ship reports at 0000 on the 7th showed a secondary surface center near Baguio. At the same time, the primary center was crossing the Cordillera central mountain range 95 mi to the north.

After exiting into the South China Sea, the strong northeast monsoon flow accelerated Vera southwestward, and on the 7th she was downgraded to a tropical depression.

TYPHOON ABBY

Abby, the last typhoon of the season, developed over the Marshall Islands during early December. Abby proved to be an unusual cyclone in several ways. Throughout much of her existence, she was not vertically aligned. Aircraft reconnaissance located the midlevel circulation center displaced as much as 55 mi from the surface center. At one point, two centers were identified. In addition, Abby fluctuated between tropical-depression and tropical-storm strength several times before reaching typhoon strength 10 days after formation.

On the 2nd aircraft reconnaissance observed surface winds of 45 kn and a sea-level pressure of 996 mb. The surface and 700-mb centers were displaced by 12 mi, but Abby continued to intensify to 60 kn on the 4th, while increasing the displacement between the surface and 700-mb centers.

All available information indicated continued intensification as Abby tracked towards Guam. However, the opposite occurred. As Abby moved west of Truk, she weakened to less than tropical-storm strength. By the 7th Abby reintensified to minimum tropical-storm strength as she moved westward. During the 8th Abby once again weakened to less than tropical-storm strength and increased her forward speed of movement.

Abby was not vertically aligned from the 1st through the 9th. On the 9th aircraft reconnaissance observed that Abby possessed multiple 700-mb centers, but a few hours later only one well-organized, intensifying center was found. The following is a storm mission summary by the ARWO, who made the double penetration into Abby: "This mission started out as a normal fix but ended up being unusual. On our way inbound for the supplemental fix, there was no problem reading winds at flight level or on the surface. Winds were 20 to 25 kn the entire way. An area of thunderstorm activity became visible ahead of us. As we neared it, the doppler indicated that the 700-mb center was in the middle of the

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thunderstorm. Not eager to go find this out, we went back to find the surface center. Enroute, we saw surface winds in excess of 35 kn which led us to a fairly disorganized surface center just east of the main thunderstorm. Over it was a fairly small light and variable wind center. Radar showed little curvature in the shower pattern, but the surface winds did indicate a weak circulation existed at this first position. No weather existed to the east of our first fix, and this position was right on the JTWC forecast track. On the second fix, things had changed. As we came in the second time, we encountered considerable precipitation. Doppler and search radar indicated a center with a possible wall cloud forming considerably west of our first fix. Winds were stronger at flight level and we penetrated a wall cloud of about 80-percent coverage. When we broke through, we encountered our strongest winds at flight level. The surface center was under the eastern wall cloud with a small light and variable wind center at 700 mb centered in the eye. Lightning started in the eastern wall cloud and spread around the eye. Our drop was made as close to the surface center as was possible and indicated a good 988-mb sea-level pressure. The

700-mb height was down 72 m from the first fix. The positions were 85 mi apart causing me to believe that two centers existed for a short time with the latter becoming the predominant one. The pressure profile seems to indicate this theory...."

Satellite imagery at 0144 on the 9th also indicated the possible existence of multiple outflow centers. While Abby was reorganizing into a single center, she began to reintensify to tropical-storm intensity, which made her the last typhoon of the decade.

Typically, recurving typhoons have their maximum intensities either before or less than 12 hr after recurvature. Abby, however, did not reach maximum intensity until 36 hr after recurvature. By the 13th Abby reached maximum intensity of 110 kn with a minimum sea-level pressure of 951 mb. As she continued toward the east-northeast, Abby approached a regime of very strong westerlies in the middle and upper troposphere. The strong westerlies induced Abby's acceleration and rapid weakening. Abby dissipated on the 14th due to strong vertical shear between the surface and middle levels.

Table 1.--Western North Pacific significant tropical cyclones, 1979

<u>CYCLONE</u>	<u>TYPE</u>	<u>NAME</u>	<u>PERIOD OF WARNING</u>	<u>CALENDAR DAYS OF WARNING</u>	<u>MAX SFC WIND</u>	<u>MIN OBS SLP</u>	<u>NUMBER OF WARNINGS</u>	<u>DISTANCE TRAVELED</u>
01	TY	ALICE	01 JAN-14 JAN	14	110	930	51	2597
02	TY	BESS	20 MAR-25 MAR	6	90	958	21	1804
03	TY	CECIL	11 APR-20 APR	10	80	965	40	2535
04	TS	DOT	10 MAY-16 MAY	7	40	984	24	2876
05	TD	TD-05	23 MAY-24 MAY	2	30	998	6	2170
06	TY	ELLIS	01 JUL-06 JUL	6	85	955	22	1612
07	TS	FAYE	01 JUL-06 JUL	6	40	998	20	1837
08	TD	TD-08	24 JUL-25 JUL	2	20	1004	5	1264
09	ST	HOPE	27 JUL-03 AUG	10	130	898	33	3928
10	TS	GORDON	26 JUL-29 JUL	4	60	980	13	1058
11	TD	TD-11	03 AUG-06 AUG	4	25	997	14	1088
12	TY	IRVING	09 AUG-18 AUG	10	90	954	38	2732
13	ST	JUDY	16 AUG-26 AUG	11	135	887	39	2502
14	TD	TD-14	18 AUG-20 AUG	3	20	1006	9	605
15	TS	KEN	01 SEP-04 SEP	5	60	985	13	1418
16	TY	LOLA	02 SEP-08 SEP	7	90	950	23	1298
17	TY	MAC	15 SEP-24 SEP	10	70	984	35	1831
18	TS	NANCY	19 SEP-22 SEP	4	45	993	14	528
19	TY	OWEN	22 SEP-01 OCT	10	110	918	37	2151
20	TS	PAMELA	25 SEP-26 SEP	3	45	1002	6	984
21	TS	ROGER	03 OCT-07 OCT	6	45	985	16	1920
22	TY	SARAH	04 OCT-15 OCT	12	110	929	43	1194
23	ST	TIP	05 OCT-19 OCT	16	165	870	60	3972
24	ST	VERA	02 NOV-07 NOV	6	140	915	23	1868
25	TS	WAYNE	08 NOV-13 NOV	6	50	990	22	1559
26	TD	TD-26	01 DEC-02 DEC	2	30	998	6	1070
27	TY	ABBY	01 DEC-14 DEC	14	110	951	52	4044
28	TS	BEN	21 DEC-23 DEC	3	60	990	10	2245
1979 TOTALS				149*			695	

*OVERLAPPING DAYS INCLUDED ONLY ONCE IN SUM.

Table 2.--Frequency of typhoons by month and year

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
AVERAGE (1945-58)	0.4	0.1	0.3	0.4	0.7	1.1	2.0	2.9	3.2	2.4	2.0	0.9	16.3
1959	0	0	0	1	0	0	1	5	3	3	2	2	17
1960	0	0	0	1	0	2	2	8	0	4	1	1	19
1961	0	0	1	0	2	1	3	3	5	3	1	1	20
1962	0	0	0	1	2	0	5	7	2	4	3	0	24
1963	0	0	0	1	1	2	3	3	3	4	0	2	19
1964	0	0	0	0	2	2	6	3	5	3	4	1	26
1965	1	0	0	1	2	2	4	3	5	2	1	0	21
1966	0	0	0	1	2	1	3	6	4	2	0	1	26
1967	0	0	1	1	0	1	3	4	4	3	3	0	23
1968	0	0	0	1	1	1	1	4	3	5	4	0	23
1969	1	0	0	1	0	0	2	3	2	3	1	0	13
1970	0	1	0	0	0	1	0	4	2	3	1	0	12
1971	0	0	0	3	1	2	6	3	5	3	1	0	24
1972	1	0	0	0	1	1	4	4	3	4	2	2	22
1973	0	0	0	0	0	0	4	2	2	4	0	0	12
1974	0	0	0	0	1	2	1	2	3	4	2	0	14
1975	1	0	0	0	0	0	1	3	4	3	2	0	15
1976	1	0	0	1	2	2	2	1	4	1	1	0	15
1977	0	0	0	0	0	0	3	0	2	3	2	1	11
1978	0	0	0	1	0	0	3	2	4	3	2	0	15
1979	1	0	1	1	0	0	2	2	2	2	1	1	13
AVERAGE (1959-78)	0.25	0.05	0.10	0.70	0.85	0.95	2.85	3.55	3.25	3.20	1.65	0.55	17.95

JTWC

Table 3.--Frequency of tropical storms and typhoons by month and year

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
AVERAGE (1945-58)	0.4	0.1	0.4	0.5	0.8	1.3	3.0	3.9	4.1	3.3	2.7	1.1	21.6
1959	0	1	1	1	0	0	3	6	6	4	2	2	26
1960	0	0	0	1	1	3	3	10	3	4	1	1	27
1961	1	1	1	1	3	2	5	4	6	5	1	1	31
1962	0	1	0	1	2	0	6	7	3	5	3	2	30
1963	0	0	0	1	1	3	4	3	5	5	0	3	25
1964	0	0	0	0	2	2	7	9	7	6	6	1	40
1965	2	2	1	1	2	3	5	6	7	2	2	1	34
1966	0	0	0	1	2	1	5	8	7	3	2	1	30
1967	1	0	2	1	1	1	6	8	7	4	3	1	35
1968	0	0	0	1	1	1	3	8	3	6	4	0	27
1969	1	0	1	1	0	0	3	4	3	3	2	1	19
1970	0	1	0	0	0	2	2	6	4	5	4	0	24
1971	1	0	1	3	4	2	8	4	6	4	2	0	35
1972	1	0	0	0	1	3	6	5	4	5	2	3	30
1973	0	0	0	0	0	0	7	5	2	4	3	0	21
1974	1	0	1	1	1	4	4	5	5	4	2	2	32
1975	1	0	0	0	0	0	2	4	5	5	3	0	20
1976	1	1	0	2	2	2	4	4	5	5	1	2	25
1977	0	0	1	0	0	1	4	1	5	4	2	1	19
1978	1	0	0	1	0	3	4	7	5	4	3	0	28
1979	1	0	1	1	1	0	4	2	6	3	2	2	23
AVERAGE (1959-78)	0.55	0.35	0.45	0.85	1.15	1.65	4.55	5.70	4.90	4.15	2.50	1.10	27.90

JTWC

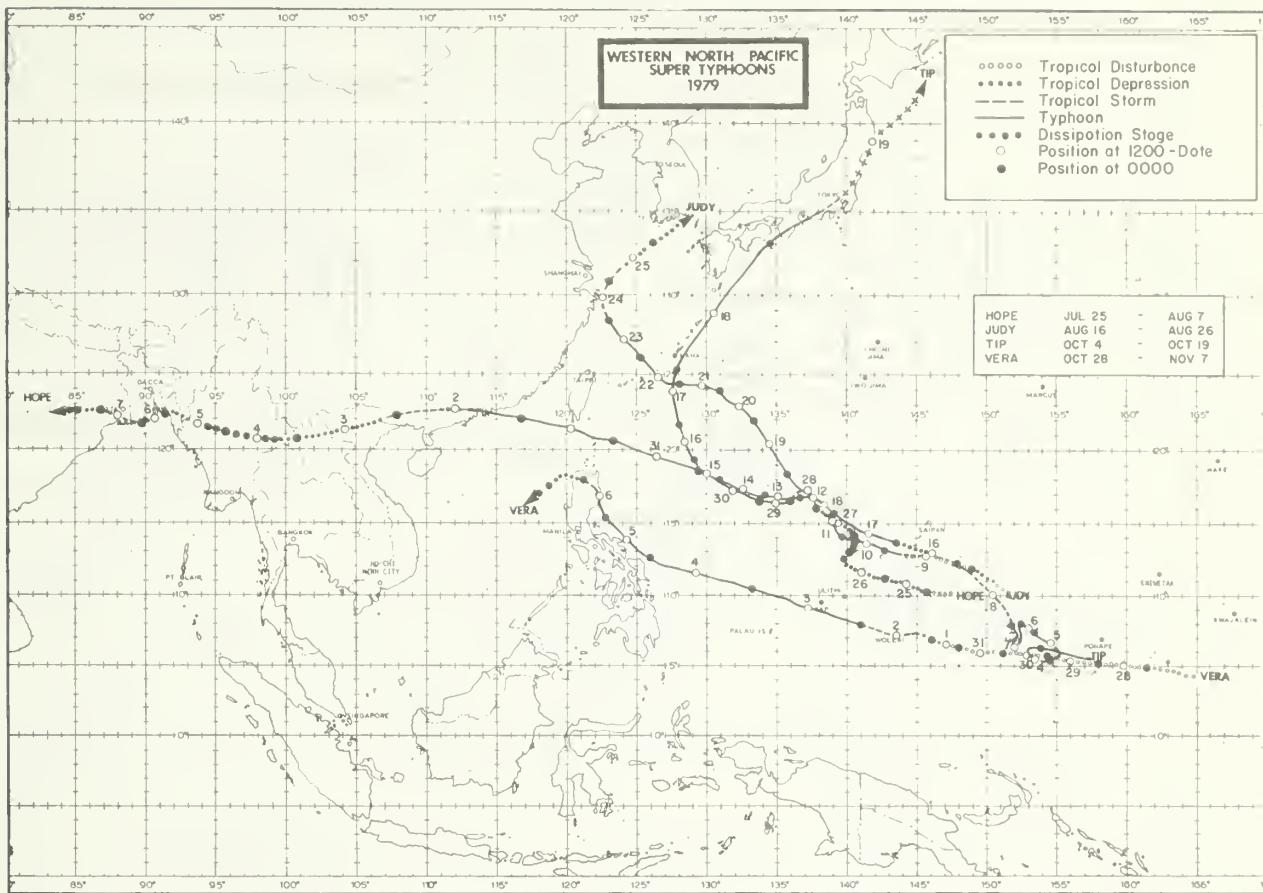


Figure 1.---Tracks of western North Pacific supertyphoons, 1979.

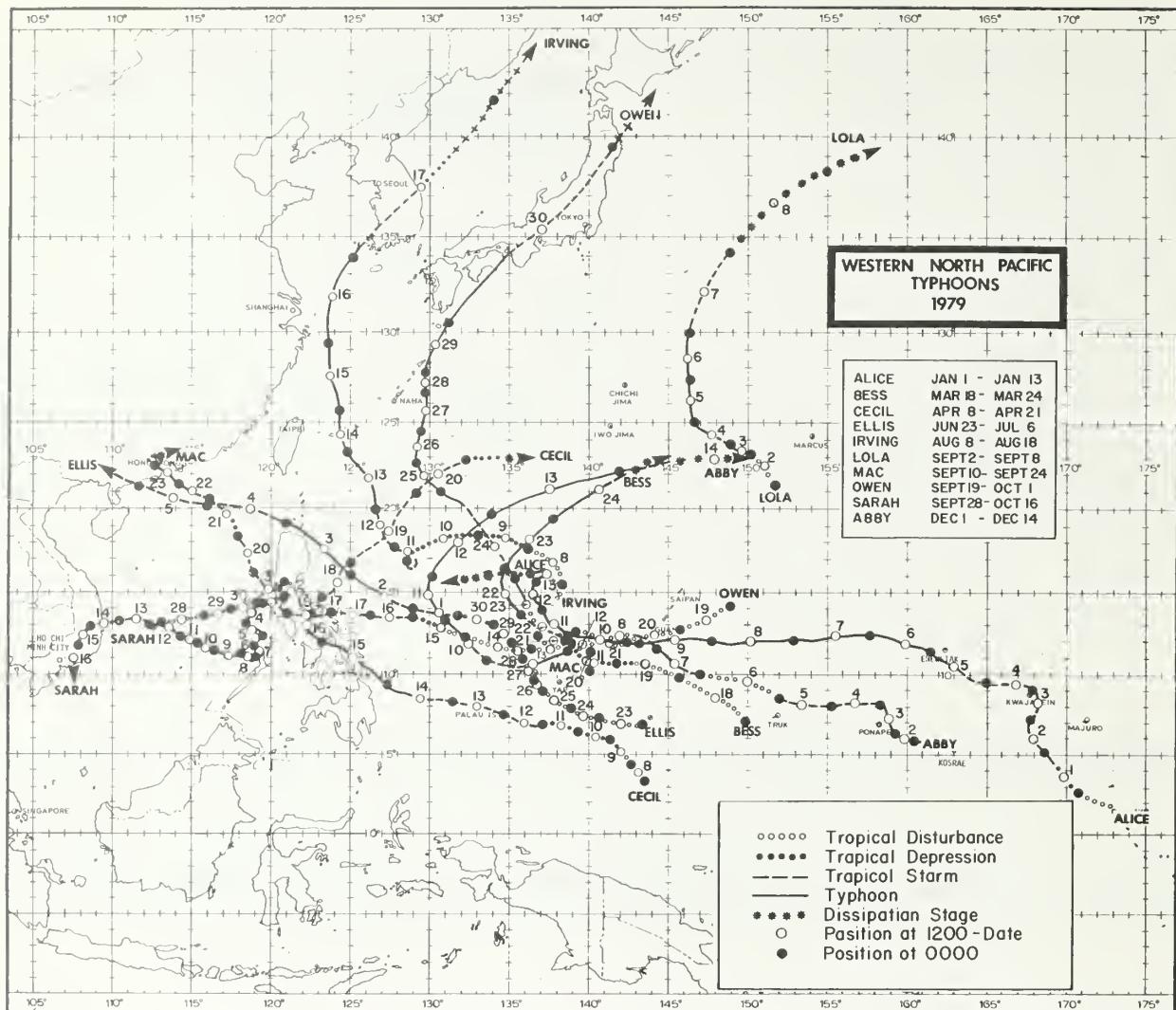


Figure 2.---Tracks of western North Pacific typhoons, 1979.

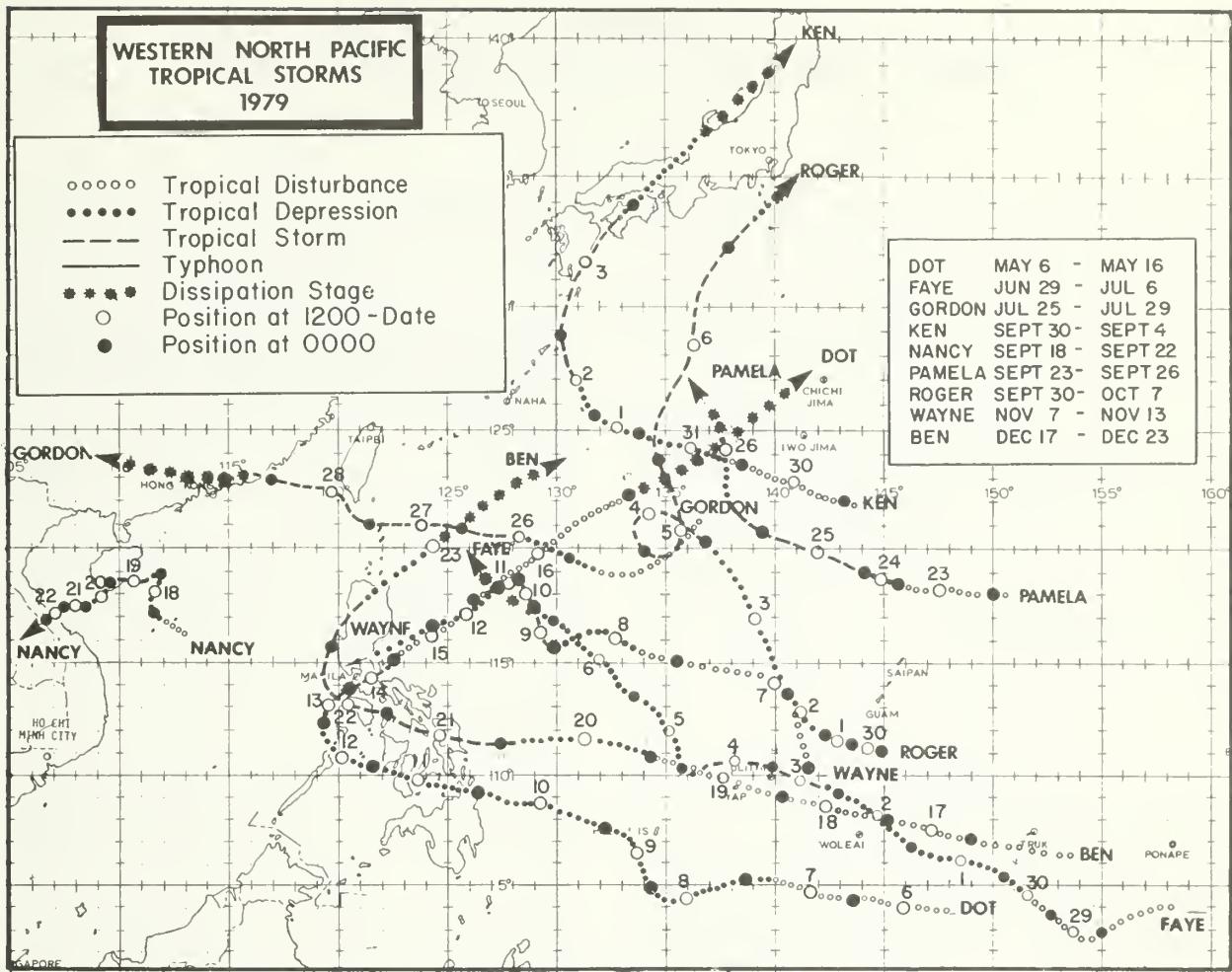


Figure 3. ---Tracks of western North Pacific tropical cyclones, 1979.

LATE REPORTS
GENERAL SUMMARY OF NATIONAL FLOOD EVENTS
YEAR 1978

Jose O. Marrero, Office of Hydrology

The total flood-related losses for the year were estimated to be near \$1 billion, and at least 120 lives lost.

The remnants of tropical storm Amelia brought great flooding and rainfall to central Texas during July 31 to August 4. Damage estimates were expected to be near \$100 million. Thirty-three lives were lost as a result of flash flooding, ranking the central Texas flooding as the top event for 1978 flood year.

In California some 20 lives were lost due to flash flooding in the Big Tunjunga Canyon area -- monetary losses around \$80 million.

A total of 10 lives were lost and damages estimated at \$25 million in Arkansas.

JANUARY

January was a fairly normal month rainfall-wise in the eastern Gulf Basin, until the middle of the fourth week. Heavy rain occurred from the 24th through the morning of the 26th. During this period the rainfall pattern ranged from over 9 inches in the immediate Gulf Coast area with a fairly rapid gradient northward to near 1 to 2 inches in the Tupelo area of Mississippi.

Severe flooding occurred in a small area in southwestern Georgia between Columbus and Bainbridge, where the flow on several streams was reported by the U. S. Geological Survey to be equal to that of a 25-year flood.

Flooding occurred near month end in southern Alabama and in the adjacent area of northwestern Florida. In the Conecuh River Basin in southeastern Alabama, monthly mean flow at the index station at Brontley increased sharply and was 3 times the average for the month.

In extreme northwestern Florida, where rainfall amounts as high as 10 inches were reported from Pensacola, rapid runoff resulted in flooding along many streams. Losses were estimated to be near \$3.3 million.

In West Virginia, in the Ohio Basin area, rapid runoff from rain and melting snow on the 27th and 28th caused many streams throughout the state to reach or slightly exceed flood stages. The most serious flooding occurred along the Kanawha and Lower Lug Fork rivers. Total damage along the Little Kanawha will exceed \$700,000.

In South Carolina, as a result of 2 to 3 times the normal monthly rainfall, flooding occurred at 17 of the 21 river stage reporting stations. Moderate flooding occurred at lower Broad River and Congaree River below Columbia. Flooding of lowlands and swamp-

land developed along the Pee Dee River in northeastern South Carolina. On the Saluda River, Lake Greenwood did not fill but flooding was reported. Damage was estimated near \$60,000, however, savings were estimated at half a million dollars due to excellent warnings.

Precipitation in January was much above normal over most of West Virginia. Most of the precipitation occurred in the form of snow over the northern half of the area. Monthly totals ranged up to near 89.5 inches at Snowshoe, WV. A record 24-hour snowfall of 15.8 inches was established at Charlestown, WV, where the January monthly total of 39.5 inches exceeded the January record of 22.2 inches set in 1977. Streamflow was near normal until the last week of the month when heavy rain and snowmelt brought streamflow to much above normal. On the 19th and 20th heavy snow fell over most of West Virginia, resulting in a snowcover of 1 to 3 feet. The most significant period of precipitation occurred when rain began during the afternoon of the 24th and continued until the very early hours of the 26th. The heaviest rain fell during the early morning hours of the 25th and again during the late afternoon and evening hours. Runoff was slow to begin as the rain fell on the heavy snowcover, but temperatures rose rapidly into the low to mid 50's accompanied by strong winds. This caused a rapid increase in snowmelt which resulted in ten rivers exceeding flood stage. However, a surge of Arctic air moved rapidly over the area bringing a halt to snowmelt. The most serious flooding occurred along the Little Kanawha and Lower Tug Fork Rivers. No death or injuries due to flooding were reported.

In New York a giant ice jam formed at Prattsville on the Schoharie Creek, resulting in the second highest stage of record, 17.7 feet, at least, and the village was inundated by 3 feet of water. Other minor flood problems occurred, mostly due to ice jams on streams and rivers.

Locally heavy rains fell in the Tucson, AZ area, creating a rise on rivers. Two deaths were attributed to a minor rise on the Rillito Creek, apparently as the result of unsafe actions.

Major flooding was experienced on the San Lorenzo River in Santa Cruz County, California. Damage reported by the county was estimated at \$1.6 million and one death reported.

Minor flooding was reported from the Atlantic Drainage to the Pacific and Alaska, mostly due to ice jamming in the colder regions. Flood losses for the month of January total just over \$6.5 million with 3 fatalities reported.

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FEBRUARY

In California, the heavy rains that began in mid-December continued through February, causing more floods and mudslides, great amounts of highway and property damage, and considerable loss of life.

On the 10th, a flash flood in Big Tujunga Canyon in Angeles National Forest, 50 miles north of Los Angeles, destroyed the hamlet of Hidden Springs and damaged three nearby camping areas. Twenty persons were reported dead as a result of that flood. About 1,200 persons were reported to have been evacuated because of the flooding and mudslides in the Los Angeles area and in the San Joaquin Valley.

Major flooding occurred along the Salinas and Pajaro Rivers with damage estimates in excess of \$20 million. Some limited evacuation was reported, but the heaviest damage was to agricultural areas. A crest of 15.1 feet at Arsojo Seco and 18.6 feet was recorded on the Serbinas River. Flood stage at both locations is 11 feet.

In northern Florida, mean flow in Suwanee River at Branford increased seasonally as a result of runoff from midmonth's rains, and was above the normal range. Extensive flooding was reported along the Chipola River, mainly in the lakes area which rose 7 feet above the flood stage of 12 feet at Dead Lake. Losses were estimated at \$423,823.

Surface soil conditions in southeastern Texas continued wet during the month. Rainfall was reported almost daily the first three weeks of the month. The greatest daily amounts fell from the 7th to the 8th.

However, on the 8th there was widespread rainfall across the entire southeast area with amounts from .5 to 2 inches reported. Village Creek was out of banks from the 2d to the 20th with a peak of 13.86 feet on the 6th; flood stage is 12 feet at Kauntze; Pine Island Bayou was out of banks from the 1st to the 6th at Sour Lake with a peak stage of 24.7 feet on the 1st. (flood stage 22 feet). This rise was due to rainfall from previous month. A second rise occurred from the 7th to the 22d with a peak stage of 23.86 feet on the 15th.

MARCH

Major flooding occurred in parts of central and eastern Nebraska from the 12th through the 26th. The most serious flooding hit the Platte River Basin between North Bend to Ashland. Specifically, the Union Dike break near Valley, NE, in extreme northwestern Douglas County turned the flooding into a major state and federal disaster.

One life was lost and estimated damages were reported to be as high as \$240 million.

Steady rains on the 11th and 12th coupled with temperatures in the upper 30's and 40's began to melt the heavy snowcover and started the rapid runoff into the streams and rivers. Flooding aggravated by ice jamming hit the South Loup, the Lower Mid Loup and

the North Loup Rivers and around St. Paul shortly thereafter. Extensive overflows resulted along these rivers; at some areas the highest stages recorded since the great floods of the late 60's and late 40's.

A series of major storms in late February and early March caused severe flooding in the Phoenix and Flagstaff areas in Arizona.

Approximately \$18 million damage was reported and 1 life lost. The President declared 8 counties disaster areas. Record flow at Littlefield in northwestern Arizona, was reported in the Virgin River, which was the highest for March in 49 years.

Flooding occurred on the White, Black, Cache, and St. Francis Rivers in March following above normal rainfall across northern Arkansas and southern Missouri.

Flooding in Indiana was widespread during March. The most serious flooding was along the St. Mary's and Maumee Rivers in Adams and Allen Counties. Estimated damage of nearly \$35 million was reported. The river stage at Decatur was the highest since 1959, while at Fort Wayne it was the second highest on record. The St. Mary's at Decatur and Maumee River at Fort Wayne were above flood stage for more than two weeks.

Flooding along the Elkhart River at Goshen was the greatest since 1954. The Elkhart River remained above flood stage over one week.

Flooding along the Kankakee River was greater than in 1976. Estimated damage reported at \$1 million. Extensive lowland flooding occurred in the Wabash River Basin.

Mild temperatures the second week of March caused rapid snowmelt along the White River in south central South Dakota. An ice jam developed near the mouth of the river on the 13th and 14th causing rapid rises at the gage near Oacoma, SD.

Minimal property loss resulted because only agricultural land was flooded. At Oacoma, the White River crested at about 23 feet, which is a flood record.

Minor flooding occurred in eastern and central parts of Kansas, in the lower half of the Skunk River Basin of Iowa, in South Dakota along the Bad River Basin, and along the Cannonball River in southwestern North Dakota, as a result of either runoff from rain and melting ice and snow, or both.

APRIL

The flooding which began near the end of March in the Red River of the North near West Fargo, ND continued downstream in April, and expanded to include tributaries in Minnesota. The flood along the Red River from Wahpeton, ND to Breckenridge, MN northward through Fargo/Moorhead metropolitan area to Halstad, MN, was determined to be the third highest of record. The President declared the Red River Valley a major

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federal disaster area, which included ten Minnesota counties and six North Dakota counties. However, in the greater Grand Fork metropolitan area the event became the flood of the century, exceeding all but the historical floods of 1882 and 1897. Further downstream at Oslo, MN, the Red River exceeded all known flooding, including the flood of 1897. At Drayton, ND, it also exceeded the flood of 1897. Major flooding became widespread over almost all of the basin and a number of tributaries reached record or near record levels. Estimated damages to private and public property was \$13 million and 2 lives lost, however, accurate flood forecast prevented nearly \$30 million in damages.

Severe flooding along the Roanoke River in Virginia near the end of the month forced many residents to evacuate their homes. The flooding in the upper Roanoke Valley was the worst since the record Hurricane Agnes flood of 1972, and about \$10 million in damage was reported. The river at Roanoke crested about 0.5 foot below the record.

Flooding in Indiana occurred along the Wabash, White, Kankakee, Elkhart, Maumee, and St. Mary's Rivers. The most serious flooding occurred along the Kankakee River in the Shelby/Schneider area. Approximately 40 families were evacuated from the Schneider area because of levee failures. Lowland flooding continued along the Wabash River and minor flooding occurred along the St. Mary's, Maumee, and Elkhart Rivers. Little immediate damage occurred from this flooding, however, the long delays in planting of agricultural lands caused reduced yields of crops.

Flooding continued on the Milk River which began in late March and continued into April. Total damage was estimated at \$1.5 million.

There were two periods of flooding in Iowa during April; one around the 10th and the other from the 17th to 21st. The flooding was due to a series of rains which produced 2 to 3 inches of rainfall from southwest across central Des Moines River Basin into the upper Iowa and Cedar Basins. Flood crests were generally 1 to 3 feet above flood stages, although the estimated crest near Hamburg during the second period was 7 feet above the flood stage. Flood damages were minor, affecting mostly agricultural land.

The St. Joseph River at Montpelier, OH, and the Tiffin River at Stryker, OH, continued over bankfull from March. A few localized thunderstorms put the Blanchard River near Flood stage at Findlay in the second week of April. Two drownings were reported.

MAY

Rainfall over Louisiana varied from below normal over southwest to above normal over north and southeast. Amounts of rainfall ranged from 14.16 inches at Abita Springs to .08 inches at Lake Arthur.

On the 3d, the New Orleans metropolitan area experienced widespread urban flooding. Actual losses

were near \$100 million. Four persons were killed; 3 drownings and one electrocution. Areas of major damages reported included Orleans, Jefferson, and St. Bernard Parishes.

During the 6th-7th, urban flooding was reported at a number of communities across northern Louisiana following heavy rainfall. One life was lost due to drowning in the Shreveport area. Evacuations were required in portions of Mooretown, where the water was reported to be window high of homes. Areas of greatest damage included Caddo, Bossier, Bienville, Union, and Morehouse Parishes. Damages estimated in the several millions. Most of the area received between 4 and 6 inches of rain during the 17th-19th. Extreme rainfall amounts were reported at Joliet, 6.6 inches, and Lame Deer with 7.6 inches.

Severe flooding occurred in southeastern Montana. Flooding began on the tributaries of the Bighorn and Little Bighorn Rivers on the 18th. By the 19th major flooding was noted along the entire Bighorn and Little Bighorn Rivers, as well as the upper reaches of the Tongue and Powder Rivers in Montana. The floods were the result of unusually heavy rainfall on well saturated soils. Most of the damage was to northern Cheyenne and Crow Indian Reservations of southern Montana. People from the towns of Crow Agency and Lodge Grass as well as the Sabre Indian School at Ashland were evacuated as the waters rose and isolated the areas. Many bridges and approaches to the bridges were washed out in Yellowstone, Rosebud, Big Horn, and Powder River Counties. Major damage was to agricultural lands and roads, with total damage estimated at \$50 million, and 2 fatalities.

Severe flooding occurred in southeastern Montana along the Yellowstone and Cheyenne Rivers and their tributaries during the 17th-23d. The floods were the result of unusually heavy rainfall and well saturated soils, with much damage.

JUNE

Thunderstorms on 3 consecutive days caused very heavy rains and flash flooding to sections of southwest and south central lower Michigan. On the 25th about 4 inches of rain fell over Cass and Berrien Counties. On the 26th heavy thunderstorms passed over a 50-70 mile swath from Allegan County southeastward across Kalamazoo, Calhoun, Branch, Hillsdale, and Lenawee Counties. Rainfall amounts ranged from 5 to 8.62 inches. Serious flash flooding occurred in Allegan County with less serious flooding on a localized scale in the other counties. On the 27th localized flooding was reported in Berrien, Cass, St. Joseph, and Hillsdale Counties, but on a minor scale.

A state of local emergency was declared over Allegan County by local officials. The town of Hopkins had approximately 6 inches of water over the whole town. Damage estimates were not available.

On the evening of the 19th, water poured off the White

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Mountains in New Hampshire faster than the Ammonoosuc, the Wild Ammonoosuc Rivers, and nearby streams could handle. This produced some of the few true flash floods that are experienced in New Hampshire. Most of the damage occurred in northwest Grafton County, along the Route #302 corridor from Woodsville to Littleton with high streams cutting roads by the dozen. In Bath 30 families were stranded where 3.25 inches of rain occurred in one hour. Damage estimates of \$900,000 were reported.

Major damage occurred near mid-month in southwestern Wisconsin. In the Pecatonica River Basin area, which was the hardest hit, the river crested about 3 feet over flood stage at most points. Widespread flooding was reported elsewhere, but at a lesser scale. Total estimated damage approached \$1 million.

On the 25th, the Minneapolis/St. Paul metropolitan area incurred significant urban flooding. This was the result of a 1 to 3-hour storm which dropped 4 inches of rainfall in southern Minneapolis. The soil was so saturated with moisture that basement collapses were numerous. The Hasting area reported 60 homes with this or related damages. Losses were near \$5 million.

Two heavy rain events occurred in Indiana. The first storm occurred on the 18th, with unofficial reports of 4 inches of rain reported in Osgood and about 5 miles south of Liberty. Street Flooding was reported in Jasper, where 3.5 inches of rain fell. The second storm hit on the 25th. Total damage from flash flooding was in the 3-4 million dollar range. Unofficial rainfall in excess of 6 inches were quite common from Lafayette to Shelbyville.

In Texas very heavy rains fell on the 2d in the southern portion of Big Bend National Park, causing a sharp rise on the Rio Grande. One fatality occurred due to flash flooding within the park. A man was asleep in a dry creek bed; he became tangled in his sleeping bag and was swept away. The Rio Grande crested at 14 feet; one foot above the flood stage at Boquillas, TX.

JULY

This was the most severe month for flooding since 1951. In fact, several of the 1951 records, as well as a few of 1965, crest stages were surpassed by a significant margin. Severe flooding occurred in parts of southeastern Minnesota as a result of rapid runoff from intense thunderstorm rainfall. The stage at the official gaging station in Rochester, MN., rose from a little over 4 feet early on the evening of the 5th, to a record stage of 23.36 feet at noon the following day. The flood stage is 12 feet. This surpassed the old record by 4.24 feet (March 1, 1965). Five people died that night but only one as a direct cause from the flood waters. The other four died when a power failure at a nursing home caused an elevator to fall to the flooded basement. Damage is estimated near \$60 million. The storm hit hardest in Goodhue, Wabash, Winona and Houston Counties in Minne-

sota. Red Wing reported 7.78 inches of rain. Mud slides and bridge or road washouts were numerous. Three deaths were attributed to the storm in the above counties. A driver in a pickup truck drove into a flooded area near a bridge and was swept away just 2.5 miles east of White Rock in Goodhue County. An elderly man in White Rock was swept away while trying to retrieve personal belongings. In Lewiston, Winona County, a man was electrocuted in his flooded basement. The staff at the White Water State Park near Elba, MN, on the Whitewater River evacuated 600 campers. Their flash flood alarm system functioned normally and the town of Elba was evacuated also. Estimated damages reported for the four counties were over the \$10 million mark.

By the end of June, the soil had been "set up" for a potential disaster. Precipitation departures for the two previous months period ran from 2 inches to as high as 6 inch range for the Kickapoo River Basin and adjacent areas. In Ontario, WI, the extreme headwater area, rainfall was about 8 inches above the normal for the same period. Southwestern Wisconsin reported heavy losses, mostly in the Kickapoo River Valley. Record stages were set at each gaging station. By the morning of the 2d, the 72-hour rainfall total ranged from nearly 7.75 inches at the head to 2.75 inches near Steuben, WI, at the mouth of the Kickapoo. No towns along the river were spared damage. Flood waters came fast and even broke through the dike at Soldiers Grove, WI.

An elderly woman in La Crosse, WI, was killed when she went to her basement to check for damage; the concrete walls collapsed on her, and a young man was swept away in the Mississippi River the following day due to swift current from tributary discharge.

Moderate to severe flooding occurred along several streams in eastern Iowa. Rapid runoff from the intense rainfall on the 2d resulted in severe flooding along Waterloo Creek in and near Dorchester, in the upper Iowa River Basin.

A brief downpour over metropolitan St. Louis, MO, caused flash flooding along River Des Peres in University City. Property damage from this was estimated to be near \$2 million.

The finale to July's flooding came on the 19th to Ceustin, MN, at a time when people were cleaning up from the previous flood of the 9th.

Intense thunderstorms moved southeast along the east side of the Cedar River Basin in Minnesota. Around 8 inches of rain was recorded near Brownsdale, northeast of Austin. The record surge of water that hit Austin came mostly from creeks flowing in from the east. The headwaters of the Cedar did not contribute much to the crest. The peak stage at the Sewage Plant was 21.9.

The U. S. Geological Survey showed a crest of 20.35 feet, a new record for the city of Austin.

In Alabama severe flooding occurred on the 26th in and near Fairhope, a few miles southeast of Mobile on the eastern shore of Mobile Bay. The National Weather

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Service Cooperative Observer reported 15.46 inches of rain at Fairhope during the first 11 hours of that date, exceeding the record rainfall of 13.36 inches in 24-hours for the period 1891 to date at that site, and also exceeding the 100-year 12-hour rainfall of 12 inches for the Mobile area. One death was attributed to the massive torrential downpour, due to a road washout. Estimated damages were \$2 million, mostly to roads and agriculture.

Severe flooding occurred in the Kickapoo River Basin in west central and southwestern Wisconsin early in July. Sixteen counties were reported to have been declared eligible for Federal Disaster Assistance. Total losses were estimated by local officials to be \$53 million.

AUGUST

The remnants of Tropical Storm Amelia brought great flooding and rainfall from July 31 to August 4. Ironically, most parts of central Texas were seeking relief from a prolonged drought period. Rainfall recorded on the 3d and 4th exceeded the normal annual precipitation for a large area of western Texas. This probably was the greatest storm in recorded history in terms of widespread heavy rainfall and runoff over Texas.

The storm extended from the south coastal plains, northwest to the hill country, and then northward into north central Texas. Record flooding occurred in and along the Guadalupe, Brazos and Medina Rivers of Texas. Widespread flooding was reported along the Sabinal, Pedernales, Llano, and San Saba Rivers. Moderate flooding occurred along the Frio, Neuces, Atascosa, San Antonio Rivers and Hondo and Seco Creeks. Twenty-seven people died in southern Texas and 6 more in the north central portion for a total of 33 deaths.

The heaviest point rainfall recorded was northwest of Albany, TX, in Shackelford County, where 32.5 inches fell. Damages in Shackelford County were estimated at \$20 million. The city of Albany reported 6 persons drowned and over \$3 million in damages. In Throckmorton and Haskell Counties nearly 15 inches of rain fell during the same period. Throckmorton County reported an estimated \$12 million in damages and Haskell \$30 million. Record rises occurred on the Brazos River in Haskell and Shackelford Counties.

In the Northeast, August began and ended wet with a 2-week dry spell inbetween. The dry spell broke on the morning of the 28th when heavy thunderstorms dumped 3-5 inches of rain over Chester and Delaware Counties in Pennsylvania and Camden and Burlington Counties in New Jersey. Severe highway flooding was reported in Camden County with many major highways closed during the morning rush hour due to standing water and mud slides. Several roads remained closed for 18 hours.

The evening of the 31st saw a flash flood hit portions of Burlington and Ocean Counties in New Jersey, along

Crosswicks Creek. Hardest hit was the town of New Egypt, where damage was estimated at \$2.5 million. No deaths or injuries were reported. From 1 p.m. August 31, to 1 a.m. September 1, McGuire Air Force Base recorded 6.89 inches of rain and estimates made from the Fort Dix Forest Fire Tower of 9 to 9.5 inches during the same period. Evacuation of 50 people was necessary. Electric, gas, and phone services were disrupted; the municipal water supply was contaminated and unusable for several days.

A flash flood which roared out of the Oregon Mountains in New Mexico claimed 5 lives on the White Sand Missile Range and destroyed millions of dollars worth of technical equipment. The five victims were swept to their deaths when a 12-foot wall of water caught their vehicles on a bridge across a normally dry arroyo. An unofficial 10 inches of rain was measured during a 4-hour period on the 19th at a nearby ranch.

A large flood occurred on the Rio Grande from Presidio, TX, downstream to Lake Amistad on the 5th-8th. The flood was caused by rains estimated in excess of 12 inches, which fell on the night of the 4th on the Rio Conchos watershed in northern Mexico. Damage was estimated at \$100,000 in the Presidio area.

A flash flood killed 2 persons on Caesars Creek near Friendship, IN on August 18.

During the afternoon and night of the 26th, thunderstorms dumped up to 11 inches of rain northeast of Watertown, SD. Damages were estimated at greater than \$250,000.

The month of August was both costly in terms of lost dollars and lives.

SEPTEMBER

Heavy rains developed in the Benton area of Arkansas in the early morning of the 13th. At 7:00 AM measurements by the Benton observer was 2.7 inches; by noon an additional 9.75 inches was measured, making a total of 12.45 inches at Benton in 8 or 9 hours. At an industrial plant just east of Benton area, an unofficial measurement of 15.37 inches was reported during the same period.

The heavy rains caused severe flash flooding in Pulaski and Saline Counties. The flooding of Rock and Fourche Creeks in Little Rock and McNeil and Salt Creeks in Benton took a total of 10 lives. Most of the lives lost were children. One characteristic feature of flash flooding during 1978 was that the young and old accounted for a large percentage of the lives lost. The Saline River reached a crest of 22.1 feet; flood stage is 18 feet at Benton. Damage was estimated at \$25 million.

Considerable urban flooding was reported in West Monroe, LA, where maximum rainfall estimated at about 12.5 inches fell during late on the 14th into early on the 15th. Estimated damages occurred of \$18-20 million to some 2-4,000 homes; \$2-3 million to public

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facilities and \$3-5 million in agricultural for a total of \$25 million. No fatalities or injuries were reported.

Several significant floods occurred in western Texas. All of these were in the Rio Grande Drainage Basin. During the 24th, heavy rains of the Terlingua Creek watershed and Big Bend National Park caused a sharp rise on the Rio Grande. A crest of 11 feet was reported at Boquillas, TX. A flash flood occurred on the 26th at Pecos, TX. Cottonwood Draw, which flows through the northern part of Pecos, caused major damage to an estimated 70 homes. Rainfall of 4 to 5 inches were recorded. During the same period heavy rains south of Ojinaga in Mexico caused water to be released from a diversion dam about 20 miles south of Ojinaga, into the Rio Conchos River. In addition, rains of 3 to 5 inches fell on the Cibolo Creek watershed in southwestern Texas; the result was a crest of 25.6 feet in the Presidio area; flood stage is 14.5. A crest of 6-7 feet above flood stage was recorded at Boquilla and Lajitas, TX. The final flood occurred on the 28th-30th. Extremely heavy rains on the Rio Conchos Basin in Mexico, just upstream from Luis Lean Reservoir, caused an unprecedented flow into the reservoir. This was released into the Rio Conchos which caused the second largest flood in history on the Rio Grande at Presidio, (largest was recorded in 1904). Losses were mainly agricultural.

OCTOBER

Flooding continued into October on the Rio Grande from Presidio to the mouth of the Pecos. Damage was estimated at \$1.75 million, with most of the damage to farm lands and the levee system at Presidio.

Intermittent rains, occasionally heavy at times during a five day period, drenched Puerto Rico during the 22d-27th. Although no major rivers or streams went into flood stage, there was considerable flooding of small creeks with heavy runoff and flooding of low-lying areas. The highest 24-hour total was reported at Humacao with 8.32 inches. The heaviest rain for the 5-day period was concentrated along the southern and eastern section of Puerto Rico, with totals ranging from 10 to 18 inches. All three flash flood alarms were activated. Although no actual river flooding occurred, the alarm warned of significant rains in the area. Damages were mainly to roads and agriculture with some small businesses and homes affected in low-lying areas. Flood losses were estimated at around \$5 million in the Ponce area and 2 lives lost.

NOVEMBER

Heavy rains of up to 4 inches caused flash flooding and mainstem flooding along rivers in New Mexico and Arizona.

Major flooding occurred during the 24th-26th on the Blue, San Francisco and Gila Rivers of Arizona and

southwest of New Mexico. Most of the damage occurred in Arizona where an estimated \$8 million in damage was reported in Graham and Greenlee Counties.

One fatality was reported near Reserve, NM. The San Francisco and Gila Rivers reached the high water mark of the 1972 flood event in southwest New Mexico.

Unofficial rainfall reports of 4.5 to 12 inches in the Kirbyville area of southeastern Texas during the 15th caused local flash flood problems. Trout Creek, which runs through Kirbyville, flooded and some 200 people had to evacuate their homes. A total of 19 homes, 13 mobile homes, and 11 small business buildings were flooded. Only 1 fatality occurred, a 57 year old man was trying to save property along the creek; drove his tractor into the water and drowned. Dollar damage was unavailable.

Torrential downpours fell over the Rio Grande watershed in both the United States and Mexico during the night of the 4th and into early morning of the 5th. Rainfall on the mainstem was estimated at 20 to 25 inches. The resultant flood on the Rio Grande broke all the previous records at the Foster Ranch Gauging Station, located upstream from Lake Amistad. The river crested at a stage of 61.5 feet at around 5 AM CST on the 5th. At 10 PM CST on November 4, the stage at this same location was only 7.5 feet. The maximum flow during the flood was 200,000 cfs. Losses as a result of the flood were estimated at approximately \$100,000, mainly to several fishing camps and vehicles.

During the early morning of the 5th, a flash flood struck Sanderson, TX, just northwest of Dryden. Sanderson Creek crested at a stage of 9.0 feet, or just 1.5 feet above flood stage. However, during the flood, a railroad bridge spanning the creek collected considerable debris causing a damming problem. Water backed around through the town, causing an estimated \$1.5 million in damage.

DECEMBER

Flooding occurred in many parts of Kentucky as a result of rapid runoff from rainfall amounts of 3 to 8 inches during the 8th through the 10th. The most significant flooding was in the Kentucky River Basin in the north central portion of the state. Severe damage was reported in Frankfort and other cities situated on the flood plains. Record flooding occurred at Frankfort on the Kentucky River. A crest of 48.4 feet was recorded on the 10th, exceeding the previous record of 47.5 feet set in January 1937. A record crest was also recorded at Clay City on the Red River. According to the Geological Survey's report, peak discharges at several stream-gaging stations in the state were greater than those of a 100-year flood. Near Bowling Green 2 persons were drowned in an automobile, when the driver failed to see a "road washed out" sign. Estimated damages are not available, however losses exceeded \$100 million.

Flooding occurred in portions of western West Virginia,

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as a result of heavy rainfall on the 8th through the 10th. Parts of West Virginia reported record precipitation with monthly totals 2 to 3 times the normal occurring at many locations. Monthly totals ranged from a minimum of 2.35 inches at Speedwell, VA, to a maximum of 11.74 inches at Dunlow, WV.

The most significant flooding occurred in the Twelvepole Creek Basin. The greatest flood since records began was recorded near Dunlow, WV, on the East Fork Twelvepole Creek. The flood was greater than that of a 100-year flood, according to Geological Survey reports.

Approximately 1,600 people left their homes. Damage to roads in a 5-county area (Lincoln, Cabell, Wayne, Jackson and Mingo), was estimated at \$2.2 million. There were additional minor damages in the neighboring counties and some evacuations required. Two small dams were threatened during this event.

Severe flooding also occurred in portions of western New Mexico as a result of high elevation rainfall of up to 8 inches during a 2-day period. Also the wet snow pack of 1 to 2 feet caused extremely high runoff.

Many of the reporting stations failed in southwestern New Mexico. Flood losses exceeded \$3 million, but only 1 fatality was reported.

The Arizona storm of the 10th-20th resulted in the most extensive flooding ever to hit the state. Except for the extreme northern and western parts of the state, rainfall amounts generally were in excess of 2 inches with higher elevations receiving 4-6 inches or more. Complicating the situation was the wet snowpack of 1 to 2 feet.

During the storm, almost every major river in Arizona overflowed its banks. Considerable flood damage occurred along the Gila River and its tributaries above Safford, and the Little Colorado and its tributaries above Winslow. Also, the Verde, Agua Fria and Salt Rivers caused millions of dollars in flood damages in and near Phoenix. Flood losses were estimated to be \$55.2 million, with 10 counties declared disaster areas.

An estimated 8,000 people were left homeless, and 10 persons drowned. Six died when the bridge on I-17 near Black Canyon City was washed out in floodwaters of the Agua Fria River.

Chart I. Departure from Normal of Annual Temperature ($^{\circ}$ F) at Surface, 1979.

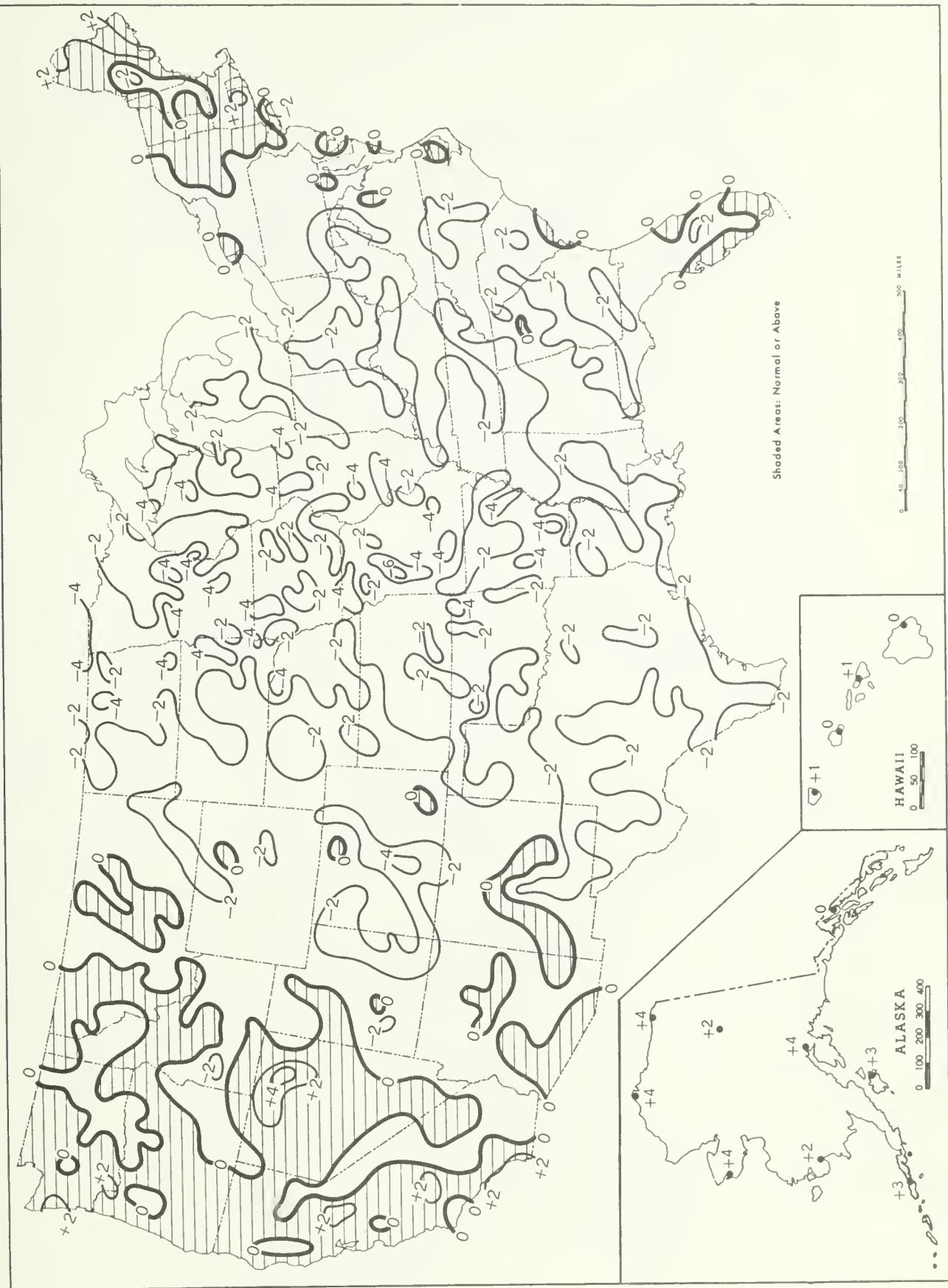


Chart II. Total Annual Precipitation (inches), 1979.

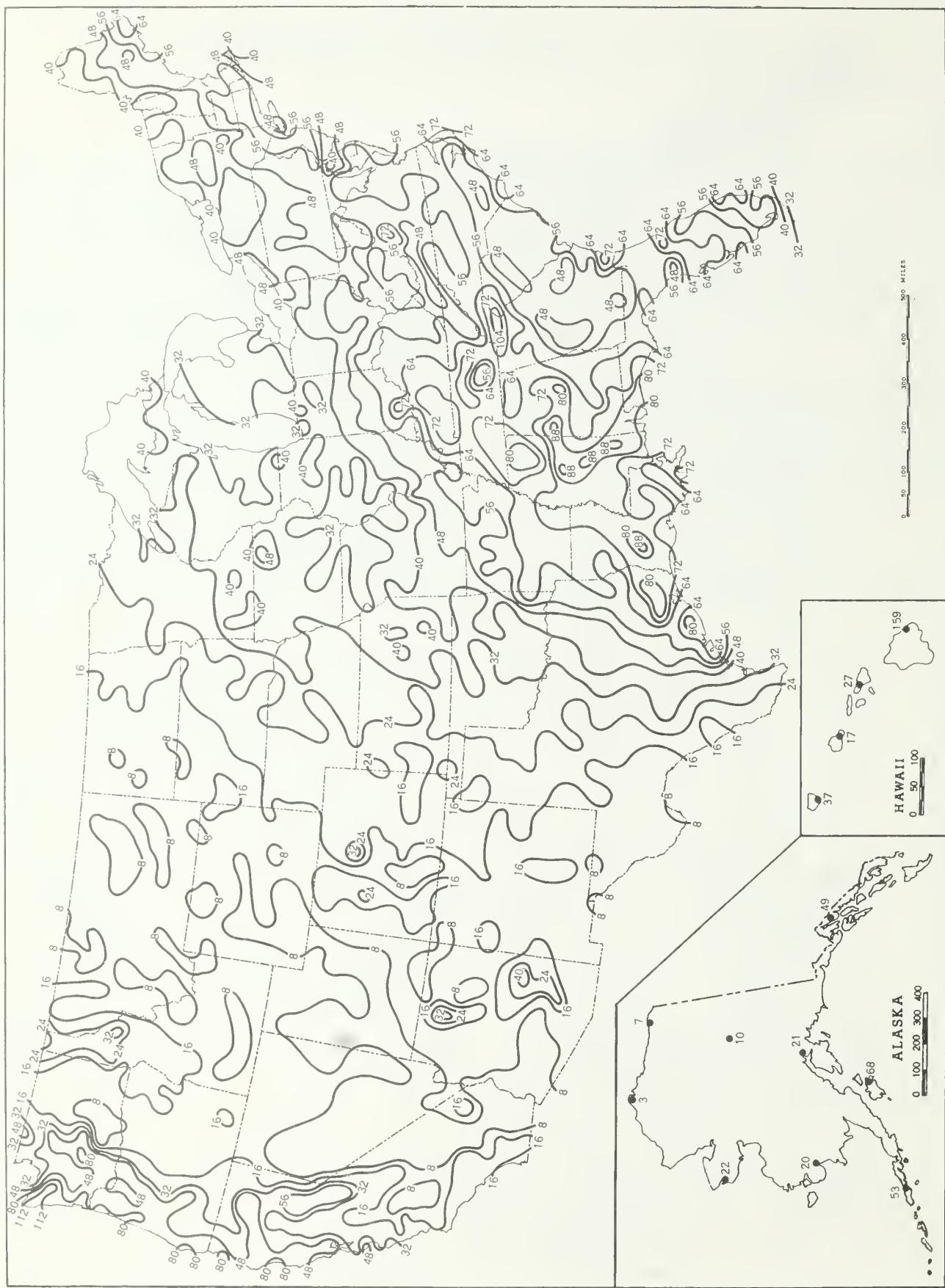
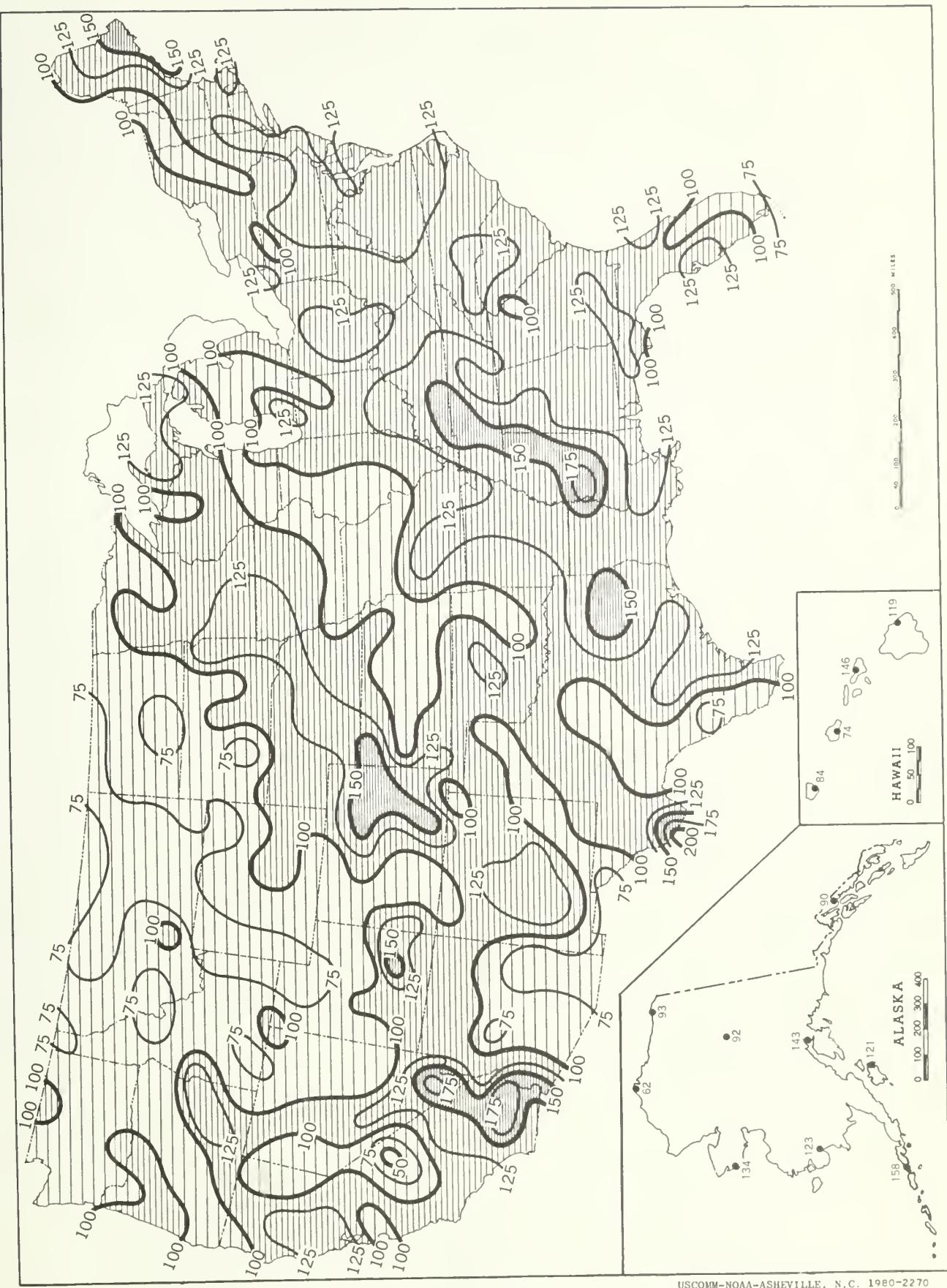


Chart III. Percentage of Normal Annual Precipitation, 1979.



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