

## SECTION VII.—WEATHER AND DATA FOR THE MONTH.

## WEATHER FOR DECEMBER, 1918.

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## PRESSURE AND WINDS.

The distribution of the mean atmospheric pressure over the United States and Canada, and the prevailing direction of the winds for December, 1918, are graphically shown on Chart VII, while the means at the several stations, with the departures from the normal, are shown in Tables I and III.

The average sea-level barometric pressure for the month was below the normal in the great central valleys and over the far Southwest, but elsewhere it was generally above normal. The minus departures were as a rule small; so, also, were the plus departures, save in the northeastern Canadian Provinces and the far Northwest where they were more pronounced. (A more detailed discussion of the pressure distribution during December will be found under "Forecasts and Warnings.")

The general distribution of the barometric pressure favored northwesterly to westerly winds in the coastal portion of the Atlantic States and in the Missouri Valley, and southerly to southwesterly in much of the Mississippi Valley and portions of the Lake region. Elsewhere variable winds prevailed.

## TEMPERATURE.

During the first decade of December moderate temperature prevailed in most districts, although on the morning of the 2d heavy to killing frosts were reported as far south as Mississippi, Alabama, and extreme northwestern Florida. Unusually warm weather for the season continued generally east of the Rocky Mountains until near the middle of the third decade, when much colder weather overspread the Plains region and central valleys, the line of zero temperature extending over the Plains States southward to Oklahoma, and that of freezing to the central Gulf coast. During the following few days it continued cold over the southern Rocky Mountain region, but slightly warmer weather prevailed over most eastern districts. At the close of the month a severe cold wave was advancing from the Northwest over the Plains States, with temperatures ranging from  $-30^{\circ}$  F. in North Dakota to  $0^{\circ}$  F. in central Kansas.

The month as a whole was warmer than normal over nearly all districts east of the Rocky Mountains and in the far Northwest, and in a number of the Eastern States it was one of the warmest Decembers of record. In portions of the Ohio, middle Mississippi, and Missouri valleys, the monthly averages were nearly 10 degrees above the normal, and over much of the remaining area to eastward of the Rocky Mountains the averages were from 3 to 6 degrees above normal. On the other hand the month was persistently cold in the central and southern Rocky Mountain and Plateau States and generally to the westward, the averages for the month ranging from 3 to 6 degrees below the normal.

## PRECIPITATION.

The first week of December was marked by generally fair weather, except that showers were frequent in the far Northwest, some rain fell during the first day or two in the Southeastern States, and rain or snow was frequent from the upper Mississippi Valley eastward, the snowfall

being considerable in northern Michigan, and quite heavy in portions of northern New York and southern New England. Shortly after the middle of the first decade rain set in over the Pacific Coast States and the Colorado River basin, and by the end of the decade rain or snow had fallen over an extensive area eastward to the Ohio Valley. During the first half of the second decade precipitation was general and frequent from Oklahoma, Texas, and the Mississippi Valley eastward, occurring mostly in the form of rain. After a few days of relatively fair weather rain or snow set in over the central and southern Rocky Mountain regions and the western Great Plains, and moved slowly eastward, so that by the first few days of the third decade precipitation had overspread practically all districts east of the Rocky Mountains and continued in most localities until about the middle of the decade. During this period heavy rain fell in portions of the Gulf States and the Ohio Valley, and heavy snow in the central Plains region, particularly in Kansas and the Texas Panhandle. Generally fair weather overspread most sections thereafter, and continued until the last two days of the month, when there was precipitation over practically the entire country, with clearing weather moving in from the Northwest at the close of the month.

For the month as a whole the precipitation exceeded the normal in nearly all districts east of the 105th meridian, except in portions of New York, New England, and the lower Lakes, where less than the seasonal average was received. The amounts were heavy in southern Louisiana, portions of Alabama and Georgia, and also locally in the southern Appalachian Mountain districts, and in the southern Rocky Mountain regions.

In the northern Rocky Mountains and to the westward the amounts were generally less than the seasonal average, particularly in Idaho and the eastern portions of Oregon. In California the precipitation was nearly everywhere deficient, and particularly so in the higher mountain regions, where at points the total for the month was scarcely one-third the normal.

## SNOWFALL.

The snowfall in most districts was light for the season, except in portions of the Great Plains, where it was unusually heavy, and in the western upper Lake region and portions of New York and New England, where rather heavy falls were received.

From 6 to 20 inches or more of snow fell in Kansas, Oklahoma, and portions of the Texas Panhandle during the latter part of the month, the amounts in places being heavier than in any previous December for which authentic records are available. In the far western mountains, particularly in California, the snowfall was unusually light for December.

At the close of the month there was practically no accumulation of snow in the Sierra Nevada and Cascade Ranges save at the highest elevations, and there was much less snow on the ground than usual at this season in the upper Lake region and also in the Northeastern States; but over the elevated portions of the central and southern Rocky Mountain districts the amounts were generally well above the normal.

## RELATIVE HUMIDITY.

The relative humidity as a rule was below the normal in the northern Rocky Mountain and Plateau regions and over much of the Pacific Coast States. Elsewhere it

was higher than normal, particularly in the central and southern Rocky Mountain regions, where it was unusually high.

GENERAL SUMMARY.

The weather was favorable for farm work in the central and northern States, while rainy weather and wet soil interfered with outdoor work in the Gulf States, where less seeding was done than is usual during December. The gathering of corn was completed in most sections, but wet weather in the south delayed the completion of cotton picking, and at the end of the month some top crop still remained in the fields (from 10 to 25 per cent in the delta counties in Mississippi, and 5 to 10 per cent in South Carolina). The general absence of frost in the ground permitted plowing throughout nearly the entire month and much of this work was accomplished.

The temperature and rainfall both averaged above the normal in the principal winter grain-growing areas, and the grain entered the winter in unusually satisfactory condition in practically all sections of the country. Low temperature caused some damage to early potatoes and tender garden truck in Florida, but winter truck was generally in satisfactory condition because of the mild weather that prevailed most of the month.

The warm weather and ample precipitation were favorable for pastures in the central and eastern part of the country, and the general absence of any material snow cover over the northern Plains and mountain regions permitted grazing throughout nearly the entire month. Heavy snows were unfavorable for grazing in the central and southern Great Plains area, and stock suffered considerably from the cold of the latter part of the month. However the condition of stock continued generally good in practically all parts of the country. The weather was favorable for ripening citrus fruits except that considerable damage was done to oranges in southern California by the low temperatures.

Average accumulated departures for December, 1918.

Districts.	Temperature.			Precipitation.			Cloudiness.		Relative humidity.	
	General mean for the current month.	Departure for the current month.	Accumulated departure since Jan. 1.	General mean for the current month.	Departure for the current month.	Accumulated departure since Jan. 1.	General mean for the current month.	Departure from the normal.	General mean for the current month.	Departure from the normal.
New England.....	31.4	+2.3	-4.1	3.30	-0.10	-5.40	6.9	+0.7	79	+3
Middle Atlantic.....	40.1	+4.9	+5.8	3.55	+0.40	-6.50	6.5	+0.7	76	+1
South Atlantic.....	51.1	+3.9	+9.4	3.94	+0.50	-13.00	6.9	+2.0	81	+4
Florida Peninsula...	67.4	+0.9	+7.0	2.80	+0.80	-16.10	5.9	+1.3	78	-4
East Gulf.....	52.7	+3.5	+12.3	5.88	+1.40	+3.70	6.5	+1.0	80	+3
West Gulf.....	52.0	+2.9	+9.5	4.09	+1.20	-5.50	5.3	+0.1	76	+2
Ohio Valley and Tennessee.....	43.9	+7.2	+6.2	4.69	+1.30	-3.50	7.1	+0.7	78	+1
Lower Lakes.....	35.0	+5.9	+1.4	2.55	-0.30	-2.90	7.9	+0.1	80	+1
Upper Lakes.....	30.9	+6.4	+3.0	2.83	+0.70	-1.90	8.0	+0.7	85	+3
North Dakota.....	19.2	+7.4	+23.8	1.00	+0.30	-2.90	7.0	+1.4	85	+4
Upper Mississippi Valley.....	35.5	+8.5	+13.5	2.24	+0.40	-1.60	7.3	+1.3	80	+5
Missouri Valley.....	33.8	+7.0	+25.9	1.75	+0.70	-1.90	6.3	+1.0	84	+4
Northern slope.....	26.7	+3.0	+11.9	0.62	-0.20	+0.90	5.8	+0.5	72	-1
Middle slope.....	34.7	+1.7	+12.6	2.83	+1.70	+2.80	5.2	+1.0	74	+6
Southern slope.....	40.5	-3.2	+7.9	1.74	+0.90	-4.80	4.3	-0.2	74	+6
Southern Plateau.....	39.2	-2.9	-3.7	0.90	+0.40	+0.40	3.2	0.0	61	+10
Middle Plateau.....	28.3	-3.0	-0.5	0.86	-0.20	-0.90	4.6	-0.5	73	+1
Northern Plateau.....	31.5	-0.5	+17.1	0.62	-1.10	-3.00	7.5	+0.6	76	-4
North Pacific.....	42.0	-0.1	+14.0	6.44	-1.30	-7.00	7.6	-0.2	88	+1
Middle Pacific.....	46.2	-2.3	+2.4	2.41	-2.00	-5.30	4.0	-1.5	74	-5
South Pacific.....	52.0	-1.0	+22.0	1.65	-0.50	+3.00	3.0	-1.3	65	-3

WEATHER CONDITIONS OVER THE NORTH ATLANTIC DURING DECEMBER, 1917.

The data presented are for December, 1917, and comparison and study of the same should be in connection with those appearing in the REVIEW for that month. Chart IX (XLVI-109) shows for December, 1917, the averages of pressure, air temperature, water-surface temperature, and the prevailing direction of the wind at 7 a. m., 75th Meridian Time (Greenwich mean noon). Notes on the locations and courses of the more severe storms of the month are included in the following general summary.

PRESSURE.

The distribution of the mean atmospheric pressure for the month presented some unusual features. The Azores HIGH was slightly above the normal in intensity and considerably north of its usual position, and the mean pressure over the northeastern division of the ocean also was comparatively high. Over the remaining portions of the ocean pressure was near the normal.

The following table gives for a number of selected 5-degree squares the average pressure for each of the three decades of the month, as well as the highest and lowest individual readings reported during the month within the respective squares.

Pressure over the North Atlantic Ocean during December, 1917, by 5-degree squares.

Position of 5-degree square.		Decade means.			Extremes.			
		I.	II.	III.*	Highest.		Lowest.	
Latitude.	Longitude.				Pressure.	Date.	Pressure.	Date.
		Inches.	Inches.	Inches.	Inches.	December.	Inches.	December.
60-65 N.	30-25 W.	29.83	30.19	30.36	30.58	28	29.60	4
60-65 N.	0-5 E.	29.68	29.55	30.15	30.49	30	29.09	1
55-60 N.	35-40 W.	29.77	30.24	30.26	30.55	25	29.32	4
55-60 N.	10-15 W.	29.92	30.18	30.46	30.62	24	29.59	1
50-55 N.	55-60 W.	29.87	30.32	30.05	30.86	17	29.50	4
50-55 N.	25-30 W.	29.89	30.30	30.46	30.59	28	29.03	4
50-55 N.	0-5 W.	30.09	30.22	30.28	30.50	3	29.72	1
45-50 N.	65-70 W.	29.84	30.40	30.30	30.70	27	29.10	9
45-50 N.	30-45 W.	29.58	30.37	30.19	30.61	18	29.60	3
45-50 N.	10-15 W.	30.73	30.35	30.30	30.60	12, 24	30.01	1
40-45 N.	50-55 W.	29.55	30.35	29.99	30.50	19	29.53	3
40-45 N.	25-30 W.	30.20	30.41	30.31	30.52	13	29.89	2
35-40 N.	75-80 W.	29.99	30.40	30.35	30.64	16	29.80	9
35-40 N.	35-40 W.	30.21	30.32	30.15	30.49	19	29.79	2
35-40 N.	10-15 W.	30.34	30.08	30.10	30.42	5, 7	29.78	31
30-35 N.	50-55 W.	30.06	30.17	29.93	30.32	9	29.70	7
30-35 N.	25-30 W.	30.30	30.17	30.14	30.44	8	29.90	11, 31
25-30 N.	60-65 W.	30.11	30.18	30.21	30.49	30	29.92	7
25-30 N.	30-35 W.	30.03	30.04	30.00	30.27	12	29.79	21
25-30 N.	15-20 W.	30.25	30.06	30.04	30.35	7	29.79	31
20-25 N.	75-80 W.	30.03	30.01	30.07	30.20	10, 15	29.90	8, 19
20-25 N.	50-55 W.	30.05	29.95	29.96	30.15	10	29.70	27
15-20 N.	35-40 W.	29.98	29.90	29.94	29.99	10	29.88	30
10-15 N.	80-85 W.	30.05	29.95	29.95	30.20	8	29.85	12, 27

\* Mean of last 11 days of the month.

The values presented in the above table are based on the interpolated daily pressure for each square on the daily synoptic charts of the North Atlantic, compiled by the marine section of the Weather Bureau. The extremes are the highest and lowest actual readings observed within the respective squares.

GALES.

According to the records of vessels in the steamer lanes, gales were comparatively rare in these waters during the month, although, due to war conditions, few reports were received from the eastern and central sections. The number of days on which gales occurred

below the normal, with the exception of the 5-degree square between latitude 35° to 40°, longitude 70° to 75°, where they were reported on eight days.

On December 1 there was a low (I on Chart IX) central near New York, where the barometer reading was 29.68 inches; light to moderate winds prevailed along the American coast, although one vessel near St. Johns, Newfoundland, reported a northeasterly gale of about 50 miles an hour. This disturbance moved rapidly eastward, and on the 2d surrounded Nova Scotia; it had increased somewhat in intensity, and moderate northwesterly gales were encountered over a limited area off the North Carolina and Virginia coasts. Low I continued in its easterly movement, and on the 3d the center was near Sydney, Cape Breton Island; it had remained about the same in intensity, and there was little change in the condition of wind and weather since the previous day. On the 4th it was central near St. Johns, Newfoundland, and light winds with fog prevailed in the southerly quadrants.

On the 5th there was a Low of slight intensity (II on Chart IX) near Brownsville, Tex.; it moved rapidly eastward, and on the 6th was off the coast of southern Georgia, where light southerly winds were the rule. This disturbance, increasing rapidly in intensity, was central near latitude 39°, longitude 64°, on the 7th, and northeasterly gales of over 50 miles an hour were reported from its westerly quadrants. Low II then curved sharply toward the north, and on the 8th the center was near the west coast of Newfoundland. A few reports denoting moderate gales were received from vessels off the American coast between the 37th and 42d parallels.

From the 1st to the 8th a Low of considerable intensity remained practically stationary near the coast of northern Europe, although it is impossible to determine the weather conditions accurately on account of lack of reports.

On the 8th there was a disturbance central near Savannah, Ga., and moderate southeasterly gales prevailed along the coast between Hatteras and the Virginia Capes. This low moved rapidly northward, increasing in intensity, and on the 9th the center was near Quebec, where the barometric reading was 29.08 inches. The storm area had increased in extent since the previous day, and gales of from 40 to 50 miles an hour prevailed over the southerly quadrants. This depression drifted slowly northward, and on the 10th was in the vicinity of Father Point, while gales swept the same region as on the previous day. The low then moved rapidly toward the east, decreasing in intensity, and on the 11th it covered the greater part of Newfoundland; one vessel near latitude 41°, longitude 62° encountered a westerly gale of 55 miles an hour, accompanied by hail and snow, while other reports received from that region denoted light to moderate winds.

On the 14th a well-developed Low was central near Boston, where the barometer reading was 29.14 inches, and strong westerly gales occurred between the 70th meridian and the American coast and the 38th and 41st parallels.

On the 16th a well-developed depression covered the greater part of England, and moderate northerly gales were reported along the European coast as far south as Bordeaux. This low moved rapidly southward, and on the 17th was central near Bilbao, Spain, and heavy weather was still encountered between the 40th and 50th

parallels. It moved but little during the next 24 hours, and had decreased in intensity, as on the 18th no winds of gale force were reported from European waters.

On the 19th a low of slight intensity covered a large area in the West Indies and the Caribbean Sea, the center being somewhere near Porto Rico. At the same time a well-developed high with a crest of 30.64 inches was central near St. Johns, Newfoundland. Vessels in the vicinity of Hatteras encountered strong northeasterly gales, while along the American coast, to the north and south of that point, moderate winds were reported. From the 20th to the 22d this slight depression remained nearly stationary between the Bermudas and the Azores, and was attended by light to moderate winds, with fog in the northern quadrants. On the 24th there was a Low central about 150 miles off the east coast of Labrador, and at the same time a High, with a crest of 30.60 inches, had its center near latitude 50°, longitude 22°, and vessels between these areas experienced moderate southerly gales.

While there were a number of slight depressions over various portions of the ocean during the remainder of the month, no winds of gale force were recorded until the 31st, when vessels near the American coast between the 33d and 36th parallels encountered moderate north-easterly gales.

AIR TEMPERATURE.

The month of December, 1917, was one of the coldest on record in the eastern part of the United States, while the mean temperature of the air over the Atlantic Ocean was, for the most part, above the normal, as positive departures of from 1 to 6 degrees were the rule over the northern steamer lanes.

On the Gulf of Mexico the temperatures were very irregular, the departures varying from -2 to +5 degrees, while in the southeastern division of the ocean they ranged from 0 to +4 degrees.

The greatest monthly range in temperature occurred, as usual, in the 5-degree square that included the east coast of Labrador, where the thermometer reading was 44° F. on the 8th and 26° F. on the 12th. The following table gives the temperature departures for the month at a number of Canadian and United States Weather Bureau stations on the Atlantic and Gulf coasts:

	° F.		° F.
St. Johns, Newfoundland...	+3.1	Norfolk, Va.....	-9.2
Sydney, Cape Breton Island	-0.5	Hatteras, N. C.....	-8.5
Halifax, Nova Scotia.....	-4.1	Charleston, S. C.....	-9.3
Eastport, Me.....	-7.5	Key West, Fla.....	-3.7
Portland, Me.....	-9.3	Tampa, Fla.....	-2.7
Boston, Mass.....	-7.9	Mobile, Ala.....	-3.3
Nantucket, Mass.....	-7.3	New Orleans, La.....	-3.0
Block Island, R. I.....	-9.2	Galveston, Tex.....	-3.5
New York, N. Y.....	-9.0	Corpus Christi, Tex.....	-0.8

WATER-SURFACE TEMPERATURE.

Off the Banks of Newfoundland the mean monthly temperature of the water, as compared with the normal, was as usual, very irregular, the departures ranging from -2 to +4 degrees over a comparatively limited area. The temperatures for the greater part of the northern steamer lanes were somewhat cooler than usual, the same conditions holding true in the Gulf of Mexico and in the waters adjacent to the American coast, while in the vicinity of the Maderias and the Azores the departures were slightly positive. The greatest range in tempera-

ture in the water occurred in the square between latitude 45° to 50°, longitude 40° to 45°, where the thermometer reading was 40° on the 19th and 59° on the 20th.

FOG.

The number of days on which fog was observed was considerably below the normal over all sections of the ocean. On the Banks of Newfoundland, where the greatest amount usually occurs, it was reported on only two days, while in no other 5-degree square was it observed on more than one day.

HAIL AND SNOW.

Hail was observed on only one day, the 11th, in the square between latitude 40° to 45°, longitude 60° to 65°. Snow was reported on two days in the region between latitude 35° to 40°, longitude 70° to 75°, and also between latitude 40° to 45°, longitude 60° to 65°, while it occurred on one day in a number of squares in the western division of the ocean.

Winds of 50 mis./hr. (22.4 m./sec.) or over, during December, 1918.

Station.	Date.	Velocity.	Direction.	Station.	Date.	Velocity.	Direction.
Birmingham, Ala.	21	52	se.	North Head, Wash.	12	62	s.
Block Island, R. I.	1	60	w.	Do.	13	60	s.
Buffalo, N. Y.	1	60	nw.	Do.	19	60	s.
Do.	2	56	sw.	Do.	28	78	se.
Do.	25	60	sw.	Do.	29	54	nw.
Cheyenne, Wyo.	2	58	w.	Pensacola, Fla.	20	55	se.
Do.	3	58	w.	Do.	24	62	sw.
Cleveland, Ohio.	6	52	nw.	Pittsburgh, Pa.	6	51	nw.
Columbus, Ohio.	5	50	nw.	Point Reyes Light, Cal.	8	70	s.
Ellendale, N. Dak.	22	50	nw.	Do.	20	85	nw.
Erie, Pa.	10	55	se.	Do.	28	80	nw.
Flagstaff, Ariz.	7	50	sw.	Do.	29	74	nw.
Green Bay, Wis.	24	50	ne.	Do.	1	54	nw.
Mount Tamalpais, Cal.	5	56	se.	Sandy Hook, N. J.	1	56	nw.
Do.	8	70	se.	Do.	6	57	nw.
Do.	20	50	nw.	Do.	14	50	s.
Nantucket, Mass.	17	56	ne.	Tatoosh Island, Wash.	1	58	s.
New York, N. Y.	1	65	w.	Do.	3	50	s.
Do.	4	54	nw.	Do.	8	60	sw.
Do.	5	57	nw.	Do.	10	68	s.
Do.	6	75	nw.	Do.	10	60	sw.
Do.	14	52	s.	Do.	12	50	sw.
North Head, Wash.	3	62	se.	Do.	13	58	s.
Do.	4	64	s.	Do.	19	50	e.
Do.	8	54	se.	Do.	28	68	w.
Do.	10	74	s.	Trenton, N. J.	6	60	nw.
Do.	11	52	s.				

CONDENSED CLIMATOLOGICAL SUMMARY.

In the following table are given for the various sections of the climatological service of the Weather Bureau the monthly average temperature and total rainfall; the stations reporting the highest and lowest temperatures, with dates of occurrence; the stations reporting the greatest and least total precipitation; and other data as indicated by the several headings.

The mean temperature for each section, the highest

and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperatures and precipitation are based only on records from stations that have 10 or more years of observations. Of course the number of such records is smaller than the total number of stations.

Condensed climatological summary of temperature and precipitation by sections, December, 1918.

Section.	Temperature.								Precipitation.					
	Section aver. age.	Departure from the normal.	Monthly extremes.				Section average.	Departure from the normal.	Greatest monthly.		Least monthly.			
			Station.	Highest.	Date.	Station.			Lowest.	Date.	Station.	Amount.	Station.	Amount.
Alabama	50.3	+4.4	Ashville	82	11	St. Bernard	27	5.70	+1.16	Union Springs	11.13	Cochrane	2.30	
Arizona	40.5	-1.9	Sentinel	83	4	2 stations	-22	1.82	+0.60	Pinal Ranch	4.14	Yuma	0.24	
Arkansas	47.6	+5.9	Camden	88	10	4 stations	9	26	5.58	+1.60	Alicia	12.90	Helena	1.68
California	43.8	-2.9	2 stations	89	3†	Madeline	-16	31	2.10	-1.93	Crescent City	7.12	2 stations	0.00
Colorado	23.8	-1.3	2 stations	73	4†	Gunnison	-36	26	1.26	+0.30	Cumbres	3.78	Cathedral	0.04
Florida	60.9	+1.5	Homestead	90	25	Garniers (near)	23	29	3.60	+0.90	Apalachicola	15.88	Ritta	0.16
Georgia	51.6	+4.8	Glennville	82	14	Ramhurst	15	27	6.36	+2.13	Toccoa	11.62	Augusta	2.20
Hawaii (November)	72.4	+0.7	Mahukona	92	9	Waimea	50	16	9.90	+1.84	Glenwood	27.54	Puuhele, Mauri	1.96
Idaho	25.7	-0.3	3 stations	65	9†	French Gulch	-33	31	0.92	-1.20	Pri-hard	4.41	2 stations	0.05
Illinois	38.4	+8.2	3 stations	74	9†	Morrison	-1	26	3.50	+1.34	Palestine	9.53	Freeport	1.47
Indiana	39.9	+7.6	Seymour	74	17	Hammond	1	31	5.28	+2.67	Vincennes	9.17	Hammond	2.01
Iowa	32.7	+8.8	Columbus Junction	68	8	2 stations	-7	25†	1.30	+0.03	Oskaloosa	3.30	Le Mars	0.37
Kansas	35.6	+4.4	2 stations	76	8	Salina	-15	25	2.74	+1.83	Scott City	6.03	Oketo	0.94
Kentucky	44.8	+7.7	2 stations	75	10	Junction City	14	27	4.44	+0.52	2 stations	7.10	Williamsburg	2.24
Louisiana	55.1	+3.3	Donaldsonville	88	13	Calhoun	15	26	5.93	+1.31	Ifouma	13.62	Monroe	2.34
Maryland-Delaware	40.2	+6.0	2 stations	71	14	Oakland, Md.	7	29	4.23	+0.60	Union Bridge, Md.	5.43	Western Port, Md.	2.51
Michigan	30.4	+4.7	Wasepi	62	22	Humboldt	-16	26	2.84	+0.73	Allegan	5.57	Humboldt	0.86
Minnesota	22.8	+7.3	Wheaton	60	7	Hallock	-28	31	1.41	+0.58	New Ulm	3.71	Ada	0.49
Mississippi	52.0	+4.9	Greenwood	83	13	Anguilla	16	26	4.12	-1.21	McNeill	9.37	Grenada	1.60
Missouri	40.0	+6.6	Marble Hill	83	6	Warsaw	-12	26	3.21	+1.14	Poplar Bluff	8.65	St. Charles	1.21
Montana	27.3	+4.1	Boulder	80	1	3 stations	-36	31	0.53	-0.31	Trout Creek	5.40	5 stations	T.
Nebraska	30.3	+4.4	3 stations	73	4†	Kirkwood	-22	31	1.40	+0.66	Brewster	3.61	Wahoo	0.37
Nevada	27.8	-3.3	Beatty	74	3	Potts	-21	24	0.69	-0.22	Sharp	2.25	Oasis Ranch	0.05
New England	28.1	+3.1	Fall River, Mass.	64	14	Van Buren, Me.	-21	8	3.25	-0.10	Springfield, Mass.	5.09	Houlton, Me.	1.05
New Jersey	37.5	+4.6	Tuckerton	66	23	Culvers Lake	6	7	3.92	+0.07	Long Branch	4.94	Paterson	3.21
New Mexico	29.2	-3.9	Deming	73	4†	Elizabethtown	-8	25	1.62	-0.75	Mogollon Ranger Sta	4.17	Loving	0.19
New York	31.2	+4.5	Wappingers Falls	62	23	North Lake	-13	7	2.77	-0.28	Adams Center	6.51	Cape Vincent	0.48
North Carolina	46.1	+4.7	Newbern	80	9†	2 stations	9	27	5.58	+1.46	Rock House	14.34	Hot Springs	1.07
North Dakota	18.3	+5.3	2 stations	65	1†	Minot	-41	31	0.89	+0.35	Grand Forks	2.29	Lisbon	0.05
Ohio	39.3	+8.4	Peebles	72	10	London	-12	30	3.53	+0.61	Montpelier	6.24	Wickliffe	1.53
Oklahoma	42.1	+2.3	Pauls Valley	82	9	Newkirk	-10	25	3.76	+1.99	Antlers	6.25	Meeker	2.05
Oregon	34.3	-3.2	Warm Springs	70	3	Lavine	-21	31	3.25	-2.56	Astoria	11.22	Sunrise Valley	0.03
Pennsylvania	36.6	+5.5	Grove City	72	8	Ebensburg	-1	28	3.38	+0.18	Bustleton	5.74	Lawrenceville	0.90
Porto Rico	74.5	0.0	Guanica Centrale	93	18	2 stations	54	25	3.66	-1.17	Dorado	8.32	Hac. Potala	0.69
South Carolina	50.8	+4.5	Oaks	82	14	Walhalla	17	29	5.25	+1.96	Walhalla	13.41	Paris Island	1.16
South Dakota	25.9	+5.2	Howell	70	6	Pine Ridge	-25	24	1.02	+0.61	Greenmont	2.80	Lemmon	0.10
Tennessee	46.8	+7.0	Dyersburg	79	13	Erasmus	-7	27	4.29	-0.41	Copperhill	9.69	Elizabethton	1.95
Texas	49.8	+1.5	Mercedes	90	12	Dalhart	-6	25†	3.59	+1.26	Clarksville	8.36	2 stations	0.30
Utah	25.7	-0.9	Springdale	73	4	East Portal	-29	24	0.85	-0.17	Loekeyer	2.99	0.2 Ranch	0.00
Virginia	42.3	+5.0	Franklin	76	14	Mineral	10	30	4.03	+0.71	Mayhurst	6.90	Swansville	2.42
Washington	34.5	+1.4	2 stations	67	4	Anatone	-10	31†	4.41	-0.20	Forks	24.47	Maryhill	0.10
West Virginia	41.0	+7.3	Charleston	74	15	Marlinton	0	30	4.41	+1.00	Terra Alta	8.14	Clay	2.61
Wisconsin	28.3	+8.0	Delavan	58	8	Solon Springs	-20	25	1.68	+0.36	Manitowoc	3.43	Prairie du Chien	0.78
Wyoming	23.6	+2.7	Crow Hill	69	14	Sheridan Creek R. S.	-34	31	0.45	-0.36	Willow Springs R. S.	1.23	4 stations	T.

† Other dates also.