

STORMS AND WEATHER WARNINGS

WASHINGTON FORECAST DISTRICT

A disturbance that was central off the North Carolina coast on the morning of the 1st, remained nearly stationary for 24 hours and then advanced north-northwest to a position immediately off the New Jersey coast on the evening of the 2nd. It thence moved slowly north-northeast to Nova Scotia by the morning of the 4th. Advices were disseminated on the 1st for strong northeast winds off the Middle Atlantic coast and on the morning of the 2nd northeast storm warnings were ordered for the Atlantic coast from Delaware Breakwater to Boston and at 3 p. m. of that date southeast warnings were extended to Eastport, Me. Strong winds and gales attended this disturbance.

On the evening of the 7th southwest storm warnings were ordered from Delaware Breakwater to Nantucket in connection with a disturbance of moderate intensity that was over Hudson Bay, but winds were only fresh to strong.

Northeast warnings were ordered from Delaware Breakwater to Boston on the afternoon of the 10th; but winds did not attain high velocities, and the warnings were ordered down the following morning.

In the morning radio bulletin of the 11th forecasts of strong winds were disseminated for the middle and north Atlantic coast. These were repeated on the 12th and the 13th, and strong winds and gales occurred as indicated.

Advisory warnings were issued on the afternoon of the 16th in connection with a disturbance over Georgia, but the disturbance did not increase in intensity as anticipated and dangerous winds did not result.

A disturbance that was off the South Atlantic coast on the evening of the 19th advanced rapidly north-northeast with greatly increased intensity to Massachusetts during the next 24 hours. On the evening of the 19th information was disseminated for increasing winds north of Sandy Hook and on the following morning northeast storm warnings were ordered from Delaware Breakwater to Eastport. Strong winds and gales occurred from Delaware Breakwater northward.

A disturbance of moderate intensity was over eastern Ontario on the evening of the 21st and advisory warnings were issued between Delaware Breakwater and Nantucket; further advices were disseminated on the morning of the 22nd and on the evening of that date northwest warnings were ordered displayed. Strong winds and gales occurred substantially as indicated.

Northwest storm warnings were ordered on the evening of the 26th on the Atlantic coast north of Delaware Breakwater and on the following afternoon they were changed to northeast. The strong winds and gales on the North Atlantic coast occurred substantially as indicated in the advices.

With a disturbance of increasing intensity over the North Carolina coast on the morning of the 29th, northeast storm warnings were ordered for the Atlantic coast from Delaware Breakwater to Nantucket and in the afternoon extended to Eastport. On the morning of the 30th the warnings were changed to northwest from Sandy Hook to Eastport. The winds and gales that followed were fully covered in the advices.

Frost warnings were issued for southern Alabama and southern Mississippi on the 12th, for portions of the South Atlantic and east Gulf States and Florida on the following morning and again on the 14th. The first two

were verified, but cloudiness prevented the occurrence on the 14th.

Frost warnings were again issued on the 20th, but were only partially verified on account of cloudiness.

On the 29th frost warnings were issued for Alabama, Mississippi, and northwest Florida and on the 30th for Georgia, Alabama, and portions of Florida. Frosts occurred substantially as indicated, except that frosts occurred in Georgia and extreme northern Florida on the 30th that were not predicted.

On the 26th cold-wave warnings were ordered for the lower Lake region, the Ohio valley and portions of the east Gulf and Atlantic States and marked changes to colder weather occurred as indicated.—*R. H. Weightman.*

CHICAGO FORECAST DISTRICT

In the Chicago forecast district, January, 1925, was not a severe month, when contrasted with past months of the same name. In fact, there was much pleasant weather for the time of year; and especially was this true in the Northwestern States, particularly in Montana and Wyoming. Cold waves occurred with more or less frequency in the last two decades, but, as a rule, they were neither widespread nor of long duration.

Cold-wave warnings.—These were issued for some portion of the district on 15 days, but except in two cases, the warnings were for more or less limited areas. The most important cold wave was that covering the 25th to 27th, inclusive, and it affected virtually the entire district. Temperatures of from 20° to 30° below zero were reached at this time in most of North Dakota and northern Minnesota, while in portions of lower Michigan values were within a few degrees of the lowest of record for January. The warnings disseminated in this connection were well verified, but earlier action should have been taken for some north-central areas. Again on the 30th and 31st quite general warnings were issued for the northern and eastern portions of the district, but these failed of verification in western Montana, Illinois, Indiana, northern Missouri, and a few contiguous areas. Evidently, too much weight was given to the indications of the barometer-change map and not enough to Map "A."

Storms on Lake Michigan.—No severe storms affected Lake Michigan, where navigation continues to some extent throughout the winter months. However, strong winds occurred on a few days, reaching moderate gale force over portions of the lake once or twice. Advisory warnings were issued on the 6th, 20th, 21st, 25th and 31st.

Livestock warnings.—The month was favorable for livestock interests, and but one warning was issued in this connection; namely, that on the 15th for Nebraska, western Kansas and southern Wyoming.

Special forecasts.—On the morning of the date preceding the recent solar eclipse a special forecast of probable sky conditions along and near the path of totality in this district was made, the forecast calling for mostly cloudy weather. The ensuing conditions were as expected.—*C. A. Donnel.*

NEW ORLEANS FORECAST DISTRICT

Cold-wave and livestock warnings were issued for the northwestern portion of the district on the morning of the 15th, and extended at night over the interior of east Texas and northern Louisiana. The warnings were extended on the morning of the 16th over the remainder of the district. The cold wave occurred as forecast over

Oklahoma and the interior of Texas, but a slower movement of the disturbance in front of the high-pressure area retarded the fall in temperature over Louisiana, Arkansas, and the southeastern portion of East Texas.

Cold-wave and livestock warnings were issued on the morning of the 25th for Oklahoma and the northwestern portion of Texas and were extended over the district on the night of the 25th and during the 26th. Snow warnings were issued for the northern portion of the district. A severe cold wave overspread the district during the 26th and 27th and snow fell over the northern portion.

No cold wave occurred without warning. Timely warnings were issued for freezing near the coast.

Storm warnings were displayed on the Texas coast on the 16th and 26th, and small-craft warnings on the Louisiana coast on the 27th, and winds occurred which justified the warnings. No general storm occurred on the coast without warning.—*I. M. Cline.*

DENVER FORECAST DISTRICT

A storm attended by general precipitation advanced from the North Pacific coast southeastward across the Rocky Mountain Plateau to the west Gulf sections during the period from the 13th to the 16th; and a more moderate low, accompanied by light though general snow or rain, moved eastward from northern California to Wyoming and thence southward and southeastward during the 24th–26th. Throughout about all of the remainder of the month high pressures prevailed over the middle and southern plateau sections, with a succession of disturbances passing to the northward and eastward of the district, and precipitation in appreciable amounts was infrequent, except in northwestern Utah. Temperatures were generally much below normal until the 18th, with especially cold weather on the western slope of Colorado, which continued until the 23d.

Cold-wave warnings, which as a rule were verified, were issued as follows: 15th, moderate cold wave in western Colorado, northern New Mexico, northern Arizona, and southern Utah; 21st, moderate cold wave in southeastern Arizona; 25th, moderate cold wave in southeastern Colorado and extreme eastern New Mexico; 26th, moderate cold wave in southeastern New Mexico and eastern and central Arizona; 28th, severe cold wave in eastern and central Colorado, and a moderate cold wave in extreme eastern New Mexico.

On the 14th, when snow, probably heavy, followed by much colder weather, was forecast, advices were issued to livestock interests in western Colorado, northwestern New Mexico, northeastern Arizona, and southeastern Utah. The warning was verified. On the 28th, when light snow, with a severe cold wave, was indicated, the same interests in eastern Colorado were advised. The warning was only partly verified.

Frost warnings which were generally justified were issued for southern Arizona on the 1st and 2d; for south-central and southeastern Arizona on the 3d; south-central Arizona on the 4th, and extreme southwestern Arizona on the 7th, 10th, 12th, 14th, 17th, 19th, 21st, and 26th.

Warnings of freezing temperature, which also were generally verified, were issued for Arizona as follows: Southeastern, on the 4th; southern, on the 11th, 15th, 16th, and 18th; south-central and southeastern, on the 12th, 14th, 17th, 21st, and 26th.—*J. M. Sherier,*

SAN FRANCISCO FORECAST DISTRICT

The month was characterized by frequent rains over the Pacific Northwestern States and by deficient rains over California and Nevada. The rains over the northern portion of this district were attendant on the frequent and in most instances shallow depressions that crossed the coast line north of the mouth of the Columbia River. These averaged approximately fifteen in number, or one every other day, and after moving inland passed eastward, and rarely brought the southern part of this forecast district under their influence. This resulted in an increased deficit in the seasonal rainfall for California and Nevada.

In California at the end of the month the season of rains was half over, and the rainfall was then below normal for the season except in the San Francisco Bay region. The following table for regular Weather Bureau stations gives the precipitation for the season to date, the normal seasonal precipitation to date, and the seasonal rainfall for the preceding season to the same date:

Stations	Seasonal rainfall to date	Normal rainfall to date	Seasonal rainfall to date last year
	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>
Eureka.....	22.59	24.52	13.88
Red Bluff.....	11.04	14.02	8.46
Sacramento.....	8.30	10.81	4.44
San Francisco.....	13.48	12.63	6.06
San Jose.....	5.72	9.10	3.63
Fresno.....	3.93	5.15	1.50
San Luis Obispo.....	6.69	10.50	3.33
Los Angeles.....	3.05	8.05	1.79
San Diego.....	2.32	5.17	2.48

Much apprehension is felt concerning the probable shortage of precipitation during the current season, following two years of deficient rainfall and snowfall. The fact that on a number of occasions when isobaric types that usually portend rain generally over the State passed eastward without appreciable rainfall, adds to the feeling of apprehension that the latter half of the season of rains will not likely bring the precipitation for the season up to normal. The deficit in rainfall for the season is notable over the southern part of the State, where it generally is less than during the preceding season.

The district forecaster was called on to forecast snows on a number of dates for the interior of the States of Washington and Oregon and for Idaho. Storm warnings were displayed on a number of dates for sections of the coast north of the San Francisco Bay region, and the majority of these were followed by winds of gale force, except on the Puget Sound, where the topography is such that rarely do the gales commonly experienced on the coast extend over this inland body of water. No cold-wave warnings were ordered, but warnings of frosts and freezing temperature were issued on a number of days during the first half of the month for the interior of California. The frost-warning service in the citrus regions of the southern part of the State was carried on in a very efficient and effective manner during a season calling for frequent firings to protect fruit and trees. The damage in orchards not protected has been considerable, while in the orchards that were properly fired the loss of fruit was inconsiderable.—*E. H. Bowie,*