NEWS

WATER SYMPOSIUM

A two-day conference will be held at the Victoria University of Wellington on 1 and 2 December, 1964.

The conference, which has been planned to foster the advancement of all phases of water management, will discuss papers on the following subjects:

Water supply: urban, industrial and rural.
Water utilization: power, irrigation agriculture and recreation.
Protection: water quality and catchments.
River control and land drainage.
Transport communications: design and maintenance aspects.
Hydrological data: collection, processing and use.
Associated scientific work: ground water, hydrometeorology and activities of the International Hydrological Decade.
Education and legislation.

Papers are to be contributed by members of the N.Z. Institute of Engineers, the Royal Society of New Zealand, the New Zealand Hydrological Society and the New Zealand Water Supply and Disposal Association. Some papers, and abstracts of others, will be published in the July and August issues of "New Zealand Engineering". Copies of papers will be supplied in advance to those registering for attendance.

NEW ZEALAND HYDROLOGICAL SOCIETY

Membership

Membership now stands at 146. This figure comprises 52 members, 75 affiliate members (including 28 libraries and other organisations) and 19 student members. A list of members will be published in the next issue of the Journal.

1964 Annual General Meeting

This is planned for the evening of 2 December, in Wellington, after the close of the Water Symposium. Following discussion of business a guest speaker will address a combined gathering of the Society and the Water Supply and Disposal Association. Members will receive written notification.

Technical Session: Correlation of Hydrological Data

For 3 December, in Wellington, a full-day technical session on the correlation of hydrological data has been arranged by the Society. This will take the form of a series of technical addresses and discussions. Details of time and place will be made known to members by circular.

Journal of Hydrology (New Zealand)

Firstly, readers will have probably noted the insertion of "New Zealand" after the title. This Journal was launched in June, 1962, and can lay claim to being the first "Journal of Hydrology" in the world. However, in March, 1963, a second "Journal of Hydrology" appeared — published by the North-Holland Publishing Co., Amsterdam. Problems of reference were soon foreseen and the Committee, loathe to make a major title change decided to append: (New Zealand). It is proposed that J. of Hydrol. (N.Z.) be used for references.

The New Journal and Subscriptions

This Journal is printed by the letterpress process and comparisons with previous issues require no mention. However, the cost of publication is approximately double that of the previous issues. Readers should be pleased to know, though, that no increase in the subscription rates are anticipated **if all members pay their subscriptions promptly.** With the present financial year more than half gone, 38 per cent of members have not paid subscriptions. If you are one of these please act now; as the overall success of the Society depends on your wholehearted support. Members are further reminded to add exchange to cheques.

ENGINEERING HYDROLOGY COURSE THE UNIVERSITY OF NEW SOUTH WALES

A full-time, 12 weeks, special course in Engineering Hydrology will be conducted by the School of Civil Engineering of the University of New South Wales from 31 August to 20 November, 1964, subject to sufficient applications being received.

The course will cover the principles, practice, and applications of Engineering Hydrology from the elementary to the post-graduate level.

In general, a first degree in engineering or science will be required for admission to the course, but consideration will be given to applicants holding a lower qualification with suitable experience in the field of hydrology.

Enquiries about the course should be addressed to Professor C. H. Munro, School of Civil Engineering, The University of New South Wales, Broadway, New South Wales, Australia.

NEW ZEALAND WATER SUPPLY AND DISPOSAL ASSOCIATION

At the 1963 Annual General Meeting of the N.Z. Sewage and Industrial Wastes Association the constitution was amended to include water supply and treatment within the scope of the organisation and its title was changed to "The New Zealand Water Supply and Disposal Association". It is hoped that the

revised Association will prove a useful forum for both professional and non-professional people interested in the administration, design, construction, management and operation of water supply and sewage disposal facilities, and in water pollution problems. It is also intended to serve as a means of expression of any opinions representative of the water supply and waste-water disposal industries. Conferences will probably be held annually in future. Those interested may contact: Mr K. R. Davis, 13 Woodside Road, Henderson.

FROM SOIL CONSERVATION AND RIVERS CONTROL COUNCIL

Retirement: Mr E. J. Speight

On 30 June this year, Mr E. J. Speight, Hydrologist, New Zealand Hydrological Instrument Depot, retired from the Ministry of Works at 63 years of age. After an earlier career as a surveyor and aerodromes engineer with the Ministry of Works he became, in 1949, officer in charge of the "South Island Hydraulic Survey Party" as it was then called. This party was set up to establish gauging stations and to measure river flows throughout the South Island. With the development of this work, Mr Speight was quick to recognise that, if hydrology was to be effective at all, measuring instruments and equipment had to be of the type to suit New Zealand conditions and had to be maintained to the highest possible standard. His special abilities in the techniques of instrument repair and development, originally started as a hobby, stood him in good stead. Subsequently with the general growth of hydrology Mr Speight founded and managed the New Zealand Hydrological Instrument Depot until his retirement. The depot now includes an instrument workshop with several technicians, a rating tank, a stores section and a staff training school. At this school some six to eight fortnightly field hydrology courses have been held annually with Mr Speight as principal tutor.

Mr Speight can really be classed as a "hydrometrist" of great stature. With the post-war difficulties of limited imports from limited sources it was Mr Speight who developed equipment for use in New Zealand hydrological surveys and he improved considerably the design of several current meters and water level recorders.

Mr Speight has a thoroughness which few people possess and which is such an obvious quality required when it comes to precise measurement. The Council will greatly miss his services and only hopes that his vast hydrometrical knowledge and experience may still serve hydrology in New Zealand, even though in different circumstances.

Fischer and Porter Automatic Precipitation Gauge

A new type of precipitation gauge has been developed by the Fischer and Porter Company (U.S.A.) for the U.S. Weather Bureau. The gauge mechanically converts depth of accumulation of rainfall during a given period to a code disc position. The code disc position is recorded on punched tape at selected intervals. The punched tape is identical to the tape used on the analog-to-digital water level recorder and data can therefore be processed on the electronic computer.

The instrument is designed for permanent installation in remote locations and is powered by a $7\frac{1}{2}$ volt dry battery. The instrument is cylindrical in shape, 20in. in diameter, 42in. high and has a total weight of 78 lbs. The orifice is 8in. diameter. The bucket has a capacity of 19.9in. and has to be emptied manually. The sensitivity is 0.025in. response with an accuracy of $\pm$0.15in. over the whole range. The tape is 410 ft long and at a 5-minute punch-out lasts five months.

The accuracy of the clock is stated to be $\pm$2minutes per day.

One instrument, complete with a Binary-decimal transmitter, has been purchased by the Council. It looks a well made instrument but a drawback may be the small capacity.

Analysis of Data from Experimental Basins

A detailed analysis was done this summer by the hydrological section, Ministry of Works, of the three years' flow and rainfall record of Makara experimental basin No. 10; a steep-sided grassed valley of 13.75 acres. The work was very useful for the testing of some improved methods of hydrograph analyses; interesting results were obtained and these will be published in due course. Sufficient experience has now been obtained to write standard procedures for the reduction and publication of data on experimental basins. These procedures will be issued in the Handbook of Hydrological Procedures. The first three procedures: No. 33, flow; No. 34, rainfall; and No. 35, summary of flow and rainfall for publication, will be issued shortly.

Hydrological Survey Field Parties

A new development in the Hydrological Survey is the establishment of field parties away from headquarters. The function of

these field parties is to carry out all routine field observations and maintenance work in a relatively small area (1000-2000 sq. mls.); all computations and analysis work remain to be done at the Hydrological Survey headquarters. So far three field parties have been established (Whakatane, Taumarunui, Murchison) and a fourth one is about to be established (Tekapo). The establishment of these field parties has cut down travelling time considerably, allowing improved maintenance of the field stations, and also increasing the possibility of measuring extreme flows.

Technical Memorandum No. 61

The third revision of Ministry of Works Technical Memorandum No. 61 is now ready for publication and will have been issued to catchment authorities by the time members receive this Journal.

The basic method of estimating peak discharges for design remains unchanged but a new feature is the incorporation of the methods for determination of rainfall depth-duration-frequency relationships given in "The Frequency of High Intensity Rainfalls in New Zealand" by N. G. Robertson, N.Z. Meteorological Service. Additional factors have been included for urban catchments and the coefficient "C" has been upgraded to correspond more closely with data made available since the last revision in 1961.

Standard Weirs

Because of the great variability of discharge from basins of the order of one sq. mile, the usual types of self-rated weirs have been found to be either of too low a capacity for the high discharges, or not accurate enough for the low-flow section of the hydrograph. To overcome this weirs having a 2 ft deep 90° vee-notch, set in a concrete wall with varying side slopes, have been tested in a scale model at Ministry of Works Central Laboratory, Gracefield.

The rating curves are now on hand and will be made available on request. The weirs will be installed in suitable experimental basins where the maximum range is about 1000 cusecs for the once in five year peak discharge.