

WEATHER, FORECASTS, AND WARNINGS.

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NORTHERN HEMISPHERE PRESSURE.

Alaska.—Over this area pressure averaged decidedly below normal for the month, particularly over the Aleutian Islands. Lows occurred about the 2d, 7th–8th, 10th, 14th, 22d, 27th–28th, and on the last of the month; highs occurred about the 5th–6th, 9th, 11th–12th, 17th, 20th, 24th, 26th, and 29th.

Honolulu.—The average pressure was slightly above normal. Pressure was generally low during the first and last weeks of the month and high during the second and third. The principal highs of the month occurred from the 9th to the 12th and on the 24th; and the principal lows on the 5th–6th and 27th.

Iceland.—Pressure averaged slightly below normal, being almost continuously so from the 1st to the 18th and generally above normal during the remainder of the month. Lows occurred on the 2d–3d, 9th, 11th–12th, 13th, 15th, 17th, and 25th–26th; and highs occurred on the 5th, 10th, 14th, 19th, 21st, 23d–24th, and 28th–29th.

Azores.—During the month pressure was almost continuously above normal, the mean for the month being well above the seasonal average. Lows occurred on the 8th, 26th–27th, and 30th; and highs from the 4th to 7th, 9th to 13th, 22d to 24th, and on the 28th.

Siberia.—Over the western portion pressure below normal predominated, there being only occasional reactions to high pressure, the principal one occurring about the 19th–20th. Over the eastern portion, however, pressure averaged above normal, the principal highs occurring from the 1st to 4th, from the 11th to 17th, and about the 22d, 25th, and 29th.

WEATHER IN THE UNITED STATES.

The month opened with moderate high-pressure areas on the north Atlantic and north Pacific coasts, with a low-pressure area southeast of the Bermudas, and another over southwestern Colorado. Pressure became high over northern districts following the movement of the Colorado low southeastward to Texas where it later lost intensity.

Pressure remained high over the northern districts from the north Pacific coast to the middle Atlantic coast. By the morning of the 4th the remainder of the Colorado low took on renewed energy and moved eastward and southeastward to Texas by the morning of the 6th, and during the next 24 hours broke through the saddle of high pressure over the northern districts, being central on the morning of the 6th over northeastern Oklahoma and on the following morning over northern Lake Huron with greatly increased development. By the morning of the 8th it was over Maine with lowest pressure reading at Greenville (28.88), whence it passed during the next 36 hours to the Grand Banks.

A sharp recovery to high pressure followed, the high center moving eastward and southeastward to the Gulf States, causing moderate changes to colder weather over all districts, frosts being quite general over the west Gulf States on the 8th and 9th, and over the east Gulf and

southern portions of the South Atlantic States on the 9th and 10th, warnings for which were previously issued.

A low passed along the northern border from Medicine Hat on the morning of the 7th to the Grand Banks on the morning of the 12th.

Pressure continued high from the Rocky Mountains to the South Atlantic States, and another low of slight intensity passed along the northern border and was central over the mouth of the St. Lawrence on the morning of the 14th. It passed eastward to the Grand Banks by the morning of the 16th.

On the evening of the 12th conditions became unsettled over the West Gulf States, and showers occurred over that region. This condition passed slowly eastward across the Gulf States and gave showers over portions of that region until the 16th.

Pressure still remained high from the northern Rocky Mountain region to the South Atlantic States, and a low that made its appearance on the morning of the 14th over British Columbia passed along the northern border without precipitation of consequence to a position over the Grand Banks by the 20th.

Conditions over the Southwest became unsettled during the 15th, and in the two days following showers occurred over the southern Rocky Mountain region, the southern Plains, and West Gulf States. On the evening of the 16th a disturbance of slight intensity was central over southern Texas, which during the next 36 hours moved eastward with decreased energy, having caused showers over the Gulf States.

A high-pressure area that had persisted for some days over the northern Rocky Mountain region was central on the morning of the 18th over Iowa and in the next 48 hours passed eastward to a position off the Atlantic coast.

On the evening of the 17th pressure had fallen from Alberta southward to the southern Plateau and on the following morning lows were central over Saskatchewan and southern Utah. A trough connecting these two lows advanced slowly eastward to the Atlantic coast by the evening of the 21st, having caused precipitation over the southern Rocky Mountain region and southern Plains States and from the Mississippi Valley eastward.

Following the passage of this low, pressure became high over the Northwest on the morning of the 19th and spread later southward and eastward, causing changes to colder weather over the Rocky Mountain region and thence eastward over the central and northern districts to the Atlantic coast.

After the passage of the previous low areas, pressure remained below normal over Arizona, and on the morning of the 21st a low-pressure area was central over southwestern New Mexico, which during the following 24 hours passed to the Louisiana coast. It thence turned northeastward, and on the morning of the 23d there were two centers, one over Alabama and the other over Indiana. During the 48 hours following, the Indiana storm decreased in intensity, while the Alabama center developed increased energy, causing high winds on the Atlantic

coast from New York to Eastport, warnings of which were issued on the 23d. By the morning of the 25th the Alabama disturbance passed northeastward to the ocean.

Following the passage of this storm there was no immediate reaction to higher pressure, although it was high over the northwest.

On the morning of the 22d pressure was high off the Washington coast, and during the succeeding 24 hours it fell decidedly over the Rocky Mountain region, and by evening of that date a low was central over northwestern Texas. By the morning of the 24th the disturbance was central near the south Texas coast with a second illy-defined center over southwestern Oklahoma. The southern center passed eastward and northeastward with increased intensity, causing high winds on the Gulf coast. Storm warnings were ordered on the 24th for the Gulf and middle and south Atlantic coasts, and on the 25th were extended to include the north Atlantic coast. From a position over extreme northwestern Georgia on the 25th the disturbance passed in 24 hours to northern New Jersey and during the succeeding 24 hours to Newfoundland, causing high winds and gales along the entire Atlantic seaboard. Attending the passage of this storm precipitation occurred from the Rocky Mountains westward to the Pacific coast, over the west Gulf States and from the Mississippi Valley eastward. Pressure increased and temperature fell decidedly to below zero over the Canadian Northwest and, closely following the eastward movement of the low, temperatures fell generally over all districts east of the Rocky Mountains. The crest of the high area reached the North Atlantic States on the morning of the 29th.

Pressure was low off the north Pacific coast during the 24th and 25th, and during the succeeding 48 hours an illy-defined disturbance passed thence to the west Gulf coast. Attending its passage eastward off the south Atlantic coast showers occurred generally through the Gulf and South Atlantic States.

Following the passage of the above-mentioned storm southeastward from the north Pacific coast, pressure became high over the northern Plateau, the center persisting over that region for several days, after which it settled slowly southward with decreased intensity and at the last of the month was over northwestern New Mexico.

On the evening of the 27th a low of moderate intensity was over Alberta, and during the several days following passed eastward along the northern border, no precipitation of consequence attending its passage. On the evening of the 29th pressure had fallen over the North Pacific States, and on the following evening a disturbance was central off the Washington coast which on the last day of the month had passed to southern Alberta, having caused precipitation over the Coast States and northern

and central Plateau region. On the last day of the month pressure was high from extreme eastern Ontario southwestward to the West Gulf States and thence westward to the south Pacific coast, the principal low-pressure area being central over southern Alberta and an unsettled condition obtained over the South Atlantic States.

Average temperatures and departures from the normal.

Districts.	Number of stations.	Average temperatures for the current month.	Departures for the current month.	Average departures since Jan. 1.	
				Accumulated departures since Jan. 1.	Average departures since Jan. 1.
New England.....	12	33.9	+4.6	+27.3	+2.3
Middle Atlantic.....	15	38.6	+3.7	+25.2	+2.1
South Atlantic.....	10	49.0	+1.9	+17.3	+1.4
Florida Peninsula ¹	9	62.5	+2.0	+ 9.8	+0.8
East Gulf.....	11	50.2	+1.1	+ 8.0	+0.7
West Gulf.....	11	48.7	-0.4	- 0.4	0.0
Ohio Valley and Tennessee.....	14	39.1	+2.3	+19.0	+1.6
Lower Lakes.....	11	33.5	+1.3	+17.9	+1.5
Upper Lakes.....	13	31.9	+7.5	+17.5	+1.5
North Dakota ¹	9	22.4	+8.9	+13.6	+1.1
Upper Mississippi Valley.....	13	35.3	+8.0	+23.6	+2.0
Missouri Valley.....	12	33.4	+6.5	+15.2	+1.3
Northern slope.....	9	23.8	+0.1	- 5.2	-0.4
Middle slope.....	6	31.4	+1.5	+ 7.7	+0.6
Southern slope ¹	8	40.2	-1.7	- 4.9	-0.4
Southern Plateau ¹	9	40.5	-1.9	-21.2	-1.8
Middle Plateau ¹	9	24.7	-2.5	- 9.3	-0.8
Northern Plateau ¹	10	28.5	-1.7	-13.1	-1.1
North Pacific.....	7	42.1	+0.5	- 0.7	-0.1
Middle Pacific.....	7	47.4	-1.1	+ 2.4	+0.2
South Pacific.....	4	52.0	-1.0	+13.4	+1.1

¹ Regular Weather Bureau and selected cooperative stations.

Average precipitation and departures from the normal.

Districts.	Number of stations.	Average.		Departure.	
		Current month.	Percentage of normal.	Current month.	Accumulated since Jan. 1.
New England.....	11	3.15	91	-0.30	-4.90
Middle Atlantic.....	15	2.26	72	-0.90	-3.30
South Atlantic.....	11	3.12	86	-0.50	-6.80
Florida Peninsula ¹	9	3.31	127	+0.70	-7.60
East Gulf.....	11	2.76	61	-1.80	-2.30
West Gulf.....	10	5.74	167	+2.30	+4.90
Ohio Valley and Tennessee.....	14	2.08	62	-1.30	+1.00
Lower Lakes.....	10	1.57	55	-1.30	+0.70
Upper Lakes.....	14	0.46	22	-1.60	-2.90
North Dakota ¹	9	0.07	12	-0.50	-4.10
Upper Mississippi Valley.....	14	0.66	38	-1.10	-3.60
Missouri Valley.....	12	1.98	183	+0.90	-3.60
Northern slope.....	9	0.81	100	0.00	+0.40
Middle slope.....	6	3.28	420	+2.50	+0.50
Southern slope ¹	8	2.71	244	+1.60	+0.50
Southern Plateau ¹	9	0.55	73	-0.20	-1.20
Middle Plateau ¹	10	1.12	110	+0.10	-0.30
Northern Plateau ¹	10	1.05	60	-0.70	-0.90
North Pacific.....	7	3.05	48	-4.30	-8.30
Middle Pacific.....	6	6.08	139	+1.70	-5.60
South Pacific.....	4	2.41	100	0.00	-1.40

¹ Regular Weather Bureau and selected cooperative stations.

Average relative humidity and departure from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England.....	74	- 2	Missouri Valley.....	82	+ 7
Middle Atlantic.....	74	- 1	Northern slope.....	76	+ 8
South Atlantic.....	78	0	Middle slope.....	81	+15
Florida Peninsula.....	82	0	Southern slope.....	76	+10
East Gulf.....	80	+ 3	Southern Plateau.....	65	+19
West Gulf.....	80	+ 6	Middle Plateau.....	77	+ 7
Ohio Valley and Tennessee.....	82	+ 6	Northern Plateau.....	83	+ 3
Lower Lakes.....	80	+ 2	North Pacific.....	88	+ 2
Upper Lakes.....	81	- 1	Middle Pacific.....	84	+ 3
North Dakota.....	78	- 1	South Pacific.....	74	+ 6
Upper Mississippi Valley.....	83	+ 5			

Average cloudiness and departure from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England.....	6.2	+0.7	Missouri Valley.....	5.5	+0.3
Middle Atlantic.....	5.8	+0.6	Northern slope.....	4.4	-0.8
South Atlantic.....	5.6	+0.7	Middle slope.....	5.6	+1.1
Florida Peninsula.....	5.6	+0.9	Southern slope.....	5.1	+0.1
East Gulf.....	6.8	+1.3	Southern Plateau.....	3.8	+0.6
West Gulf.....	6.6	+1.4	Middle Plateau.....	5.2	+0.4
Ohio Valley and Tennessee.....	6.7	+0.4	Northern Plateau.....	6.8	0.0
Lower Lakes.....	7.4	-0.3	North Pacific.....	7.7	-0.1
Upper Lakes.....	6.4	-0.9	Middle Pacific.....	6.3	+0.9
North Dakota.....	3.8	-1.6	South Pacific.....	5.5	+1.2
Upper Mississippi Valley.....	6.1	+0.3			

Maximum wind velocities.

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
Block Island, R. I.	8	62	w.	Nantucket, Mass....	8	55	sw.
Do.....	9	58	nw.	New York, N. Y....	7	64	nw.
Do.....	19	50	nw.	Do.....	8	85	nw.
Do.....	25	54	ne.	Do.....	18	62	nw.
Do.....	26	60	ne.	Do.....	23	60	e.
Buffalo, N. Y.....	8	54	w.	Norfolk, Va.....	8	58	nw.
Do.....	9	52	sw.	North Head, Wash.	6	56	se.
Do.....	10	54	sw.	Do.....	13	60	se.
Do.....	12	58	sw.	Do.....	27	68	se.
Do.....	16	54	sw.	Do.....	30	52	se.
Do.....	17	50	sw.	Point Reyes Light, Cal.....	12	57	s.
Cheyenne, Wyo.....	31	56	w.	Do.....	17	50	nw.
Cleveland, Ohio.....	8	60	nw.	Do.....	21	54	s.
Duluth, Minn.....	6	52	nw.	Do.....	22	62	sw.
Hatteras, N. C.....	8	50	nw.	Do.....	24	70	s.
Do.....	25	51	w.	Do.....	25	50	nw.
Mount Tamalpais, Cal.....	1	54	n.	Do.....	29	56	s.
Do.....	2	52	ne.	Do.....	30	64	s.
Do.....	22	53	sw.	Do.....	31	69	s.
Do.....	25	70	nw.	Providence, R. I....	8	64	w.
Do.....	30	62	sw.	Savannah, Ga.....	25	54	sw.
Do.....	31	60	sw.	Do.....	26	50	w.
Mount Weather, Va.	5	52	nw.	Tatoosh Island, Wash.....	6	56	s.
Do.....	7	60	nw.	Do.....	21	62	e.
Do.....	8	84	nw.	Do.....	24	56	e.
Do.....	9	58	nw.	Do.....	28	52	e.
Do.....	18	54	nw.	Trenton, N. J.....	8	54	w.
Do.....	26	72	nw.	Do.....	26	50	ne.
Do.....	27	56	nw.				