

TABLE 3.—Mean free-air temperatures, relative humidities and vapor pressures; and resultant winds during February, 1926, at Washington, D. C.

Altitude m. s. l.	Naval Air Station, D. C. (7 meters)			Weather Bureau (34 meters)	
	Temperature	Relative humidity	Vapor pressure	Wind	
				Direction	Velocity
<i>Meters</i>	<i>° C.</i>	<i>Per cent</i>	<i>Mb.</i>		<i>M. p. s.</i>
Surface	0.3	78	4.99	N. 50° W.	1.7
250	0.1	74	4.68	N. 67° W.	4.4
500	-0.1	70	4.30	N. 65° W.	6.9
750	-1.1	69	3.94	N. 62° W.	8.8
1,000	-2.2	69	3.63	N. 67° W.	9.3
1,250	-3.4	70	3.38		
1,500	-4.0	68	3.14	N. 56° W.	13.2
2,000	-4.7	63	2.67	N. 61° W.	16.3
2,500	-6.4	58	2.17	N. 57° W.	18.2
3,000	-8.9	54	1.65	N. 55° W.	19.2
3,500	-12.2	54	1.31	N. 47° W.	17.0
4,000	-15.9	53	0.92	N. 68° W.	17.0
4,500	-19.3	54	0.53	N. 45° W.	16.0

THE WEATHER ELEMENTS

By P. C. DAY, In Charge of Division

PRESSURE AND WINDS

The distribution of the atmospheric pressure resembled that of the preceding month, moderately high pressure over the Plateau region, diminishing eastward, with distinctly low pressure, on the average, over the North Atlantic coast and the Canadian Maritime Provinces.

Only a few of the cyclones developed into important storms over the interior districts, but a number increased markedly in proportion as they approached the Atlantic coast, several becoming storms of great severity over the southern New England coast, attended by unusually low barometric pressure and winds of gale force.

One of the most important of these had its origin near the coast of northern California, where it appeared on the morning of January 31, whence it progressed southeasterly to the Texas coast by the morning of the 3d. From that point it moved rapidly northeastward to southern New England by the morning of the 4th with greatly increasing intensity and rapidly falling pressure, and during the following 24 hours continued its northeastward course toward the Grand Banks with pressure only slightly above 28.5 inches.

A second storm, of much shorter path but developing great severity, moved from the Carolina coast to southern New England on the 9th and 10th and thence northeastward with barometric pressure only slightly above 29.0 inches.

A third storm, pursuing a course similar to that at the first of the month, advanced southeastward from the Oregon coast and was central over southwestern Missouri on the morning of the 18th, whence it moved northeastward to southern New England during the following 24 hours as a storm of wide extent and general precipitation over the eastern third of the country. This storm continued its northeasterly course with increasing intensity, the pressure falling below 29 inches on the morning of the 20th.

The only important storm over the Great Lakes had its origin in the Southwest and was central over northern Texas on the morning of the 24th, whence it moved to southern Lake Michigan by the following morning, increasing greatly in intensity, the barometer falling below 29 inches at the center. This storm moved to the Canadian Maritime Provinces during the following 24 hours,

and was attended by moderate to heavy precipitation from the Great Plains eastward, with snow over northern districts and high winds over portions of the Great Lakes and near-by areas.

Important anticyclones were notably absent during the month, but several of moderate strength finally reached the southern States attended by sharp changes in temperature.

The average pressure for the month was mainly lower than normal, except over the Southwest. From the upper Missouri Valley and the Canadian Northwest Provinces eastward and southeastward to the Atlantic coast the average pressure was from 0.10 to 0.25 inch below normal, a few stations in New England reporting the lowest average pressure of record for February.

Over all parts of the country, save for a small area near Lake Superior, the averages of pressure were lower than those for January, the deficiencies being comparatively large over the far Northwest and along the middle Atlantic coast.

On account of the persistence of low pressure over eastern districts the prevailing winds had a distinct westerly or northwesterly trend from the Missouri Valley eastward and southeastward to the Atlantic coast, becoming more northerly in portions of the Great Lakes region and New England.

Over the southern plains the winds were mainly from southerly points, and similar directions prevailed in the far Northwest.

High winds prevailed over the Pacific coast districts for several days near the beginning of the month and they were high along the Atlantic coast on the 3d and 4th, 10th and 11th, and 19th and 20th. From the 24th to 26th high winds prevailed over much of the Ohio and lower Mississippi Valleys and the southern portions of the lower Lake region and thence to New England. A table at the end of this section gives details of the more important local storms.

TEMPERATURE

The marked feature of the weather was the unusual warmth that prevailed over the greater part of the country, and particularly its uniformity over the central and western districts, a condition that likewise prevailed over large portions of the same territory during the two preceding months. At a number of points in the area from the upper Mississippi Valley westward to the Pacific the daily temperatures were normal or above on every day of the month, and over the greater part of this area there were not more than one or two days with temperature below normal. Not only were the temperatures far above normal, but at some of the most northerly points, the temperature did not fall below zero. At Havre Mont., usually one of the coldest stations in the country, the lowest temperature was 6° above zero, a record not observed in any previous February.

At many points in the Missouri Valley and thence west to the Pacific the average temperature was the highest of record for February, and in a number of instances the combined average of the three winter months shows the winter of 1925-26 as the warmest of record.

In the Canadian districts adjacent to Montana and North Dakota the monthly means were likewise as high as those previously referred to, but high temperatures probably did not extend northward as far as in January. At Eagle, Alaska, where the January average was nearly 30° above normal that for February was apparently less than 1° above, due mainly to marked cold during the

latter part of the month, which had not become effective over districts to the southward at the close.

Over a small area from the lower Lakes eastward and northeastward to the Atlantic coast, and the more eastern Canadian Maritime Provinces the average temperature was mainly lower than normal, and the Florida peninsula was likewise colder than normal, though no marked cold occurred at any time.

The dates of the highest and lowest temperatures for the several sections were not uniform over extensive areas, though in the Gulf States the highest temperatures were mainly about the 14th to 16th; in the Ohio Valley and Middle Atlantic States about the 21st to 25th; and from the 26th to 28th in the Northwest and far West.

The lowest temperatures occurred mainly during the first two decades, about the 1st and 2d in the northern plains; 6th to 9th along the North Atlantic coast; 11th to 12th in the Ohio Valley and Gulf States, and generally from the 14th to 20th in the Rocky Mountain and Plateau States.

PRECIPITATION

For the country as a whole precipitation was deficient, though the areas of material lack in the usual fall were not large, and confined mainly to Texas and the adjacent portions of the lower Mississippi Valley, and locally in the Ohio Valley, Florida, and the far Southwest. A small area in the southern portions of Alabama and Georgia had precipitation above normal, and in the Appalachian region from the Virginias to New England there was usually a moderate excess; also in the Lake region, lower Missouri Valley, and the Pacific Coast States. In California, where both rain and snow had been greatly deficient during the preceding months of the winter, the February precipitation was mainly above normal, materially so in some central and northern districts; in portions of the southeastern part of the State, however, there was a deficiency. Over the more important areas of the State the precipitation was generous, greatly relieving the existing water shortage and improving the outlook for the coming summer.

SNOWFALL

The general deficiency in precipitation over the Northwest and in the western mountain districts was due mainly to a lack of the usual snowfall, and even in the Pacific Coast States where there was some excess of

precipitation it was mainly due to rains in areas where snow usually falls at this period of the winter.

From the Great Lakes eastward there was a very general excess in the total falls, and in portions of New England the totals were among the heaviest of record for February.

The heaviest falls over eastern districts occurred generally on the 3d to 5th and 9th to 10th when, from the Potomac drainage area to New England, the amounts ranged up to 20 inches. High winds during and after these storms caused much drifting and interference with traffic over the more northern districts.

Some heavy snows occurred in the Rocky Mountain region and locally to the eastward on the 16th to 18th, amounts up to 18 inches being reported locally in northeastern and central Kansas; and heavy snow in portions of Utah was attended by many snow slides; one at Bingham caused the death of 36 persons, injured many others, damaged or destroyed a number of buildings, and interfered with traffic.

In the western mountains snowfall was mainly less than normal, except in California, where in the Sierra Nevada it was mainly above normal, though, due to deficient falls in the earlier months of the winter, the accumulated depths on ground at the end of the month were mainly less than normal, and on account of unseasonably high temperatures, it was melting rapidly at the lower elevations.

In other portions of the western mountains the total depth of snow on ground at the end of the month was mainly deficient, except locally on the eastern slopes of the Rockies.

On account of the deficient snowfall and the very general excess of temperature during the winter, causing early melting at the lower levels, the outlook for a plentiful supply of water for irrigation and power purposes is generally unfavorable in the areas where water is most needed.

RELATIVE HUMIDITY

Like precipitation, the relative humidity was mainly higher than normal in the Lake region and thence eastward, also in portions of the Missouri and upper Mississippi Valleys, and locally in California and Oregon. Elsewhere the relative humidity was deficient as a rule, and to a marked extent from Texas and the lower Mississippi Valley westward and northwestward to the Plateau region.