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Proposed Power Developments Near Halifax

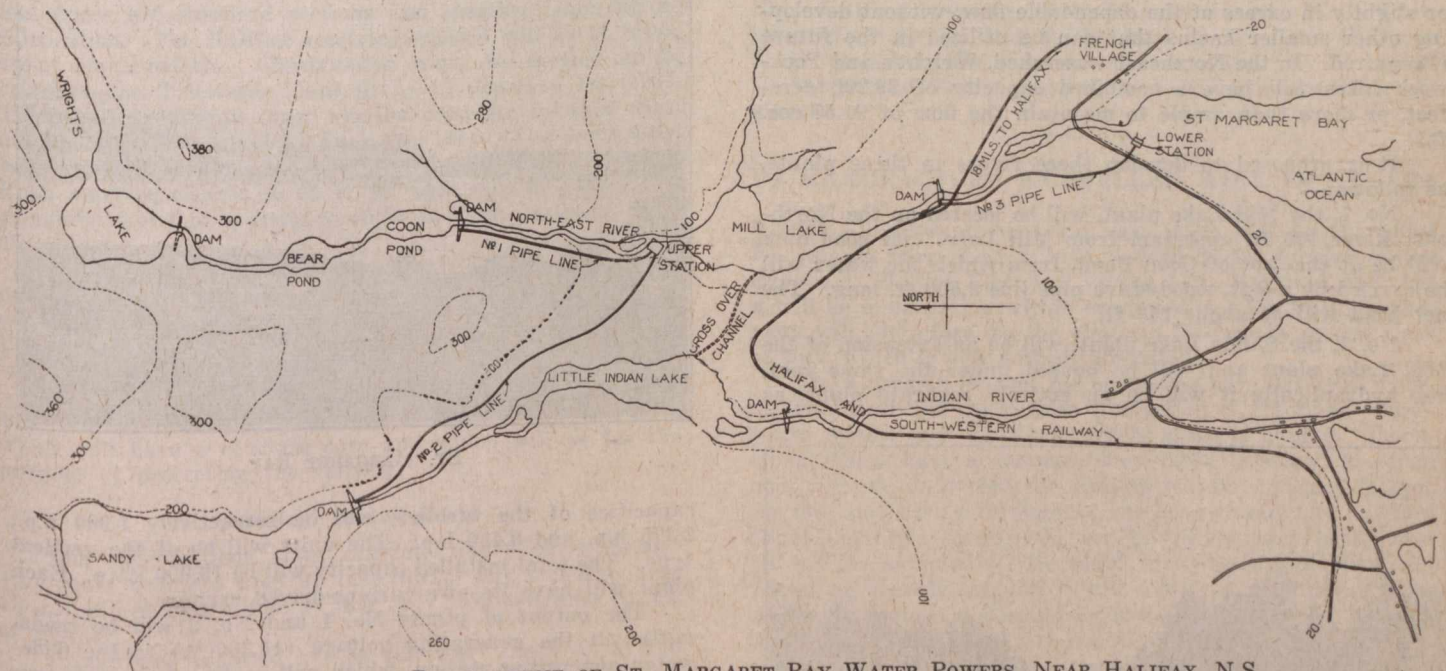
Northeast and Indian Rivers to be Developed in Two Stages by Nova Scotia Power Commission—Generating Capacity to Total 13,000 K.V.A.—Three Hydraulically Independent Plants Served by Separate Dams and Wood-Stave Conduits

DEVELOPMENT of the Northeast and Indian rivers, at a cost of approximately \$1,050,000, will be started at an early date by the Nova Scotia Power Commission and will provide the city and district of Halifax with about 10,500 h.p., which will likely be sold at about one cent per kilowatt-hour. Tenders are now being received for the hydraulic and electrical machinery and for the construction of the first two of the three parts into which the development is grouped.

About 18 miles due west of Halifax, the Northeast River flows into St. Margaret Bay, an arm of the Atlantic Ocean. Roughly paralleling it, and about a mile farther west, is

terior, and show that the mean discharge of the Indian River for the year ended September 30th, 1916, was 191.7 sec. ft., or 38.29 ins. on the drainage area; for the year 1917, 39.5 ins.; for 1918, 38.88 ins.; for 1919, 41.66 ins.; or 39.58 ins. average for the four years.

The Meteorological Service Station at Halifax has compiled records of precipitation for the past 51 years, over which period the average has been 55.98 ins.; the lowest, 46.11 ins.; the highest, 68.27 ins. The variations from the average have not been great; the lowest was 82.3% of the average. The four-year period, 1914-8, was a cycle of low precipitation. The average for the four years ended Sep-



PLAN OF PROPOSED DEVELOPMENT OF ST. MARGARET BAY WATER POWERS, NEAR HALIFAX, N.S.

the Indian River. Both rivers are on the southern slope of the Nova Scotian peninsula and extend northward to a height of land about 500 ft. above sea level.

The watersheds of the Northeast and Indian rivers adjoin throughout their length and are respectively 35.5 and 68 square miles, measured above the Halifax & Southwestern Railway. Both watersheds are well forested, rough, rocky and but sparsely settled. Northeast River is approximately 17 miles long and the Indian River 19 miles. Both have lakes that are excellent for storage purposes. In the Northeast watershed, Wright's Lake and Pockwock Lake, farther north, are especially adaptable to water conservation. In the Indian watershed, Five-Mile, Big Indian and Island lakes are the principal ones for storage purposes.

Run-off data for the past four years have been obtained by the Nova Scotia Water Power Commission in co-operation with the Water Power Branch of the Department of the In-

ter 30th, 1919, was 52.15 ins. Therefore the run-off records above mentioned show that for these four years the run-off was about 76% of the precipitation.

Making allowance for greater evaporation due to the creation of storage lakes of larger area than the natural lakes, it is estimated that the run-off will be 70% of the precipitation. Based upon the records for the past 51 years, it is assumed that a precipitation of 50 ins. is assured, as the average for 51 years was 55.98 ins., and in only 5 years of the 51 was the precipitation less than 50 ins., whereas for 9 years it was over 60 ins. It was less than 50 ins. in 1875, 1881, 1905, 1917 and 1918. In 1919 it was 59.3 ins. A run-off of 35 ins. is therefore assumed as a conservative figure.

As the run-off on the Northeast watershed is difficult to measure owing to several mills and storage lakes which introduce elements affecting the daily flow and for which