Mokauiti Willow-clearing.—Four miles of willows previously poisoned on the Mangawhero and Huiteko Streams have been cut, hauled, and stacked. A distance of 1 m. 40 ch. has been similarly treated on the Mokauiti Stream, leaving 1 m. to be undertaken to complete the programme.

Wanganui River (Willow-clearing).—Over a length of 1 m. all willows on the banks and on the islands between, across the proposed width of flood channels, have been cut; of this distance, 75 ch. has been stripped and poisoned.

Ohura River (Willow-clearing).—Over a length of 5 m. retreatment of willows and poisoning of seedlings was carried out. Mixtures of varying strengths were applied at different periods of the year for experimental purposes, the result of which will not be known until next summer.

Napier District.

Kumeti Drain.—Thorburn's Bridge and Protective Works: The decking, which is of hardwood, and the hand-rails were added to complete Thorburn's Bridge which spans the new concrete chute. It has a length of 29 ft. and a deck width of 12 ft. In Section 7, upstream from Thorburn's Bridge, 1,712 cubic yards (loose measurement) of spoil was excavated from the creek-bed to complete a stop-bank 10 ch. on the south side of the creek and another 8 ch. long on the north side. These stop-banks are up to 6 ft. in height and converge on a stone-and-netting weir 6½ ch. above Thorburn's Bridge. Three hundred cubic yards of spoil was excavated for the second weir above Thorburn's Bridge at a distance of 6½ ch. upstream from the bridge. Two hundred and twenty-two cubic yards of stone and netting gabion work was used to construct this weir, which is 35 ft. wide on the crest and 5 ft. high from the top of the mat to the crest. The crest steps and mat of the weir were concreted to protect the wire from wear. Two groynes requiring 75 cubic yards of stone and netting work were put in below Thorburn's Bridge to prevent lateral erosion. Six hundred poplar-trees were planted along the toes of the stop-banks in Section 7. Ordinary maintenance-work on the system of stone-and-netting weirs in Kumeti Drain proper involved the addition of a mat 10 ft. wide to No. 1 weir at the lower end of the drain and the extending and raising of the end contraction gabions of a number of other weirs.

Ngaruroro River-control Scheme.—This scheme was continued and work proceeded without interruption until 25th January, 1938, when a heavy flood occurred and was followed by others on 19th February, 25th April, and 2nd May. Wet conditions prevailed over this period and little progress could be made. Flood damage was confined to short lengths of newly built levee on which no grass or vegetation had grown, but the aggregate loss was comparatively heavy. The channel of the river was widened and generally improved by the floods, but in places erosion threatened the levees, and protection work had to be done. The work completed during the period comprised 9 m. 40 ch. of levees built to grade height, 4 m. 60 ch. on each side of the river. On the overflow 4 m. of levees have been built to a reduced level. 4 m. 40 ch. of drains have been excavated in the Puninga Swamp Area, the total quantity of earth removed was 379,116 cubic yards, of which 249,057 yards were put on the river levees, 8,232 yards excavated from drains and not put on levees, and 50,943 yards replaced in repairs following the floods. Fencing has been completed on both sides of the levees, an eight-wire fence on the boundary and a three-wire fence on the river side of the protective belt; altogether 5 m. 20 ch. of eight-wire and 7 m. 40 ch. of three-wire fence has been erected. Four miles of protective belts have been planted.

Tutaekuri River-control Scheme.—As reported last year, this work was nearing completion and little new work has been carried out in the period under review. In July, 1937, the gap where the river flowed into the Waitangi Stream and out to sea was closed and the new outlet under the Waitangi Washout Bridge was made, work at this stage being difficult and at times carried out in the water and generally under very wet conditions. The scheme has been a complete success so far, the banks having withstood all floods and the outlet proving satisfactory. Two heavy floods—one at the end of January and the other at the end of February—did no damage, but scoured a very good channel straight out to sea. The estimated discharge in the January flood was 60,000 cusecs, but the channel was not overtaxed after the mouth opened, and the flood-waters were rapidly discharged. Later, on 25th April, an exceptionally heavy flood was experienced, and over a period of three days the rainfall in the Tutaekuri Drainage Area was: Mangaone Valley, 17·1 in.; Te Pohue, 19·45 in.; Puketitiri, 39·4 in.; Rissington, 19·30 in. This flood is considered to be the heaviest which has occurred since 1897, and rose to within 3 ft. 6 in. of the levees near the Waitangi Washout Bridge. At this point the bed of the river scoured down 40 ft. from the original level over a width of some 50 ft. to 60 ft. and caused serious damage to three piers. The Mangaone River, a tributary of the Tutaekuri River, was measured at Rissington, and for a drainage area of 81 square miles the run-off was 39,200 cusecs. The estimated discharge near the mouth of the Tutaekuri River for this great flood was 74,000 cusecs. During the year the groyne on the north bank at the mouth was completed and has acted in a very efficient manner. The Bay City excavator has widened and deepened the channel above the bridge, with the result that the water-level in the channel higher up was lowered 1 ft.

Wellington District.

Hokio-Manawatu Rivers (Sand-dunes Reclamation).—The reclamation work in this vicinity has progressed satisfactorily during the period. The main activities consisted of planting marram-grass over 170 acres and sowing lupin-seed and planting out trees over an additional area of 200 acres. Additional land, totalling 325 acres, has been acquired and is to be reclaimed similarly.

Hutt River Estuary (Reclamation).—An additional 485,894 cubic yards of spoil has been excavated and dumped on the reclamation, giving an area of 48·5 acres of new land. With the work carried out last year the reclaimed area now covers 74·5 acres,