



## Substantially increased research programs needed in meteorology to benefit water supplies and land utilization

**S**TEPPED UP RESEARCH PROGRAMS in weather to benefit water supplies and land utilization are among recommendations of an advisory committee which has just completed a study of the operations of the Weather Bureau. Simultaneously another committee is starting a detailed study of methods of controlling weather, particularly those aspects relating to rainmaking.

### **Weather Bureau Behind Times**

Because of penny pinching, the U.S. Weather Bureau must operate on standards 20 to 40 years behind the times, a special Advisory Committee on Weather services, says. The U.S. is spending about 18 cents per person per year for Weather Bureau operations compared to 50 cents in Canada and 47 in Russia. Many of the flaws could be corrected by the Weather Bureau itself, if it had sufficient funds.

The eight-man advisory committee, appointed last July, in addition to recommending the strongest possible support for the Weather Bureau in budgetary matters, proposes a series of other changes.

One suggestion is that there be more decentralization to give more administrative and technical responsibility at lower levels. Another proposal calls for establishment of a program for rapid selection and training of replacements for several high-level officials who are near or who have passed retirement age.

A further suggestion is that all operating functions be removed from Washington and that there be retained only a small policy-making staff in Washington. The advisory committee also feels that there should be changes in personnel policy to provide a good supply of young professional meteorologists.

The Weather Bureau should take over

weather services now being performed by the military. A strengthened forecasting organization helped by additional experienced forecasters at staff and regional levels and decentralization is also essential, the committee feels.

An "aggressive, imaginative, 'can-do' research program" is a must. Vigorous climatological research programs should be pushed also in such fields as land utilization, water supplies, and climatic changes.

While advocating the need for new funds, the committee feels that some economies can be effected by reducing the number of major forecast centers from 15 to 5. Reducing general forecasts to the public from four to two, setting adequate charges for publications, encouraging state and local governments to help in hydrologic observations, and using military and private vessels to collect ocean weather data, can also save money.

The committee says that the Weather Bureau should take a more favorable attitude toward development of the new profession of private meteorology as a means of assisting in the free growth and development of this profession.

The committee criticizes the Weather Bureau's "stuffy" attitude with respect to sharing information with private weather men, television weather programs and other communication sources.

While the committee found that only about half of the forecasters well qualified, it notes that shift work, and limited opportunities for advancement are deterrents to persons staying in this work. The committee feels that Weather Bureau chief F. W. Reichelderfer "has served with a devotion to duty and conscientious effort, seldom found in any organization."

Programs which require financial support, the committee feels, are the develop-

ment of a national radar storm detection network within the next three years; modernization of the "upper air" program to obtain observations each six hours up to 100,000 feet; rehabilitation and modernization of offices and equipment; expanded research in tornados and other several type storms; use of electronic computers for making forecasts and for analyzing Northern hemisphere weather charts.

Committee members are Brig. Gen. Joseph J. George, Eastern Air Lines, chairman; Robert D. Elliott, North American Weather Consultants; Col. A. F. Mereweather, American Air Lines; Capt. Howard T. Orville, Bendix Aviation Corp.; Richard J. Roth, Crop Hail Insurance Actuarial Assn.; Charles P. Smith, Pacific Gas and Electric Co.; Kenneth C. Spengler, American Meteorological Society; Athelstan F. Spilhaus, University of Minnesota.

### **Weather Control Group Begins Operations**

Closely related to the problems of the Weather Bureau is that of weather control. During the last session of Congress a law was passed authorizing creation of a committee to study various aspects of weather-making activities with particular emphasis on rain-making. President Eisenhower recently named the public members of the committee, which is known as the Advisory Committee on Weather Control.

In passing the law Congress said that research and experimentation in this field have reached the stage at which application of scientific advances in the field appear practical. Because the effects of wide scale experimentation will affect large areas, Congress feels that the federal government should be concerned with the problem.

The new committee will, therefore, attempt to solve the problem of determining the extent to which the U.S. should experiment with, or engage in, or regulate activities designed to control weather conditions.

Capt. Howard T. Orville, a member of the special Advisory Committee on Weather Services, will head up the Advisory Committee on Weather Control. Joseph J. George, and Kenneth C. Spengler, who were also members of the weather services committee, will serve with Capt. Orville. Other members are Lewis W. Douglas, industrialist and engineer; and Alfred M. Eberle, South Dakota Agricultural and Mechanical College.

In addition to the five public members, selected by President Eisenhower, the committee will include representatives of the Departments of Defense, Agriculture, Interior, and Health Education and Welfare and the National Science Foundation.