

For various reasons, all of the dredges have not been continuously employed during the year, but where conditions favoured rapid construction two shifts were worked on four of the dredging-plants.

No. 19, Michigan land dredge, has been on loan to the Public Works Department, and No. 20, Rood land dredge, was laid up for some months. No. 23, Dipper dredge, is idle in the Upper Elstow Canal, as the work cannot progress until an agreement is completed with the Elstow Drainage Board.

Owing to the exceptionally low summer flow in the Waitoa River, it was found impossible to float No. 24, Dipper dredge, to the point of commencement of the proposed Whakahoro Relief Canal. As soon as the river rises this dredge will be placed in commission. This canal will provide a main outlet for a large portion of the Waitoa Drainage District through the recently formed Tahuna Drainage District.

The following table shows the quantities excavated by the dredges during the past eight years, and the average unit cost :—

Year.				Cubic Yards.	Cost per Cubic Yard.
1920-21	..	..	..	.. 158,865	7·42d.
1921-22	..	..	..	.. 246,022	7·29d.
1922-23	..	..	..	.. 440,092	8·20d.
1923-24	..	..	..	.. 508,654	7·27d.
1924-25	..	..	..	.. 822,286	5·86d.
1925-26	..	..	..	.. 856,653	6·32d.
1926-27	..	..	..	.. 647,182	7·42d.
1927-28	..	..	..	.. 652,413	7·32d.

No. 1, Priestman dredge, was engaged on the Piako River improvement-works, Awaiti Canal construction, and pulling willow-stumps along the river-banks. The total quantity excavated by this dredge was 30,432 cubic yards, and the unit cost 12·4d. per cubic yard.

No. 2, Priestman dredge, was engaged on the Maukoro Canal and deepening the Railway Canal in the Waitakaruru District. The dredge was laid up for extensive overhaul during the year, and owing to the necessity for the construction of dams in the cut to raise the water-level as the dredge advances dredging operations have been intermittent. Two shifts were employed, with a very creditable output of 126,375 cubic yards, at unit cost of 5·12d. per cubic yard.

No. 6, Priestman dredge, was engaged entirely on Piako River improvement-works. In September last this dredge was taken through the Ngatea Bridge, and has since been enlarging the channel between the six- and eight-mile pegs. Work on this reach has to be carried out when river-level is about half-tide. The total quantity excavated during the year was 46,225 cubic yards, and the unit cost 8·31d. per cubic yard.

No. 11, Kingston dredge, was employed for three months on the Waikoura outlet, Kaihere District, and for nine months constructing the Awaiti Canal. Two shifts have been worked during the last four months of the year. The quantity excavated was 67,177 cubic yards, at cost of 8·12d. per cubic yard.

No. 15, Bucyrus dragline, working two shifts was engaged for ten months constructing the Awaiti Canal and stop-banks. For the last two months of the year this plant has been removing a troublesome slide from the Piako River near Kaihere Wharf. The output for the year was 114,796 cubic yards, and the unit cost 7·2d.

No. 16, Bucyrus dragline, has been engaged on stop-bank construction on the Piako River between Ngatea and Kaihere Wharf. Two shifts are employed, and the output was 112,134 cubic yards, at a cost of 7·75d. per cubic yard.

No. 20, Rood land dredge, was in commission for four months of the year only, and during that period was engaged on the construction of a large drain and the cleaning-out of machine-excavated drains in the Kerepeehi Block. The quantity excavated was 28,234 cubic yards, at unit cost of 5·21d. per cubic yard.

No. 24, American steam dipper, was for seven months engaged on the construction of the Lower Elstow Canal along the southern boundary of the Kerepeehi Block extension. A total of 127,040 cubic yards of material was excavated, at a cost of 4·01d. per cubic yard.

CENTRAL DISTRICT.

The principal activities in this district were : river-improvement works extending over a distance of six and a half miles, including channel enlargement, stop-bank-improvement, and removal of willows ; construction of 4 miles 58 chains of road on the Kerepeehi Block and 1 mile 50 chains of embankment road between Puhanga Canal and Kaihere Landing, where two large slides have proved very troublesome ; cleaning 30 miles 30 chains of drain and improvement of 7 miles 63 chains of drains, necessitating the excavation of 27,257 cubic yards of spoil, and 12,343 cubic yards excavated in the construction of 1 mile 67 chains of new drain ; 24 chains of road was formed and metalled in Kerepeehi Township, and 2,324 cubic yards of clay conveyed by tramway for relaying Torehape Road. One 37-ft.-span road-bridge was constructed on the Kaihere Road, and concrete piles have been placed under the abutments of the ferro-concrete bridge over the Ngarua Stream.

The Lower Elstow Canal, forming the southern boundary of the Kerepeehi Extension Block, was completed in October. The clay won from this canal will be utilized to complete the stop-banks surrounding the Kerepeehi Block, and it is anticipated that as a result of the drainage provided by the canal the banks will be sufficiently consolidated next summer to support the permanent embankment.