

The following table gives details of rainfall for the past eleven years:—

Year.	Rainfall for Year.	Wettest Month and Rainfall.		Driest Month and Rainfall.	
	Inches.		Inches.		Inches.
1918-19 ..	47·30	Oct., 1918 ..	9·06	Aug., 1918 ..	1·39
1919-20 ..	31·71	July, 1919 ..	7·37	Dec., 1919 ..	0·62
1920-21 ..	53·11	May and Aug., 1920 (each) ..	8·02	Mar., 1921 ..	1·13
1921-22 ..	49·42	Mar., 1922 ..	5·84	Jan., 1922 ..	2·24
1922-23 ..	44·81	Oct., 1922 ..	7·46	Jan., 1923 ..	2·02
1923-24 ..	49·23	Oct., 1923 ..	7·92	Dec., 1923 ..	1·38
1924-25 ..	48·89	May, 1924 ..	10·34	Mar., 1925 ..	0·51
1925-26 ..	57·90	May, 1925 ..	10·43	Feb., 1926 ..	0·88
1926-27 ..	64·91	Oct., 1926 ..	9·62	Dec., 1926 ..	1·51
1927-28 ..	55·97	July, 1927 ..	11·35	Jan., 1928 ..	0·22
1928-29 ..	58·21	June, 1928 ..	9·13	Feb., 1929 ..	0·28

Awanui River.—No work was done on this channel except the removal of some snags which impeded navigation below Awanui, and the hauling-out of overhanging puriri-trees and young willows near Kaitaia. A large quantity of sand has been deposited in the lower reaches of this stream during the past twelve months, and the navigation of the channel with vessels of any great draught will become increasingly difficult from this cause.

Whangatane Spillway.—Dredger No. 27, Marion steam drag-line, was engaged throughout the year in enlarging this channel on the western side to the extended section required to carry eventual discharge, and dredger No. 18, a Monighan oil-driven drag-line, was engaged for six months in similar work on the eastern side. A distance of 2 miles 10 chains was covered by No. 27 dredge, excavating approximately 149,958 cubic yards of spoil, mostly stiff clay. No. 18 dredge widened for a distance of 76·08 chains, excavating 57,260 cubic yards of spoil, of which approximately half was light peaty soil and the balance stiff clay. Much of the work was carried out in country below or about high-tide level, where the spoil was required for construction of stop-banks. Owing to the presence of water the spoil could not be shaped by machines as excavated, and hand shaping had to be carried out after the spoil had dried sufficiently to stand to the required height at a reasonable batter. Internal drains leading to flood-gates under the banks have also been constructed by hand, and a certain amount of hand-work is entailed at bridge-sites, especially as these structures could not be completed in advance of dredging owing to delays in arrival of timber-supplies from Australia.

Certain alterations were made to No. 27 dredge, giving greater range and adaptability to the different kinds of work required. This entails operating in soft as well as hard country, cuttings up to 20 ft. in depth, and the handling of heavy timber. This machine is now eminently suitable for the job in hand. Two ten-hour shifts were worked with the aid of electric light supplied by a steam-driven generating plant. Coal has been delivered on the line of work throughout, and as water is gravitated direct into the boiler through pipe-line laid to the Kaitaia River it is hoped that little time will be lost in operation in the ensuing year.

Dredger No. 18 was erected and placed in commission this year, and during six months consistent operation has proved a thoroughly efficient machine for the work required. A new one-yard bucket capable of dealing with stiff clay has been fitted, which, with the provision of "pads" for soft country, is the only alteration found necessary to suit local conditions.

Drains.—The principal work in connection with drains has been maintenance, which entails heavy expenditure owing to the rapid and almost continuous growth of many varieties of water-weeds in this locality. Certain drains of flat grade have been cleaned, in spring as well as late autumn, proving of undoubted benefit to the low-lying country served by these outlets. During the late autumn 37 miles of drain was cleaned out, and 5 miles 35 chains was cleaned again in October. Deepening and improvement of drains was carried out on 3 miles 68 chains, and 78 chains of new drain constructed, mostly in connection with additional flood-gate outlets to the Awanui River.

Stop-banks.—The maintenance of 10 miles of stop-bank and drain with eighteen flood-gate outlets was carried out, and 60 chains of new bank was erected on the west bank of the Awanui River, thus continuing the stop-bank system to a point higher up-stream.

Six flood-gates, ranging from 18 in. to 3 ft. diameter, were placed in position to give additional outlets to the Awanui River. Five gates were installed to discharge through spoil-bank into the Whangatane spillway, and one culvert was lengthened for this purpose. Three gates were refitted with iron flaps.

The shaping of stop-banks thrown up by drag-line excavators was carried on by hand as spoil dried out, and 80 chains of bank completed. About 30 chains of bank constructed of light peaty soil was planted in Kikuyu grass in order to bind and strengthen the embankment.

Bridges.—Five sill bridges were erected over outlet drains to serve severances, and the Kareponia Road bridge was raised 3 ft., lengthened 54 ft., and approaches reconstructed to conform to enlargement of the Whangatane spillway. A temporary bridge was erected at this point to carry traffic pending completion of the permanent structure.

Buildings, &c.—Two small buildings were erected, one for accommodation of dredge crew of No. 18, and one for storing tools and stores for dredger No. 27. All wooden buildings and surplus plant were painted.