

and on the Mackenzie system. Now, as I understand it, the federal government has no authority over the use of that water upstream; but what steps can they take to ensure that proper flows will be left downstream during the filling of a reservoir?

Mr. CÔTÉ: Mr. Chairman, I would like to take that question, if I may.

The question of jurisdiction of the federal and provincial governments is an extremely complicated one, and I do not think the committee would expect Mr. McLeod or myself to be able to give a clear constitutional answer to that subject. Nevertheless, in an attempt to outline some of the perimeter of the problem, the ownership of the water, as it is within the province, seems to be that of a province or territory, as the case may be, while the water is within the boundaries.

The federal government has certain direct responsibilities, which are legislative responsibilities under the British North America Act, for certain uses of water. In regard, say, to the Peace river the federal government's responsibility is a legislative responsibility concerning the navigational use of that water, or concerning the fisheries within those waters.

Mr. PAYNE: What about the situation of interprovincial interests?

Mr. CÔTÉ: Well, Mr. Payne, I think you have put your finger on the problem which was mentioned earlier by Mr. Patterson and, indeed, was mentioned by my minister in his opening statement.

There is a problem between the provinces as to the uses of these waters in one province or in the other—the possible future incapability of use in one province in regard to the other. This is the sort of problem which Mr. Hamilton has indicated may be solved by cooperative action between the provinces.

Mr. MARTEL: Mr. Chairman, I am interested in the question of gauging and flow measuring stations from the lake downstream in the St. Lawrence. I understand from your lecture to the Royal Society of Canada that this has been done to record the levels for navigation on the Great Lakes and the St. Lawrence applying since 1860. I would like to know from your knowledge or as a result of these measurements if the water level of the Great Lakes has increased very much in ten years or twenty years. I might tell you why I want to have that answer. I may tell you that last year we have heard a lot about the diversion of waters from Lake Michigan to the Mississippi basin in southwestern United States, and I want to know what effect that could have on the original level of the lakes.

Mr. McLEOD: I think Mr. Patterson is better equipped than I to answer that question.

Mr. PATTERSON: Mr. Martel, as you have indicated, we have records since 1860 on the Great Lakes and naturally, or in nature, the lakes vary from year to year and from so-called cycle to cycle. Over that period of what is now a hundred years the lowest recorded levels on the lakes occurred in the thirties, around 1934 and 1935, and the highest recorded levels occurred in the fifties, in 1952. But there were high levels away back in the 1870's.

With regard to the effect that the Chicago diversion has on the Great Lakes, it does have an effect of course. Diversion now is about 3,200 second feet and the natural rate of flow from the lakes, if you consider all the lakes, runs around 20,000 second feet per foot range and varies in the different lakes—17,000, 18,000, 20,000; but, say, 20,000. So that if you take out 3,000 second feet from that system you lower the lakes by the 3,000 over 20,000 times 12 or approximately two inches.

Mr. MARTEL: Would that not endanger navigation in the seaway?