HYDROLOGIC RESEARCH

By Dr. ROBERT E. HORTON

VOORHEESVILLE, NEW YORK

The fact that hydrology has largely grown up in the families of sister sciences, and the tremendous pressure for hydrologic research created by recent activities in soil and water conservation, have created a situation which seems to call for some pertinent discussion of the objectives and methodology of hydrologic research. This is especially true in view of the fact that practical applications of hydrology are running away from the scientific development of the subject. There is a consequent tendency to concentrate research on specific objectives rather than to direct it toward the development of a complete, well-rounded body of scientific knowledge.

From different view-points the objectives of hydrologic research are manifold, but, while hitherto not generally recognized, the fundamental objective of such researches, stated in its most general terms, is to determine the independent variables which govern the phenomena and the relations between them.

It is recognized that scientific research can not be standardized and that researches which have proven to be of the greatest utilitarian value have quite generally been carried out by individuals and from purely scientific motives, without regard to the application of the results. On the other hand, experience has shown that wholly undirected or uncoordinated research does not usually lead to the best results. This is especially true of researches conducted by individuals or by separate governmental bureaus or agencies. For economic reasons or through lack of interest, the research is carried only as far as needs be for the specific problem in hand. It is often true that with little additional effort, variables could be measured and the scope or limits of the research extended in such a way as to make the results valuable with reference to other re-