

The Canadian Engineer

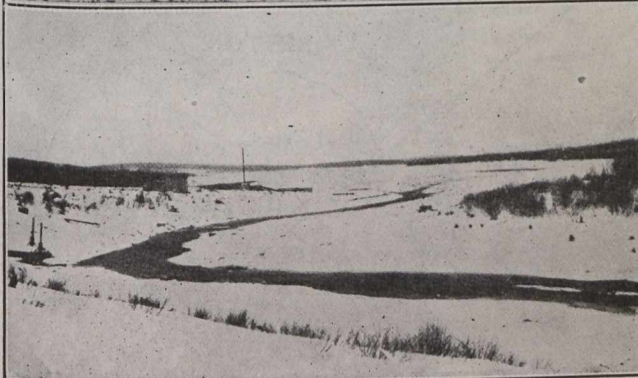
A weekly paper for engineers and engineering-contractors

ST. FRANCIS RIVER STORAGE DAM

DESCRIPTION OF THE STORAGE WORKS AT THE DISCHARGE OF LAKE ST. FRANCIS, NOW UNDER CONSTRUCTION FOR THE QUEBEC STREAMS COMMISSION FOR REGULATING THE FLOW OF THE RIVER AND ITS TRIBUTARIES.

IN *The Canadian Engineer* for July 8th, 1915, a brief outline appeared of the contemplated regulation by the Quebec Streams Commission of the run-off from the St. Francis River water shed in Quebec province. The river is one of variable flow and subjected to heavy spring freshets. In other seasons the various industries

The storage dam, the location of which is shown on the accompanying map, and the contract for the construction of which has recently been awarded to Madden & Company, of Quebec, for the sum of \$101,000, is designed to raise the water 27 ft. above low-water level, thus increasing the area of the lake 6.7 square miles and the



Present Dam at Outlet of Lake St. Francis.
Flow in March from Lake St. Francis.

North Channel of River at Site of Proposed Dam.
Flow in October from Lake St. Francis.

utilizing its numerous water powers are handicapped by shortage.

The regulation scheme consists chiefly of the building of a large storage dam at the outlet of Lake St. Francis. In addition, it involves the construction of a 540-ft. bridge across the River Sauvage as well as the relocating and building of about six miles of roadway. It includes, also, the expropriation of about four square miles of flooded lands and the buying of the rights and privileges from the owners of the present storages on Lakes St. Francis and Aylmer. The scheme is estimated to cost \$400,000.

capacity 438 square-mile-feet. This new capacity will make it possible to regulate the flow at the outlet of the lake at 600 second-feet during the whole of the year, which is an increase of 500 second-feet over the present minimum flow during eight months.

Between the outlet of Lake St. Francis and the mouth of the river at Lake St. Peter there is a total fall of about 900 ft. Should this head be wholly utilized for generating power, the increase due to the storage would amount to 27,000 h.p.-year, or 41,000 h.p. at the extreme low-water period. Only 200 ft. of the available head is being utilized, however, and hence the amount of power due to