

Maraetai Scheme.—Most of the work for the year was of a preliminary nature, good progress being made with access roading, temporary bridging, extensive surveys, and investigations.

Work was commenced on rock excavations for the inlet and outlet ends of the diversion tunnel.

Although mechanical means were fully employed, the shortage of artisans was a handicap.

Highbank Power Scheme.—The power-station operated during the winter of 1945. An extra 150 ft. has been added to the concrete lining of the tailrace, and the construction of a new access roadway to the station is now in hand. Certain permanent village buildings damaged by the flood of 1945 were resited, and a new water-supply, drainage, and roading has been completed.

Lake Tekapo Scheme.—During the past year progress has been difficult owing to loose and broken country above the old test drive, and the presence of a seam of large boulders requiring boring and shooting. The seam is gradually lifting, and the shield should soon pass under it. Certain mechanical difficulties have been experienced with the shield, but these have largely been overcome, and the experience gained with this shield is built into a second shield which has been manufactured at Temuka Workshops and erected in the gate-shaft chamber at the lake end of the tunnel. A ventilation system has also been installed.

Detailed surveys have been carried out for the siting of the power-house, surge chamber, tailrace, and the dock-site for the section of the tunnel intake which is to be built and floated into position. A rotary screen, belt-conveyers, new sand-wash, and new batching-plant have been installed, and sufficient washed and screened stock pile of concrete aggregates is available for winter months.

General maintenance and improvements have been carried out on roads, accommodation, and facilities.

Black Jack's Point Scheme : Waitaki River.—A contract has been let for metalling 10 miles of access road to the proposed site. The design for a suspension bridge is under consideration.

Cobb River Scheme.—Work during the year covered further investigations of the foundations on the dam-site, with a view to the further development of this useful scheme. As in the past, difficult conditions were met in the exploration shafts, due to water inflow. An average of 53 men was employed. Routine maintenance was carried out on access roads and workmen's accommodation.

IRRIGATION

In both Otago and Canterbury, wet winter and spring conditions increased the amount of maintenance work necessary on some schemes. Further flooding after the major flood of 1945 caused damage in particular localities in Canterbury, and the whole irrigation season in Otago was characterized by unusually heavy rains, which continued into January. In the first five months of the season, commencing September, 1945, the Alexandra rainfall amounted to 72 per cent. of the annual average.

Central Otago.—The sales on the Omakau Scheme, operating on a demand basis, improved upon last year's figures, being 6,518 acre/feet, compared with 3,624 acre/feet for 1945.

New construction work was limited to minor extensions on the Ida Valley Scheme and shortage of casual labour hampered maintenance work in the off-season.

Further surveys and investigations for the proposed Maniototo Scheme were undertaken.