

Poolburn Dam.—Borings have been taken here, and investigations are in progress with a view to carrying the irrigation head-race across the Poolburn by means of a flume or an inverted siphon to obviate the construction of the proposed dam.

MANUHERIKIA—ALEXANDRA—CLYDE SCHEME.

Survey-work was continued during the year, comprising chiefly the setting-out and pegging of distributary race-lines. The total mileage now set out on both sides of the Manuherikia River is about 55 miles, which, however, includes some alternative race-lines. For the period 32 miles of distributary races were surveyed, and the long cross-sections, trial and check lines total close on 130 miles. A main distributary race has been set out from 6 m. 59 ch. on the main-race line, and taken across the river to the Galloway side. Definite calculations give the area of irrigable land which can be served on the Moutere side of the Manuherikia River at 9,000 acres. On the Galloway side 1,000 acres are available.

Race-construction.—One small contract has been completed and another is in hand, the work done to date comprising about 50 chains of completed race between 0 m. 15 ch. and 1 m. The Department's co-operative workers have completed the next mile, and have commenced work beyond 2 m.

Intake.—The exact character and location of the intake are still undecided. Some further investigation has been made during the year.

Rainfall Data.—Five new rainfall-recording stations have been established in connection with this scheme.

WAIHOU AND OHINEMURI RIVERS IMPROVEMENT.

Dredging.—The new dredge was completed by the contractors on the 21st May, 1915, and the excavation of the Koutou cut to bed-level was commenced the following month. This cut straightens out a meander about $\frac{3}{4}$ mile long on the Waihou River, the length of the cut being 9½ chains. It was deepened to the extent of 11 ft. on a width of 145 ft., the work being completed in February last. The material is fairly stiff clay, which was deposited at a distance of 5 chains from the dredge. Earthen dykes were constructed to retain the dredged material. The dredge then deepened the berthage at the new Paeroa Wharf. Experiments are now being made to determine the most economical method of constructing the large amount of stop-banks required. A large coal-pontoon was built locally for use in connection with the dredge.

Dredge Slip Reserve, Paeroa.—A road was made to this reserve, and a store, 30 ft. by 20 ft., erected.

Willow Clearance.—Some difficulty was experienced owing to decayed willow-tree stumps floating down-stream, and, as a large number of these trees, which had been killed by poisoning during the past four years, showed signs of falling into the stream, all overhanging trunks for a length of about 8 miles were removed and stacked ashore.

Silting of Rivers.—A considerable amount of data has been obtained monthly and tabulated.

Snagging.—A barge, 36 ft. long by 18 ft. wide, with crane and fittings, is being constructed for use in snagging and for general purposes.

Stop-bank, Junction to Thorp's Bend.—This work was resurveyed and working plans prepared, the total length being 66 chains, of which 12 chains has been constructed by means of the dredge.

Tirohia—Ngararahi Stop-bank.—Tenders have been received for two contracts comprising the construction of 67 chains of stop-bank immediately northward of the Ngararahi Cut. Further contracts are being prepared for advertising.

Surveys have been carried out at Hikutaia Creek and elsewhere as required.

TRAMWAYS.

Auckland.—The construction of a double line of tramway from the junction of Queen and Wellesley Streets along Queen Street to Karangahape Road has been authorized. An alteration to the track in Customs Street West in connection with street-improvement is nearing completion.

New Plymouth.—This undertaking is now practically completed. All permanent-way has been laid, and the power plant and overhead gear are almost completed. Two sections have been passed as fit for traffic, and five cars have also been passed.

Wanganui.—At the beginning of the period the Wanganui electric tramways were extended for about a mile along the river-bank road from the railway at Aramoho.

Wellington.—The Constable Street duplication and extension has been completed and passed for traffic, also sundry loops and cross-overs, and several new cars.

Christchurch.—The Sockburn, Coronation Street, and Barbadoes Street extensions have been completed and passed. A deviation across the estuary, from the Shag Rock to the Sumner Tramway Bridge, is under construction. Two new trailers have been inspected and passed.

Dunedin.—The City Council's proposals for alteration of curves to suit improved rolling-stock have been approved, also the designs for the new cars, and an amended layout of tracks at the car-depot.