

CLIMATOLOGICAL DATA

NATIONAL SUMMARY



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Daniel B. Mitchell

DIRECTOR
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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 1980

GENERAL SUMMARY OF WEATHER CONDITIONS

Lyle Denny, Climatologist
Environmental Data and Information Service, NOAA

HIGHLIGHTS: The dominant features of the March centered on the southeastern United States. As March began very cold air moved into the Southeast and by the third day of the month had enveloped all of Florida. Freezing temperatures reached all the way to Miami. Immediately after the freeze, rain set in and accumulated excessive amounts for each week of the month. Much of the Southeast had well over double the normal rainfall. The northern Plains, northern Mississippi Valley, and western Great Lakes areas experienced a dry month. The area from southeastern Oklahoma to southern New Mexico and southward into Mexico was also very dry.

March began cold and snowy for much of the eastern United States. On the first day, snow eased into the Midwest and spread a mantle from the southern Appalachians to the Atlantic Coast. Very cold air moved in with the storm. A record snowfall left 1 to 2 feet in southeastern Virginia and northeastern North Carolina. The morning temperature at Raleigh, NC, dipped to 11° with the cold air pushing southward. On the 3d freezing temperatures reached all the way to Miami, FL; much of the Southeast was chilled by readings in the teens.

Gradual warming took place during the succeeding week and by the 7th springlike weather prevailed in the East. Showers and thunderstorms deluged the Southeast. Elsewhere, moderate rain fell in most of California and spread eastward to the Rockies in lesser amounts.

Early in the period of the 10th-16th another cold airmass moved rapidly southward through the Plains and eastward. New England recorded light to moderate snow in the mountains and rain on the coast as the

front moved through. The cold air stalled in the South and caused another week of very heavy rain, keeping Southern farmers out of their fields. Another storm system moved into the Pacific Northwest and on to the Rockies. Rain, with snow at higher elevations, again covered the entire West. Average temperatures for the week of the 10th-16th were normal or warmer in all but the northern Mississippi Valley through New England.

The 17th-23d showed some precipitation falling in nearly all of the Nation. Exceptions included parts of the north central Plains and in southwestern Texas. Again, the area of greatest rainfall ranged from the lower Mississippi Valley through the Southeast and into New England. As much as 8 inches of rain accumulated in parts of northern Georgia and Alabama. Flooding ensued along the already swollen rivers. No severely cold temperatures were reported during the week except near the western Great Lakes, but the freeze line did reach into southwestern Texas.

March went out like a lion in parts of the Nation. Excessive rain, thunderstorms, and even tornadoes were reported from eastern Texas to the Florida Panhandle and North Carolina. It was the fourth week of excessive rain in the Southeast. A series of storms originating in the central Rockies caused near blizzard conditions in the west central Plains. Parts of western Kansas and Nebraska accumulated over 15 inches of snow. Temperatures hovering near freezing and periodic high winds compounded the problems. Again, nearly all of the Nation recorded some precipitation. Average temperatures for the week were cooler than normal in the Rockies and central Plains, warmer in the northern Plains, and near normal elsewhere.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

March 1980

STATE	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest °F	Date	Station	Lowest °F	Date	Station	Greatest In.	Station	Least In.
Alabama	Mobile WSO AP	85	13	Valley Head	-2	3	Galera 2 SW	18.86	Frisco City 4 SSW	9.91
Alaska	2 Stations	53	31	Chandalar Lake	-48	15	Little Port Walter	15.53	Lonely	T
Arizona	Casa Grande	87	2	Sunrise Mountain	-5	17	Hawley Lake	5.47	Bisbee 2	.15
Arkansas	4 Stations	82	21+	Fayetteville Exo Sta	-4	1	Eudora	11.91	Moratio	2.25
California	2 Stations	86	31+	Bodie	-14	25	Crescent City 7 ENE	12.12	Bishop WSO AP	.28
Colorado	Lamar	80	15	Taylor Park	-38	17	Wolf Creek Pass 1 E	8.19	Creede	.34
Connecticut	Hartford-Brainard FLD	66	21	Wigwan Reservoir	-9	1	New Haven	10.65	Hartford WSO AP	5.87
Delaware	Lewes 1 SW	68	8	Wilmington WSO AP	6	1	Wilmington Porter Reav	7.30	Middletown 1 WSW	4.94
Florida	Ft. Myers FAA AP	93	19	Smith Creek	13	3	Lake City 2 E	15.69	Key West WSO AP	.83
Georgia	Folkston 9 SW	87	28+	Blairsville Exp Sta	-3	3	Dahlonega	19.70	Folkston 3 SW	5.78
Hawaii	Puukohola Heiau 98.1	90	11	Mauna Kea Obs 111.2	20	22+	Waialea SCD	90.07	Waialea 943	.24
Idaho	Grand View 2 W	69	14	Island Park Dam	-14	26	Silver City 5 W	5.20	May	.11
Illinois	Castro WSO CI	71	10	2 Stations	-13	2	Fairfield Radio WFIW	6.19	Marengo	.48
Indiana	Evansville	70	15	Hartsville 2 SW	-15	2	Williams	6.03	Warsaw	2.29
Iowa	4 Stations	68	20+	2 Stations	-12	2	Port Madison	3.27	Waukon	.27
Kansas	2 Stations	81	15	Sabetha Lake	-14	2	LeRoy	7.17	Richfield 1 NE	.53
Kentucky	Tomahawk 1 WSW	76	17+	2 Stations	-12	3	Blackmont	D 8.64	Calhoun Lock 2	3.96
Louisiana	2 Stations	86	13	2 Stations	11	3	Bunkie	18.43	Shreveport WSO AP	3.75
Maine	Lewiston	58	29+	Rangleey	-25	3	Bar Harbor 3 NW	6.84	Clayton Lake 2	2.10
Maryland	Cumberland 2	75	8	McHenry 2 NW	-5	2	Catoctin Mountain Park	D 7.39	Hancock Fruit Lab	3.83
Massachusetts	Chester 2	68	20	Chester 2	-14	1	Chester 2	13.60	Nantucket FAA AP	3.85
Michigan	3 Stations	63	21+	Trout Lake	-31	1	Monroe	4.44	Payette 3 SW	.18
Minnesota	Winona	61	20	Tower 3 S	-36	1	New London	2.67	Crookston NW Exp Sta	.34
Mississippi	4 Stations	84	9+	4 Stations	7	3+	Centreville 4 ESE	17.99	Rosedale	9.49
Missouri	2 Stations	78	8+	Cole Camp 9 SE	-18	2	Marble Hill	6.66	Princeton 6 SW	1.73
Montana	Ballantine	67	14	Simpson 6 NW	-33	5	Red Lodge	4.90	Bloomfield	.02
Nebraska	4 Stations	75	18+	Nenzel 20 S	-32	1	Benkelman	4.99	Tryon 6 NE	.34
Nevada	Sunrise Manr Las Vegas	78	30+	Mountain City R S	-2	17	Red Rock Canyon St Pk	2.53	Lahontan Dam	.07
New Hampshire	2 Stations	62	20	Mount Washington	-30	1	MacDowell Dam	8.25	Lancaster	2.41
New Jersey	Moorestown	68	8	2 Stations	0	2+	Woodcliff Lake	9.59	Shiloh	4.70
New Mexico	3 Stations	84	31+	Chama	-8	17	Brasos Lodge	4.40	7 Stations	.00
New York	Aurora Research Farm	66	21	Old Forge	-36	2	Slide Mountain	14.53	Ellenburg Depot	1.74
North Carolina	2 Stations	78	22+	Grandfather Mountain	-8	3	Coweeta Exp Station	17.04	Roanoke Rapids	4.00
North Dakota	Breien	64	18	Upham 3 N	-38	1	Forbes 9 NNW	1.12	Ambrose 3 N	.00
Ohio	Ironton	74	9	Dorset	-20	2	Waterloo	6.76	Ashtabula	2.39
Oklahoma	3 Stations	83	16	2 Stations	-2	2	Eufaula	6.08	Marietta 3 NW	.54
Oregon	Gold Beach Ranger Sta	71	9	Crater Lake NPS Hq	3	16	Port Orford 5 E	13.79	Redmond FAA AP	.18
Pennsylvania	2 Stations	70	17+	Kane 1 NNE	-23	2	Bucksville	8.17	Titusville Waterworks	2.31
Puerto Rico	2 Stations	95	28+	Adjuntas Substation	49	1	Pico Del Este	8.86	Puerto Real	.00
Rhode Island	Providence WSO AP	63	17	North Foster 1 E	1	1	Kingston	10.06	Woonsocket	6.91
South Carolina	Ridgeland 5 NE	82	31	Simms Water Plant	-3	3	Walhalla	15.43	Andrews	D 6.48
South Dakota	3 Stations	75	15	Usta 8 NNW	-35	1	Edgemont	2.38	Glad Valley 2 W	T
Tennessee	2 Stations	77	9+	Oneida	-11	3	Chattanooga WSO AP	16.32	Samburg Wildlife Ref	5.40
Texas	2 Stations	97	23+	Lipscomb	-2	2	Deweyville 5 S	10.49	27 Stations	.00
Utah	3 Stations	69	14	Scofield	-16	26+	Alta	11.64	Duchesne Airport	.29
Vermont	3 Stations	62	21+	Enosburg Falls	-28	2	Searsburg Station	9.13	Enosburg Falls	1.59
Virginia	2 Stations	77	30+	Timberville 3 E	-7	3	Meadows of Dan 5 SW	7.56	Colonial Beach	2.31
Virgin Islands	Annaly	90	28	Beth Upper New Works	62	2	Caneel Bay Plantation	4.05	East Hill	.94
Washington	Sunnyside	70	23	Chesaw 4 NNW	-1	6	Rainier Paradise R S	13.83	Wenatchee	.07
West Virginia	2 Stations	78	8	Elkins WSO AP	-14	3	Seneca State Forest	7.05	Moorefield 2 SSE	2.22
Wisconsin	2 Stations	59	31	3 Stations	-26	1	Madeline Island	1.63	2 Stations	.30
Wyoming	Yoder 4 SW	67	15	Double Four Ranch	-24	1	Atlantic City Ore Mine	4.24	Deaver	.02

CLIMATOLOGICAL DATA

METRIC UNITS

MARCH 1980

State and Station	Elevation (ground)	Pressure			Temperature										Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine	
		Station #	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days		Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	No. of days		Snow, ice pellets		Resultant speed	Resultant direction	Fastest mile (1.6 kilometers)			Clear, 0-3	Partly cloudy, 4-7			Cloudy, 8-10
												Max. 32.2 °C or above	Min. 0 °C or lower						Total	Maximum depth on ground	Speed	Direction			Date							
												mm	mm						mm	mm	m/s	m/s										
INDIANA FORT WAYNE INDIANAPOLIS SOUTH BEND	241 241 241 236	985.8 986.8 987.5	1016.7 1016.7 1016.2	4.1 6.9 6.3	-3.6 -2.5 -2.4	0.3 2.2 1.9	-2.2 -2.1 0.1	12.2 16.1 15.6	16 15 16	-21.7 -21.7 -15.0	2 2 1	0 0 0	25 20 19	-5.0 -2.8 -1.7	69 70 79	106 108 95	32 13 25	28 23 23	15 16 16	4 0 1	51 91 249	178 127 127	0.4 0.1 0.1	31 25 26	13.4 13.0 13.0	NE SE SE	30 21 10	5 6 2	5 3 7	21 22 22	7.7 7.5 8.2	63 40
IOWA DES MOINES DUBUQUE SIOUX CITY WATERLOO	286 322 334 265	980.4 976.6 975.6 984.4	1016.1 1016.5 1016.5 1017.3	6.7 3.7 6.7 4.4	-3.7 -6.3 -4.9 -6.3	1.5 -1.3 0.9 -0.9	0.4 -1.4 0.2 -0.7	18.9 13.9 19.4 15.6	19 31 19 19	-15.6 -22.2 -17.8 -21.7	2+ 2 0 2	0 0 0 0	22 26 28 24	-5.0 -5.6 -5.6 -5.0	66 66 66 75	29 28 26 22	-29 -47 -11 -35	9 11 6 10	7 6 0 1	0 0 0 1	147 203 147 201	76 102 51 152	1.0 0.4 1.2 0.8	4 4 4 3	13.0 13.0 14.3 13.9	SW SE NW SE	2 10 16+ 10	5 9 4 9	9 17 14 18	7.3 7.6 6.9 7.2	46 60	
KANSAS CONCORDIA ODDGE CITY GOODLAND TOPEKA WICHITA	448 787 1114 267 403	961.1 921.4 883.8 983.1 965.8	1015.0 1013.4 1013.1 1015.4 1014.6	8.8 10.5 7.9 10.7 10.9	-2.7 -2.1 -4.5 -0.9 -0.4	3.1 4.2 1.7 4.9 5.3	-0.9 -0.9 -0.7 -0.2 -1.2	23.9 25.6 21.1 22.8 21.1	19 15 15 19 19	-18.9 -16.7 -22.2 -19.4 -15.6	1 0 0 2 2	0 0 0 14 0	20 20 30 14 14	-3.9 -2.8 -3.9 -2.8 -2.2	66 69 73 62 64	81 73 70 105 101	42 44 47 50 56	34 35 31 57 32	14 3 10 13 8	0 3 0 2 2	152 259 696 86 10	76 0.5 0.7 51 25	0.8 1.2 0.8 0.8 0.3	7 7 34 14 11	16.5 21.0 18.3 15.2 18.8	S SE SE SW NE	16 11 12 19 23	9 9 3 8 13	7 7 15 6 15	6.4 6.1 6.2 6.7 5.9	57 53 60 51 60	
KENTUCKY COVINGTON LEXINGTON LOUISVILLE	265 294 294 145	984.4 980.4 999.0	1016.7 1016.6 1017.0	8.7 10.2 10.5	-1.5 0.3 0.3	3.6 5.3 5.4	-1.8 -1.2 -1.2	19.4 21.1 18.3	16 8 15	-23.9 -17.8 -17.2	3 0 3	0 0 15	20 15 15	-0.6 -1.1 -1.1	76 66 67	114 153 122	10 31 -6	20 39 27	15 16 17	2 4 2	201 107 99	279 102 102	0.8 1.1 0.6	24 22 25	12.5 12.5 16.1	SE SE NW	21 21 21	5 4 5	4 7 6	22 20 20	7.6 7.7 7.6	37
LOUISIANA BATON ROUGE LAKE CHARLES NEW ORLEANS SHREVEPORT	20 3 1 7 1	1013.9 1014.6 1014.9 1006.1	1016.4 1015.8 1015.9 1015.3	19.9 20.2 21.6 19.0	9.8 10.3 11.7 6.4	14.9 15.3 16.7 12.7	-0.5 -0.4 0.7 -1.1	26.7 25.6 28.9 28.3	10 12 8 12	-6.7 -3.9 -3.9 -6.7	3 3+ 3+ 3+	0 0 0 3	3 11.7 11.7 6.7	75 81 74 70	210 229 256 95	79 31 117 -9	61 75 83 18	12 14 12 11	8 9 11 7	0 0 0 0	0 0 1.1 0.2	0 0.8 9 14	11 12 10.3 11.6	28 1 2 31	27+ 1 5 20	5 4 5 10	6 22 21 18	7.7 7.9 7.7 6.5	42 52			
MAINE CARIBOU PORTLAND	190 13	989.8 1012.5	1014.9	0.9 5.1	-9.8 -5.2	-4.4 0.0	0.2 0.1	11.7 12.2	29 29	-23.3 -20.6	3 1	0 30	20 26	-0.6 -7.2	76 60	114 115	24 24	24 36	12 12	0 0	701 173	940 152	0.8 1.1	33	15.6	NW	18	10 9	5 6	16 16	6.2 6.3	54
MARYLAND BALTIMORE	45	1010.8	1016.5	10.6	-0.1	5.3	-0.7	21.1	8	-11.7	1	0	15	-2.2	60	139	45	41	16	2	145	127	1.5	30	18.3	W	14	8	5	18	7.0	58
MASSACHUSETTS BLUE HILL OBS R BOSTON WORCESTER	192 5 301	981.4 1013.9 976.3	1014.7	6.3 6.9 5.3	-3.2 -1.6 -4.1	1.6 2.7 0.6	-0.2 -0.7 -0.1	14.4 15.0 14.4	20+ 20 20	-17.2 -13.9 -18.3	1 0 1	0 16 25	23 16 25	-5.0 -5.0 -7.2	62 62 60	154 136 174	40 35 76	38 38 65	13 15 17	1 1 0	119 91 246	76 76 127	1.6 1.6 2.1	31 31	24.1 16.1 16.1	S NE NE	18 22 15	5 6 5	9 16 15	16 6.8 6.8	45 54	
MICHIGAN ALPENA DETROIT DETROIT METRO FLINT GRAND RAPIDS HOUGHTON LAKE LANSING MARQUETTE MUSKEGON SAULT STE MARIE	210 189 193 235 239 350 256 431 191 220	990.2 987.5 991.2 987.5 986.8 972.9 984.1 992.9 988.8	1016.4 1016.1 1016.1 1016.1 1016.7 1016.5 1016.8 1016.5 1016.6	2.1 3.6 4.3 3.5 4.9 2.1 3.7 -0.2 3.0 -0.2	-8.7 -3.6 -5.2 -5.8 -4.4 -9.9 -6.1 -11.8 -4.6 -10.3	-3.3 0.1 -0.4 -1.2 0.3 -3.9 -1.2 -5.9 -0.8 -5.3	-0.1 -1.8 -2.2 -1.5 -0.3 -0.9 -1.7 -0.6 -1.2 -0.8	14.4 13.9 14.4 15.6 16.1 11.7 16.7 10.6 13.9 12.2	20 20+ 20 20 20+ 20 20 12 16 31	-25.0 -15.0 -18.3 -19.4 -20.0 -28.3 -21.1 -23.9 -20.0 -25.0	1 2+ 2 2 2+ 2 2 12 0 12	0 0 25 26 23 29 28 0 25 31	30 24 25 26 23 29 28 31 25 31	-7.2 -15.0 -4.4 -5.6 -3.9 -8.3 -4.4 -5.6 -8.3	75 75 74 75 75 71 79 71 71 79	31 99 56 44 28 28 49 14 26 29	-17 36 23 17 -19 -16 -11 -39 -35 -15	6 23 14 17 13 13 15 4 6 10	13 14 0 0 11 0 13 1 12 13	1 1 0 0 0 0 0 1 0 0	399 297 274 168 307 307 224 178 206 445	229 152 76 51 229 76 787 51 432	1.0 1.1 0.8 0.2 0.5 0.7 0.5 0.3 0.3 1.1	30 27 34 28 32 28 16 15 30 31	11.6 14.3 14.3 11.2 12.5 16.1 15.6 12.5 14.3	NW SE SE SE SE NW NW NW NW	21+ 21 21 21 21 10 10 19+ 14	2 4 3 2 3 2 11 1 8 6	11 9 10 7 5 11 8 19 6	18 18 18 22 21 18 18 22 17	7.5 7.4 7.8 8.2 7.9 7.6 6.8 8.4 6.9	57 48 30 30 54 53 54 63
MINNESOTA DULUTH INTERNATIONAL FALLS MINNEAPOLIS ROCHESTER ST CLOUD	435 359 254 395 313	963.8 972.2 986.1 967.8 979.3	1017.5 1017.4 1017.6 1017.1 1018.0	-1.6 -1.1 2.4 2.2 1.4	-12.1 -15.8 -7.7 -8.2 -11.2	-6.8 -8.4 -2.6 -3.0 -4.9	-2.1 -2.1 -0.6 -0.7 -1.5	6.7 11.7 13.3 12.8 12.2	19 31 31 31+ 31	-25.6 -33.3 -19.4 -22.8 -25.6	1 0 1 0 11+	0 0 28 0 30	31 31 31 31 30	-11.1 -15.0 -10.0 -7.8	71 58 57 71	26 22 28 21 19	-19 -6 -14 -22 -14	9 10 6 6 7	9 0 11 0 9	0 0 348 325 305	457 737 152 203 229	0.4 1.0 0.5 0.4 0.2	30 29 13.4 33	16.1 11.6 13.4 17.4	E SE SE SE	15+ 10 10 10	7 11 7 8	8 13 6.1 18	6.5 6.1 6.1 7.1	63 60		
MISSISSIPPI JACKSON	94	1004.1	1016.1	18.6	6.2	12.4	-1.0	27.2	8	-9.4	3	0	4	7.8	74	345	202	85	17	13	1	1	0.2	11	10.3	9	29+	7	3	21	7.4	38

CLIMATOLOGICAL DATA

METRIC UNITS

MARCH 1980

State and Station	Elevation (ground)	Pressure					Temperature								No. of days	Average dew point	Average relative humidity	Precipitation					Wind				No. of days (sunrise to sunset)					
		Station φ	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.5 °C or above	Min. 0 °C or lower	Total				Departure from normal	Greatest in 24 hours	No. of days		Snow, ice pellets		Resultant speed	Resultant direction	Fastest mile (1.6 kilometers)						
																						Total	Maximum depth on ground			Speed	Direction	Date				
		m	mb	mb	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C				mm	mm	mm	mm	mm	m/s	m/s	m/s	m/s	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine	
RHODE ISLAND PROVIDENCE	16	1013.2	1015.4	7.9	-2.2	2.8	0.1	17.2	17	-15.6	1	0	21	-5.6	58	206	105	87	15	1	135	76	1.6	31	14.3	11	21*	7	9	15	6.6	59
SOUTH CAROLINA CHARLESTON CHARLESTON U COLUMBIA COLUMBIA GRNVILLE-SPRTNBRG	12 3 65 964 292	1015.9 1017.4 1016.8	18.2 17.5 16.3 13.9	6.9 9.6 3.4 3.4	12.6 13.6 9.9 8.7	-1.1 -0.4 -2.4 -1.8	25.0 24.4 24.4 20.0	30+ 30 17 10+	-9.4 -5.6 -15.6 -11.7	3 3 0 3	0 0 0 6	4 3 0 6	7.2 7.5 7.5 6.6	75 75 75 66	203 209 272 289	82 94 154 153	94 16 62 64	14 16 15 14	2 3 2 1	33 33 104 91	25 25 102 51	0.4 0.3 0.9	24 29	13.4 13.0 11.2	30 28 E 28	21+ 21 21 28	7 6 7 9	6 18 4 18	18 7.1 6.9 6.4	58 57 55		
SOUTH DAKOTA ABERDEEN HURON RAPID CITY SIOUX FALLS	395 390 964 432	968.2 1016.7 1015.1 1017.2	2.0 4.6 6.2 5.2	-9.1 -7.1 -6.8 -5.6	-3.6 -1.3 -0.3 -0.2	-0.9 0.4 0.2 0.9	13.3 17.2 18.3 17.2	18 18+ 15 19	-27.8 -23.9 -23.9 -20.0	1 1 0 1	0 28 30 26	30 28 30 26	-5.6 6.9 6.7 7.5	58 69 67 66	22 21 22 18	-2 -7 -3 -18	14 12 7 6	5 0 0 10	272 218 218 147	127 25 76 76	1.6 0.6 1.2 0.7	31 6 1	14.3 13.9 18.3 13.0	N 16+ NW 12 SW 16	16+ 5 4	4 10 16 12	6 18 16 7	6.8 6.8 7.0 6.7	74 60			
TENNESSEE BRISTOL CHATTANOOGA KNOXVILLE KNOXVILLE MEMPHIS NASHVILLE OAK RIDGE R	459 203 299 79 180 276	962.1 992.2 981.0 1006.4 994.9 1016.8	12.3 19.2 14.3 14.8 13.9 12.8	0.1 3.3 3.1 4.5 1.9 1.1	6.2 8.8 8.7 9.7 7.9 6.9	-1.4 -1.1 -0.4 -0.9 -1.3 -1.7	21.7 23.9 23.3 23.3 21.7 22.2	8 8 8 10 30+ 8	-18.9 -12.8 -17.2 -8.3 -16.7 -17.2	3 3 3 0 2 3	0 0 0 0 0 13	17 7 6 6 9 13	-0.6 1.1 6.4 2.2 3.3 1.1	66 64 276 221 68 66	144 415 229 88 185 234	45 272 98 80 58 95	12 19 16 15 16 15	2 5 0 6 5 15	91 10 89 102 79 81	76 T 1 25 76 76	0.7 0.6 1.1 0.3 0.5 0.5	28 32 32 13 24	11.6 13.0 11.6 15.6 13.4	25 28 28 31 27	21 7 8 3 24+	4 7 3 21 5	8 17 8 20 19	7.5 7.1 7.5 4.8 7.4 7.2	38			
TEXAS ABILENE AMARILLO AUSTIN BROWNSVILLE CORPUS CHRISTI DALLAS - FORT WORTH DEL RIO EL PASO GALVESTON HOUSTON INTERCON LUBBOCK MIDLAND PORT ARTHUR SAN ANGELO SAN ANTONIO VICTORIA WACO WICHITA FALLS	544 1098 182 6 12 168 313 1194 29 992 869 5 580 240 32 153 303	950.6 887.2 992.6 1013.6 1014.2 993.9 1015.3 1011.0 1015.6 1011.7 913.6 1012.0 1014.9 947.2 986.5 1013.8 996.6 1015.3 977.3	19.9 15.2 22.7 26.2 25.6 19.3 24.5 20.6 18.4 21.9 19.5 19.8 21.5 20.8 23.7 23.2 20.5 18.0	5.4 -2.0 9.9 15.6 13.9 5.4 10.6 3.9 12.7 10.1 1.3 2.8 11.2 5.2 9.0 11.1 6.1 1.9	12.7 6.6 16.3 20.9 19.8 12.3 17.6 12.3 15.6 16.1 10.4 11.3 16.3 13.0 16.4 17.1 13.3 9.9	0.2 -0.9 1.1 1.1 1.5 -0.4 0.6 -0.3 -0.6 0.1 1.1 -1.1 0.7 -0.9 0.4 0.3 -0.7 -1.4	27.8 24.4 32.8 35.0 32.8 28.9 32.2 25.6 25.0 31.7 26.7 27.8 29.4 27.2 32.8 31.7 30.0 27.2	7 15 10 20 23 7 10+ 22 10 3 2 15 10 10 10 10 10 16	-12.2 -15.6 -7.2 0.0 -4.4 -9.4 -6.1 -4.4 -3.3 -5.6 -13.3 -4.4 -3.9 -13.3 -7.2 -6.1 -8.3 -12.2	2 0 1 1 3 0 2 0 0 2 0 0 3 2 1 2 0 3 2	0 22 3 0 0 6 2 0 0 10 0 0 0 6 4 0 5 0 7	-1.1 -6.1 5.6 15.0 7.3 8 3.3 31 6 137 5 15 -1 9 18 5 62 -0.6	43 48 55 81 70 59 31 6 100 69 33 17 -1 15 173 18 25 72 54 19	-7 15 33 68 7 6 5 1 3 0 0 0 0 0 0 0 0 0 0 0 0	3 3 3 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	T T 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1.9 1.7 2.4 3.3 2.5 3.0 1.0 2.1 0.5 0.5 1.3 1.0 1.9 0.8 1.3 0.7 0.9	19 24 14 18 13 14 22 28 23 11 20 10 15 20 15 21 20 20 19	16.1 17.9 14.8 18.3 14.3 13.4 17.4 15.6 11.2 16.5 16.5 13.4 15.6 10.8 20.6 14.3 14.3 19.7	26 4 34 33 15 34 31 31 3 11 2 12 20 10 1 34 17 26	23 16 9 17 2 3 1 17 17 13 9 12 9 5 10 8 11 6 23	9 14 5 12 3 5 11 6 2 5 2 4 1 10 8 3 6 13	10 9 12 8 11 11 9 17 10 10 9 9 9 10 16 6 12	12 8 8 6.4 5.3 6.0 5.5 8 8 8 4 4 5 5 5 5 16 12	5.5 4.6 7.4 6.4 8.1 8.0 5.5 7.1	68 74 44 48 45 37 71						
UTAH MILFORD SALT LAKE CITY	1533 1287	882.5 868.3	1014.2 1013.3	9.6 10.4	-4.9 0.1	2.4 5.3	-1.0 1.1	16.7 17.8	14 14	-12.2 -5.0	17 22	0 17	-2.2 63	65	31 62	4 21	7 18	11 10	2 2	277 505	102 102	1.3	19	20.1 16.1	N 30 S 5	12 6	3 10	16 15	5.8 6.9	63 66		
VERMONT BURLINGTON	101	1002.7	1015.7	4.6	-5.6	-0.5	1.1	14.4	28+	-27.8	2	0	23	-6.1	70	62	13	16	14	0	427	254	0.9	29	14.3	NW 18	6	10	15	6.8	49	
VIRGINIA LYNCHBURG NORFOLK RICHMOND ROANOKE WALLOPS ISLAND	279 7 50 10 350 3	982.4 1015.6 1010.2 973.9	11.8 13.1 14.5 12.0 9.3	1.3 3.0 2.6 0.8 1.4	6.6 8.1 8.6 6.4 5.4	-0.9 -0.9 0.3 -1.0 -1.2	21.1 24.4 23.3 23.9 15.6	29 21 21 8 29+	-12.2 -7.8 -10.6 -12.2 -10.0	1 0 1 3 1	0 0 0 15 0	12 7 7 8 8	12 66 66 66 66	128 112 139 137 107	40 25 54 53 0	36 13 37 34 24	13 13 13 14 14	0 3 0 0 0	226 348 381 305 165	203 356 330 229 152	1.0 0.6 1.3 1.3 1.5	28 33 28 28 26.8	15.6 17.9 13.0 17.9 26.8	NW 21 N 1 NW 22 NW 22 WNW 22	8 7 7 7 4	6 17 17 17 20	17 6.6 6.7 6.8 7.1	53 53 56				
WASHINGTON OLYMPIA QUILLAYUTE SEATTLE U	59 55 6	1009.5 1008.8	1016.6	10.6 10.4 11.7	0.6 2.2 4.8	5.6 6.3 8.3	-0.7 0.7 0.8	15.6 15.0 16.1	2 1 2	-5.0 -3.3 0.0	30 6 6	0 0 1	16 8 1	2.8 83	101 267 83	-21 -7 1	20 49 18	22 22 17	0 2 0	104 53 0	T 53 51	2.7 0.9 0.9	21 23 19.7	11.6 12.1 19.7	SW 13 SW 13 WSW 22	0 1 4	5 26 26	8.7 8.6 8.6	22			

CLIMATOLOGICAL DATA

METRIC UNITS

MARCH 1980

State and Station	Elevation (ground)		Pressure		Temperature										Average relative humidity		Precipitation						Wind			No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine				
	m	mb	mb	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days		Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	No. of days		Snow, ice pellets		Resultant speed	Resultant direction	Fastest mile (1.6 kilometers)			Clear, 0-3			Partly cloudy, 4-7	Cloudy, 8-10		
												Max. 32.2 °C or above	Min. 0 °C or lower						.25 mm. or more	With thunderstorms	Total	Maximum depth on ground			Speed	Direction	Date							
												°C	°C						mm	mm	mm	mm			m/s	m/s	Date							
WASHINGTON				°C	°C	°C	°C	°C	°C	°C	°C		°C	%	mm	mm	mm		mm	mm	m/s	m/s												
SEATTLE-TACOMA	122	1000.0	1016.6	10.0	3.6	6.8	0.1	16.1	1	-0.6	6	0	1	2.2	77	53	-38	11	16	0	1	0	2.4	19	S 12	2	4	25	8.5	37				
SPOKANE	718	929.6	1014.4	8.1	-0.8	3.7	0.6	13.3	21	-6.1	6+	0	21	-1.1	77	23	-16	8	9	0	1	0	2.7	21	SW 14+	1	10	20	8.1	43				
STAMPEDE PASS R	1206	876.1		1.1	-3.1	-1.0	0.1	6.1	25+	-7.8	6	0	30		236	9	29	26	0	22	23	2946				1	1	29	9.3					
WALLA WALLA U	289			11.2	3.2	7.2	-0.3	17.2	10	-3.3	6	0	2		49	14	14	11	0	94	76				S 12	2	6	23	8.3		32			
YAKIMA	321	976.6	1015.6	12.8	0.2	6.5	1.1	18.9	22	-3.9	15	0	17	-1.1	62	7	-7	4	6	0	43	51	2.1	27	S 12	6	6	19	7.0					
WEST INDIES																																		
SAN JUAN P.R.	4	1014.9	1017.3	29.7	22.7	26.2	1.6	32.2	2	21.1	2	1	0	20.0	72	37	-14	9	14	0	0	0	3.2	8	E 29+	8	19	4	4.7		89			
WEST VIRGINIA																																		
BECKLEY	763	926.5	1017.0	8.9	-1.6	3.7	-0.9	19.4	16+	-20.6	3	0	19	-2.8	69	94	-13	20	19	3	325	356	1.4	23	15.6	30	10	4	5	22	7.9			
CHARLESTON	310	981.4	1017.3	11.7	-0.7	5.6	-1.4	23.3	16	-17.8	3	0	17	-1.7	64	135	33	38	19	4	267	229	1.0	27	15.6	29	21	5	5	21	7.5			
ELKINS	594	944.8		9.3	-4.1	2.6	-1.2	20.6	8	-25.6	3	0	22		122	22	23	20	0	358	254						1	7	23	8.3				
HUNTINGTON	252	986.1	1016.7	11.2	-0.2	5.5	-1.3	22.8	8	-18.9	3	0	16	-1.7	63	128	25	22	17	4	140	178	0.7	26	13.4	26	21	4	5	22	8.0			
PARKERSBURG U	187			9.5	-1.1	4.2	-1.8	21.1	16	-16.7	3	0	18		118	23	26	16	0	277	254						W 21					38		
WISCONSIN																																		
GREEN BAY	208	990.5	1017.3	1.9	-7.3	-2.7	-0.8	11.1	19+	-20.0	7	0	27	-7.2	74	25	-17	15	8	0	290	152	1.0	32	16.1	W 10	7	6	18	6.9		71		
LA CROSSE	198	992.6	1018.1	4.2	-6.8	-1.3	-0.8	14.4	31+	-18.3	1	0	28	-5.0	78	17	-35	6	0	257	0.3	34												
MADISON	262	984.8	1017.2	3.1	-7.5	-2.2	-1.2	12.8	31	-20.0	1	0	27	-7.2	70	17	-32	8	7	0	142	76	0.7	35	16.1	NW 10	5	7	19	7.3		42		
MILWAUKEE	205	990.9	1017.0	3.2	-4.9	-0.8	-0.5	13.9	20	-16.7	6	0	25	-5.6	71	20	-37	8	10	0	160	203	1.5	33	16.1	W 10	4	6	21	7.6		37		
WYOMING																																		
CASPER	1627	832.0	1012.8	5.6	-6.8	-0.6	0.0	12.8	15	-23.3	1	0	31	-6.7	67	30	7	12	13	1	439	178	3.0	23	16.5	23	13	1	5	25	8.5			
CHEYENNE	1867	805.6	1011.8	6.1	-4.9	0.6	0.8	14.4	18	-21.7	1	0	28	-8.3	55	35	8	13	9	0	452	203	2.5	29	24.1	W 9	5	7	19	7.5		48		
LANDER	1696	823.6	1012.2	6.3	-5.8	0.3	0.6	13.3	14	-11.1	26	0	31	-7.8	61	38	8	21	7	0	645	305	0.5	27	10.3	24	15	3	12	16	7.3		58	
SHERIDAN	1208	874.4	1014.5	5.7	-7.4	-0.8	-0.3	13.3	11	-18.9	5	0	31	-5.6	72	32	1	10	13	0	490	102	2.0	31	14.8	NW 19	2	8	21	7.5		60		

STORM SUMMARY

MARCH 1980

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				ALL OTHER				
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE						
								PROP. ERTY	CROPS			PROP. ERTY	CROPS			PROP. ERTY	CROPS			PROP. ERTY	CROPS									
Alabama	6	3		11	5			4				10	4	7	?							1	?	5		1	4	15	5	3
Alaska																														
Arkansas																														
Arizona	*								2																					
California																														
Colorado	1	1			2																									
Connecticut														1	5															
Delaware																														
Florida	6	3	1	34	7																									
Georgia	6	2		3	6			?		1																				
Hawaii	1	1			2																									
Idaho	*																													
Illinois	*																													
Indiana	*																													
Iowa																														
Kansas																														
Kentucky																														
Louisiana	2	2			6																									
Maine																														
Maryland & DC										1	1																			
Massachusetts																														
Michigan																														
Minnesota																														
Mississippi	4	2	1	1	5																									
Missouri	*																													
Montana	*																													
Nebraska																														
Nevada	*																													
New Hampshire																														
New Jersey																														
New Mexico																														
New York																														
North Carolina	1	1			5																									
North Dakota																														
Ohio																														
Oklahoma	3	2			3			?	?																					
Oregon	*																													
Pacific	*																													
Pennsylvania	1	1			3			2																						
Puerto Rico	*																													
Rhode Island																														
South Carolina	1	1		6	5																									
South Dakota	*																													
Tennessee	2	2		2	5			?	?																					
Texas	7	3			5			?	?																					
Utah	*																													
Vermont																														
Virginia																														
Virgin Islands	*																													
Washington	*																													
West Virginia																														
Wisconsin	*																													
Wyoming	*																													

RAWINSONE DATA

Average monthly values

MARCH 1960

Table with columns for station names: CARIBOU, ME 99G MB; CENTREVILLE, AL 999 MB; CHARLESTON, SC 1016 MB; CHATHAM, MA 1013 MB; CHIMUAMUA, MEXICO 855 MB. Rows include standard pressure, dynamic height, temperature, dew point, and resultant wind data.

Table with columns for station names: COLD BAY, AK 995 MB; DAYTON, OH 981 MB; DEL RIO, TX 977 MB; DENVER, CO 832 MB; DESERT ROCK, NV 899 MB. Rows include standard pressure, dynamic height, temperature, dew point, and resultant wind data.

Table with columns for station names: DODGE CITY, KS 921 MB; EL PASO, TX 879 MB; ELY, NV 804 MB; EMPALME, MEXICO 1011 MB; FAIRBANKS, AK 992 MB. Rows include standard pressure, dynamic height, temperature, dew point, and resultant wind data.

RAWINSONDE DATA

Average monthly values

MARCH 1980

FLINT, MI 988 MB				GLASGOW, MT 932 MB				GRAND JUNCTION, CO 888 MB				GREAT FALLS, MT 884 MB				GREEN BAY, WI 991 MB																						
Standard pressure surface mb.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C †	Resultant Wind Direction ten's of deg.	Speed m.p.a.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C †	Resultant Wind Direction ten's of deg.	Speed m.p.a.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C †	Resultant Wind Direction ten's of deg.	Speed m.p.a.	No. of observations	Dynamic height meters	Temperature °C	Dew Point °C †	Resultant Wind Direction ten's of deg.	Speed m.p.a.														
																									GREENSBORO, NC 984 MB				GUADALUPE IS., MEXICO 1014 MB				GUAM, MARIANA IS. 1000 MB				HILO, HI 1017 MB	
SFC	31	236	-3.8	-7.0	24	4	31	696	-6.5	-8.5	05	.7	31	1,472	1.3	-3.8	12	1.5	31	1,118	-3.2	-9.3	23	2.9	31	210	-5.7	-8.3	34	1.1								
1000																																						

RAWINSONDE DATA

Average monthly values

MARCH 1960

Table with 4 columns of station data: NASHVILLE, TN (995 MB), NOME, AK (1005 MB), NORTH PLATTE, NE (915 MB), and OAKLAND, CA (1017 MB). Each column contains a grid of meteorological data including pressure, dynamic height, temperature, dew point, and resultant wind at various altitudes.

Table with 4 columns of station data: PAGO PAGO, AMERICAN SAMOA (1008 MB), PEORIA, IL (992 MB), PITTSBURGH, PA (974 MB), and PORTLAND, ME (1013 MB). Each column contains a grid of meteorological data including pressure, dynamic height, temperature, dew point, and resultant wind at various altitudes.

Table with 4 columns of station data: QUILLAYUTE, WA (1009 MB), RAPID CITY, SD (901 MB), ST CLOUD, MN (979 MB), and ST PAUL ISLAND, AK (994 MB). Each column contains a grid of meteorological data including pressure, dynamic height, temperature, dew point, and resultant wind at various altitudes.

RAWINSONDE DATA

Average monthly values

MARCH 1960

Standard pressure surface mb.	SALEM, OR 1011 MB						SALT LAKE CITY, UT 868 MB						SAN DIEGO, CA 1000 MB						SAN JUAN, P. R. 1017 MB						SAULT STE MARIE, MI 989 MB							
	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	
	No. of observations	Direction lens of deg.	Speed m.p.s.	No. of observations	Direction lens of deg.	Speed m.p.s.	No. of observations	Direction lens of deg.	Speed m.p.s.	No. of observations	Direction lens of deg.	Speed m.p.s.	No. of observations	Direction lens of deg.	Speed m.p.s.	No. of observations	Direction lens of deg.	Speed m.p.s.	No. of observations	Direction lens of deg.	Speed m.p.s.	No. of observations	Direction lens of deg.	Speed m.p.s.	No. of observations	Direction lens of deg.	Speed m.p.s.	No. of observations	Direction lens of deg.	Speed m.p.s.		
SFC 51	61	4.7	3.1	20	1.3	31	1.288	2.1	-2.8	17	2.4	23	124	11.5	7.9	13	-7	31	6	21.6	19.5	10	1.7	31	221	-7.5	-10.9	34	-9			

SOLAR RADIATION INTENSITIES

Tabulated in langley's per minute on a surface normal to the direction of the sun.

MARCH 1980

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											TUCSON, AZ												
Air mass											Air mass												
	3.34	2.67	2.01	1.34	*	1.34	2.01	2.67	3.34		3	---	---	---	---	1.42	1.28	---	---	---	---		
2----	1.24	1.31	1.39	1.51	1.61	---	---	---	---	4----	.86	.94	1.06	1.24	1.45	---	---	---	---	---	---	---	
3----	1.21	1.28	1.37	1.49	1.59	---	---	---	---	5----	.94	1.03	1.16	1.31	1.47	1.30	1.14	1.02	.91	---	---	---	
4----	1.22	1.30	1.38	1.49	1.57	---	---	---	---	6----	.91	1.01	1.13	1.30	---	---	---	---	---	---	---	---	
5----	1.24	1.30	1.38	1.50	---	---	---	---	---	8----	.91	1.01	1.14	1.31	1.44	1.28	---	---	---	---	---	---	
6----	1.20	1.26	1.35	1.47	---	---	---	---	---	12----	.85	.95	1.09	1.22	1.37	1.25	1.09	.96	---	---	---	---	
8----	1.20	1.27	1.36	1.49	---	---	---	---	---	13----	.87	.98	1.09	1.28	1.42	1.22	1.04	.09	---	---	---	---	
9----	1.21	1.29	1.38	1.49	---	---	---	---	---	14----	.82	.93	1.06	1.26	1.40	1.16	1.00	.68	---	---	---	---	
10----	1.17	1.25	1.34	1.46	---	---	---	---	---	16----	.83	.95	1.07	1.25	1.45	1.22	1.03	.89	---	---	---	---	
11----	1.20	1.27	1.37	1.48	---	---	---	---	---	17----	.96	1.08	1.19	1.33	1.50	1.31	1.15	.89	---	---	---	---	
21----	1.17	1.26	1.36	1.50	---	---	---	---	---	18----	.93	1.04	1.15	1.31	---	---	---	---	---	---	---	---	
22----	1.20	1.30	1.37	1.49	1.61	---	---	---	---	22----	.88	.97	1.09	1.29	1.45	1.30	1.14	1.03	.94	---	---	---	
27----	1.11	1.18	1.31	1.42	---	---	---	---	---	23----	---	---	---	1.30	1.46	1.32	---	---	---	---	---	---	
29----	---	---	---	---	1.60	1.49	1.38	1.29	1.21	24----	---	---	---	1.00	1.18	1.40	1.23	1.09	.95	.83	---	---	
31----	1.19	1.26	1.35	1.48	---	---	---	---	---	25----	.70	.80	.92	1.15	1.37	1.19	---	---	---	---	---	---	
Averages	1.20	1.27	1.36	1.48	1.60	1.49	1.38	1.29	1.21	27----	---	---	---	---	---	---	1.17	1.05	.93	.82	---	---	
										28----	---	---	---	---	---	---	---	1.12	.98	.86	.87	---	---
										29----	.87	.97	1.10	1.26	1.46	1.27	1.11	.97	.87	.87	---	---	---
										30----	.98	1.07	1.19	1.34	1.51	1.31	1.16	1.03	.95	.95	---	---	---
										31----	.79	.88	.99	1.20	1.50	1.32	1.17	1.06	.97	.97	---	---	---
										Averages	.87	.97	1.09	1.26	1.44	1.26	1.10	.97	.87	.87	---	---	---

NET RADIATION

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

MARCH 1980

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's	- 37	6	16	8	- 39	12	- 26	9	- 39	- 73	- 65	- 59	- 66	- 40	- 63	- 43	- 41	- 56	- 63	- 29	- 25	- 27	- 29	- 31	35	18	8	17	25	38	M	22

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 snowfall.

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:

$$1 \text{ foot} = 0.3048 \text{ meters}$$

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

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

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

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 hygriators. 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.

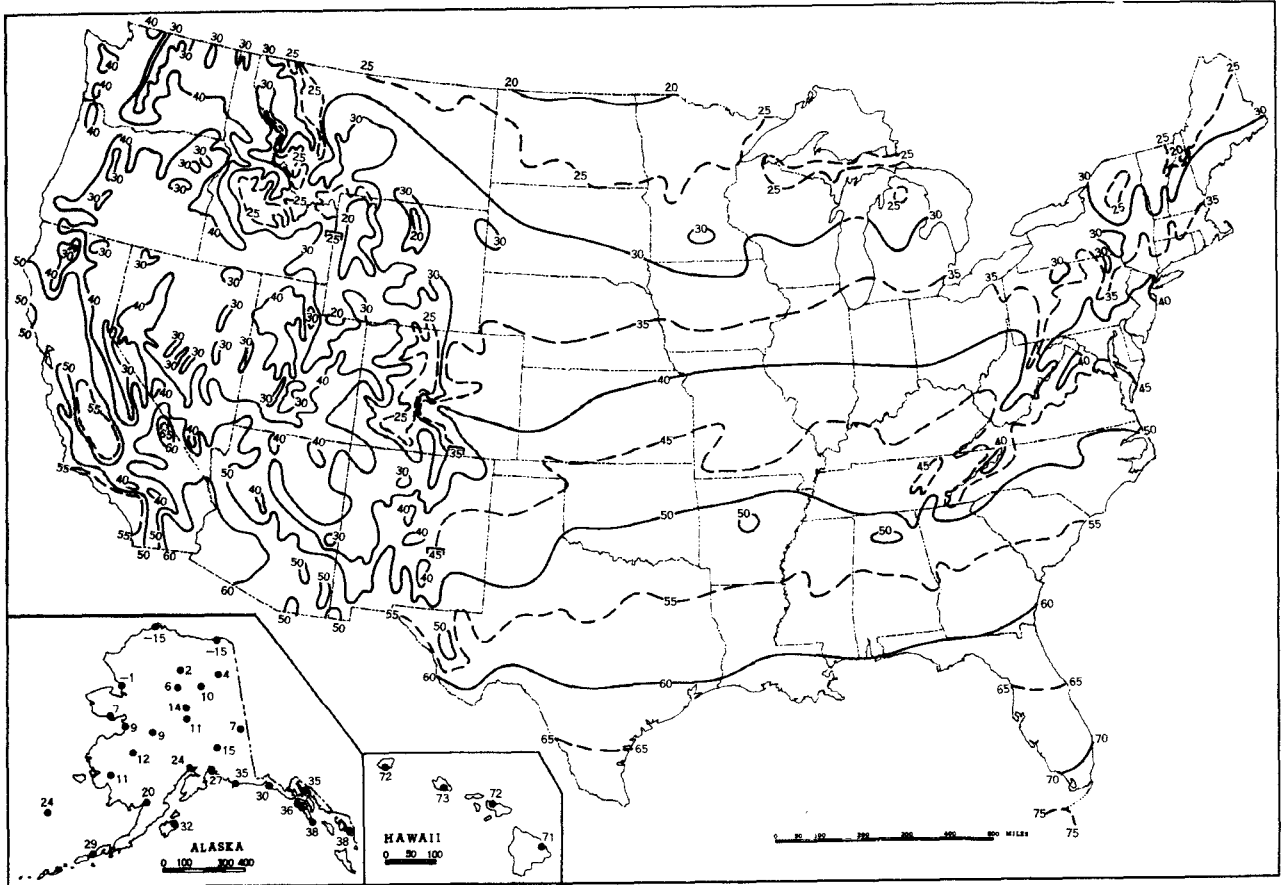
SOLAR RADIATION INTENSITIES: Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

()	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-indeter-
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-indeter-
DI	Intense Dust	HI	Intense Haze	KM	Moderate Smoke		minable

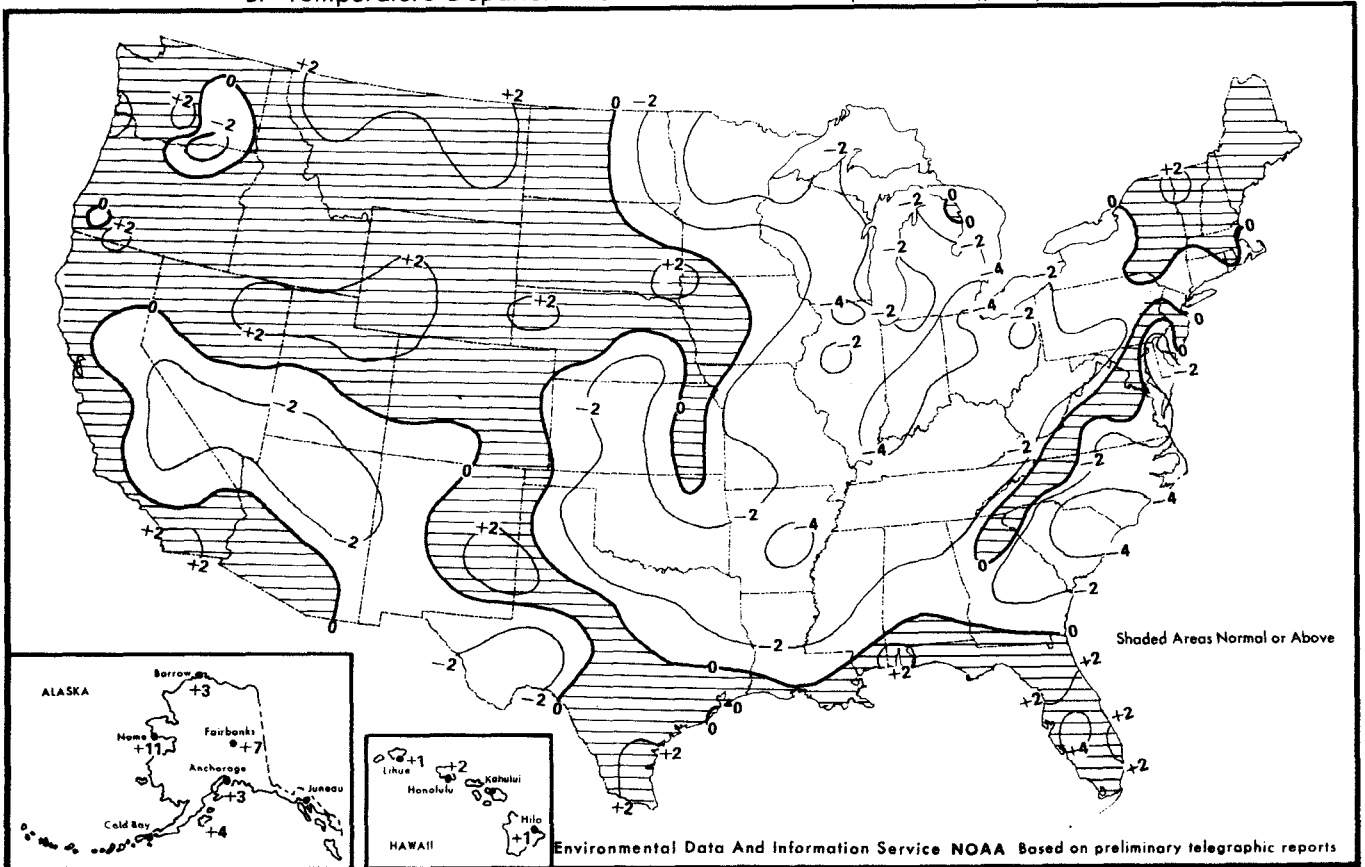
NET RADIATION: The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

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), March.

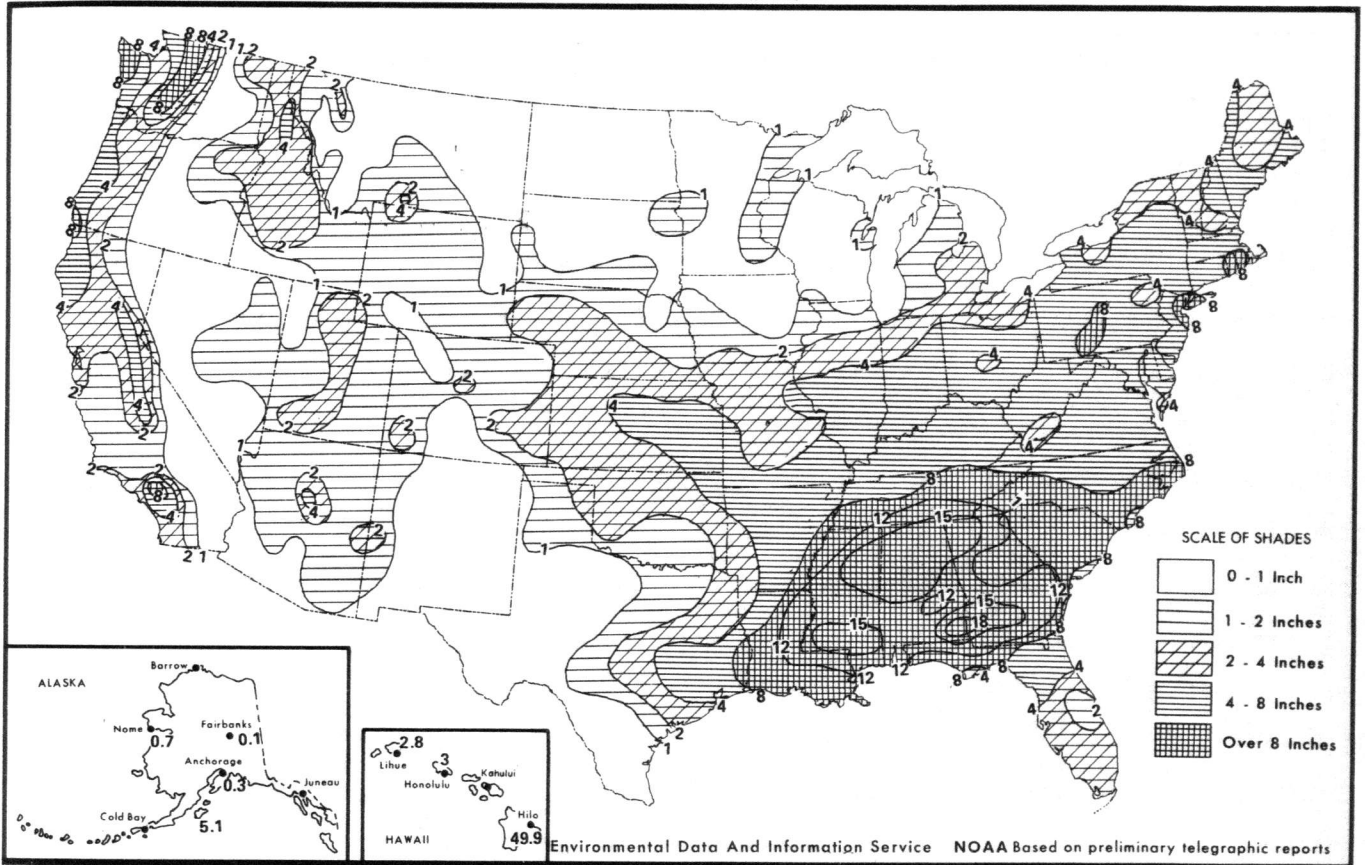


B. Temperature Departure from 30 - Year Mean (°F 1941-70), March 1980



Environmental Data And Information Service NOAA Based on preliminary telegraphic reports

Chart II. A. Total Precipitation (Inches), March 1980



B. Percentage of Normal Precipitation, March 1980

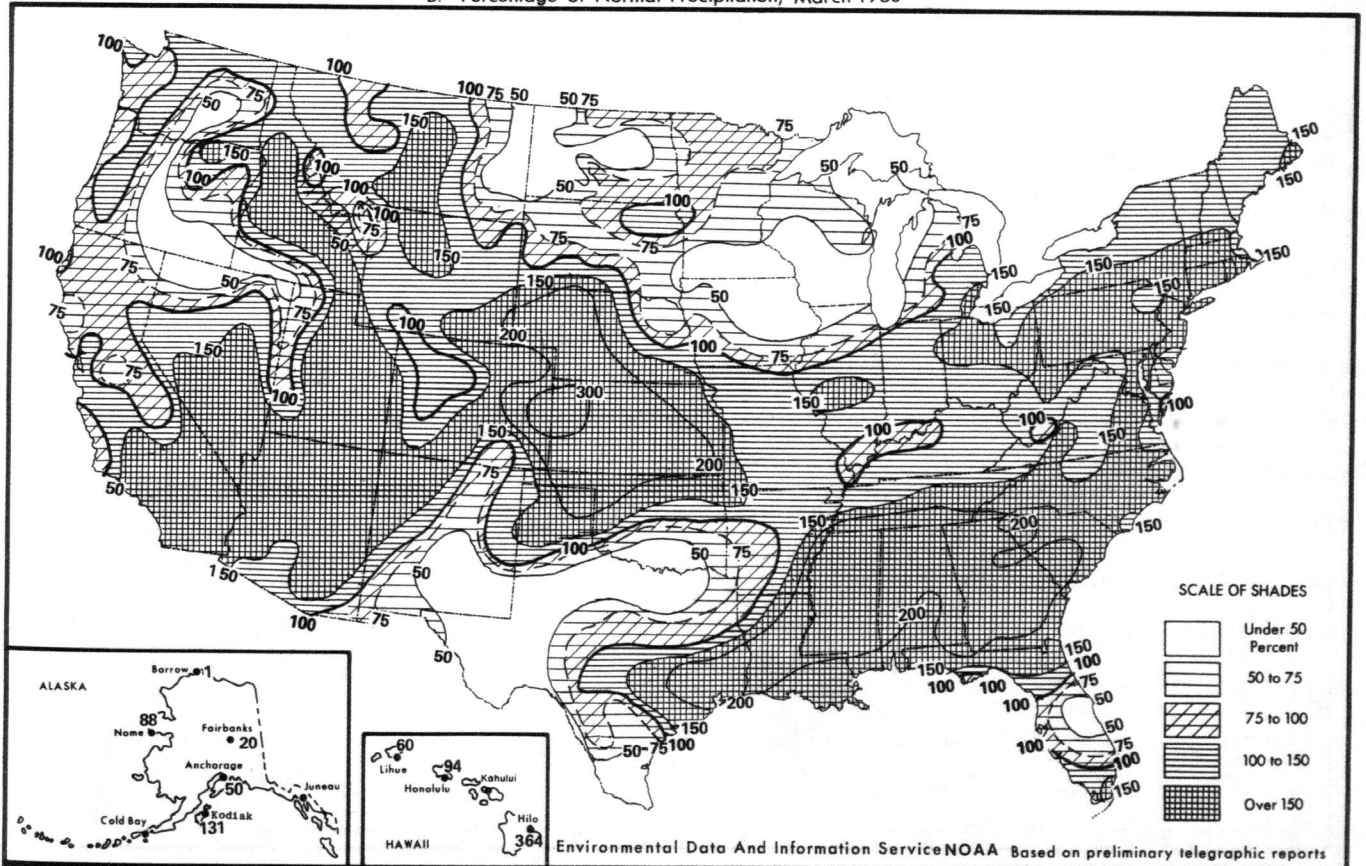
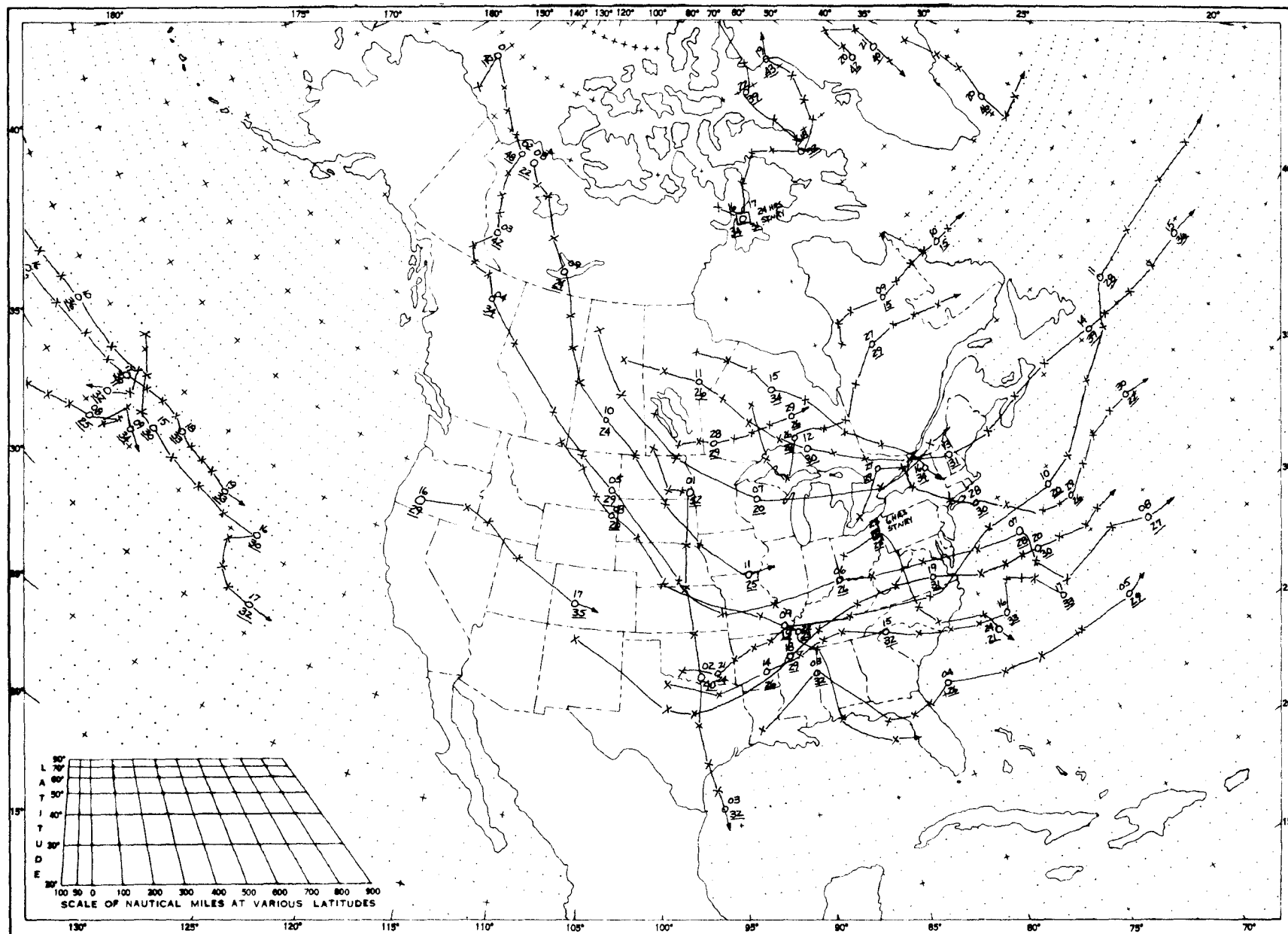
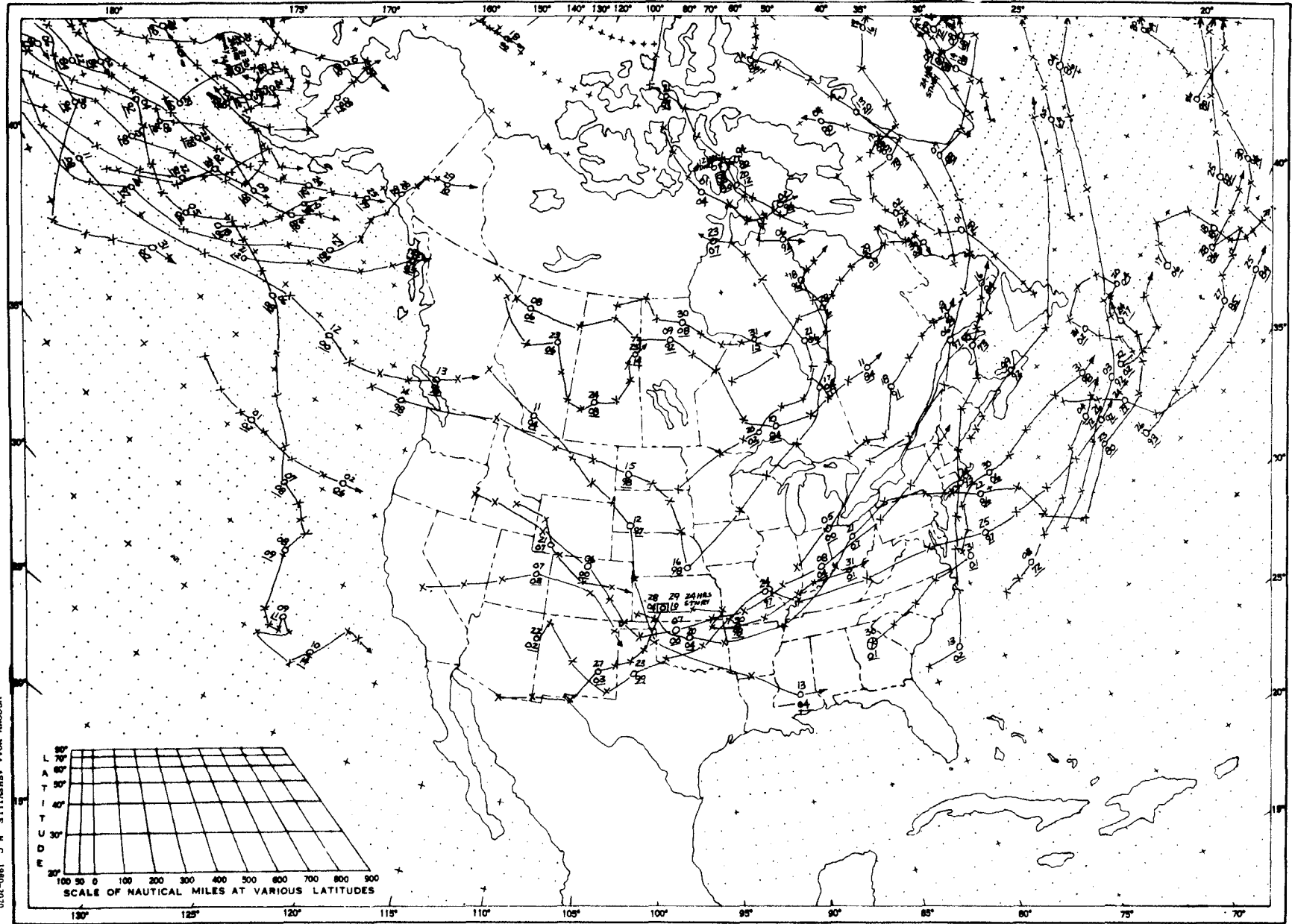


Chart III. Tracks of Centers of Anticyclones at Sea Level, March 1980



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 1980



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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