

IRRIGATION.

IDA VALLEY SCHEME.

Extensive drainage-works were put in hand during the last year and ordinary maintenance has been carried out. In January last a thunderstorm occasioned damage, but this was quickly repaired. During the season water was supplied to fifteen settlers in Ida Valley and sixteen on Galloway Flat. In connection with the Galloway Flat scheme a survey for the amended main race was completed.

MANUHERIKIA SCHEME.

The work of driving the tunnel was confined to the outlet end, and only 1.22 chains remain to be done. The main race was extended towards Clyde, and completed as far as 21 m., except for various flumes and a portion from 19 m. 61 ch. to 20 m. 30 ch., which is in hand.

WAIHOU AND OHINEMURI RIVERS IMPROVEMENT.

This work has been carried on during the year, and the following shows the principal operations :—

Puke-Ngahina Stop-bank.—A three-barrelled concrete standard culvert, fitted with flood-gates and sluices, was built at Stock's drain, and the necessary filling done to formation level. The road on the top of the stop-bank was metalled.

Ngahina Wharf and Goods-shed.—The existing shed was extended, and the wharf lengthened by 65 ft. A 7 ton stiff-legged crane has been erected on the up-stream end.

Kuaotiti Stream Flood-gate.—The old timber flood-gate was shored up and repaired.

Tirohia-Ngararahi Left Stop-bank.—93 chains of stop-bank were formed with material dredged from the river-bed. All necessary clearing to the point where the partly constructed stop-bank commences has been completed.

Tirohia-Ngararahi Right Stop-bank.—2 miles of the site has been cleared with the help of steam log-hauler, 12 chains of the complete bank formed, and 1 mile 33 chains of modified section bank formed.

Rotokohu Drainage.—A dipper dredge has been employed on this work with good results. The dipper has done 103 chains of ditch.

Cooper's Drain Flood-gate.—The box culvert has been replaced by a standard two-barrel 115 ft. culvert. The outlet drain to Mill Road was enlarged to final dimensions.

Awaiti Gap Stop-bank.—40 chains of stop-bank has been completed.

Ohinemuri River.—Willows have been cleared of overhanging branches on both banks between the old junction and Criterion traffic-bridge.

Groyne at Puke.—A 50 ft. totara groyne was constructed, and has proved successful in diverting the current and preventing erosion.

Paeroa Stop-bank.—Right bank has been completed so as to positively protect the Town of Paeroa.

Ngahina Bridge Extension.—Timber is on hand for construction of the extension of the bridge on the right bank of the Waihou River.

The Rivers Commission sat at Paeroa in October, 1919, and reported upon the Waihou River below Ngahina Bridge. Their recommendations have been adopted.

TRAMWAYS.

Auckland.—Inspection of several lengths of duplication, totalling 99 chains, has been carried out and the work approved.

Napier.—The usual inspection of tramways in this town was made.

Wellington.—A small loop-line has been approved, and minor inspections have been made.

Christchurch.—Proposals for relaying portions of the line have been approved, as also the laying of new lengths. Designs for new cars and alterations to trailers and cars have also been approved.

Dunedin.—A number of minor inspections were made. Plans of new bogie cars and trailers have been inspected, while proposals for a balloon loop have been approved. Plans of reinstatement of the Mary Hill cable-tramway line were also approved.

MARINE.

Numerous inspections and reports have been made on behalf of the Marine Department, mainly in connection with harbour-works, reclamations, wharves, foreshore leases, &c. Among the various works dealt with during the year the following are selected for brief mention :—

Cape Maria van Diemen.—Joinery repairs have been carried out, and two new dwellings are shortly to be erected.

Russell Harbour.—A plan has been prepared indicating improvements required.

Helensville Rivers.—An order has been placed for an automatic light to replace that at the entrance to the river from Kaipara Harbour, which latter will be removed and re-erected on the South Head at the entrance to Kaipara Harbour.

Mercury Island Passage.—A powerful automatic light is on order and will be placed on Ohena Island.