

the spillway is 1,200 feet. The slope of the upstream face is 1 in 5, and of the down-stream face 1 in 2 to 1 in 4. The width of the spillway is 250 feet, with 15 feet of free board, which provides spillway capacity considerably in excess of any recorded flood. The construction of the new dam provided storage amounting to 180,500 acre feet available for power purposes.

The total quantity of material in the dam amounts to 544,710 cubic yards. Of this quantity, 116,360 cubic yards consists of rock placed in the toes by hand and by cableways; the remainder of the material in the dam is sluiced material.

During the construction of the dam the outflow from the lake was carried around the dam site in a tunnel driven under the spillway. This tunnel has an area of 412 square feet and is 490 feet in length; it was designed to carry 12,000 cubic feet per second. For controlling the flow of water through this tunnel, permanent gates are placed in a concrete tower at its upper end.

As the City of New Westminster had drawn its water supply from Coquitlam Lake since 1892, and as the raising of the lake level rendered the original intake works useless, an entirely new intake for the New Westminster Water Works had to be provided. The new intake structure is a substantial concrete tower founded on bedrock on the east side of the lake, about 1,000 feet north of the dam. The tower is circular in plan, with an inside diameter of 18 feet. In the walls of the tower four intake openings are provided, which are protected by screens and controlled by means of gates placed within the tower. A



Coquitlam-Buntzen Development. Intake Valve House, Plant No. 2, Lake Buntzen.