

Moving north-northwest, the storm passed inland over southern Terrebonne County, its center slightly west of the town of Houma, where the lowest barometer reading, corrected by bell jar comparison, was 28.31 inches, at 9:30-9:55 p. m. At Morgan City, 32 miles northwest of Houma, the lowest barometer reading, corrected in the same manner, was 28.80 inches, between 11:15 p. m. of the 25th and 12:30 a. m. of the 26th. The maximum wind velocity at Morgan City, up to the time the anemometer became unserviceable, was 70 miles an hour from the northeast at about 10:30 p. m., with an extreme velocity within a period of 10 seconds, of 90 miles an hour. At New Orleans the lowest barometer reading was 29.37 inches at midnight and 1 a. m. of the 26th, and the highest wind velocity was 44 miles an hour from the southeast at 9:42-9:47 p. m. of the 25th, with an extreme velocity of 52 miles for the fastest mile, though gusts too brief to register had still higher velocities.

After passing between Thibodaux and Morgan City, the further course of the storm center was along or near the west bank of the Mississippi River to east-central Louisiana, where the storm had so greatly weakened by 7 a. m. of the 26th that the winds were no longer dangerous. The greater part of the damage occurred from New Orleans westward to Franklin and from Donaldsonville southward to the coast. In New Orleans the damage, estimated at \$250,000, was principally due to fires where electric wiring was probably rendered defective by the winds, though there was considerable damage also to roofs of houses here and elsewhere in the storm-swept section.

An authentic, complete survey of the property losses has not been made but the probable loss is between \$3,000,000 and \$5,000,000, besides considerable damage to crops and trees. The Bureau of Agricultural Economics estimates that damage from the storm in percentage of normal crops for southern Louisiana, was about 8 per cent to sugar cane, 9 per cent to rice, 6 per cent to corn, 3 per cent to soy beans, and 14.7 per cent to pecans. Cotton, of which the acreage in this part of the State is small, suffered considerable damage also.

No vessel losses off the coast have been reported to this office. A number of small boats were sunk in harbor at Morgan City and in the Terrebonne section. In the Mississippi River a few river boats and barges, with cargoes went down.

Twenty-five persons are known to have lost their lives as a result of the storm, a few through contact with live wires, but nearly all from drowning on Felicity Island and near Gibson, both in Terrebonne County, and from the capsizing of a boat in the Mississippi River near Convent, La.

In general the tides were not remarkably high for a hurricane. In southeastern Terrebonne County, where the storm was most severely felt, the tide was 3 to 6 feet above normal over the marshes and streams, with one report of 15 feet above normal in a small locality about 30 miles south of Houma, while along the western Terrebonne coast the tide was near normal. The highest readings of the river gauge at Morgan City were only slightly above normal and reports from Burrwood indicated a storm tide of scarcely more than a foot. Considerable water accumulated in bayous and lakes around New Orleans but was not high enough to cause material damage or to delay train service on the Louisville & Nashville Railroad, the storm tide at Chef Menteur, northeast of New Orleans on this line, being about 4 feet. The Southern Pacific Railway and the Illinois Central suffered minor damage and delay of a day or two in train service.

The timely warnings resulted in the saving of much property and many lives. Boats and radiophone carried the warnings to Cameron Parish and through the Barataria Bay section to Grand Isle. The merchants of Houma, Morgan City, and other towns, through the aid of fishermen, sent the warnings to isolated sections of Terrebonne and St. Mary Counties. Interests concerned, mail, telegraph, telephone, and radio were utilized and with the able assistance of the daily newspapers, the warnings were well disseminated through the inland territory. The stations WSMB and WCBE of New Orleans and KPRC of Houston rendered valuable service and those of the Tropical Radio Co. and the United States Navy were very effective in behalf of marine interests and in collection of important weather reports from ships in the Gulf of Mexico.—*R. A. Dyke.*

DENVER FORECAST DISTRICT

The usual low-pressure conditions of summer prevailed over the Great Basin and southern Rocky Mountain regions during most of August; and during the first half of the month the Pacific Ocean high pressure extended well to the northeastward over the Alaskan coast and into western Canada. This distribution resulted in frequent light showers and thunderstorms in the central and southern mountainous regions of the district, and in dry weather in western Montana. On the morning of the 16th the Alaskan high pressure was replaced by a rather deep low that had moved eastward from the Aleutian Islands, and thereafter throughout the month low pressures prevailed over Alaska and western Canada. At times during this period offshoots of the Pacific high overspread northern California and extended inland to the northern Rocky Mountain region, causing general rains over the Pacific northwest and in Montana and Wyoming, effectually breaking the drouth. When the pressure was not unusually high along the California coast and low pressure continued along the Canadian border, unusually high temperatures prevailed in Montana and Wyoming.

Daily forecasts of wind direction and velocity for western Montana were furnished for the benefit of the Forest Service in combating the serious forest fires in that region. No other warnings were required.—*E. B. Gittings, Jr.*

SAN FRANCISCO FORECAST DISTRICT

The barometer was high over the greater portion of the northeast Pacific Ocean during the early part of August, with pressure considerably above normal in the Gulf of Alaska. A movement of this anticyclone caused rising pressure over the North Pacific States and western Canada on the 5th and advices of warmer weather were issued for Oregon and Washington, which were duly amplified in the fire-weather warnings by officials in those States. Temperatures rose as predicted and remained generally above normal with low humidity until the 9th. Similar warnings were issued for northern California on the 5th and, although temperatures did not rise materially, the hazard in the forested areas increased and numerous fires started. In the Shasta National Forest, in the extreme northern end of the State, the situation became so acute that the forest supervisor asked for special advices daily. These were sent to him morning and evening until the fires were put under control. Similar daily service was given the Sequoia National Forest on the 17th, and for several days thereafter, to aid in the suppression of serious fires in that area.

On the 17th a radical change took place in the weather of the North Pacific States. The drought which had prevailed since the 19th of June was terminated by the southeastward movement of a low-pressure system from the valley of the Yukon. Rains and lower temperatures brought marked relief to the forest-fire situation in Oregon, Washington, and Idaho, a change in conditions which was anticipated 12 to 24 hours by district and local forecasts. Another disturbance of similar type produced general rains in the northern parts of the district on the 26th. Its behavior was unusual in that the rain in the north was preceded by showers in the coast range counties of California from the bay region northward, which, though light, were sufficient to require the covering of fruit in the process of sun-drying. Adequate warnings were issued to provide for protective measures.

On the 28th the first disturbance showing typical Fall characteristics appeared in the Gulf of Alaska, the pressure variation charts showing large changes on that and succeeding dates. This storm brought general rains to the North Pacific States and further relief to the fire situation in the forests. These rains were predicted 24 hours in advance.—*T. R. Reed.*

627.41 (73) RIVERS AND FLOODS

By H. C. FRANKENFIELD

The floods of August were few and of very moderate character. The Trinity River of Texas was in moderate flood during the last week of July and crested on August 1 at a stage of 30.3 feet, 5.3 feet above the flood stage. The crest stage at Trinidad was 31.1 feet, or 3.1 feet above the flood stage, on August 5, but there were no floods below that point. A crest of 26 feet also occurred at Dallas immediately after the heavy rains of August 17-19. The floods were properly forecast and no losses of consequence occurred. These rains also caused moderate floods in the Sulphur River of Texas. Flood warnings were not necessary and no reports of damage were received. The excessive rains of August 16-18 over the upper drainage area of the Black River of Arkansas were followed by a flood that, while of small proportions, required flood warnings for the benefit of lumber, livestock, and agricultural interests. Stock and portable property were taken from the bottoms and there were no losses of consequence.

From August 17 to 19 the average rainfall over the upper drainage basin of the Wisconsin River was very nearly 5 inches, and under ordinary conditions there might have been a repetition of the great flood of July 24-25, 1912. That a disastrous flood did not occur was due (1) to the very dry condition of the soil and (2) to the prompt collection and dissemination of data and information by the Weather Bureau and its immediate and effective use by the power companies. These companies were enabled to open sluice gates in time to permit great volumes of water to pass down the stream in advance of the flood waters and materially lower the flood crest. Only at Knowlton, Wis., did the waters rise much above the flood stage (crest, 18.7 feet, or 6.7 feet above flood stage), and the reason therefor lies in the heavier local rains (over 6 inches) that fell over that section (Wausau 7.86 and Knowlton 5.42 inches). Flood stages did not actually occur below Wisconsin Rapids, yet the district officials wisely issued warnings for moderate floods, and a special report received indicated that the warnings permitted the saving of a large quantity of construction equipment at Prairie du Sac, Wis.

The losses as reported did not exceed \$6,000 in crops and \$1,000 in lost lumber. There was, however, some damage to railroad trackage in the Wisconsin Valley.

Flood stages during the month of August, 1926

River and station	Flood stage	Above flood stages—dates		Crest	
		From—	To—	Stage	Date
ATLANTIC DRAINAGE					
Santee:	Feet			Feet	
Rimini, S. C.....	12	(1)	6	13.2	3
Ferguson, S. C.....	12	3	8	12.6	7
MISSISSIPPI DRAINAGE					
Moeking: Athens, Ohio.....	17	19	19	17.7	19
Little Miami: Kings Mills, Ohio.....	17	19	19	19.9	19
Tippecanoe: Norway, Ind.....	6			6.1	22
Wisconsin:					
Knowlton, Wis.....	12	21	23	18.7	22
Wisconsin Rapids, Wis.....	12	23	23	12.6	23
Black: Black Rock, Ark.....	14	19	19	14.1	19
Sulphur:					
Ringo Crossing, Tex.....	20	19	21	21.2	20
Finley, Tex.....	24	(1)	3	25.1	1
WEST GULF DRAINAGE					
Trinity:					
Dallas, Tex.....	25	(1)	1	30.3	1
Trinidad, Tex.....	28	2	6	31.1	5

¹ Continued from last month.

MEAN LAKE LEVELS DURING AUGUST, 1926

By UNITED STATES LAKE SURVEY

[Detroit, Mich., Sept. 3, 1926]

The following data are reported in the Notice to Mariners of the above date:

Data	Lakes ¹			
	Superior	Michigan and Huron	Erie	Ontario
Mean level during August, 1926:				
Above mean sea level at New York.....	Feet 600.98	Feet 578.59	Feet 571.30	Feet 244.99
Above or below—				
Mean stage of July, 1926.....	+0.12	+0.06	+0.08	-0.21
Mean stage of August, 1925.....	-0.54	+0.15	+0.22	+0.00
Average stage for August, last 10 years.....	-1.47	-1.96	-1.16	-1.30
Highest recorded August, stage.....	-2.95	-4.92	-2.81	-3.27
Lowest recorded August, stage.....	-0.54	+0.15	+0.22	+0.64
Average departure (since 1860) of the August level from the July level.....	+0.11	-0.06	-0.19	-0.31

¹ Lake St. Clair's level: In August, 1926, 574.01 feet.

EFFECT OF WEATHER ON CROPS AND FARMING OPERATIONS, AUGUST, 1926

By J. B. KINCER

General summary.—East of the Mississippi River the widespread rainfall about the beginning of the month was very favorable in conditioning the soil for crop growth and for plowing, and there was sufficient moisture in practically all sections of this area, except the middle Appalachian Mountain region. In the extreme lower Missouri Valley and over much of the central and northern plains, however, very unfavorable droughty conditions continued until after the middle of the month when there was sufficient rain to be of much benefit, especially to the range and to cultivated crops that were not too far gone. During the latter part of the month rainfall continued insufficient over the Great Basin, but the drought was largely relieved in the Great Plains and some good showers occurred over the far Northwest.