1924. NEW ZEALAND.

DEPARTMENT OF LANDS AND SURVEY.

SWAME DRAINAGE.

REPORT FOR THE YEAR ENDED 31st MARCH, 1924, TOGETHER WITH STATEMENT OF ACCOUNTS.

Presented to both Houses of the General Assembly pursuant to Section 13 of the Swamp Drainage Act, 1915.

SIR,---Department of Lands and Survey, Wellington, 5th August, 1924.

In pursuance of section 13 of the Swamp Drainage Act, 1915, I have the honour to forward the report of the Chief Drainage Engineer covering all operations and transactions under his control.

The various projects have been vigorously prosecuted. The machinery is standing up well, and daily demonstrates the wise policy undertaken in 1920 to procure standard and up-to-date types.

Illustrative plans are also attached.

There is every reasonable chance of work upon the Poukawa area being undertaken within the next six months, and plans will be laid towards this end.

I have, &c., J. B. Тномряон, Under-Secretary.

The Hon. A. D. McLeod, Minister of Lands.

REPORT BY CHIEF DRAINAGE ENGINEER.

SIR,-

I have the honour to submit my annual report on the areas proclaimed under the Swamp Drainage Act, 1915, and amendments. During the year the Harihari area in the Westland Land District was brought under the provisions of the Swamp Drainage Amendment Act, 1922, and a report on this area is included herein.

KAITAIA DRAINAGE AREA (39,665 ACRES), MONGONUI COUNTY.

On this area the main works have been carried on by the three floating dredges, and the end of the year shows a big improvement in the drainage of the swamp country situated to the south of Bell's Road. This is due to the completion of the Waihoe channel, and also the dredging of the Awanui River for about four miles below the junction with the above channel. Although these works will not complete the major scheme in the vicinity, the freedom from floods has been marked. Formerly any normal fall of an inch of rain would have caused the river to overflow its banks in the vicinity of Kaitaia, but now, even with the scheme incompleted, falls of 3 in. per day have been successfully carried by the newly dredged portion of the river.

The completion of the Waihoe channel has lowered the water in the Tangonge Lake so that during fine weather the bed is practically dry, whilst during periods of heavy rain the lake-bed acts as a storage reservoir for flood-waters and so reduces the height of the floods in the Awanui River. Now that the two Priestman dredges are engaged in improving the river it is anticipated that this work will be completed as far as Awanui within eighteen months. From this point out to Rangaunu Bay it is proposed to remove only the sand deposits near the Awanui Wharf, and also the willows

along the river.

The dredging of the Whangatane spillway will take over two years, and until this is completed it is impossible to divert any flood-waters from the river down this channel. The concrete regulatingweir to be constructed at the junction with the river near Kaitaia has been designed, and the construction of same will be proceeded with. This structure will pass a maximum flow of 2,000 cusees, which is equivalent to 1 in. of rainfall over all the watershed above the site.