

Electrical accidents at Ashburton and Woolston were investigated. A new type of portable telephone was constructed.

GENERAL.

During the year under review arrangements were made to lay an additional underground cable from Addington Substation to cope with an increased demand in the supply to Christchurch, and since the beginning of the present financial year, Armagh No. 5 feeder has been laid to the city boundary and a kiosk has been installed as a sectionalizing unit.

Arrangements have been made to install during the present year an extension of the Department's transmission-line telephone-lines from Addington Substation to the District Office in Christchurch, which will enable direct communication to be established between the office and any point in the system.

An induction voltage regulator has been installed at the 33 kv. substation at Stoddarts Corner.

During the year nothing further has been done to provide a supply to Hurunui Power Board.

With the operation of the Waitaki hydro plant shortly the rupturing capacity of the existing ironclad switch-gear at Addington will be insufficient and new switch-gear has been purchased of adequate rupturing capacity. The replaced switch-gear will be overhauled and reinstalled in Timaru Substation.

WEATHER AND RAINFALL.

The annual rainfall over the lake area and at the power-house for the past three calendar years was—

Calendar Year.	Average on Lake Area.	At Power-house.
1932	26.36	21.39
1931	41.45	34.91
1930	25.18	22.05

The average annual rainfall recorded at Lake Coleridge Power-house for the period 1914–30 was 31.52. A new record of minimum rainfall of 21.39 for the power-house was established last year. During the winter of 1932 the number of consecutive frosts recorded was thirty-nine, which accounted for the low flow readings of the lake feeders. It is of interest to note that although the average rainfall on the lake area was practically the same as in 1930 (the year of water-shortage) the lake-level did not reach the low level recorded in 1930. With the standby plant operating from 1st August, 1932, the lowest lake-level recorded was 1661.8. If the standby plant had not been running the level would have fallen to 1660.8, or 2.3 ft. above the lowest level recorded in 1930. It will be seen that the position regarding water-supply in 1932 would have been quite satisfactory even without the standby plant. During the calendar year of 1932 the lake-level has been so well maintained that it was found advisable to shut down the standby plant on 16th May, 1933, and since that date to 31st July the lake, after falling to 1668.7, has risen again to nearly the same level; the level on 16th May being 1669.95 and at 31st July 1669.88—an unusual state of affairs.

It is interesting to note that while during the odd years for some time past the rainfall and Harper flow have been normal, the even years have shown a decrease from normal.

WAITAKI RIVER SCHEME (ELECTRICAL SECTION).

Due to the prevailing financial conditions progress has been curtailed during the past year to conform with the rate of construction of the major sections of this development.

MAIN TRANSMISSION-LINE – POWER-HOUSE – GLENNAVY.

This line has been in service at 66,000 volts since 28th June, 1931, as a main supply from the Coleridge system, and is completed with the exception of one span from the power-house to the Outdoor Station, the erection of this span being held over until a convenient opportunity presents itself.

The insulators on the line were “live-line” tested in May last and were found to be in good order. Routine maintenance and patrols have also been carried out.

MAIN TRANSMISSION TELEPHONE-LINE.

This line has given good service during the year, with the exception of breaks in the cadmium-copper conductors due to vibration. Experimental spans with binders and sleeves of special “dampers” design were erected and no failures occurred in these particular spans. Special material has been ordered and it is anticipated that the trouble will now be overcome.

TIMARU–OAMARU TRANSMISSION-LINE.

The construction of the new second line between Timaru and Oamaru Substations was completed in May, 1932, with the exception of the proposed tower section at the Timaru end, and supply changed over from the old line of 3/0 A.C.S.R. to the new 19/13 copper line on 15th May, 1932.