

Ngahina – Waimarie Bend.—Except for temporary drainage gaps, preliminary levels have been reached with the stop-banks on either side of the river. Cut-off drains on the right bank have been completed, and those on the left bank are in hand.

Waimarie Bend – Wharepoa.—About $1\frac{3}{4}$ miles of stop-bank on each side of the river has reached preliminary levels. Flood-gates have been erected, and a mile of willows ring-barked.

Ngahina Bridge Extension.—The stop-bank on the left bank of this river was commenced last May.

HYDRO-ELECTRIC POWER.

Of the hydro-electric programme of the Government two schemes are now in operation—Lake Coleridge (12,000 h.p.) and Horahora (8,400 h.p.). These have both shown satisfactory results for the year, both having paid operating-expenses, interest, and depreciation, and shown a margin towards reduction of the accumulated deficiency.

LAKE COLERIDGE SUPPLY.

The financial result of the year's operation is as follows :—

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Capital outlay	671,608
Working-expenses	25,911
Interest	20,981
Depreciation	8,424
Total annual cost	<u>£55,316</u>

The revenue for the year amounted to £56,814, showing a net profit of £1,498. This amount was paid off the accumulated deficiency for the previous years of operation, which now stands at a net debit of £29,175.

Although the scheme is thus showing a profit on the accounts, no sinking fund is yet provided. In accordance with the State Supply of Electricity Act, 1917, under which these accounts are kept, a sinking fund of 1 per cent. must be set up as soon as there are available profits out of which to pay it. Had this sinking fund been paid last year it would have converted the profit of £1,498 into a loss of £4,458, and had it been paid from the inception of the undertaking it would have increased the accumulated deficiency on the net revenue account by £29,855. Thus, although the results are satisfactory, they are not such as to justify any reconsideration of the standard scale of charges until the sinking fund is provided for. But the savings effected by consumers are very much greater than the revenue received by the Department. To supply the same output as was supplied from Addington substation (33,947,100 units) by means of a modern highly efficient steam station would have taken 45,500 tons of coal—nearly 150 tons per day. But the actual fuel saved as compared with the consumption of the hundreds of small engines used throughout the district before the advent of electric power is three to five times this amount.

The operation of the plant was carried out satisfactorily during the year. Trouble with two of the turbine-cases caused some difficulty, and rendered it necessary to fall back on the steam reserve maintained by the Christchurch Tramway Board for a few weeks, but with the hearty co-operation of the consumers all the essential services were maintained in spite of the shortage of power.

Insulator troubles are still frequent, but show an improvement as compared with the previous year, as the original insulators purchased in 1912 are replaced by a more modern type, and considerable credit is due to the staff for maintaining the service under the circumstances with such immunity from breakdown. The replacement of the insulators and of the aluminium wire by copper wire will be completed during the current year, and should ensure much greater freedom from interruptions.