

Severe local hail and wind storms, May, 1924—Continued

Place	Date	Time	Width of path (yards) ¹	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
Fort Smith, Ark.	27	P. m.			50,000-75,000	High wind	Heavy property damage. Fort Smith Light and Traction Company probably heaviest losers.	Official U. S. Weather Bureau.
Watts, Okla.	27	7 p. m.	2-3 mi.			Heavy hail	Considerable property damage	Do.
Do	28	7 p. m.	2-3 mi.			do		Do.
Wetumka to Warner, Okla.	28	5:30-6.15 p. m.	133-1,760	9	190,000	Tornado	Heavy property damage; 37 persons injured.	Do.
Stigler, Okla., to Fort Smith, Ark.	28	7 p. m.	300-150	5	91,000	do	Heavy property and crop damage; 15 houses at Gans wrecked; 27 persons injured.	Do.
Meeker to Davenport, Okla.	28	4:30 p. m.	2 mi.		20,000	Hail	Considerable damage	Do.
Dearing (near), Kans.	28	6-8 p. m.				do	Many wheat and oat fields devastated; roofs damaged and window panes broken.	Do.
Washington County, Ark.	28	6:30 p. m.				Tornado	Heaviest damage at Farmington; 7 houses demolished and orchards badly damaged.	Do.
Do	28	P. m.			100,000	Hail and rain	Orchards, vineyards, and strawberries damaged. Storm followed tornado of same date.	Do.
Provo Bench, Utah County, Utah.	29	7-7:10	2 mi.		5,000	Moderate hail	Fruit and garden plants injured.	Do.
Marinette, Ariz.	30	6-7:30 a. m. or p. m.				Heavy hail	1,000 acres of cotton damaged 25 per cent. Store unroofed by wind.	Do.

STORMS AND WEATHER WARNINGS

By EDWARD H. BOWIE, Supervising Forecaster

WASHINGTON FORECAST DISTRICT

The month as a whole may be characterized as a quiet one, there being few storms of consequence, and in all cases the warnings were confined to the middle and north Atlantic coasts.

The first display was made on the evening of the 3d, when southeast warnings were ordered from Sandy Hook to Eastport, in connection with a disturbance over eastern Ontario. Warnings were again disseminated on the evening of the 7th, from the Virginia Capes to Boston, due to the northward movement of a secondary that developed over the south Atlantic States. The storm continued its slow northward movement and warnings of strong winds, thick weather, and rains were issued on the evening of the 9th from Sandy Hook to Portland. Another secondary that developed over the south Atlantic coast and moved to southeastern Virginia required the issuance of northeast warnings from Delaware Breakwater to Eastport. The necessity for warnings did not occur again until the 18th, when a disturbance of marked intensity was central southeast of Hudson Bay. Southwest warnings were ordered on the morning of that day for the Atlantic coast from Delaware Breakwater to Eastport. Southwest storm warnings were again displayed on the morning of the 24th from the Virginia Capes to Eastport. Small-craft warnings were displayed at Mobile and Pensacola during the 26th.

Warnings of light frosts were required on a number of days for portions of the Ohio Valley, the lower Lake region, and the north and middle Atlantic States.

CHICAGO FORECAST DISTRICT

From the point of view of the forecaster, May, 1924, in the Chicago Forecast District was a month of decided activity. Frost warnings were issued for some part of the district on every day but the 16th, and likewise frost occurred in some part of the district every night except that of the 16-17th. Furthermore, the month was much stormier than usual on the Great Lakes, winds of storm force or within four miles thereof having occurred at some one or more Lake stations on 20 days.

Frost warnings.—At the opening of the month the growth of vegetation had advanced sufficiently to be injured by frost northward across Nebraska, Iowa,

southern Wisconsin, and Indiana. During the following two weeks the susceptible stage was reached over most of the remainder of the district, except the northern Lake region where frost warnings were not needed until about the close of the month. The dates on which the most general frost warnings were issued include the 6th to 10th, inclusive, 13th, 14th, 18th to 21st, inclusive, 23d to 25th, inclusive, and the 29th and 30th. The most damaging frost effects appear to have been those of the 11th in portions of Iowa, of the 19th and 20th in lower Michigan, and on several dates during the week ending on the 26th in North Dakota, Iowa, lower Michigan, and Indiana. Frosts were numerous in the Wisconsin cranberry bogs, and one observer described the month as a "terrible one."

Storm warnings.—There were three principal storm periods on the Great Lakes, namely, those of the 5-9th, 17-19th, and 23d-24th, all dates, inclusive. Altogether storm warnings were issued on nine days, and small-craft warnings on six additional days.

The first storm warning of the month was issued at 1 p. m. of the 5th for Lake Superior west of Marquette, northeast warnings being ordered. Noon special observations on that date had shown a disturbance of increasing intensity centered over the northern Plains, the lowest pressure being 29.48 inches. At the same time a high pressure area appeared in northern Manitoba, where the barometer read 30.24 inches. At 10 p. m. of the same date these warnings were extended over the Escanaba and Green Bay districts of Lake Michigan. By the morning of the 6th the disturbance was centered over Iowa with somewhat decreased energy, but verifying wind velocities had occurred during the night over most of the region where the warnings were displayed. Accordingly, small craft-warnings were issued for the remainder of the Great Lakes, and later, at 1 p. m., the warnings were continued on that portion of Lake Superior where already displayed. However, the latter were lowered at 10 p. m. As the disturbance moved slowly eastward it increased in intensity, so that it was necessary to issue northeast warnings on the night of the 7th for the northern portion of the Alpena District of Lake Huron. By the following morning the storm had still further increased in energy, and in connection with a high pressure area over Ontario had created a strong gradient across most of the Lake Region. As a result strong winds or moderate gales had set in over Lake Superior and the northern portions of Lakes Michigan and Huron. Therefore, the northeast warnings were extended over the remainder of the Great Lakes.