Minimum temperatures were below freezing toward the end of the month over the more northern States, and in portions of the western mountains they were below 20° F., notably 9° and 3° F. in Wyoming and Montana, respectively.

For the month as a whole the average temperature was above normal practically throughout the country, and, while the departures from the normal were not generally large (see Chart IV), some sections had the warmest September in many years, notably 30 years in central Wyoming. In portions of the middle Plateau region September was the sixth consecutive month with mean temperature above the normal. In northern Michigan, however, it was the first month this year with a mean temperature below normal.

PRECIPITATION.

The month opened with showery weather along the Atlantic seaboard, and with local rains in the central Rocky Mountain and Plateau areas. During the following few days showers occurred in the extreme northeast and southeast sections, and also in the central Rocky Mountains and portions of the Missouri and upper Mississippi Valleys. However, the greater part of the first decade of the month was dry, except along the North Pacific coast, the extreme northern border and over the Florida Peninsula and locally along the Gulf coast.

The West Indian hurricane caused rain all along the immediate Gulf coast, then about the middle of the month it passed inland near the mouth of the Rio Grande. Figure 1, page 640, shows the rainfall of this storm in Texas and New Mexico, locally exceeding 9 inches. At the same time, showers were fairly general over the Great Lakes and the North Atlantic States.

During the latter part of the decade showers occurred in the Southwest and about the 18th a storm of considerable intensity moved from Kansas to the Great Lakes, accompanied by more or less general, and in some districts, heavy rains. A second rain area covered most of the country east of the Great Plains during the early part of the last decade, bringing heavy and well distributed precipitation to many sections where drought conditions had prevented preparation of the soil for fall seeding. The last few days of the month there was more or less precipitation in the West, and eastward to the Great Lakes. In parts of southern California the rains were remarkably heavy for the time of year; and effectually checked the forest fires, locally serious.

The precipitation for the month is shown on Chart V. In portions of the east Gulf States, where rain is usually abundant in September, the totals were mostly small and over large areas no appreciable precipitation occurred during the entire month. In portions of Virginia, the Carolinas, and Alabama it was the driest September in nearly 50 years; on the other hand in portions of Arizona and the Southwest the month was the wettest of record, and in Texas it was the fifth consecutive month with precipitation above the normal. Generally speaking, the precipitation was far below normal over all the Gulf States east of the Mississippi River and along the Atlantic coast from Virginia southward. There was generally a large excess from Texas to southern California, as well as from southern Nebraska to Lake Michigan, and over small areas in New England.

SNOWFALL.

Some snow was reported in the Rocky Mountain region as early as the 21st and considerable amounts fell in the higher elevations, particularly in the more northern districts during the last few days of the month. In Montana depths of 5 to 10 inches were reported from numerous points and falls of 2 feet or more were reported locally. In the high Sierra of California as much as 10 inches fell in a few localities.

RELATIVE HUMIDITY.

In New England and generally west of the Mississippi Valley, except in the far Northwest, the relative humidity was above normal, with unusually large departures from Texas westward and over portions of the middle Rocky Mountain and Plateau districts. From the middle Mississippi Valley eastward to near the Atlantic coast the atmosphere was relatively far drier than normal, a condition naturally resulting from the generally high temperatures and the absence of any considerable rainfall.

SEVERE STORMS.

The West Indian hurricane and two associated tornadoes are described on pages 639,640, and 664–673.

Average accumulated departures for September, 1919.

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.
	°F.	°F.	°F.	In.	In.	In.	0–10		P. ct.	
New England	60.6	−0.1	+14.3	4.42	+1.20	+2.21	6.2	+1.0	82	+1
Middle Atlantic	67.5	+1.6	+19.4	1.85	−1.50	−2.40	4.6	−0.1	75	+3
South Atlantic	73.7	+0.8	+ 9.0	1.59	−3.00	−4.30	3.5	−1.1	74	−7
Florida Peninsula	81.2	0.0	− 2.9	8.26	+0.30	+6.40	5.7	+0.2	78	−3
East Gulf	76.5	+1.7	+ 1.3	0.88	−3.00	+1.96	4.1	−0.4	72	−6
West Gulf	76.7	+1.0	− 7.5	4.01	+0.60	+3.10	4.9	+0.8	77	+3
Ohio Valley and Tennessee	70.5	+2.7	+12.1	1.70	−1.10	−2.20	4.1	−0.3	68	−6
Lower Lakes	64.7	+1.6	+18.7	2.23	−0.60	−0.90	5.4	+0.5	70	−4
Upper Lakes	61.6	+2.7	+29.7	3.06	−0.20	−3.20	5.9	+0.7	75	−3
North Dakota	59.1	+2.0	+29.2	0.90	−0.50	−2.35	5.1	+0.7	67	−2
Upper Mississippi Valley	68.4	+3.5	+21.4	4.16	+0.80	0.00	4.6	+0.2	71	−4
Missouri Valley	69.1	+4.2	+23.1	2.68	−0.10	−3.10	4.3	+0.1	67	−1
Northern slope	59.2	+1.8	+25.9	1.37	+0.30	−3.50	4.4	+0.3	62	+3
Middle slope	70.8	+3.3	+11.0	1.40	−0.60	−4.50	4.4	+1.0	64	+3
Southern slope	73.4	+0.6	−10.9	5.59	+3.00	+0.40	5.0	+1.4	70	+5
Southern Plateau	71.0	+0.5	+ 5.6	1.56	+0.60	+1.19	2.9	+0.4	51	+9
Middle Plateau	63.1	+0.7	+12.0	1.24	+0.60	−2.30	3.0	0.0	44	+2
Northern Plateau	60.8	−0.3	+14.7	0.94	+0.20	−2.70	3.5	+0.2	51	+1
North Pacific	59.0	+1.4	+10.2	2.34	−0.10	−4.80	4.6	−0.8	76	−3
Middle Pacific	63.4	− .1	− 5.4	0.77	+0.20	−1.80	3.5	+0.3	64	+1
South Pacific	68.1	0.0	+ 5.1	0.56	+0.40	−3.40	2.8	+0.1	69	+3

Winds of 50 mis/hr. (22.4 m./sec.), or over, during September, 1919.

Station.	Date.	Velocity.	Direction.	Station.	Date.	Velocity.	Direction.
Buffalo, N. Y.	19	74	sw.	Modena, Utah	6	56	sw.
Do	20	62	sw.	Mt. Tamalpais, Calif	3	66	nw.
Do	24	56	sw.	Do	4	68	nw.
Do	25	56	sw.	Do	5	62	nw.
Corpus Christi, Tex.	14	72	ne.	Do	6	70	nw.
Do	15	70	se.	Do	27	54	sw.
Del Rio, Tex.	15	58	e.	North Head, Wash.	30	72	s.
Galveston, Tex.	14	53	e.	San Antonio, Tex.	15	52	se.
Houghton, Mich.	20	63	nw.	St. Paul, Minn.	26	51	s.
Key West, Fla.	9	100	e.	Toledo, Ohio	19	64	s.
Do	10	110	e.				