

*The Budget—Mr. MacNicol*

an adequate, permanent supply of water for those people. I appeal to the minister to bring in a gigantic programme, if that is required, in order to give those cities the water supply to which they are entitled. Many industries would be attracted to them as a consequence of such an undertaking and they would expand and give handsome returns to the people of the east, the workers of the different ridings in the east, by providing jobs to make the goods that would be required.

By 1938 that commission finally presented a programme and by 1939 commenced to build the present works. I will not say anything about the present works apart from this. I am satisfied that if the P.F.R.B. engineers had been furnished with the number of millions of dollars necessary to do a real job they would have done it, and a permanent, adequate supply of water for those cities would have been provided. More than that, I believe they would do as good a job as any other engineers could perform. That is the best I can say for them. But of course they did not have the money. I will not say anything about the work they have done, but I will ask the minister to come forward with a real programme, and a real programme would consist in the building of a dam across the river. According to the figures I have, a dam fifty feet high would provide water for the two cities but not for irrigation, but it would provide the power required to deliver an abundance of water to the two cities. But there are dams that can be built piecemeal. The Ambursen Company of New York city have built a number of dams, some of which I have examined. Some of them have been constructed to a certain height, say fifty feet, at the commencement, and as more power was required they have been added to. There is one in New Hampshire, at Bristol, I believe. That dam was raised thirty feet some years after it was first built. But that is neither here nor there. If the government decides that only water for domestic purposes shall be provided, a fifty-foot high dam may be sufficient. If it decides that the land must be irrigated between Regina and the river it may require a 150-foot dam to produce the 75,000 horse-power, more or less, that would be needed to pump the water over the hill and to provide irrigation water as well as domestic. At any rate, while it is an engineering problem it is not an insuperable one. If the engineers are directed to do it they will do a good job. I have sufficient confidence in the engineers to believe that, given the necessary money to do the job, they will overcome almost any obstacle; and it is not an impossible task.

[Mr. MacNicol.]

I strongly recommend this. The people there are entitled to it; they need the water. Just consider what would happen if either of those cities were overtaken by a catastrophe. In the recent fire in Montreal caused by the falling plane—and that was a comparatively small fire—they required twelve lines of hose which poured out 3,000 gallons per minute for two hours to do the work. In that time they required 360,000 gallons of water. At that rate a fire lasting ten hours would require a million and a half gallons; or a fire lasting a full day would require three and a half million gallons. I hope neither of those cities will be so unfortunate as to require this amount of water for this purpose, but could either of them supply the water necessary if it should be required? Moose Jaw could not supply 3,500,000 gallons in twenty-four hours. The total capacity in Moose Jaw to-day, even under the most favourable circumstances, does not exceed two millions gallons a day, and that would not allow water to be used as it is here in Ottawa.

I made a careful tabulation of the requirements of thirteen eastern cities and arrived at an average of 117 gallons a day per person. I do not believe either Moose Jaw or Regina ever had that capacity. To adequately meet that requirement Regina, with its sixty thousand inhabitants, would need a capacity of eight million gallons a day, while the twenty-five thousand population of Moose Jaw would require not less than four million gallons a day. In order to have that supply of water available they will require a pressure line, and they will need a large reservoir, which in turn will require an adequate dam and pumping plant to get the water over the hill and through conduits to the two cities. If it were put into a pressure conduit the line would be much straighter; perhaps a good deal of it would be underground, and hence much safer. It would have to be of wood, because steel would not stand the frost, and then it could operate all year. The present ditch has never even had its maximum flow of water. I do not want to enter into that question, but I can say that in 1941, when the test of the present ditch was made, the plant pumped 550,000,000 gallons of water, but the amount that reached the Caron saturation plant was infinitesimal. When it finally reached Caron, according to a letter I received, the stream of water was about fourteen inches wide and seven-eighths of an inch deep. It was run at this capacity for only a very short time. In 1942 it was not run at all. In 1943, the year I was out there, an engineer at the plant told me—I am now speaking from memory—that