

WESTERN DISTRICT.

Good progress has been made with the works remaining to be done in this district, and final deepening-work has been done or is in hand on practically all the hand drains in the area. The completion of dredging in the Omeheu outfall has made a decided difference here, and has enabled sufficient fall to be taken up in the Adjunct, Awaiti Road, Tarawera Western, Omeheu, and Grieve's drains and outfalls. The widening of the deviations in the Awaiti-Paku Stream lower down should greatly lessen the danger from flooding in low-lying country hereabouts. The stop-banking of the Tarawera River has proceeded steadily, and many of the points where dangerous flooding occurred last winter have been made secure. The only areas requiring particular attention are that to the north of the Awaiti Stream and served by the Tarawera flood-gate, and the small area to the west of the Tarawera River. There is a Priestman dredge operating in each of these areas. Groynes to confine the waters of the Tarawera River to a straight channel where it enters the sea have been in course of construction during the year, and it is hoped that these will shortly be sufficient to ensure a good outlet. It must be remembered, however, that the watershed of this river is almost entirely covered with volcanic ash and pumice, and consequently its waters are continually charged with these materials. During the dry-weather season, when the outflow of the river is at a minimum, there will naturally be a tendency for the river to deposit its load in the slack water at the mouth, with temporary detrimental results to drainage. However, the groynes being erected are calculated to be sufficient to prevent the mouth wandering along the coast during this period of deposition, thus securing a position most favourable to a speedy return to best conditions as soon as the wet season commences.

DREDGES.

Altogether seven dredges, comprising four Priestman grabs, two Monighan drag-lines, and one Bay City dipper dredge, have been continuously employed on works. A total of 788,059 cubic yards of spoil, covering a distance of 2,162½ chains, was lifted during the period at a cost per cubic yard of 5·56d. This is an exceptionally large output for one year's operations. The digging generally has, however, been in easily excavated country, and it has been possible with the range of machinery now on the works to handle each job with the type of plant most suitable.

No. 3 Priestman dredge, which was working in the Kopeopeo outfall, Kopeopeo deviation, Western drain outfall, and Western drain, completed work late in the period, and is being dismantled preparatory to being transferred to other works. During the period this plant covered a distance of 413½ chains and lifted 100,713 yards of spoil.

No. 4 Priestman dredge completed work in the Omeheu Canal and Awaiti-Paku Stream deviations late in the period, and is at present working towards the Tarawera flood-gate on Seccombe's drain. The dredge should reach there early in the coming period, and will then deepen a length of the old Rangitaiki River and work back up Seccombe's drain to Section 110 drain. During the period 137,854 yards of spoil were lifted, covering a distance of 349 chains.

No. 8 Priestman dredge has been doing excellent work in the Tarawera River taking off bends and erecting stop-banks to prevent flooding. During the period a total of 107,466 yards of spoil were lifted and deposited to form stop-banks, and a distance of 323 chains was covered. The worst portions of this bank are now nearing completion, when progress will be more marked.

No. 9 Priestman dredge, which was working in the Awakaponga outlet, completed this late in the period and pulled back to commence in Awakaponga drain. The high banks, necessitating damming, and the difficult nature of the country have made progress in this drain somewhat slow. The plant will be assisted on this work by the Bay City dredge, which will commence at the railway-line and work northwards. During the period this plant covered a distance of 203 chains and lifted 128,121 yards of spoil.

No. 17 Monighan dredge, which commenced work at the mouth of the Orini Stream, has an exceptionally good record of work to her credit, and on the last day of the period completed the stream improvements. A total distance of 207 chains was covered, and 117,420 yards of spoil were lifted. After a few days' overhaul this plant will walk across country to commence work on the Waioho Stream and the White-pine Bush Road drain. The dredge will widen and deepen this latter drain, and will use spoil to erect stop-banks to prevent flooding from the Waioho Stream and Whakatane River.

No. 18 Monighan dredge commenced work in the Kopeopeo outfall at the beginning of the period, but owing to the treacherous nature of banks the machine got into difficulties, and some time was lost in replacing parts, including main walking-shaft and cams, which became damaged. Eventually a fresh start was made and a new dredgemaster put in charge, and to date exceptionally good work has been done. A total distance of 152 chains was covered during the period, and 61,989 yards of spoil were lifted.

No. 21 Bay City dredge has a splendid record of work to its credit for the period, having covered in all a distance of 515 chains and lifted 130,756 yards of spoil. Most of this work was through difficult country, and much heavy timber was encountered. At the beginning of the period work was commenced on the Awaiti Road drain from the railway-line northwards, and after completing this the plant worked south to the railway-line, cleaning up, and continued on to Section 143, from where the machine walked across country to work down the Tarawera Western drain. At the end of the period the dredge had practically completed this work, and will be shifted across to the Awakaponga drain.

The following table shows the total amount excavated, with the cost per cubic yard, for the past ten years:—

	Cubic Yards.	Cost per Cubic Yard.		Cubic Yards.	Cost per Cubic Yard.
1914-15 ..	268,760	3·48d.	1919-20..	176,672	6·62d.
1915-16 ..	224,740	4·54d.	1920-21..	215,768	8·82d.
1916-17 ..	261,751	4·36d.	1921-22..	473,994	6·68d.
1917-18 ..	320,614	3·72d.	1922-23..	540,802	8·13d.
1918-19 ..	229,659	5·70d.	1923-24..	788,059	5·56d.