

Measurement of the flow at the Chaudiere Falls shows that at extreme spring flood 150,000 cubic feet per second goes to waste over the falls. At extreme low water the flow declines to 10,000 cubic feet per second. To prevent the waste in spring and utilize it to augment the diminished flow in the low water period is the object of the storage system.

filled up with a reserve supply. This can be fed out during November, December, January, February and March, thereby doubling the present insufficient low-water flow."

A stream 100 feet wide and 3 feet deep, running at the rate of 1 foot per second, or $\frac{2}{3}$ mile per hour, would practically fill one square mile a foot deep in 24 hours;

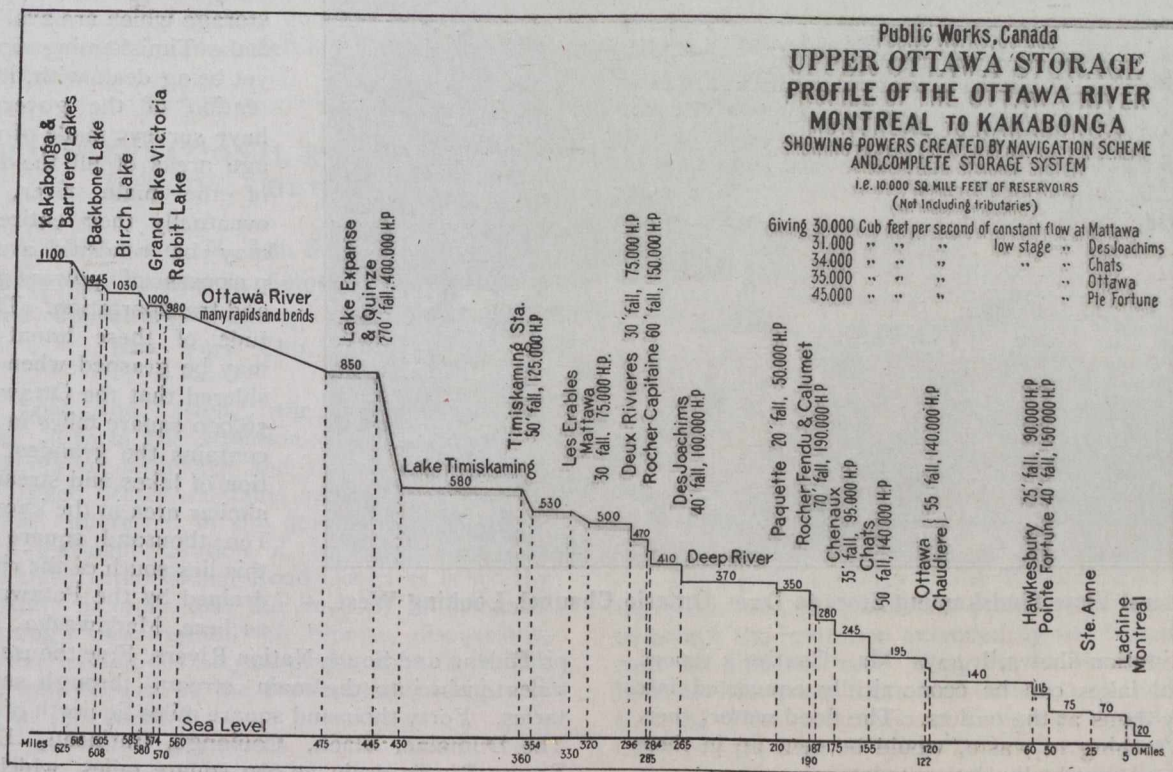


Fig. 2.

In a progress report upon the Ottawa River Storage System, Mr. Coutlee says: "The capacity of each of the three lakes, Timiskaming, Kipawa and Quinze-Expense, is about 100 square miles in extent and a layer 20 feet in depth stored in them would be 2,000 square mile feet of storage. Altogether, then, their storage would amount to a depth of one foot over 6,000 square miles. It would

or, more exactly, 322 c.f.s. will fill or empty a square mile one foot deep in one day.

It is further estimated that perfect control would require a constant flow of 31,000 cubic feet per second, and that this can be obtained by a further system of dams which will remain and regulate the waters of the numerous lakes and tributaries of the Ottawa between the

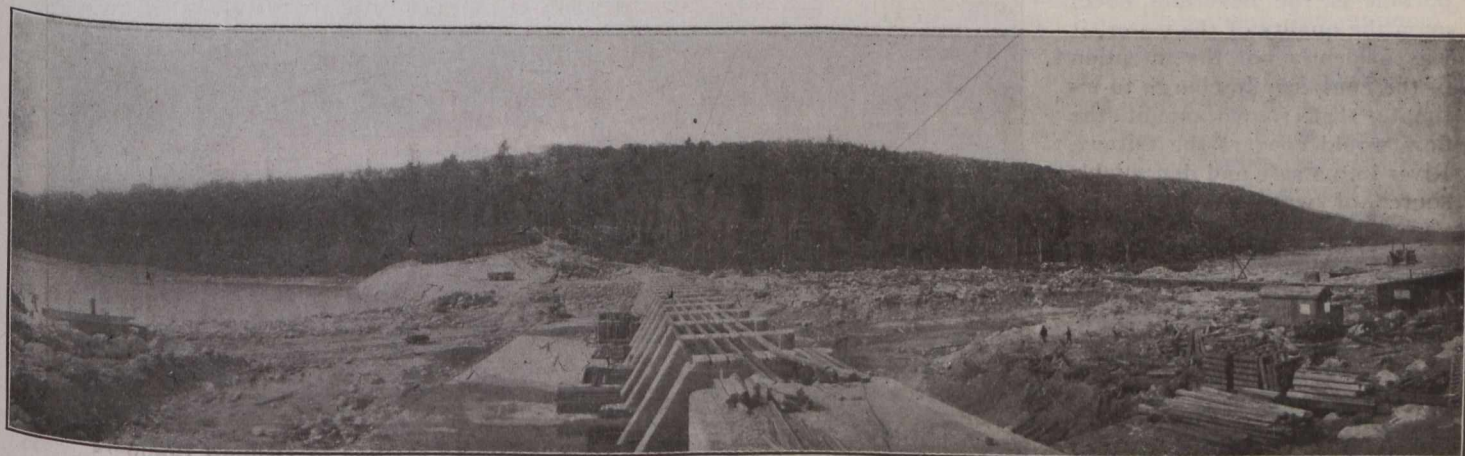


Fig. 3.—Timiskaming Dam, Ontario Side.

take a flow of 18,000 c.f.s. to empty the three reservoirs in 100 days, or a flow of 12,000 c.f.s. to empty them in 150 days—the average low-water period of the river. If we encroach upon the spring flood and allow only a normal flow to pass, these three great reservoirs will be

Quinze-Expense basin and the source of the river. These include Lakes Opasaica, Grand Lake, Victoria, Barriere, Kakabonga, etc., which would give an additional 5,000 square mile-feet of storage. Although, measuring across country from the head of Lake Timiskaming, the Ottawa