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? WHY THE WEATHER ?

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SNOW SURVEYS

In the semi-arid mountainous regions of the western United States the major part of the annual precipitation falls as snow rather than rain. The snow piles up in the mountains and forms the chief source of the water in the streams, some of which flow the year around while others are intermittent, flowing only as long as the snow lies on the ground. Thus, in this part of the world, the water-supply for irrigation, power development and municipal uses is derived mainly from winter snows.

Forecasts of the amount of water available from year to year are wanted both in order to insure its economical use and for other reasons. If a water shortage is in prospect, hydroelectric companies must prepare to utilize steam plants to a greater or less extent, according to the extent of the shortage. If an excess of water is indicated, precautions must be taken against floods.

The basis of such forecasts is a series of "snow surveys," made in the winter and spring. The methods and equipment used in these surveys have been developed during the past 25 years and surveys are now made on the principal watersheds of Nevada, California and Utah, as well as in parts of Idaho, Oregon and Washington. The surveyors travel over the snowfields, following permanently established routes and making measurements at fixed points. The water content of the snow from point to point is measured by cutting a core of snow, from the surface to the ground, with a cylindrical steel "snow sampler" and weighing it on a spring balance.

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