

reviewed the history of the snow survey scheme, which he said was originally the product of his thought, Mr. Mixer remarks:

"I may not have been the first to consider the water equivalent of accumulated snow on the ground, and its effect later on the run-off, but I believe I was the first to publish anything about it.

"If you can refer to *Monthly Weather Reviews* of April, 1903, you will see curves and statements of my observations in 1900 and after. . . . After that was published, Dr. Frankenfield came up here to see me and talk it over. Prof. N. C. Grover, then in Maine, now with the Geological Survey, was familiar with my observations, methods and records."

In the rest of his letter, Mr. Mixer discusses some interesting observations noted during his thirty years of gauging the Androscoggin River and observing the weather at Rumford. For nearly 29 years he has been co-operative and voluntary observer for the Weather Bureau.

"When the river monthly run-off has been more than the precipitation, I have been compelled to find the reason. Many times I have seen several months of winter precipitation remain in 'cold storage,' then released months later only by sunshine. It has been interesting to see the river in a dry time rise and fall with the temperatures, and there have been times of other interest when the river run-off from a warm spring rain was increased by the waiting snow on the ground."

The voluminous report of the Water Supply Needs and Resources of the Commonwealth of Massachusetts was recently published jointly by the State Dept. of Health and the Metropolitan District Commission. It is interesting to note the bearing of droughts upon a proposal for a large increase in the sources of water supply for Boston. In a period of severe drought such as may be expected five or six times in a century the present reservoirs would probably not supply the needs of Boston with its increased consumption a few years hence.

"Therefore a project to make a lake of 39 square miles in the head-water region of the Swift River is put forward. The distribution of rainfall on both sides of the highlands of Massachusetts is discussed, and it is shown that the summer rainfall on the west side exceeds that on the east side, while the winter rainfall on the east side exceeds that on the west. It is proposed to establish many more rain gauges on the Swift River watershed."—C. F. B.

#### Predicting Stream Flow From Precipitation Data.

The engineering department of the Utah Power and Light Company has made comparisons of the precipitation recorded by the co-operative weather observers at Laketown, Utah, and Border and Evanston, Wyoming, and the discharge of Bear River, measured at a point near Bear Lake, and from these comparisons has been able to make some very useful predictions of summer stream flow. At the end of January a prediction can be made as to whether the flood period of March-July will be high or low as compared with average; at the end of February a verification or modification of the January prediction can be made; at the end of March an approximation of the quantity of the run-off in day-second feet may be ventured; and at the end of April a quantity estimate can be given which will no doubt closely approach the actual run-off. Only quantity forecasts are made. This important utilization of weather data is possible, according to the engineer writing the report, because "these stations are far apart, have desirable locations, and apparently have dependable observers."—*Climat'l. Data*, Utah Sec., Apr., 1921.