

Collingwood; for protecting the Ocean Beach at St. Clair; and for sundry minor works.

Under the head of "Harbour Defences," last year's expenditure amounted to £6,126, and for the current year a vote of £10,000 is provided.

TOURIST AND HEALTH RESORTS.

The amount expended under this heading was £10,949, of which £6,495 was spent in and around Rotorua.

The other principal items of expenditure were: Accommodation-house, Waikaremoana, and improvements at Te Aroha and Queenstown.

Provision is made this year for some important works, such as new bath buildings, drainage, electrical and water-works at Rotorua, and a new bath and additional buildings at Hanmer.

The gross authorisation asked for is £26,535, on account of which a vote of £20,000 is proposed.

UTILISATION OF WATER-POWER FOR GENERATING ELECTRICITY.

New Zealand, being favoured with a good rainfall, distributed fairly evenly throughout the year, possesses numerous rivers and streams having, as a rule, a steady and abundant flow of water. When, in addition to this, we consider that many of our rivers and streams have their sources in high altitudes, their beds having a good, and, in many cases, a rapid fall, the conditions appear generally favourable for obtaining in a number of places a large and constant supply of water for motive power.

The Government, having been asked to provide expert advice as to the best means of utilising the water-power in certain rivers, has determined to ascertain the sources from which such power can most readily be obtained at reasonable cost.

Reliable data as to the flow of our rivers based on continuous records extending over a number of years are not at present available, but steps are being taken to obtain satisfactory information on this point. In rivers where no natural reservoirs, such as large lakes, exist, or where no artificial storage can be easily provided, it is essential to know accurately the low-water flow before undertaking the construction of costly works to utilise the power available.

Our rainfall statistics for the most part are the results of observations taken in settled districts, while the rivers and lakes that are apparently most likely to be utilised for power have their sources in mountainous districts where no regular observations have been taken. It thus happens that, while the rainfall records may be of service (in the absence of reliable measurements of low-water flow) for many of the smaller schemes suggested, for the larger schemes they give little or no information or help.

In the North Island over eighty streams and rivers have been suggested as affording suitable facilities for the supply of water for power-stations. Of these, the Wairua River Falls, north of Auckland, are conveniently situated in the centre of an isolated district. The Huka Falls, on the Waikato River, are centrally situated, and, from the very favourable conditions they present, a large supply of power can be got from them at a comparatively small cost, and, in addition to the falls themselves, much greater supplies of power by utilising the rapids below the falls. From these falls electrical energy can be distributed to various parts of the North Island between Auckland and Wellington at reasonable cost.

There is also a possibility of obtaining considerable power from the falls near Lake Waikaremoana and from the Rangitikei, Manawatu, and other rivers. In the cases of the rivers, however, the cost for the hydraulic part of any scheme would require investigation.

In the South Island over ninety rivers, streams, and lakes have been suggested as presenting conditions favourable for the generation of electrical energy from water-power. The streams and rivers of Marlborough, Nelson, and Westland could in some cases be utilised for electrical-generating stations of