

weather may give a forest fire a good chance of spreading once it is started. We know also that if the humidity is 100%, even a gale cannot make a fire go far.

In the two conferences held at Clark University we constantly kept in mind the relations between the single factor under discussion and the other, more generally known ones. We picked out relative humidity for special attention because of its importance in the West, and because we thought a more accurate knowledge of its part in favoring fires would assist materially in forecasting fire weather. Eastern forecasts of fire weather are based on weather map conditions, and do not include a consideration of relative humidity, except indirectly and in the most general terms.

SUMMARY OF SNOW SURVEY AND FORECAST OF RUN-OFF, FOR THE CENTRAL SIERRA NEVADA, AS OF APRIL 1, 1926

The character of the snow cover and run-off in the Central Sierra Quadrangle thus far the present season, has closely duplicated that of last season, except in quantity, the average snow cover in the various basins being from 20 to 45 per cent less than last season with resultant diminution in water supply to approximately 50 per cent of normal.

In detail, the snow cover until March 1, was practically uniform at high and low levels over the watershed and had attained a water content of 55 to 65 per cent of the normal April 1. From that time lack of further precipitation during the month prevented the further accumulation of snow while an excess temperature of 5.8° F. (Reno) greatly diminished the snow cover at low levels.

The resulting snow cover on April 1 was as follows: South Yuba, 48.6 per cent; Mokelumne, 50.3 per cent; Truckee (exclusive of Tahoe), 43.2 per cent; Tahoe, 40.2 per cent; Carson, 43.7 per cent; Walker 50.0 to 54.6 per cent.

Heavy precipitation since April 1, assures little or no shrinkage in the run-off indicated by the snow cover, except that in streams affected by diversions, the down-stream shrinkage in a season so far below normal may amount to 15 or even 25 per cent of normal.

Owing to continued high temperatures, the run-off is occurring relatively early in the season. This is even advantageous where ample down-stream storage is available, but is serious where the water flows below the point needed. However, the high temperature has also advanced the growing season, though in no wise commensurately with the advance in the water season.

Lake Tahoe should reach its maximum of 6225.11 feet in June, thus failing to reach its maximum of last season by 0.45 feet. The Truckee River will furnish 500 sec. feet and more at Iceland until July, when it should gradually fall from 429 sec. feet for the first half of July to 195 sec. feet in early September, and possibly 150 sec. feet during the remainder of the month and until autumn rains set in. However, losses in the channel of the stream and early drying out of the watershed may

reduce the autumn flow to one-half the expected amount. Heavy rains during the summer can materially improve the situation.—*From Report of J. E. Church, in charge of Nevada Co-operative Snow Surveys, April 1, 1926.*

DOUBLING OF VISIBILITY OF LIGHTS BY REFRACTION

Second Officer S. G. Weir of the British steamer *Tideway*, Capt. J. A. Agnew, reports on March 24, 1926, that the ship's position was fixed by cross bearings in lat. $47^{\circ} 54' S.$, lon. $64^{\circ} 57' W.$, when Cape Blanco and Isla Penguin Lights, Argentina, were 53 and 31 miles distant, respectively. The flashes of each light were clear and distinct, without blur or distortion. The height of the observer's eye was 45 feet. The normal visibility for these lights, with this height of eye, is 24.3 and 23.5 miles, respectively.

Cape Blanco Light remained in sight for a distance of 58 miles.

There was a slight cloud to the westward, but the sky was otherwise clear; wind west, force 2; temperature, $65^{\circ} F.$ —*Hydrographic Bulletin, May 19, 1926.*

ICE-BOUND BUFFALO

An ice field locally 15 to 18 feet thick and stretching 40 miles out into Lake Erie from Buffalo formed an impenetrable barrier even to the concerted attack of 36 steel freighters as late as May 8 this year. Not since 1908, when navigation out of Buffalo was opened on April 26, has there been even an approach to the extraordinary situation of this spring.

Buffalo and other leeward shore places on the Great Lakes are notably cold in spring, but the conditions this year, in their marked contrast with so much warmer weather on opposite shores have been most extraordinary. The shape of the eastern end of Lake Erie and the long sweep of the westerly winds which jam the ice into Buffalo's pocket are responsible for her especial chilliness.

However, some warmth comes to Buffalo even in such a spring as this one. While the ships were stuck in the ice the air temperature rose to 74 under clear skies and a light northeast wind, off the land. But it soon fell back to 34. We do not always relish northeast winds in spring, but there are times when some people do. Until that ice is all gone the citizens of Buffalo would welcome a strong northeaster every other day. The grip of such a wind on the ice moves it out into the lake. When you are trying to keep warm and imagine that spring has come, an icefield nearby is not likely to add to your comfort or bear the fragrance of flowers. *C. F. Brooks* in "Why the Weather," (Science Service).

OIL DISASTERS BY LIGHTNING

The great oil fires near San Luis Obispo and Brea early in April, and at Bakersfield, California, late in the month were set by lightning. At Bakersfield there was such a downpour of rain that the protecting embankments about the oil tanks were gullied through and the whole dis-