FORM MAP C

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

CHARLES F. MARVIN, CHIEF

DAILY WEATHER MAP

Washington, D. C., Sunday, October 21, 1917---8 A. M.

WEATHER CONDITIONS AND GENERAL FORECAST.

Rain is indicated for the Lake region, the Ohio Valley, northern New York, and northern New England during the next 36 hours. Elsewhere the weather will be fair and cool, with frost in the East Gulf and South Atlantic States and northern Florida.

Higher temperatures are probable in the Ohio Valley Monday.

Storm warnings are displayed on the Atlantic coast from Norfolk to Hatteras.

Along the New England coast there will be fresh northeast to north winds, probably increasing on the south coast; on the middle Atlantic coast fresh north to northeast winds, except moderate gales on the Virginia coast; on the south Atlantic coast moderate northeast gales this afternoon and to-night on North Carolina coast, elsewhere fresh northwest to north winds; on the east Gulf coast light northerly.

FORECAST TILL 8 P. M. MONDAY.

For Northern New England, rain to-night and probably Monday; warmer to-night; variable winds, becoming fresh south.

For Southern New England, partly cloudy to-night and Monday; warmer Monday; light north winds, becoming south.

For Eastern New York, fair in south, rain in north portion to-night; somewhat warmer. Monday partly cloudy; variable winds, becoming fresh south.

For Eastern Pennsylvania, partly cloudy to-night and Monday; warmer Monday; light variable winds, becoming fresh south.

For New Jersey, and **Delaware,** fair to-night and Monday; light north winds, becoming south.

For the District of Columbia, and Maryland, fair to-night. Monday partly cloudy and warmer; light variable winds, becoming fresh south.

For Virginia, and **North Carolina,** fair, continued cool to-night, with frost in exposed places. Monday fair, warmer; strong northeast winds on the coast this afternoon and to-night, diminishing Monday.

For South Carolina, fair, continued cool to-night, with frost in exposed places in the interior. Monday fair; fresh northerly winds on the coast.

For Georgia, fair, continued cool to-night with frost. Monday fair, warmer; light northerly winds.

For Florida, fair, continued cool to-night, with light frost in north portion; cooler in northeast portion. Monday fair, continued cool; light northerly winds.

For Alabama, and **Mississippi,** fair, continued cool to-night with light frost, heavy in exposed places. Monday fair, warmer; light northerly winds.

For Tennessee, partly cloudy to-night and Monday; warmer Monday.

For Kentucky, and **Indiana,** cloudy to-night. Monday rain.

For West Virginia, fair to-night. Monday rain and warmer.

For Western New York, rain to-night and Monday; warmer in east portion.

For Western Pennsylvania, fair to-night and Monday, except rain in north portion.

For Ohio, generally fair to-night. Monday rain and warmer.

For Lower Michigan, rain to-night and probably Monday.

For Upper Michigan, snow or rain to-night and Monday.

For the Upper Lakes, increasing southeast winds to-night, becoming fresh to strong Monday morning; rain.

For the Lower Lakes, fresh southeast to south winds this afternoon, becoming northwest to-night and variable Monday; rain.

A. J. HENRY, Forecaster.

Observations are taken at 8 a. m. and 8 p. m., 75th meridian time.

Barometer readings are reduced to sea level and standard gravity. When heavy dotted red lines appear they indicate regions of marked changes in temperature during the last 24 hours. Shaded areas show regions of precipitation of .01 inch or more during the last 24 hours. Arrows point in the direction the wind is blowing. Solid black lines are isobars and solid red lines isotherms.

Wind velocities of less than 10 miles an hour, and amounts of precipitation of less than .01 of an inch, are not published hereon.

Symbols indicate: ○ clear, ◑ partly cloudy, ● cloudy, R rain, S snow, ⟶ storm warnings, CW cold wave warnings, ⟶(H)⟶ storm track and location of storm center, date above, time (a. m. or p. m.) below, ⟟a, ⟟p, thunderstorms at or near the station during 12 hours ending 8 a. m. or 8 p. m., respectively.

WIND-BAROMETER INDICATIONS.

When the wind sets in from points between south and southeast and the barometer falls steadily a storm is approaching from the west or northwest, and its center will pass near or north of the observer within 12 to 24 hours with wind shifting to northwest by way of southwest and west. When the wind sets in from points between east and northeast and the barometer falls steadily a storm is approaching from the south or southwest, and its center will pass near or to the south or east of the observer within 12 or 24 hours with wind shifting to northwest by way of north. The rapidity of the storm's approach and its intensity will be indicated by the rate and the amount of the fall in the barometer.

Statute Miles 300 50 0 100 200 300 400

Kilometers 100 50 0 100 200 300 400 500

Warmer 20° or more

SUNDAY, October 21, 1917, 8 A. M.

STATIONS.	Pressure. Reduced to sea level and standard gravity.	Pressure. Abnormal change in 24 hours.	Temperature. Dry bulb.	Temperature. Change in 24 hours.	Temperature. Highest yesterday.	Temperature. Lowest last night.	Wind velocity in miles per hour.	Precipitation in past 12 hours. Inches.
Montreal, Que.	30.34	+20	38	0	46	32		0
Greenville, Me.			32		44			
Eastport, Me.	30.26	+20	42	+ 8	50	38	10	.74
Northfield, Vt.	30.36	+16	32	- 6	44	24		0
Portland, Me.	30.32	+20	40	+ 6	48	34	30	10
Boston, Mass.	30.30	+16	40	+10	54	38	30	0
Nantucket, Mass.	30.34	+14	48	+ 6	54	44	24	54
Block Island, R. I.	30.26	+12	42	+ 8	52	40	24	0
Hartford, Conn.	30.32	+10	34	+ 8	50	30		.02
Canton, N. Y.	30.32		32	+ 6		26		0
Syracuse, N. Y.	30.34	+ 6	34	+ 2	42	32		0
Binghamton, N. Y.	30.34		28	+ 6		26		0
Albany, N. Y.	30.36		34	+ 6	50	32		0
New York, N. Y.	30.30	+ 6	38	+ 2	52	36	12	.01
Sandy Hook, N. J.	30.30	+ 8	44	0	52	42	18	.02
Scranton, Pa.	30.30	+10	30	- 8	46	30		0
Harrisburg, Pa.	30.36	+ 6	36	- 4	46	32	30	0
Philadelphia, Pa.	30.34	+ 8	40	- 6	54	40		0
Atlantic City, N. J.	30.28		40	- 6	54	38	12	.04
Baltimore, Md.	30.34	+ 4	42	0	50	36		0
WASHINGTON, D. C.	30.32	+ 2	36	+ 3	49	34		0
Norfolk, Va.	30.22		44	+ 6	54	46	20	0
Richmond, Va.	30.30	+ 4	38	- 6	54	34		0
Lynchburg, Va.	30.30	+ 4	32	- 8	56	30		0
Wytheville, Va.	30.28		30	- 6	52	28		0
Charlotte, N. C.	30.24	+ 4	36	- 8	58	36	14	0
Asheville, N. C.	30.24	+ 2	38	+ 4		30		0
Raleigh, N. C.	30.24	+ 2	40	- 6	56	36	12	0
Hatteras, N. C.	30.12	- 2	58	0	68	54	20	0
Wilmington, N. C.	30.14	- 2	44	-12	68	42	12	0
Charleston, S. C.	30.06	- 6	52	-10	64	50	18	0
Columbia, S. C.	30.20		44	- 8		44	14	0
Greenville, S. C.	30.26		40	- 4		38		0
Augusta, Ga.	30.16	+ 2	46	- 8	66	46		0
Savannah, Ga.	30.08	- 2	52	- 2	74	52	14	0
Jacksonville, Fla.	30.02	- 2	60	+ 2	70	60	12	0
Titusville, Fla.	29.96	- 2	68	- 2	80	66		0
Miami, Fla.	29.98	+ 2	76	- 2	84	72		0
Key West, Fla.	29.96	+ 2	80	- 2	86	74		0
Atlanta, Ga.	30.22	+ 4	42	- 6	58	38		0
Macon, Ga.	30.18	+ 8	48	- 4	68	40		0
Thomasville, Ga.	30.08	+ 2	50	+10	68	48		0
Tampa, Fla.	30.00	0	66	- 6	80	64		0
Apalachicola, Fla.					70			
Pensacola, Fla.	30.14	+ 4	48	+ 6	66	46	18	0
Mobile, Ala.	30.16	+ 4	48	+ 4	66	46	10	0
Montgomery, Ala.	30.16	+ 2	42	+ 2	64	42		0
Birmingham, Ala.	30.22	+ 2	38	+ 6	62	36		0
Meridian, Miss.	30.18		36	+ 4	64	34		0
Corinth, Miss.	30.28		42	+10		42		0
Vicksburg, Miss.	30.28	+ 6	42	+ 4	68	40		0
New Orleans, La.	30.20	+ 2	54	+ 4	68	54		0
Burrwood, La.	30.14	+10	60	+ 4	66	58	12	0
Shreveport, La.	30.36	+14	42	+ 4	68	40		0
Fort Smith, Ark.	30.36	+ 6	32	- 6	62	32		0
Little Rock, Ark.	30.34	+14	40	0	68	40		0
Palestine, Tex.	30.34	+12	42	+ 2	70	42		0
Port Arthur, Tex.	30.24		44	+ 6		40	10	0
Galveston, Tex.	30.28	+ 6	54	0	64	54	12	0
Houston, Tex.	30.30		44	- 6		44	10	0
Taylor, Tex.	30.38		42	0		38		0
San Antonio, Tex.	30.34	+16	48	+ 4	74	48	12	0
Corpus Christi, Tex.	30.32	+14	54	+ 4	74	54		0
Brownsville, Tex.	30.26	+16	52	+ 6	80	50		0
Memphis, Tenn.	30.32	+ 8	40	- 2	64	40	10	0
Nashville, Tenn.	30.24	0	42	+10	56	40		0
Chattanooga, Tenn.	30.26	+ 6	40	+ 4	58	40		0
Knoxville, Tenn.	30.22	0	38	+ 2	60	36		0
Lexington, Ky.	30.22		44	+10	64	42		0
Louisville, Ky.	30.24		42	+10	64	40		0
Evansville, Ind.	30.28	+ 4	40	+ 4	54	40		0
Terre Haute, Ind.	30.22	+ 4	34	+ 2	62	34		.01
Indianapolis, Ind.	30.24	+ 6	42	+12	60	36		0
Cincinnati, Ohio.	30.22	- 8	42	+12	50	40		0
Dayton, Ohio.	30.20		42	+10		40		0
Columbus, Ohio.	30.22		42	+10	48	38	10	0
Elkins, W. Va.	30.34	- 2	24	- 8	42	22		0
Parkersburg, W. Va.	30.30	- 2	36	0	60	34		0
Pittsburgh, Pa.	30.30		38	+ 4	44	34		0
Oswego, N. Y.	30.32	+ 6	36	- 6	44	34		.02
Rochester, N. Y.	30.30		36	- 6		32		0
Buffalo, N. Y.	30.26		40	+ 4	42	32	12	0
Erie, Pa.	30.22	- 4	36	+ 4	40	34	20	.10
Cleveland, Ohio.	30.22	- 8	38	+ 4	42	36	20	0
Toledo, Ohio.	30.18		40	+ 4	46	38		0
Detroit, Mich.	30.16	-10	42	+ 8	42	36		.06
Saginaw, Mich.	30.10		38	+ 4		34	12	.06
Alpena, Mich.	30.10	-10	38	+ 6	40	34	18	.01
Sault Ste. Marie, Mich.	30.14	-12	34	+ 6	38	34		.02
Houghton, Mich.	30.12		30	+ 6		30		.04
Marquette, Mich.	30.10	- 6	32	+ 4	38	30		0
Escanaba, Mich.	30.10	- 6	28	+ 2	38	26		.08
Green Bay, Wis.	30.12	- 8	28	+ 2	38	26		.08
Ludington, Mich.	30.08		38	+ 2	40	32		.10
Grand Haven, Mich.	30.08	-10	46	+10	44	36	22	.30
Grand Rapids, Mich.	30.10	- 6	36	0	46	34		.12
Fort Wayne, Ind.	30.20	- 2	36	+ 6	46	34		0
Chicago, Ill.	30.18	+ 4	38	+ 4	58	36		0
Milwaukee, Wis.	30.16	+ 4	34	+ 4	54	32		.01
Duluth, Minn.	30.12	- 2	24	- 2	38	24		0
St. Paul, Minn.	30.14	+ 6	26	- 4		26		.06
Madison, Wis.	30.18	+ 6	32	+ 2	40	32		0
La Crosse, Wis.	30.16		26	- 4		16		.04
Charles City, Iowa.	30.20	+ 2	20	-14	38	20		0
Dubuque, Iowa.	30.24	+ 8	30	- 4	46	30		0
Davenport, Iowa.	30.22	+ 2	30	- 4	48	30		0
Des Moines, Iowa.	30.20	+ 8	28	-14	44	26		0
Keokuk, Iowa.	30.20	+ 6	28	-12	48	28		0
Peoria, Ill.	30.26		32	- 6		30		0
Springfield, Ill.	30.26	+ 6	30	- 6	50	30		.02
St. Louis, Mo.	30.28	+ 8	36	- 4	56	34		.06
Cairo, Ill.	30.28	+12	38	+ 2	58	38		0
Springfield, Mo.	30.34	- 2	26	-12	52	26		.01
St. Joseph, Mo.	30.28	- 8	32	-12	50	30		0
Kansas City, Mo.	30.28	- 6	34	-10	50	34		.04
Wichita, Kans.	30.24	-16	32	-12	48	32	16	.02
Concordia, Kans.	30.18	-22	32	-10	52	30	12	0
Omaha, Nebr.	30.14	-22	32	- 6	44	30		0
Lincoln, Nebr.	30.12		38	- 2		30		0
Valentine, Nebr.	29.98		42	+14	44	30		0
Sioux City, Iowa.	30.06	-30	32	- 4	42	30	16	0
Huron, S. Dak.	29.88	-44	36	+ 6	44	30	14	0
Pierre, S. Dak.	29.86	-44	36	+ 4	48	30		0
Moorhead, Minn.	29.96	-30	28	0	34	18	12	.01
Bismarck, N. Dak.	29.80	-48	36	+10	38	30		0
Devils Lake, N. Dak.	29.78	-44	28	+ 4	38	20	14	0
Williston, N. Dak.	29.78	-32	34	+ 4	40	34	14	0
Havre, Mont.	29.96	+ 8	42	+12	52	42		0
Billings, Mont.	29.98		28	+ 2	54			0
Helena, Mont.	29.98	-20	48	+24	42	38		0
Yellowstone P'k, Wyo	30.12	-28	40	+22	48	40	10	0
Miles City, Mont.					44			
Missoula, Mont.			50	+22				.59
Kalispell, Mont.	29.98	-16	40	+16	48	38		0
Lewiston, Idaho.	30.10		38	+ 6		36		0
Baker, Oreg.	30.28		32	+ 2		32		0
Pocatello, Idaho.	30.18	-18	44	+16	58	44	18	0
Boise, Idaho.	30.28	-10	36	0	64	36		0
Rapid City, S. Dak.	29.94	-36	44	+12	66	34		0
Sheridan, Wyo.	29.94	-20	50	+22	46	32		0
Lander, Wyo.	30.08	-18	38	+14	54	34		0
Salt Lake City, Utah.	30.28	-10	42	0	58	40		0
Modena, Utah.	30.28	- 2	26	- 4	66	24		0
Grand Junction, Colo.	30.28	+ 2	32	- 4	64	32		0
Durango, Colo.	30.30	+ 6	26	+ 4	68	24		0
Cheyenne, Wyo.	29.94	-44	48	+24	40	28	38	0
North Platte, Nebr.	30.02	-38	32	- 2	60	30		0
Denver, Colo.	29.98	-44	54	+24	42	34	12	.01
Pueblo, Colo.	30.03	-36	44	+ 8	46	28		0
Dodge City, Kans.	30.24	-18	32	-10	60	30	10	0
Oklahoma, Okla.	30.36	-10	32	- 8	64	30		0
Altus, Okla.	30.36		32	- 4	64	32		0
Muskogee, Okla.	30.38		26	-14	66	26		.02
Amarillo, Tex.	30.34	-10	32	-10	52	30	12	0
Dallas, Tex.	30.40	+22	36	- 4		36		0
Fort Worth, Tex.	30.40	+22	36	- 2		36		0
Abilene, Tex.	30.42	+ 8	34	-12	76	34		0
El Paso, Tex.	30.26	+12	44	+ 6	78	44	14	0
Del Rio, Tex.	30.38		40	+ 2		40		0
Roswell, N. Mex.	30.34	+ 4	34	- 8	68	34		0
Santa Fe, N. Mex.	30.26	+10	34	-12	60	32		0
Flagstaff, Ariz.	30.24	+ 2	22	+ 2	62	20		0
Phoenix, Ariz.	30.08	+ 6	46	+ 2	88	46		0
Yuma, Ariz.	30.00	0	56	+ 4	90	56		0
Needles, Cal.	30.06	+ 4	60	+ 6	98	48		0
Tatoosh Island, Wash.					54			
Spokane, Wash.	30.06	-14	50	+22	54	48		0
Walla Walla, Wash.					58			
Seattle, Wash.	30.24	+ 4	54	+14	60	52		0
Portland, Oreg.	30.24	0	50	+ 4	68	46		0
North Head, Wash.					56			
Roseburg, Oreg.	30.26	+ 6	38	+ 2	66	38		0
Reno, Nev.	30.24	0	38	+ 4	68	36		0
Tonopah, Nev.	30.20	- 4	52	+ 8	66	52		0
Winnemucca, Nev.	30.32	0	24	- 8	68	24		0
Eureka, Cal.	30.12	- 2	48	0	58	46		0
Red Bluff, Cal.	30.12	+ 8	54	- 4	80	54		0
Sacramento, Cal.	30.10	+ 2	52	0	84	52		0
San Francisco, Cal.	30.06	+ 4	60	+ 4	82	58		0
Fresno, Cal.	30.06	+ 4	54	0	86	54		0
San Luis Obispo, Cal.	30.04	+ 2	48	- 6	82	48		0
Los Angeles, Cal.	30.02	+ 2	70	+ 2	90	68		0
San Diego, Cal.	29.96	0	60	+ 4	80	56		0

Reports from Atlantic and Alaskan Stations.

Stations	Pressure	Temp., dry bulb.	Wind. Direction.	Wind. Force.*	Weather.
LOW					
October 21, 1917.					
Hamilton, Bermuda	30.08	78	se.	2	p. cloudy.
Turks Island, W. I.	29.94		se.	2	clear.
Havana, Cuba, W. I.	29.98	76	se.	2	p. cloudy.
Nassau, N. P., W. I.	29.98	78	sw.		clear.
October 20 (local time).					
Honolulu, H. I., 9 p. m., 8 p. m., 135th mer. time.	29.94	76	e.	1	cloudy.
Nome, Alaska	29.98	28	ne.	1	cloudy.
Eagle, Alaska	30.10	10	w.	2	cloudy.
Valdez, Alaska	30.12	4			
Sitka, Alaska	29.94	34	0		clear.
Dutch Harbor, Alaska	29.98	44	w.		p. cloudy.
Juneau, Alaska					
	29.96	36	e.	1	p. cloudy.

*Beaufort scale.

RIVER STAGES 8 a. m., OCTOBER 21, 1917.

Flood stages.	Stations.	Height above zero.	Change.	Remarks.
		Feet.	Feet.	
22	Pittsburgh	6.8	+ 0.3	Rising.
36	Parkersburg	12.7	+ 1.7	Rising.
50	Cincinnati	12.2	+ 0.7	Rising.
28	Louisville	8.9	0.0	Rising.
35	Evansville	8.2	+ 0.2	Rising.
45	Cairo	6.9	0.0	Falling.
16	Terre Haute	5.0	- 1.3	Falling.
16	Peoria			
40	Nashville	8.6	+ 1.3	Rising.
33	Chattanooga	8.0	- 0.2	Falling.
14	Pierre			
17	Sioux City			
19	Omaha	7.7	0.0	Falling.
22	Kansas City	6.6	0.0	Falling.
14	St. Paul	2.0	0.0	Rising.
12	La Crosse	2.2	- 0.1	Falling.
18	Dubuque	3.1	+ 0.1	Rising.
15	Davenport	2.2	- 0.2	Falling.
14	Keokuk			
30	St. Louis	1.8	+ 0.1	Rising.
35	Memphis	3.5	- 0.2	Falling.
45	Vicksburg	3.8	- 0.2	Falling.
18	New Orleans	4.5	+ 0.1	Falling.
22	Fort Smith	3.2	0.0	Falling.
23	Little Rock	1.3	- 0.1	Falling.
29	Shreveport	4.8	- 0.1	Falling.
32	Augusta	9.4	+ 2.0	Rising.