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EIGHTY-FOURTH LEGISLATURE OF MAINE

Report of hearing held in the Hall of the House of Representatives, State House, Augusta, Maine, on Wednesday Evening, February 27th, 1929, before the Joint Committees on Public Utilities, Judiciary and Interior Waters, relative to

Senate Paper No. 178 -- Senate Document No. 78

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Bill, "An Act to incorporate Fish River Power and Storage Company."

Senator WEATHERBEE, Chairman of the Joint Committees: The meeting will now be in order. We have met this evening for the consideration of Senate Document No. 78, Bill, "An Act to incorporate Fish River Power and Storage Company." The time for the hearing will be divided equally between the proponents and opponents of this bill. The proponents will be given one and three-quarter hours, and we shall then have an intermission of fifteen minutes, after which the opponents will be given two hours, after which the proponents will be given fifteen minutes for rebuttal. The division of this time will be in charge of Mr. Thaxter for the proponents, and Mr. Gurney for the opponents. In addressing the committees each person will first give their name and residence and state whom they represent.

Mr. SIDNEY ST. F. THAXTER: Mr. Chairman and members of the committee, I am here representing the International Paper & Power Company and with Mr. William S. Linnell of Portland will conduct the presentation of the case for the proponents of this bill.

Two years ago we introduced a bill into the Legislature the provisions of which with reference to storage rights and the rights of generating power were similar to the provisions of this bill. We asked at that time for the right to generate power on the Fish River which flows into the St. John River at Fort Kent, and we asked for rights of storage on the lakes above the Fish River in order to make that power uniform. In addition to being in the power business we are also in the business of making paper.

At the session two years ago it was fairly evident that the people of Aroostook county desired if these storage rights and

power rights were granted that we should do something in the way of industrial development in Aroostook county. I think that sentiment was expressed by Senator Bragdon of Aroostook county when he stated before the joint committees at that time as follows:

“But it occurs to me that at the session of the Legislature two years ago that a feeling prevailed that after this International Paper Company’s project at Grand Falls had begun to be talked up, that they might get storage rights in Aroostook county and that Aroostook would not get a proper return from it, and it was for that reason that the Mill Act was repealed in so far as it affected Aroostook waters.

“I understood that was perfectly satisfactory to the people of Aroostook County, and so far as I have heard from my constituents they feel the same way now. Personally, I feel that this Fish River water could be used to better advantage through the International project at Grand Falls than it could in any other way. But so far as the return that the State of Maine will get from it under this proposed bill and its amendments, I must say that I am somewhat uncertain. It seems to me that it would not be unwise to defer the matter until the next Legislature. It would seem that the International Paper Company has enough on its hands to occupy its attention until after the next Legislative session.

“I notice that Mr. Graustein is very careful not to make any definite promises in regard to what he intends to do as to the erection of a paper mill in Aroostook county; and so I can see no reason why we should not ‘hang off’ in regard to legislation until he is willing to meet us.”

Now, Mr. Chairman and members of the Committee, it is in response to that sentiment, which I assume at that time to have been the sentiment of the people of Aroostook county, that we are here tonight. Two years ago we were not in a position to make any promises with respect to a paper mill, and very frankly said so. Today that situation has changed; our plans have crystallized and at this time we are in a position where we can promise to the people of Aroostook county a

paper mill which will add industrial growth not only in that county but to all the state.

I want to explain to the committees a few of the provisions of this bill. On the surface they may seem quite complicated, but in fact they are not; and then I want to call before you a consulting engineer who can explain them more in detail and also Mr. Graustein, who can explain the purposes of the company, and then certain others who can testify with some authority as to the effect that this flowage will have on the fishing in those lakes which are affected.

Now, first, I will take up the provisions of the bill, and I will say that we are to offer certain amendments to meet what we understand are some of the objections which have been raised to it. I do not think it is necessary to make any comment in regard to section one of the bill, which enumerates the incorporators, who are, with the exception of myself, either officials of the company or business men in Aroostook county.

Section two sets forth the objects and purposes of the bill, which are that we shall have the right to generate electricity and sell it as do other corporations organized under the general law. I will say that it is also our purpose to aid navigation so that logs will be driven down over those waters into the mills which are located on the St. John River, or which will be built there.

Section three sets forth the powers of this company which are necessary in order to carry out its purposes. Under those powers we have the right to build transmission lines and to do all other things which are necessary for a company organized to do an electrical business.

Section four authorizes us to erect dams. The bill provides that the company is authorized to erect and maintain dams on land which it may at any time own, at any rate, near the outlet of Eagle Lake as a storage dam, in the Fish River water-shed, and we have offered an amendment to that to make a little more definite the location of that dam, by inserting after the word "water-shed" in line ten the words, 'above the outlet of Sly Brook.' That dam, according to the terms of the bill, will hold the waters of Eagle Lake to a height of nineteen feet above low water in the lake, or about ten feet above the present high water level; also the right to erect a dam at the outlet of St. Froid Lake to a height of twenty-one feet. Then there is a provision at the bottom of the page providing for the erection and maintaining of a dam or dams at Cross Rock Rapids

on the St. John River, our positions differing as to that clause in the bill and we have agreed that it may be eliminated, and that part may be stricken from the bill. We ask for rights of flowage and rights of eminent domain where it may be necessary to take land to build our dams or other structures on those lakes to hold the water. This is a right that probably will not have to be exercised, and we are perfectly willing that that should be eliminated from this provision, the clause giving us the right to take material which may be needed for erecting dams. The damages for flowage are to be assessed under the provisions of the Mill Act, and the proceedings in relation to any taking of land which we may have to take by right of eminent domain are in accordance with sections 11 and 22 of chapter 61 of the Revised Statutes. And by the way, the word "and" at the top of page five of the bill should read "to." Provision is also made that the state land agent or such other person as the governor and council may direct is authorized to represent the state. The other provisions of that section are the provisions of the general law, except that we agree to erect at the outlet of Eagle Lake a fish screen to take the place of the one that is now there, subject to the approval of the commissioner of inland fisheries and game. We also agree to clear the land of standing timber and debris so that the shores of the lake will be clean, and in this connection we suggest the insertion after the word "flowage" in line eleven of the second sections the words 'within two years from the time when the same is flowed.' That is, that this land must be cleared within two years.

Section five contains certain restrictions upon our rights. We want to make it clear that there are certain things that we do not have the right to do so that there may be no misunderstanding about it. At the top of page six of the printed bill, in line six you will strike out the words "above the mouth of the Allagash River," and we have substituted in place of that the words 'other than the Fish River.' Now I want to call particular attention to the fact that we have endeavored to protect the rights of other companies which have dams on the Wallagrass Stream and at other places, and we would like to offer this amendment to go at the end of section five in order to make it perfectly clear that we do not ask for the right to divert the waters of these lakes in any other way than through their natural channels. There never has been any intention to do it but there might seem to be some misunderstanding about it, so that we have offered this amendment:

“Nothing in this act shall be construed to authorize the company to divert the waters of the Fish River or the lakes above the same by way of Violette Brook or in any other manner so that said waters shall be discharged into the St. John River otherwise than through the Fish River. Nothing in this Act shall be construed to prohibit the taking of water from said river or lakes for municipal and domestic purposes.”

Section six provides for a right of eminent domain on transmission lines which we expect is something that will not have to be used. At the same time it may be necessary, in order that we may not be held up in the transmission of power from one point to another if we do have this right.

Section seven provides that we may sell electricity in Aroostook county in competition with the present company only after an order of the Public Utilities Commission that such company is not performing proper service. It appeared two years ago that it was the policy of the state to protect companies which were serving the public properly, and this amendment is drawn to conform to that policy.

Section eight provides for the interchange of power between the Fish River station and the station at Grand Falls which is owned by a subsidiary of the International Paper Company. The purpose of that is that during certain seasons of the year the Fish River plant may be run at maximum capacity and at other seasons of the year when they are running at minimum capacity that this power may be brought back, so that there will always be in the State of Maine every bit of electrical energy that is generated in it. We are not in any way, as I see it, infringing upon the rights of others by a mere inter-connection with Grand Falls which provides that our power may be shipped over there and brought back during the same calendar year. The advantages of that inter-connection are, I think, obvious and will be explained to you fully by the engineers. It provides for Aroostook county that great reservoir of power on which to draw, and a break-down in one plant will not necessarily mean a loss of power in Aroostook.

Section nine provides that certain power shall be shipped back from Grand Falls, over and above the amount that comes back by reason of this inter-change and over and above the amount that may come back under the present order of the International Joint Commission. The purpose of that is this:

This storage on the Fish River is a benefit to Grand Falls as every bit of water that flows by the plant on the Fish River must of necessity flow to Grand Falls, and Grand Falls receives a benefit from that storage in just the same way as does the farm on the Fish River. It would have to receive it; it cannot be otherwise, and as it receives this benefit the bill provides that a certain amount of power shall be imported into Maine from Grand Falls, and providing that the amount of it shall be subject to the approval of the Public Utilities Commission of the State of Maine. We cannot in this bill determine and settle upon the details of what that amount shall be. So that we feel that we have given that into the hands of the Public Utilities Commission which will protect the rights of the state.

I don't think it is necessary for me to say anything in regard to sections ten, eleven, twelve and thirteen.

Section fourteen, in regard to the construction of the charter, is inserted merely that through an oversight or through inadvertence this charter might not be modified by some act passed at this session of the legislature.

Section fifteen contains two clauses, providing that this act shall become null and void, that is, that we get no rights under it whatever if we do not do certain things. The first of these things is that we must organize and commence business within two years. That is the provision of the general law on this subject. Clause "b" provides for the construction of a pulp or paper mill and a generating plant, and we offer an amendment with respect to this clause, and I want the committee to remember that unless these terms are carried out under the law we get no rights whatever to any storage or any other rights under this bill. This section, as we have offered the amendment, reads as follows:

"Unless, within four years from the day when this act takes effect the company hereby created shall have begun actual construction of a hydro-electric power generating plant or plants of at least 4000 horse power installed capacity on the Fish River in the town of Fort Kent and International Paper and Power Company, or its successors or a company owned or controlled by it or them, shall have begun actual construction in Aroostook county on the Saint John River of a pulp or paper mill costing (exclusive of said power

plant or plants and exclusive of all transmission lines) not less than \$3,000,000, and unless said power plant or plants and mill shall be completed and put in operation within a further period of two years unless delayed by factors beyond control. No expenditure for renovation of the existing pulp mill at Van Buren shall be included in such cost."

Then we add a further section—and I may say the purpose of this is to try and convince the people of the State of Maine and this legislature that after having made an investment of \$3,000,000 in a paper mill that we do not intend to go off and leave it idle, if it is necessary to convince them of that fact. This section reads as follows:

"Section 16. Operation of pulp or paper mill. If within a period of twenty years from the time of completion of said pulp or paper mill operation of said mill shall be abandoned unless further operation thereof is no longer commercially feasible, then upon such abandonment the State of Maine may, through such agencies as it may provide for the purpose, acquire the franchises and the rights hereby granted and the dams and other structures erected by authority of this act, and the lands and interests therein and other property and rights acquired by this company for the objects and purposes in this act set out, upon payment thereof of the original cost of the same less depreciation on said structures, but such payment shall not include compensation for the value of the franchises granted by this act or any profit to the International Paper and Power Company or any of its subsidiary or affiliated companies."

In other words, if we abandon that mill when we could operate it the state has a right to come in and take those dams at their actual cost, regardless of whether they have appreciated in value or not, less depreciation.

There is one amendment that I omitted, to insert after the word "game" in section four, line thirteen, second paragraph, the words: 'and the forest commissioner acting under the direction of the governor and council.' That is, there are two bodies that can determine whether or not the shores have been properly cleaned.

Now, just to summarize briefly, we are asking for storage rights, for the right of generating power, and in return for that grant we agree that all that power shall be kept in the State of Maine for use here. Secondly, that we will bring over from Grand Falls a certain amount of additional power, subject to the approval of the Public Utilities Commission of the State, of Maine, and that we will build and operate as long as it is commercially feasible a paper mill on the St. John River costing not less than \$3,000,000.

Now I just want to say one word in closing, and what I say is said rather as a citizen of this state than as attorney for the International Paper Company. We have here two great natural resources, timber and water power, and the state during the last few years has spent large sums of money advertising those resources and asking people to come in here and use them. Here we have a company asking for the right to come in and do that very thing which the State of Maine has been spending its good money asking others to come in and do. This company offers to come and build its mill here in the State of Maine. We have tried to make this bill just as fair as we knew how to make it, and if it is not fair and if it is not clear we are perfectly willing to be told so, and we will try to make it so. We have tried to protect the State of Maine in every possible way.

In the last analysis, however, the best guaranty that the State of Maine has got is the good faith of those who are asking for the legislation. Here is a corporation which had its birth in the State of Maine; it has operated here for thirty years; it paid last year \$339,000 in taxes, almost a thousand dollars a day. It employs 2500 men, with an annual pay-roll of almost \$3,000,000, and we say when that corporation which has operated here in this state comes and asks for certain rights its word is entitled to be treated with respect as to what it will do. I know the officials of this company. Its president has been a personal friend of mine of many years' standing, and I want to say to this committee with all the sincerity I possess that when he tells you he will do something his promise will be carried out to the letter.

I will call as our first witness Mr. Bean, and I would like to have Mr. Bean explain to the committee the power situation in Aroostook county and the engineering features of this bill and also his own experience in the engineering field.

Mr. PAUL L. BEAN: Mr. Chairman and members of the

Committee, my name is Paul L. Bean. My experience as a hydro-electric engineer began in about 1904 when I graduated from the University of Maine. From 1907 to 1915 I was professor of civil engineering at the University of Maine, teaching hydraulic and structural engineering. From 1915 to the middle of 1919 I was chief engineer of the Public Utilities Commission of Maine. During that time I conceived and directed the compilation of the water power investigation reported to the legislature of 1918. From 1919 to 1923 I was a member of the firm of Sawyer & Bean, consulting and hydraulic engineers with an office in Lewiston. During that period we worked on some 250 different hydraulic projects. From 1923 to date I have been the operating head of the Union Water Power Company directing the distribution of water to the textile mills in Lewiston, also the operating head of the Androscoggin Reservoir Company which, together with the Union Water Power Company, operate the storage at the headwaters of the Androscoggin River. I have also during that time had charge of the regulation of the flow of the Androscoggin River.

I will now direct the attention of the committee to these maps which are before you. This large map shown here is the new topographical map made during the last two years by the Federal Government in co-operation with the state, and it has the preliminary sheets covering the lakes on which it is proposed to create the storage reservoir. Down here in this vicinity (indicating on map) is Grand Falls about forty miles from the junction of the Fish River. The Fish River flows about south from the outlet at Eagle Lake. Along this river there is about 75 feet of fall, of which the International Paper Company proposes to develop 63 feet by two sites, one by a dam at Fort Kent and another at Fish River Falls. It also proposes to establish and place a 19-foot storage dam at the outlet of Eagle Lake. Eagle Lake is shown by this body of water here, and also along the east branch we have Square Lake, Cross Lake, Mud Lake and Long Pond. On the west branch is St. Froid. They have under consideration the construction of a dam at the outlet of St. Froid.

The drainage area of the Fish River, whose storage resources it is proposed to develop, covers an area of 766 square miles at the outlet of Eagle Lake, and 890 square miles at its junction with the St. John River. The main Fish River extends from the St. John River to the outlet of Eagle Lake.

The storage resources would be developed by raising the water on Eagle Lake 19 feet by the construction of a dam at the outlet of said lake, with its crest at elevation 592.00. This would also raise the water on Square Lake 16 feet; Cross Lake 15.5 feet; Mud Lake 11 feet, providing storage capacity at this point of 19.8 billion cubic feet.

The construction of a storage dam at the outlet of Lake St. Froid on the west branch would raise the level of that lake nine feet above the Eagle Lake level and would store 1.5 billion cubic feet of water.

These two storage systems combined would provide a capacity of 21.3 billion cubic feet and provide for a collection of water of approximately 28,000,000 cubic feet per square mile of drainage area. This reservoir could be filled in from three to four years out of five.

As to the head available on Fish River it is estimated that 25 feet of head can be developed with a dam at Fort Kent and 38 feet on a power dam at Fish River Falls, making a total head available for power of 63 feet.

The flow derived from the Fish River basin used on these heads provides the power available in the State of Maine from this water. I will refer to the power available in terms of "firm power" and "secondary power." By "firm power" I mean power available continuously, twenty-four hours a day for 365 days in the year. By "secondary power" is meant that power which is available over and above the "firm power." This power is available 24 hours a day, but only for a fraction of the 365 days in the year.

The figures of power which I shall quote are those obtained in the driest period of record, which is 1910 and 1911. Wetter periods occur than is represented by this dry period and greater amounts of power will be obtained in such years. The amount of power, however, so represented, does not represent "firm power" within the meaning of our definition of that term.

With a head of 63 feet on the Fish River and a minimum flow of 100 cubic feet per second, we have 600 horse power available as firm power before storage is developed.

The average flow in the dry year is equivalent to 450 cubic feet per second, equivalent to 2,700 horse power when used on 63-foot head.

The secondary power therefore is equal to the difference between 2,700 and 600, or 2,100 horse power in the dry year.

Taking up next the power available on the Fish River with

21.3 billion cubic feet of storage capacity developed and operated for producing the best effect on the Fish River, we would collect in the dry year approximately 13.5 billion cubic feet of water in this storage reservoir. Regulating this water for steady flow would give us an average for the year of 760 cubic feet per second, which if used on 63 feet of head on the Fish River would give 4,568 horse power. This we would call "firm power" and represents a gain by development and utilization of the storage of the difference between 4,568 horse power and 600 horse power, or 3,968 horse power. This is classified as "firm power" because it is available throughout the period of years, so far as we can tell, 24 hours a day and for 365 days in the year.

Coming now to Grand Falls located down in this section, some 40 miles away from the mouth of the Fish River, the head at Grand Falls is 126 feet, twice that which it is proposed to develop on the Fish River basin, and the water from Fish River is available for Grand Falls. Without this storage developed, the "firm power" developed at Grand Falls derived from Fish River waters is twice that on the Fish River, or 1,200 horse power. Based on the average yearly flow in the dry period, without storage developed, the average yearly flow available in the dry year is 5,400 horse power, and 4,200 horse power of secondary power is available.

Whether Fish River storage is developed or not, this amount of power will be available at Grand Falls and might be somewhat larger due to the fact that greater wheel capacity would be available at Grand Falls than on Fish River and a greater amount of water could be utilized.

Turning now to the power available at Grand Falls from Fish River with 21.3 billion cubic feet of storage developed and utilized, we find by the utilization of the proposed storage capacity on the Fish River the low water flow is increased from 100 cubic feet per second to 760 cubic feet per second in the dry year. If this 760 cubic feet per second is used on the head of 126 feet at Grand Falls there will be available 9,136 horse power, a gain of 7,936 horse power of "firm power."

On the basis of the average secondary power at Grand Falls, available before storage is developed, as compared to that available after storage is developed, we find a gain of 310 cubic feet per second, equivalent to 3,727 horse power.

Summarizing the gain therefore at Grand Falls, we find that approximately 8,000 of firm power is gained and the gain in

average secondary power is 3,727 horse power in the dry year. Wetter years will show greater amounts of secondary power available. The above figures, however, have reference to the dry period of 1910 and 1911.

The cost of developing this storage on the Fish River, exclusive of the cost of the dam at the outlet of St. Froid Lake, is estimated at \$2,000,000.

Turning next to the capital cost per horse power which may be developed on the Fish River due to the cost of the storage development alone. The following estimates do not include the cost of power developments themselves on the Fish River, but refer only to the storage dam and damages resulting from flowage.

Taking as a basis the total power available on the Fish River in the dry year as 4,568 horse power, we obtain a capital charge per horse power due to development alone, of \$438 per horse power. This does not include the cost of the hydro-electric developments on the Fish River, and we conclude that the head on the Fish River makes this unit cost a charge so great that the storage could not be developed economically for Fish River alone.

The gain in power at Grand Falls by the development of the storage is approximately 8,000 horse power, or to be exact, 7,936 horse power. Assuming a cost of \$2,000,000 for the storage and 8,000 horse power gained, we have a capital cost per horse power based on Grand Falls alone of \$252 per horse power. This is very high cost storage. We may conclude at this point that the development of this storage is too expensive for the Fish River basin and very high priced for the Grand Falls development alone.

If the cost is divided between the combined Grand Falls head of 126 feet and the Fish River head of 63 feet, the capital cost of \$2,000,000 will be spread over approximately 12,000 horse power, which would represent a capital cost per horse power gained on the combined heads of \$169 per horse power. This is relatively high priced storage.

If we let the capital cost be carried by the total power available on both Fish River and Grand Falls, we have the cost of \$2,000,000 divided by 13,700 horse power available, or a capital cost per horse power of approximately \$145. This is a reasonable charge and by no means cheap storage.

I therefore conclude that reasonable complete development of storage requires that it be utilized in connection with and

operated for the benefit of Grand Falls power; that Fish River alone can probably never economically stand the cost of full development of storage, or more than one quarter of this amount.

The power in Aroostook county, so far as I know it, available for industrial use is located at Aroostook Falls where approximately 11,000 horse power is available. Fish River power therefore seems to be the most natural source for future development of this area.

One thing more I would like to add, and that is the question of operation of that storage. Today on our head-waters the snow has begun to melt. Our gates are open and we are rapidly emptying our reservoirs. There will come a time when the snows begin to melt in the spring when we will close those reservoirs. On the Fish River there will come a time in the spring when it will be necessary to go in and close these gates and store water in the system. That will very largely reduce the flow down here, down the Fish River. There is, however, a great area on the St. John River outside which is uncontrolled and which will yield its flood of water to come to the Grand Falls plant.

Now since industry, and especially the paper industry, needs steady power it will be necessary to tie the two plants together, the Fish River and the Grand Falls with a transmission line, but when we are storing water here and no power is being generated, or a small amount, the Grand Falls plant can send power into the state and keep their industry going.

Mr. THAXTER: I would like now to call on Mr. Nelson.

Mr. GURNEY: I don't wish to transgress upon the time of the proponents, but I would like for the committee to concede us the right to ask a few questions of Mr. Bean, provided that time is taken out of our allotment.

The CHAIRMAN: Certainly, if that is agreeable.

Mr. GURNEY: And you would have no objection to my doing it?

Mr. THAXTER: No, indeed.

Mr. GURNEY: Mr. Bean, will you tell us in square miles the area that will be flowed by the projected development.

Mr. BEAN: I cannot, but I will refer you to Mr. Nelson for the details as to that matter.

Mr. GURNEY: Can you tell us whether or not a ten-foot dam would possibly satisfy your requirements rather than a 19-foot dam on Fish River?

Mr. BEAN: I might say that so far as I know the situation a ten-foot dam would store about 14 billion cubic feet of water.

Mr. GURNEY: Against 21?

Mr. BEAN: It would be just about that. In other words I think the figure which I quoted is a figure that would not be exceeded.

Mr. GURNEY: Now regarding this as a storage proposition of course your purpose is obviously to save the water from the St. John to Grand Falls, and in what season of the year ordinarily does the water there lie at its lowest point, at Grand Falls?

Mr. BEAN: I should imagine just before spring.

Mr. GURNEY: That would be along this time, in the winter, isn't it, ordinarily?

Mr. BEAN: Yes, during the winter months.

Mr. GURNEY: Now Mr. Bean, do you know what the present capacity is at Grand Falls being generated now?

Mr. BEAN: I can't tell you that. I know it is more than these figures I have quoted, but I would refer you to Mr. Nelson.

Mr. GURNEY: Do you know about 60,000 horse power at the present time?

Mr. BEAN: I couldn't say.

Mr. GURNEY: Then I will defer that until later. Now Mr. Bean, under the contemplated Act here electricity coming back into Maine may be sold only to a subsidiary of the International Paper Company, the Gould Company and such other companies as the Public Utilities Commission may from time to time determine. That is your understanding?

Mr. BEAN: Yes, I understand that.

Mr. GURNEY: Now Mr. Bean, you have had a very extensive experience with the Public Utilities Commission and in that time examined charters, didn't you?

Mr. BEAN: Yes.

Mr. GURNEY: I don't want to ask you any question that your counsel should answer, and if you think my question is unfair I will ask you not to answer it, and if you will so indicate I will withdraw it. Did you ever in all your life in your study of charters in Maine ever see one that approached in comprehensiveness and extent of power granted by the people of this State to this charter that is offered here to-night?

Mr. BEAN: I would rather not answer that question, because I don't feel competent to do so.

Mr. THAXTER: I will next call upon Mr. Nelson.

Mr. H. M. NELSON: My name is H. M. Nelson; my residence is New York City; I represent the International Paper Company. I will illustrate what I have to say by reference to this map. This map here shows all the lakes in the lower end of the Fish River drainage area. This light blue represents the area of the lakes at ordinary low water. These dark areas which you see along the edge of the lakes are the areas which will be flowed by the dam for which this bill provides. The total amount of that flowed area above the ordinary high water in the lakes is 5400 square miles—or 5400 acres, I should say. Of this 5400 acres the International Paper Company already owns about one-third.

Now these towns as you see which are colored in here, this one in green and this one in pink and another one in yellow, and also this one in brown, represent the towns in which the company has an interest. Those interests vary all the way from two-thirds to one-half of the total area of the town.

Besides this flowed land there will be certain damages due to the flowing out of buildings. There are buildings along Eagle Lake here and some of them will be flowed out. There are also some camps here on Square Lake and some more camps on Cross Lake and on Long Lake and Mud Lake Thoroughfare and also along the southwesterly shores of Long Lake. Practically all these buildings and camps can be moved back. It will not be necessary to destroy all of those buildings. The railroad along the shore of Eagle Lake can be raised. There are two mills at Eagle Lake, one right here at the pond in what is called Lake Village and the other one at Plaisted Village. Both of those mills can be moved back if the owners prefer to have that done rather than to give up the mills.

Now I want to point out on this map up in the corner here in which we have shown the relative position of the power plant

and the dam. That red mark which some of you in the back of the room cannot see very well represents the lower power house, located on the old saw mill dam at Fort Kent Village. At this power house there will be 23 feet of head available. Now as we go up the river to Big Fish Falls which is shown here on this topographical map we will put another power house in there at which we will have a head of 38 feet. The water back of that dam will back up just to the foot of the storage dam at the outlet of Eagle Lake, and these lines here are supposed to represent the high water as it stands at the present time in the spring of the year and the highest water as it will stand after the dam at the outlet of Eagle Lake is completed.

Of course at a period a little later on we would have stored water in Eagle Lake reservoir and no water would be going down the Fish River except what was going down from the uncontrolled drainage area below the Eagle Lake dam. This uncontrolled drainage area would be about one hundred square miles.

Now I believe something was said about putting a dam in there with a ten-foot head at the outlet of Eagle Lake instead of the 19-foot dam for which we have asked. If a dam only ten feet high is put in at the outlet of Eagle Lake it would be necessary also to build another dam at the outlet of Square Lake and a third dam at the outlet of St. Froid Lake in order to store the 14 billion cubic feet of water which Mr. Bean mentioned.

Mr. THAXTER: Will you please explain to the committees, Mr. Nelson, why it is that that scheme of putting a dam at the outlet of Square Lake is not practical.

Mr. NELSON: The dam at the outlet of Square Lake, the drainage area above the outlet of Square Lake is so small that we could only store about eight billion cubic feet. That would represent the yield from that small drainage area which is shown on this drainage area map over here. And the cost of that storage would be very high.

Mr. THAXTER: In other words, the reservoir created by the dam at the outlet of Square Lake wouldn't fill up, or there isn't water enough flowing in to fill it in the ordinary year.

Mr. NELSON: It would fill to the extent of eight billion cubic feet only. We couldn't put a high dam in there to store, say, 14 or 15 billion cubic feet because we wouldn't have the run-off.

Mr. THAXTER: The main branch come in below where that dam would be?

Mr. NELSON: The largest drainage area is in the southern branch instead of the southeastern branch of Fish River.

Mr. THAXTER: I think that is all.

Mr. GURNEY: May I ask a question. Mr. Nelson, are you firm in your conviction that a ten-foot dam at Eagle Lake is not practical?

Mr. NELSON: I am; yes, sir.

Mr. GURNEY: And as an engineer of the company who has made a study of this matter you wish to go on record as saying that it is either a 19-foot dam, so far as your position is concerned, or nothing?

Mr. NELSON: Yes, sir. If it was feasible to put in the three dams which I have described, one at the outlet of Eagle Lake to raise the water ten feet, and another one at the outlet of Square Lake and another one at the outlet of St. Froid Lake we would have been very glad to do that because we would save raising the railroad and buying out or moving those mills along Eagle Lake.

Mr. GURNEY: Now, Mr. Nelson, you have mentioned 5400 acres of flowed land. Will you convert that into square miles? I used to be able to do that but I think perhaps I have forgotten how it is done.

Mr. NELSON: That would be about eight square miles.

Mr. GURNEY: And is that all you are contemplating flowing here?

Mr. NELSON: Yes.

Mr. GURNEY: Have you examined this chart prepared by the Water Storage Division of the Public Utilities Commission in which they estimate that the number of square miles would be 56.10 square miles to be flowed?

Mr. NELSON: You mean by that 56 square miles including water area?

Mr. GURNEY: The whole thing to be flowed.

Mr. NELSON: Yes, the flow area is 5400 acres.

Mr. GURNEY: A third of which the International Paper Company own already?

Mr. NELSON: Yes.

Mr. GURNEY: Now will you tell us something about the conditions at Eagle Lake? Do you know the number of inhabitants there?

Mr. NELSON: I do not; no, sir.

Mr. GURNEY: Do you know what the chief occupation of these people is?

Mr. NELSON: I imagine that most of the men in Eagle Lake are employed in the saw mill there.

Mr. GURNEY: You also know that a good many of them also own homes there that they have worked and struggled for many years to acquire?

Mr. NELSON: I presume that is so, although I don't know it to be a fact.

Mr. GURNEY: Do you know how many of those homes are going to be affected by your proposed change in the elevation of Eagle Lake by that 19-foot dam?

Mr. NELSON: I don't know how many are going to be at the Eagle Lake village, but for the whole of Eagle Lake there are some 47 or 48 homes.

Mr. GURNEY: Didn't you make a study of that condition at Eagle Lake? Didn't you think it was important enough for those people to address yourself to that question at Eagle Lake village?

Mr. NELSON: I beg your pardon.

Mr. GURNEY: Didn't you think it was sufficiently important for you to address yourself to that question concerning the effect upon the homes of those people living at Eagle Lake?

Mr. NELSON: Yes, we did study that question, if that answers your question.

Mr. GURNEY: But you don't know about that. You studied it, you say?

Mr. NELSON: I studied it, yes.

Mr. GURNEY: And you don't know now how many homes are going to be affected?

Mr. NELSON: I haven't got it segregated as between Eagle Lake Village and Plaisted Village. I don't have that in mind just now. I have the figures, but I haven't it in mind right now.

Mr. GURNEY: Now, Mr. Nelson, in its final analysis this is a storage proposition, isn't it?

Mr. NELSON: A storage and power proposition.

Mr. GURNEY: Yes, but your power will be comparatively secondary to storage, the plant being at Grand Falls, isn't it?

Mr. NELSON: I wouldn't say that, sir.

Mr. GURNEY: You never would build that just simply for the power alone?

Mr. NELSON: We are able to build the power plant on the Fish River because we are able to use the water that is stored behind these lakes on both the Fish River and at Grand Falls. We are going to give Maine some power that it would not get unless we could make this hook-up between the two plants.

Mr. GURNEY: But you are going to give that first to your own subsidiary company and second to the Gould Electric Company?

Mr. NELSON: If they need it.

Mr. GURNEY: And thirdly to such public utilities as may be designated by the Public Utilities Commission?

Mr. NELSON: I believe we agree, sir, to build a paper mill in Maine and use that power.

Mr. GURNEY: Yes, but you are not coming here by reason of a deficit of power in Maine?

Mr. NELSON: I beg your pardon.

Mr. GURNEY: You are not coming here particularly to make up for any deficit of power in Aroostook County?

Mr. NELSON: I should say that a paper mill at Van Buren would not be possible unless we could make this hook-up.

Mr. GURNEY: Couldn't power be developed sufficient for that paper mill without this hook-up?

Mr. NELSON: I couldn't tell you where it could be generated, not by water.

Mr. GURNEY: It could be generated by steam, if necessary, couldn't it?

Mr. NELSON: I don't know of any paper mill that is now running on that grade of paper entirely by steam power.

Mr. GURNEY: Now, Mr. Nelson, can't you tell me frankly, yes or no—and please remember that I do not want you to answer this question if you cannot do it without embarrassment. Isn't this in the last analysis a storage proposition principally?

Mr. NELSON: I don't think it is.

Mr. GURNEY: I said, principally. Would you want to answer it with that qualification?

Mr. NELSON: I still do not think it is.

Mr. GURNEY: Then you think that the International Paper Company is benevolently coming here from New York and going to this great expense to develop power that the State of Maine needs?

Mr. NELSON: I don't think it is benevolently at all. I think it is a business proposition.

Mr. GURNEY: Yes, we all think that, Mr. Nelson. Now getting back to Grand Falls, let me ask you what is your wheel hook-up there now?

Mr. NELSON: We have three units of 20,000 horse power, with provision for a fourth.

Mr. GURNEY: That is, 60,000 horse power?

Mr. NELSON: Sixty thousand horse power will be the total and provision for 80,000.

Mr. GURNEY: Now your hook-up is 60,000?

Mr. NELSON: Correct.

Mr. GURNEY: And how much of that 60,000 does the State of Maine get?

Mr. NELSON: There is allotted according to the International Joint Commission 2,000 horse power.

Mr. GURNEY: That is to say, we get one-thirtieth. How

much more are we going to get if you turn the northern section of the state into a reservoir?

Mr. NELSON: That I couldn't say. That is for your own Public Utilities Commission to say.

Mr. GURNEY: Is it?

Mr. NELSON: The way I understand it, sir.

Mr. GURNEY: Then you don't understand this bill any better than I do. Now I am asked to inquire of Mr. Nelson whether a dam can be erected on the falls at Big Fish Lake, allowing you could do that and then allow you to develop a 16-foot dam?

Mr. NELSON: I don't quite get your question.

Mr. GURNEY: I am requested to ask you whether a dam at the falls on Big Fish Lake couldn't be developed and allow you to have a 10-foot dam at the outlet of Eagle Lake?

Mr. NELSON: I don't think so. I think, so far as the dam is concerned, it could be built at the outlet of Big Fish Lake but the drainage area is so small that you wouldn't have yield enough to get more than—well, I couldn't say exactly, but I wouldn't say more than three billion yield on that drainage area.

Mr. GURNEY: So that you think it would not be practical to do that?

Mr. NELSON: That's the way I feel, sir.

Mr. GURNEY: And you have considered that matter in the course of your study of the situation?

Mr. NELSON: I have.

Mr. GURNEY: And have made the survey?

Mr. NELSON: I have not made any survey, no, sir, except to look at the drainage area.

Mr. THAXTER: I would like now to call on Mr. Graustein.

The CHAIRMAN: Would it be agreeable to let this gentleman answer a few questions that a member of the committee, Mr. Powers, wishes to ask him, before you proceed with Mr. Graustein?

Mr. THAXTER: Yes, indeed.

Mr. POWERS, of the Committee: I would like to know, Mr. Nelson, what is the firm power that would be developed at Grand Falls under your present development 95 per cent of the year, that is, with a year of average flow.

Mr. NELSON: Now I don't know that I can answer that question off-hand. I could only give a haphazard guess. I could give you that guess, but I couldn't answer the question definitely, because I don't have those figures in mind.

Mr. POWERS: Well, a guess is better than nothing.

Mr. NELSON: Ninety-five per cent of the time in an average year?

Mr. POWERS: Yes.

Mr. NELSON: Somewhere about 70,000 horse power.

Mr. POWERS: I think that is all, but I would like to ask Mr. Bean a question. Why did you change your estimate, Mr. Bean, from two years ago about the cost of development?

Mr. BEAN: I will say, Mr. Powers, that that figure of the cost of development was given me by the International Paper Company. They estimated two years ago the cost of development would be \$1,000,000. This year they gave me the estimated cost of \$2,000,000.

Mr. POWERS: There is another question I would like to ask. How far is it practical in a commercial way in large blocks to transmit electrical energy?

Mr. BEAN: My guess would be around 250 miles.

Mr. THAXTER: If there are no further questions to be asked by the committee I will call upon Mr. Graustein.

Mr. A. R. GRAUSTEIN: Mr. Chairman and members of the committee, my name is Archibald R. Graustein; my residence is New York. I am president of the International Paper Company, also the International Paper and Power Company which holds the stock both of the Paper Company and of our power properties. We are presenting to you this bill which to our minds is similar to asking for a building permit. We want to build in the State of Maine. We own the Fish River powers and we ask for the right to develop them and to develop the storage which will make them possible, and which will also help Grand Falls so that Grand Falls can pay part of the cost of

the storage and so make it possible to develop the proposition.

We offer to make that development, thereby developing power in Maine. Our request is conditional upon our getting allocated to Maine by New Brunswick an amount of additional power to come out of New Brunswick to be developed at Grand Falls and transmitted back to Maine. That amount, as Mr. Nelson has said, is to be approved by the Maine Public Utilities Commission. That is our intention. So that Maine is to be satisfied that the amount of power which will come to Maine out of the Grand Falls development is a fair compensation for the advantages accruing to Grand Falls from this storage.

We also agree to build a paper mill at a minimum cost of \$3,000,000, to be built in the State of Maine. It says in the bill on the St. John River, and presumably it will be built at Van Buren.

Mr. GURNEY: Mr. Graustein, would you kindly come nearer to the centre of the hall so that we can all hear what you say.

Mr. GRAUSTEIN: Yes, indeed. I will stand wherever it suits.

Mr. GURNEY: Wherever we can hear you. There seems to be considerable noise, and it is rather difficult to hear you.

Mr. GRAUSTEIN: I will do my best, sir. If we want development in Maine perhaps one of the first questions you may ask yourselves—I know one of the first questions I ask myself when we have under consideration doing business on a large scale with someone, is this: "Who is it we are going to do business with?" and "Do we want to do business with them?"

The International Paper Company, as far as I know, is the second largest industrial enterprise in Maine. We operate the largest paper mill we own in the United States at Livermore Falls—and I might say that it is really two mills, one at Riley and one at Livermore Falls. The mill at Riley is really part of the Livermore Falls mill. We operate a mill at Rumford which, while it produces a lesser tonnage, and converts paper into boxes, employs more help. We also operate a mill at Webster. As Mr. Thaxter has stated, we employ over 2000 people at the mills. We pay almost \$3,000,000 a year in wages. We pay out so much in taxes that it makes us feel badly. We have been in the State of Maine for thirty years. You know us and you also know what you think about us. We hope that you think we do what we say we will do.

We came here two years ago with the same general idea. At that time, however, I was not prepared to give any assurance that we would build a paper mill in Maine. At that time I told the committee before which the hearing was held that I hoped to do so, and I expected to, but we had not at that time progressed to the point where I could say that I promised. At that time our study of the situation had been based upon the assumption that when we built a paper mill it would be a newsprint mill, and there were many problems involved in that. Since that time, after carefully studying the situation, we have come to the conclusion that the proper type of mill to build to suit the conditions which we face would not be a newsprint mill but a fine paper mill. Now it is a fact that a fine paper mill costs more per ton and employs more people per ton than a newsprint mill.

Having reached that conclusion and having analyzed our problem, and having studied it in sufficient detail to have reached general conclusions, although we have not made our final plans, we are prepared to say to you that we will build a paper mill in Maine, providing we get the necessary rights.

Now in the experience which we have had—or perhaps I should say I have had, because I am speaking from my own personal experience, ordinarily a building permit such as we are asking for here is granted and granted willingly, because it means that more labor will be employed, more money will be expended in the community for supplies, both directly by the company and also through the payroll by the employees.

I do not want to take up the time of this committee unnecessarily and elaborate on that phase of the matter. I might talk at some length about the advantages to a community in having a large industry established and an industry which because of the great investment required is necessarily of a permanent character.

There has been, for instance, a comparison made between the saw mills at Eagle Lake and the program which we are considering. That comparison was based upon the assumption that our program would eliminate the saw mills. Now that is not necessarily so. I don't think our program fundamentally affects the saw mills at all, except to facilitate their operation. If our contemplated dam floods the present saw mills we are prepared to pay the entire expense of re-establishing them at a higher level, so that if they are to continue they can continue on new foundations and in better shape than they are in now,

and with somewhat better logging conditions due to the even level of the water maintained in the lakes. This point is interesting because it brings out the permanence of the paper industry. I suppose a paper mill set up and operated as we contemplate, with the power that goes with it, means an investment of fifty times as much as a saw mill consuming the same amount of lumber would involve. I think that is an obvious proposition. And I will say this, if I may interrupt myself, that I know of no industry that has come under my observation that requires such an investment per dollar of turn-over as a paper mill. This is a proposition involving the establishment of a paper mill. We are proposing the establishment of a permanent industry.

I was going to speak of the advantages to the community from having that permanent industrial enterprise in its midst, and it occurs to me that there is another advantage which is not small, and that is the advantage arising from the disbursement of the money necessary for construction of such an enterprise. We are committing ourselves in this bill to a maximum expenditure on the construction of the mill of \$3,000,000. Our estimate of the cost of storage is \$2,000,000. There is also the cost of power development, and there is also the fact that we are very probably on the low side on our estimate of the cost of the paper mill. We promise to spend that much, and we want to be on the safe side. We want to be sure that we are not promising more than we will actually do.

Now the expenditure of those sums in and of themselves during the period of time that it takes to consummate the construction of the job means in itself a real boom, it means prosperity in the community. That, however, is temporary, and what I want to stress mostly is the advantage to the community in having this permanent industry.

As I started to say a moment ago, it might be very easy for me to take up considerable time upon that subject, but I won't do it because I assume it is obvious, and I assume that everybody feels, both those who believe in the bill and those who appear here in opposition, I assume that all accept the general proposition that industrial development is desirable. The State of Maine wants to develop and wants to foster legitimate industries. I think we are all agreed upon that. And also I assume that prima facie, unless there is something to the contrary, that everybody would like to see this go through.

Now I have tried to think over and find out what reasons

there are which lead one to have any objections to the program. I have already spoken of the saw mills, and as to that, as I have stated, we are prepared, in case the owners desire it, to pay the expense of moving these mills and giving them every opportunity to continue on a more favorable operating basis than they have at present. Then assuming they don't do that, I think the fair conclusion is that the saw mills are not a permanent industry. And if they choose not to continue it means that they would not continue anyway. I think it is fair to say that this program involves at least fifty times as much investment as the saw mills, so that you can easily perceive the advantage to the community. It seems to me that there isn't any comparison between the two.

The question has been raised here about the village of Eagle Lake. We believe that there is a very real advantage to Eagle Lake and also to other communities which may very easily be overlooked, and that is this, that we cannot operate our paper mill without wood. We may enlarge the mill. It is to the advantage of ourselves and to the community, to Aroostook County in particular, to see the mill grow. We may acquire some wood in Canada. If conditions permit so that we can acquire wood in Canada that will enable us to enlarge the mill. But to-day we own no wood suitable for use at this mill except our wood in Maine, and in the State of Maine we own over 800,000 almost 850,000 acres of land, woodland, but not all of that is tributary to this mill. Some 500,000 or 550,000 acres is tributary to this mill. The building of this mill initiates a permanent demand for wood which we will naturally supply from those lands which we own in Maine, and that means that we will be seeking labor constantly to operate our Maine woodlands, and the points which are so situated as to be the natural sources of supply for that labor are going to benefit from that fact.

Perhaps a bit of historical, or semi-historical statement might be interesting in regard to that. I came into the International Paper Company five years ago. At that time the International Paper Company owned most of these lands I am speaking of in Northern Maine. We had bought them. They had been purchased with the idea of cutting that wood and shipping it to our mills in New York state. Personally, I did not like that program. I have always felt that the wood should be used right in the drainage area, and if possible in Maine. The ownership of that wood, the great big investment it represented, and the desire on our part to put that investment to work is the big

reason, the most important reason underlying our program for building a mill at that place. We have the wood and that represents a huge investment, half a million acres, and I think you will agree with me that that represents a huge investment, and we cannot afford to let it lie idle, or at least we do not want to let it lie idle. However, we have let it lie idle. I suppose we could afford to, in the sense that it wouldn't bankrupt us if it did lie idle. But we don't want to let it remain idle; we want to make some money on it, and the only way to make money on it is to use it, and that is the purpose of this mill.

Now, we cannot use those woodlands without giving employment to Maine labor, buying supplies from Maine merchants, so that the village of Eagle Lake, which is situated as you can see from the map, very close to those colored areas representing the timber holdings, will benefit from those operations, and that benefit will be some offset, if not a complete offset, and perhaps more than a complete offset to any loss which the village suffers if the saw mills should elect not to continue.

Another objection that I have heard suggested is that some owners of camps that would be flowed out, having nothing but tenancies at will, and so for that reason they might not legally be entitled to compensation. I promise this committee, and I rarely make promises which are meaningless, if any owner of camps desires it, that regardless of the rights, the legal rights of such owners, we will pay the cost of moving their camps back on to higher land, so that they won't suffer through any legal technicalities.

One suggestion in the nature of an objection was made to the effect that this was an unusual form of charter. It may be unusual, but it is not unusually broad. It is unusually narrow. The only other thing unusual about it arises from the fact that the geographical situation is unusual. Here we have a river that drains two nations, the territories of two nations, but that fact is not anything for which we are responsible, but it creates problems which this bill is carefully framed to meet. I say the bill is not unusually broad but unusually narrow because it does specify in detail just what we have to do in order to adjust the relative rights of the two sides of the boundary. In other words, I think the bill will be a complete protection for all sides. We have made the offer in the bill to protect the interests of everybody, and we want to do that.

Our purpose here is not to get anything at all that we are not entitled to. We just want an opportunity to do business, and

we don't want that except upon a fair basis. As I have already said, we have been in Maine for thirty years, and we expect to be in Maine for more than thirty years more, and we think we have a good record in the State of Maine, and we certainly are not doing or asking anything in connection with this bill that will spoil that record.

There is one other objection I have heard, and that is that the development of our storage might affect the fishing adversely. Now I will admit that I am no fisherman, so that whatever I may say to you about fishing is from what our people have told me after study of the matter. They say that the result of this additional flowage will in the long run be to improve the fishing, but there may be a period of two or three years before the fish become accustomed to the conditions created by the flowage, and we feel that difficulty can be corrected, and we are prepared to contribute a sum—and I don't know, but I imagine \$15,000 or \$20,000 would be more than adequate, but we are prepared to contribute that sum to the Fish and Game Association or to the State, or whomever it might be decided should handle that money, that money to be used to make sure that even temporarily there won't be any harm done to the fishing. So that, so far as we can see, that answers that objection.

As far as the flowage goes on land which we do not own, there is less than six square miles that is not now flowed at high water and that we will flow. Now six square miles is an insignificant area. I have already discussed the problem created by the flowage of the small amounts as an indication that there cannot be any great problem involved outside of those which have already been discussed.

I really don't suppose I need to add anything to what Mr. Thaxter has said about us, and I should like very much to have question asked that I can answer, if there are any questions that my answers will interest anyone. I would much rather answer questions than to just talk, because that is what I want to accomplish, to thresh this thing out and have everybody feel that what we are doing is for the best interests of the State of Maine, and that the way we are doing it is the best way to do it. Then if there is any difference of opinion about that I want to know it because I want to work it out so that the thing will be handled in the way that everybody feels will meet those two tests.

There has been something said on the sentimental side, and

I want to say that except for Massachusetts, where I was born, I have perhaps a stronger sentimental connection with Maine than with any other State. My grandfather came here from Germany and settled in Milo. My aunt and her family still live there, so that the State of Maine means quite a lot to me.

We don't want to be in the position of having this committee feel and this legislature feel that we are coming here and asking for favors. This is just simply a business proposition and we hope to make money through the utilization of our properties here. We know that we cannot do that without giving employment here on a large scale, and therefore we feel that our enterprises are of great interest, and so far as the terms and details are concerned, as I have said, we think what we have written here is fair. We have tried to put in clauses that will answer all the different comments and suggestions that have come to us and to answer the criticisms that have come to us; and what I would like most of all is to have an opportunity to answer any criticisms or questions which may be put to me in connection with the matter.

Mr. POWERS of the Committee: Mr. Graustein, what would you say about the present firm power that may be developed at Grand Falls 95 per cent of the time in an average year with your present development?

Mr. GRAUSTEIN: That is the question you asked Mr. Nelson, and I should have to refer that to Mr. Nelson.

Mr. POWERS: I wasn't satisfied with Mr. Nelson's answer.

Mr. GRAUSTEIN: I am not an engineer and I haven't the figures in mind, and I would rely on Mr. Nelson largely.

Mr. POWERS: I am glad to hear that you are disposed to answer questions because there are several questions which I think are pertinent to this proposition. You may not think so and of course may not care to answer, but I would like to ask you how many acres of woodland do you have on the Restigouche?

Mr. GRAUSTEIN: On the Restigouche?

Mr. POWERS: Yes.

Mr. GRAUSTEIN: Let me see—is Mr. Hinman here?
(Mr. Hinman rising)

Mr. GRAUSTEIN: Mr. Hinman, can you tell me how many acres we have on the Restigouche, roughly?

Mr. HINMAN: About 500 square miles.

Mr. GRAUSTEIN: That would be about 300,000 acres.

Mr. POWERS: How many cords of pulpwood would you estimate there would be on that?

Mr. GRAUSTEIN: I cannot give the Restigouche separately, but perhaps this is what you are driving at. If you would like to know about the pulpwood which drains to the Bay Chaleur that would include not only the Restigouche but also the rivers in Gaspé.

Mr. POWERS: The Miramichi?

Mr. GRAUSTEIN: No, not the Miramichi. That is a different river. There is a hundred miles between the mouths of the Restigouche and the Miramichi. I think perhaps I can give you either one if you wish.

Mr. POWERS: The two combined?

Mr. GRAUSTEIN: If you include in that the rivers that flow into the Bay Chaleur.

Mr. POWERS: In that whole region.

Mr. GRAUSTEIN: We have upwards of ten million cords.

Mr. POWERS: And how many acres?

Mr. GRAUSTEIN: In that whole region there would be two million acres. I think that is approximately right, isn't it, Mr. Hinman?

Mr. HINMAN: Yes, approximately two million acres.

Mr. GRAUSTEIN: Of course this is off-hand, and I will say approximately that.

Mr. POWERS: What would you say, being a lumberman, is the annual growth, that is, what per cent of that acreage could you cut off annually and still maintain the growth?

Mr. GRAUSTEIN: I figure in that a fifty years' supply, or there ought to be with proper handling. Of course a great deal depends on how you handle your forest, but with proper cutting and proper handling I should figure a fifty years' supply, and that would mean 200,000 cords a year.

Mr. POWERS: You mean that you cut 200,000 cords a year from your land?

Mr. GRAUSTEIN: From the land which drains to the Bay Chaleur and on the Miramichi.

Mr. POWERS: And your growth would be maintained?

Mr. GRAUSTEIN: I should think it would be. Of course a great deal depends on insects and fires and also on the method of cutting and various other factors, but allowing for the best handling of the forest which is consistent with economy factors I think the growth would be maintained on that lot.

Mr. POWERS: How much power would it take to run a four hundred ton mill?

Mr. GRAUSTEIN: It depends on what kind of paper.

Mr. POWERS: That is, electric power with a newsprint mill, with everything that goes with it.

Mr. GRAUSTEIN: You mean dry wood, sulphite.

Mr. POWERS: I don't know about that.

Mr. GRAUSTEIN: You mean a mill that takes wood and makes it into newsprint.

Mr. POWERS: Beginning with your very beginning.

Mr. GRAUSTEIN: That depends somewhat on other factors, engineering factors. I should say 25,000 to 30,000 horse power.

Mr. POWERS: That is, to completely electrically equip the mill?

Mr. GRAUSTEIN: Perhaps that is a little low, but it wouldn't be far from those figures. You are making an engineer out of me.

Mr. POWERS: Perhaps after you have been in the business long enough you would know about that. Is it a fact that you, or that the International Paper and Power Company own nineteen and a half million acres of timber?

Mr. GRAUSTEIN: No, not acres. It is far from that. We don't own ninety million acres. It might be ninety million cords. I don't know the precise figure, but that wouldn't be very far off. In acres it would be nearer twenty million acres, but that isn't all in fee. It is partly fee simple and partly in crown limits.

Mr. POWERS: Twenty million wouldn't be far from nineteen and a half.

Mr. GRAUSTEIN: I thought you said ninety million.

Mr. POWERS: No, nineteen and a half.

Mr. GRAUSTEIN: Yes, that is more nearly right, perhaps twenty.

Mr. POWERS: Now Mr. Graustein, is it a fact that you have contracted with the Hydro Electric Commission of Ontario to supply to them within the next ten years 360,000 horse power?

Mr. GRAUSTEIN: That is correct. That is to say, they are firmly bound to take 320,000 and they have an option on the other 40,000.

Mr. POWERS: Which you have got to supply if they ask for it?

Mr. GRAUSTEIN: That is correct.

Mr. POWERS: And that commenced October 1st, 1928?

Mr. GRAUSTEIN: That has commenced, and that is all to be delivered from our Gatineau development. It doesn't come from here at all.

Mr. POWERS: How many acres of timberland do you have in the United States?

Mr. GRAUSTEIN: It is pretty hard for me to separate this. There are 850,000 acres in Maine, and somewhere about 550,000 acres down south, and that would make 1,400,000, and then I should guess about 2,000,000 acres.

Mr. POWERS: And then you have about 18,000,000 acres in Canada?

Mr. GRAUSTEIN: And in Newfoundland. We have quite a bit in Newfoundland. I might say this. Our lands in the States are all of them fee simple so that in the division of value there is thrown a much greater proportion of the value in the United States than the division of acreage does. In other words, if only ten per cent in acreage is in the United States there is perhaps twenty or thirty per cent of value, I should say, but it is a larger value.

Mr. POWERS: I think you have 2,000,000 acres in Newfoundland. Isn't that about right?

Mr. GRAUSTEIN: I will have to refer to Mr. Hinman for that.

Mr. HINMAN: I think we must have three.

Mr. GRAUSTEIN: Three million, Mr. Hinman says. You may be interested to know that we bought our first Newfoundland wood as a reserve for our Livermore Falls mill in Maine, to protect that.

Mr. POWERS: And then that would leave 15,000,000 acres in Canada, as compared with half a million in the region now under discussion.

Mr. GRAUSTEIN: Yes, but of course you understand this, that pulpwood doesn't mean a thing except with respect to the place where you are going to deliver that wood. A cord of wood standing up in the Gatineau region isn't worth much for use at a mill down on the St. John river because the freight rate makes it impracticable. Just the same as I told the committee, I wasn't satisfied with the plan of using our Maine wood for our Hudson River mill because it was too far off. So that that is the general principle that will apply. To get really economical results, you have got to have a minimum transportation cost on the wood. The chief cost of wood for most paper mills is transportation, and the proper way to set up a paper mill is to get it as close as you can to your wood, and as I have tried to inform the committee I think we have not a single stick of timber in Canada that we own to-day that would be suitably located for use at the mill that we propose to build on the St. John river.

Mr. POWERS: Did you know they were bringing pulp from Sweden to Maine?

Mr. GRAUSTEIN: Pulp, but not wood. Oh, yes.

Mr. POWERS: What is the difference between the tonnage on pulp and wood?

Mr. GRAUSTEIN: It depends on the grade of pulp. On sulphite pulp, a ton of sulphite pulp takes about two cords of wood, and most of the pulp coming from abroad is sulphite or sulphate, and sulphite takes about two cords to the ton.

Miss LAUGHLIN of the Committee: How many acres do you say you own in Maine?

Mr. GRAUSTEIN: In Maine, 844,000 acres. But you must remember that not all of that drains to the St. John River. We have 550,000 acres that drains to the St. John River.

A MEMBER OF THE COMMITTEE: What additional employment of labor would your bill bring about? What additional crew in the woods would it bring about?

Mr. GRAUSTEIN: The mill alone would employ from 350 to 500 hands, depending upon the extent to which we cut up and finished the paper after it has been made into rolls. In the woods we would use not less than 500 men.

Miss LAUGHLIN: How many acres of land do you have on the Bay Chaleur, in the Miramichi region?

Mr. GRAUSTEIN: I think I said 10,000,000 cords. I don't know as I can give you the exact number of acres of land on the Miramichi, but that is roughly in New Brunswick as a whole. Perhaps Mr. Hinman can tell us about that.

Mr. HINMAN: I think roughly a million and a quarter acres.

Mr. GRAUSTEIN: Or about 2,000 square miles. I am more uncertain of those figures than I am of the rest, but I think those are about right.

Mr. ALDRICH of the Committee: How much would the benefit that you would derive from this development be capitalized for, should you say?

Mr. GRAUSTEIN: We never do capitalize any benefit except when we get earnings from it, and we don't expect any very substantial or any very big profit from this development. The paper business, I don't think, so far as my experience has gone, does not pay very big profits anyway. Sometimes it doesn't pay any, and I shouldn't suppose, I should say off-hand, that we could figure on making after depreciation more than eight and to the outside ten per cent on our total investment.

Mr. POWERS: There is another thing that comes to me. Is there such a thing at the present time as the International Paper Company?

Mr. GRAUSTEIN: Yes, there is. The International Paper Company is not operating as it was, but the International Paper Company stockholders have almost all of them swapped their stock, and changed to the stock of the International Paper & Power Company and the Paper & Power Company is the future company. It owns the stock now of the International Paper Company, and it is going to own the stock also of the separate company that will own most of our power development. We

formed that company so as to keep separate the paper and power. For instance, we own the Canadian Hydro Electric Corporation of Canada and we control the New England Power Association of Massachusetts, and those corporations have nothing to do with the paper business, or nothing direct to do with it, and we formed this power company which could hold in the left hand the paper enterprises and in the right hand the power, and the International Paper Company is still in existence.

Mr. POWERS: That doesn't quite satisfy me. I supposed the new company, the International Paper & Power Company was supposed to take the place of the International Paper Company and the International Paper Company finally would go out of existence.

Mr. GRAUSTEIN: No, the International Paper Company will probably continue operating the paper mills and the Paper & Power Company will own another subsidiary which will operate the power and utilities properties. You see the operations are so big that it is not convenient to have them all in one company. For instance, the International Paper does not own all its properties in its own name. It has subsidiaries. There is the American Realty Company which owns most of these acreages in Maine. The International Paper owns every share of the American Realty Company, and it is the intention to have that separate company operating and holding the timberland limits. In the same way the paper mills in Canada are owned by the Canadian International Paper Company, a Canadian company. The stock of the Canadian Company is all held by the International Paper and the stock of the International Paper Company is all held or almost all held by the International Paper & Power Company. The International Paper Company still continues to function as the paper end of the combination, and we are probably within a few days forming a company that will hold most of the power and utility properties to function on that side of our operations. Is that clear? I am not sure that I get your point exactly.

Mr. POWERS: I think that is clear. But supposing that under the plan and agreement, and you know what I mean by that.

Mr. GRAUSTEIN: Yes.

Mr. POWERS: Under the plan and agreement, if all the stock had been issued, then to-day would there be the International Paper Company?

Mr. GRAUSTEIN: I think we probably should always continue that company, or if we closed it we would put something in its place so that the International Paper & Power Company would not directly engage in business but would be a holding company and would hold the Paper Company's properties in one subsidiary and the power properties in the other.

The CHAIRMAN: The Chair will state that thirty minutes time was taken up by questions of the committee and should not be charged to either side, so that the proponents have twenty minutes left of your one and three-quarters hour period.

Mr. GURNEY: I have a few questions that I would like to ask Mr. Graustein, and I was wondering if the Committee would like to take a short recess at this time and then I could continue the cross-examination afterwards, or if you would prefer to proceed at this time. Either way will be satisfactory to us.

The CHAIRMAN: Yes, we will take a recess at this time of fifteen minutes.

AFTER RECESS

Mr. GURNEY: Will Mr. Graustein please resume the stand? (Mr. Graustein resumed his position.)

Mr. GURNEY: Now, Mr. Graustein, I want to assure you that I trust nothing has been said that you may interpret as hostility to your company or to you personally. I feel sure that everybody here would second a motion to have you come right down here to Maine and live with us.

Mr. GRAUSTEIN: I thank you, sir.

Mr. GURNEY: Mr. Graustein, you are under contract, as you stated in answer to a question by Representative Powers, to deliver 360,000 horse power to the Hydro Electric Company or Commission of Canada.

Mr. GRAUSTEIN: Of Ontario.

Mr. GURNEY: The Hydro Electric Commission of Ontario?

Mr. GRAUSTEIN: Yes.

Mr. GURNEY: Now won't you repeat what you said in regard to your power holdings in Massachusetts?

Mr. GRAUSTEIN: I don't know just what statement you refer to, but I will make this statement, that we hold very

extensive water powers in Canada, mostly on the Gatineau River and the Ottawa River, and in New England in Massachusetts and on the Connecticut River where it is a boundary between Vermont and New Hampshire. Those water powers that are developed and under construction aggregate a million horse power.

Mr. GURNEY: And what other power companies have you control of?

Mr. GRAUSTEIN: We have control of the New England Power Association, and that in turn operates quite a number of utilities, electric lighting companies in Massachusetts and in Rhode Island. Then we have the Canadian Hydro Electric Company which owns this development at Grand Falls through subsidiaries and also the developments that we own on the Gatineau and Ottawa Rivers.

Mr. GURNEY: As a matter of fact, you are one of the largest power companies in the country, are you not?

Mr. GRAUSTEIN: As far as we know, we are the largest.

Mr. GURNEY: Now Mr. Graustein, are you willing to admit that your desire to make the St. John a source of firm power largely dictates you in the development of this storage basin in Maine?

Mr. GRAUSTEIN: The storage basin in Maine rests on three different legs, and it is rather hard to say that one of those legs is the principal leg. The three legs are the fact that storage makes the Fish River development possible, it improves the Grand Falls development and it furnishes the avenue for us to build this paper mill, thereby enabling us to utilize our timber in Maine. As I say, it is pretty hard to say which one of the legs in the wheel is the most important. If I were trying to do that I should say very strongly that it was not the Grand Falls situation but the utilization of our Maine woodlands which I think I said was the problem which I faced when I took the company over. We had this very large investment in Northern Maine and the only use proposed involved a long rail haul that I felt took the value out of the wood. We were paying in freight all that the wood was worth.

Mr. GURNEY: We are not at all suspicious of you because you are a large company. As a matter of fact, the assets of your 53 companies which are subsidiary total \$290,000,000 do they not?

Mr. GRAUSTEIN: No, our assets total \$600,000,000.

Mr. GURNEY: You are more liberal than I am.

Mr. GRAUSTEIN: That is conservative.

Mr. GURNEY: We have been considering the Central Maine Power Company, which has total assets of \$36,000,000, as a great gigantic corporation. As a matter of fact, and I don't know whether you know this or not, but the Maine Central Railroad, the Central Maine Power Company, the Cumberland County Light & Power Company and the Bangor & Aroostook Railroad total assets are only \$139,000,000, so that as a matter of fact you are nearly four times as large as that.

Mr. GRAUSTEIN: We realize our responsibilities.

Mr. GURNEY: I should if I had \$600,000,000 worth of capital. Now, Mr. Graustein, how do you know that Canada is going to let you ship this power back into Maine? They have something to say about it, don't they?

Mr. GRAUSTEIN: Yes, I don't know. I am merely trying to work out something which I feel is constructive. With all these water powers running to the ocean always and not doing any work; and I have this experience back of me. The I. P. Company had owned the Grand Falls power for a great many years before I became connected with it, and we had never been able to solve the problem, and to develop the Grand Falls power we had to get the consent and deal with the authorities of the State of Maine, the Province of New Brunswick, the Province of Quebec and the International Boundary Commission, as well as the Dominion of Canada and the United States Government. Now there are six different bodies that had to be brought into line and we did succeed in getting them into line, and here we have a very similar problem. We cannot attempt to bring so many interests into line unless we can work out a program that is fair to everybody. If we should try to work out a program that was not fair to everybody we would expect to fail. The best we can do is to make the thing as fair as we can and then just tell everybody what I am just now telling you. We realize that it has got to be fair in order to succeed, and we have done our best to make it fair. I think it is certainly worth the effort. The way I view the situation is this, here is a large part of the resources of Northern Maine, and they are not going to be utilized, as far as I can see it, in the immediate future, at any

rate, unless we can work out a program to do it, and that is just exactly what I am here for, and after we get past this hurdle we will take the next one. I really feel if we get past this hurdle we are past our biggest hurdle, but I cannot guarantee that we will jump all the others. We will do our best.

Mr. GURNEY: And then you are willing to concede that even if this bill were passed that you have drawn up it may be possibly interfered with by the action of the Dominion of Canada?

Mr. GRAUSTEIN: Yes, the bill contemplates that we have to get Canada to give Maine power to compensate Maine for the use of the storage, and if Canada won't do it, then we can't do it. If Maine won't do it, then we can't do it. All we can do is to try to work out a basis that is fair and say to the State of Maine "This we think is fair," and say to Canada "This we think is fair." Of course, if we don't agree then we don't get anywhere, and for that reason I am saying, why not agree on something that is fair and thus accomplish something?

Mr. GURNEY: In the two conditions upon which the validity of your bill rests is one to the effect that if you do nothing for two years your charter is null and void. That is our general law now, isn't it?

Mr. GRAUSTEIN: I so understand it, yes.

Mr. GURNEY: So that that is no concession to us.

Mr. GRAUSTEIN: No, I didn't suppose it was.

Mr. GURNEY: I mean to say, you are aware of our general law?

Mr. GRAUSTEIN: Yes, I understood that was the general law.

Mr. GURNEY: Would you be willing to add to your conditions a provision to the effect that if Canada does not consent to re-shipment back, then your Act would be null and void?

Mr. GRAUSTEIN: I think that provision is in it now.

Mr. GURNEY: You think it is?

Mr. GRAUSTEIN: Yes, I think so.

Mr. GURNEY: Where do you think that appears in the bill, Mr. Graustein? Section 15 involves the forfeiture of your charter rights.

Mr. GRAUSTEIN: In section nine it says, beginning with line ten—

“The rights of regulation and control of said waters provided for in this act shall not be exercised unless and until a contract shall have been executed by and between the Company and St. John River Power Company for delivery into Maine by it, or its successors or assigns, of electrical energy generated in New Brunswick additional to the amount delivered under section eight of this act. Said contract shall be for such number of kilowatt hours and on such terms and conditions as shall be approved by the Public Utilities Commission.”

Mr. GURNEY: But even you might make that contract and the Public Utilities Commission might approve it, but if Canada withheld its consent then that would not be possible of attainment?

Mr. GRAUSTEIN: I shouldn't suppose it would be a contract if it was not a legal contract.

Mr. GURNEY: Would you be willing to change that under the forfeiture provisions of your charter?

Mr. GRAUSTEIN: As far as I know, there is no objection to it.

Mr. THAXTER: I don't see any.

Mr. GRAUSTEIN: I will say that is our intention. We don't expect and we don't think it is fair for Maine to be asked to allow the use of the Fish River storage without getting compensation for it in the form of power from New Brunswick.

Mr. GURNEY: And you personally would not be averse to making that a condition precedent to the validity of your charter, that Canada consent?

Mr. GRAUSTEIN: I don't know that it would be a condition precedent. It would be a condition that if Canada would not consent, then everything would be off. But I think the charter ought to come into existence first. However, that is a technical matter that can be arranged.

Mr. GURNEY: You have added here two conditions upon which the charter will be forfeited.

Mr. GRAUSTEIN: Yes.

Mr. GURNEY: You might put a condition in there to the effect that unless there shall be such a contract—and I am asking you if you would be willing to make that a condition precedent?

Mr. GRAUSTEIN: I think we would. Section 15 says that the Act shall become null and void unless certain conditions are met, and I think we would be willing to add a condition of that sort. I don't want to take the legal end of the work out of the hands of Mr. Thaxter, but I think that can be worked out to your satisfaction.

Mr. GURNEY: You have spoken of the wood in Canada not being usable in the paper mill that you contemplate erecting, and that you will have to use our Maine lumber, or Maine wood.

Mr. GRAUSTEIN: That is not exactly right. I said, as I recollect, that at the moment we didn't own any wood in Canada but in the hope of later extension to the mill I want to be able to use Canadian wood, if we require some or if we buy some.

Mr. GURNEY: Have you made computation on how long a time your Maine wood would enable the paper mill that you contemplate erecting here to operate?

Mr. GRAUSTEIN: This may be a little indirect answer, but I forgot to say before that we assume that we will buy, for instance, quantities of wood from farmers. I think with the wood that we can buy from the farmers that our supplies of wood on the 550,000 acres that I spoke of would come very close to furnishing a permanent supply, with what we buy from the farmers, for that mill; and to be more specific my guess is that it would furnish without any purchases from the farmers, our Maine timberlands would furnish 65 per cent of permanent supply.

Mr. GURNEY: In your proposed new section you say this:

“If within a period of twenty years from the time of completion of said pulp or paper mill operation of said mill shall be abandoned unless further operation thereof is no longer commercially feasible, then upon such abandonment the State may buy—”

Now if I comprehend that my understanding of that means that if you people do not find it practicable to use it we may buy.

Mr. GRAUSTEIN: What we put that in for was this: We heard that some people thought that we were building a paper mill with no idea of operating it, but merely with the idea of getting these rights. Now of course that is foolish. If we do erect a paper mill we would run it as long as we can make money. Anybody would do that. We felt that it was pretty clear that our self-interest would dictate our operating the mill. But since we heard there were some people had thought to question that we drafted that clause in the hope that it would make clearer what would be the fact anyway, that any business man with an expensive mill or any mill on his hands would run it if he could make money by running it. And on the other hand, of course if a property cannot be run at a profit in the long run it won't be run. But we didn't anticipate that at all. We certainly wouldn't put our money into it otherwise.

Mr. GURNEY: I know how good a lawyer you are because we have met before, but will you please read the first five lines of that section and then let me ask you a question.

Mr. GRAUSTEIN: Do you want me to read it aloud, or do you want me to read it to myself?

Mr. GURNEY: No, you can read it to yourself.

Mr. GRAUSTEIN: Yes.

Mr. GURNEY: Now under that amendment, any time you wanted to you could, if you thought it not feasible, discontinue your mill, couldn't you?

Mr. GRAUSTEIN: No, it doesn't say if we think it is not feasible. It says "if it is not commercially feasible to run it."

Mr. GURNEY: But you would be the judge as to whether or not it was commercially feasible, wouldn't you?

Mr. GRAUSTEIN: I don't think so.

Mr. GURNEY: Who do you think would be?

Mr. GRAUSTEIN: In the event of a dispute I suppose the courts would. Wouldn't it be like any other question. It doesn't say "if we don't think it is," it says "if it is not." Anyway, if it means in our opinion, then we don't ask it to mean that. We mean if in actual fact it is not feasible to run it.

Mr. GURNEY: And of course you may make it feasible or not according to your own judgment if you wanted to?

Mr. GRAUSTEIN: I don't think that is so. What we mean

by that is this: somebody may discover some other method of making paper, such as making paper out of sugar cane that might cause a shut-down of a pulpwood paper mill. I think, however, that is rather vague, but the clause is put in there because nobody can tell what will happen.

Mr. GURNEY: Let me read it:

“If within a period of twenty years from the time of completion of said pulp or paper mill operation of said mill shall be abandoned unless further operation thereof is no longer commercially feasible, then upon such abandonment the State of Maine may buy at cost—”

Mr. THAXTER: Not the mill, the power.

Mr. GURNEY: In other words, if this is not commercially practicable and you have demonstrated that fact, and a good accountant could demonstrate it, then you would sell it to us for cost?

Mr. GRAUSTEIN: Not the paper mill. It is the power proposition.

Mr. GURNEY: Does it say that?

Mr. GRAUSTEIN: That is what it is intended to be.

Mr. GURNEY: It says “if within a period of twenty years from the time of completion of said pulp or paper mill operation of said mill—”

Mr. GRAUSTEIN: Yes.

Mr. GURNEY: Now where do you get in your power?

Mr. GRAUSTEIN: If we stop operating the mill then it says the state may take the power away from us.

Mr. GURNEY: If you stop operating the mill?

Mr. GRAUSTEIN: Yes.

Mr. GURNEY: And we buy it then at cost?

Mr. GRAUSTEIN: No, not the mill. If we stop operating the mill you can take the power away from us. You don't have to buy the mill.

Mr. GURNEY: Buy it at your price?

Mr. GRAUSTEIN: Less depreciation.

Mr. GURNEY: The very purpose for which you having

constructed the power having gone out from under you, you would have no further use of the power?

Mr. GRAUSTEIN: The state doesn't have to buy it. The only point is this: We certainly would be pretty hard hit if we put all our money into this mill and then can't operate it. We certainly don't want to put our money into a mill and then find that we can't operate it and run it.

Mr. GURNEY: When you put in \$3,000,000 out of your \$600,000,000 it wouldn't be very much damage?

Mr. GRAUSTEIN: They say the smallest lamb in the flock is precious.

Mr. GURNEY: Do you mean before you shear him or afterwards? Now Mr. Graustein, would you be willing to file a bond with the State of Maine, or whoever else may be interested, that for ten years you would operate the mill at its full capacity?

Mr. GRAUSTEIN: I would say this, that the building of the mill and putting the money into it is about the best bond you could get, and I don't like to go to the expense of buying a bond. I shouldn't suppose it would be a great help.

Mr. GURNEY: Supposing we would take your own bond?

Mr. GRAUSTEIN: I don't think we would have any objection to agreeing to operate the mill and not abandon it.

Mr. GURNEY: For a matter of ten years?

Mr. GRAUSTEIN: No, I don't think so.

Mr. GURNEY: Now as a matter of fact, \$3,000,000 for this power and this storage basin wouldn't be an expensive price for you to pay even if you didn't operate it?

Mr. GRAUSTEIN: Oh, yes; the storage alone is going to cost about \$2,000,000, and that is very close to what we can afford to pay for that amount of storage. You see, the storage is only for the purpose of making up the power in dry seasons, and once you get to a certain cost of storage it is cheaper to rely on a steam plant for work in a dry season than to put in more storage, and this storage wouldn't possibly bear a cost of \$5,000,000. The whole Grand Falls development has to date cost only a little bit more than \$5,000,000, the whole thing. That does not include the rights, but I mean the construction costs.

Mr. GURNEY: Mr. Graustein, as I understand it you intend to put a paper mill on this side?

Mr. GRAUSTEIN: Yes, we put the pulp mill on the Canadian side and the paper mill on this side. That permits of the maximum possible development.

Mr. GURNEY: I have been requested to ask you this question, and I don't know whether you can answer it or not. How much of the 550,000 acres is situated so that the pulp can be economically transported to Van Buren?

Mr. GRAUSTEIN: Every bit of it. We have 844,000 acres in Maine, and 550,000 of this is situated on the St. John river watershed, meaning the St. John, Allagash and Fish Rivers, and that all drains to Van Buren, so that that 550,000 acres does constitute a very minimum supply for that mill.

Mr. GURNEY: Have your plans reached the point where you can tell us where you plan to erect the pulp mill?

Mr. GRAUSTEIN: Yes, the pulp mill would be directly opposite Van Buren, and the paper mill would be at Van Buren. I don't know whether it would be within the town limits, but it would be right near there.

Mr. GURNEY: Now in all your legal practice before you went into the paper business, which I know was considerable, have you ever seen a charter as comprehensive as that?

Mr. GRAUSTEIN: As I said a moment ago, I think this charter is comprehensive in the limitations which it imposes upon us. I think it is quite narrow in the matter of rights which it gives us. In other words, it does not give us broad rights generally to create storage. It allows us to create storage at specified places and at specified heights and under specified conditions; it requires us to get power imported from a foreign country and to build a paper mill. I have seen a great many charters and I never have seen one that required a company to do as much in order to develop its power as that charter does. I have read a good many charters but I certainly don't remember any charter that required a company to do as much as that charter requires us to do.

Mr. GURNEY: Do you share the conviction expressed by Mr. Nelson that a 19-foot dam would not be practical?

Mr. GRAUSTEIN: You mean a ten-foot dam.

Mr. GURNEY: Yes, a ten-foot dam.

Mr. GRAUSTEIN: Yes, for this reason, there are two main branches of the Fish River system, one coming in from the east and includes all these lakes, and the other coming from the south and includes the St. Froid. Now the one coming from the south has about two-thirds of the flow, and building a dam at the foot of Square Lake would get only about one-third of the flow, and for that reason the reservoir wouldn't fill because there would not be the amount of water necessary. That is the way I understand the situation from what Mr. Nelson said, and it fits in with my observation. I will say that we have built in Canada the second or third largest reservoir in the world, and you have to consider always in your reservoir just these things, first, how much water it will hold, and secondly, if it will catch that amount of water. You could get a pretty big reservoir by keeping Eagle Lake down to ten feet but you wouldn't get it filled with water, so that it wouldn't work.

Mr. GURNEY: I just wanted to establish the fact in regard to the position of your company, that it is a 19-foot dam or nothing?

Mr. GRAUSTEIN: That is not the position of our company; it is the engineering fact.

Mr. GURNEY: You adopt it, don't you?

Mr. GRAUSTEIN: Yes, it is the engineering fact. Our attitude is to get the truth on this, just to find out the facts and find out what they permit and to do that. We cannot change the facts.

Mr. GURNEY: The position of the company is a 19-foot dam at Eagle Lake or nothing?

Mr. GRAUSTEIN: Yes, that is the situation.

Mr. GURNEY: And for the reasons that you and Mr. Nelson state.

Mr. GRAUSTEIN: For the reason that engineering construction makes that the only solution of the problem.

Mr. GURNEY: I am requested to ask you this question: In your Ontario charter was a specification made that power should be sold at four mills?

Mr. GRAUSTEIN: You mean in the Ontario contract?

Mr. GURNEY: Yes.

Mr. GRAUSTEIN: Yes, we sell this power at less than four mills.

Mr. GURNEY: And you have not gone far enough in your computation that you can give us an estimate of what you can sell power for here?

Mr. GRAUSTEIN: No, it would be more expensive here. This is a more expensive development. I can tell you this, that we sold power to Fraser for \$20 per horse power at the switchboard at Grand Falls, and I should think that we would be able to make a comparable price. If it were delivered at some distance from Grand Falls the price would have to carry the charge, but that is only off-hand.

Representative DAIGLE: I would like to ask a few questions of Mr. Graustein.

Mr. GURNEY: We should be glad to have Representative Daigle take from our allotted time to ask any questions he may wish to ask, and he can have any amount his wishes.

The CHAIRMAN: I don't think that will be necessary.

Mr. DAIGLE: Mr. Graustein, will you please state for the benefit of some people from Frenchville here who would be interested to know, what was the object of the company in acquiring land in the town of Frenchville?

Mr. GRAUSTEIN: I am sorry, but I don't know just where Frenchville is.

Mr. DAIGLE: Frenchville is 22 miles above Van Buren, between Van Buren and Fort Kent, about half way between.

Mr. GRAUSTEIN: Perhaps Mr. Hinman can give us the information.

Mr. HINMAN: I will say that we acquired land at Frenchville with the idea of having a holding ground for booming wood in conjunction with this proposed mill at Van Buren.

Mr. DAIGLE: It was bought for a holding ground?

Mr. HINMAN: Yes.

Mr. DAIGLE: There is another thing that concerns the people there in regard to the flowage around Long Lake. The people there are asking consideration of this matter, that Long Lake, and of course I am speaking of the eastern section and the western section, the western shore. It is comparatively

low land on both sides, and if I understand the principle that would be applied there as it is in Eagle Lake, the people would be paid for their land, but how about the roads. Of course you take the matter of the railroad in Eagle Lake, and it has been brought out already that that is going to be raised, but the county has some roads there and the people are wondering what will become of those roads.

Mr. GRAUSTEIN: We pay the cost of moving them.

Mr. DAIGLE: But in certain places they couldn't be moved.

Mr. GRAUSTEIN: We would have to find a way to move them. That would perhaps be a problem, but the engineers must have considered that and I think they must have in mind a method of moving them, because they can always cut a road out of a hillside. Of course it is expensive, but it can be done. We have moved a good many roads, and sometimes it has cost just twice what we expected. I know it did on the Gatineau, but we would have to do it.

Mr. DAIGLE: That is all the questions I have to ask.

Mr. THAXTER: I don't know what the situation is as to time allotted.

The CHAIRMAN: You still have twenty minutes of your original one and three-quarters hours.

Mr. THAXTER: I will say that we have five or six others that we would like to call upon for remarks, but I realize they would have to be comparatively brief. If Mr. Gilbert is present I would like to ask him to say something about this matter.

Mr. FRED GILBERT: Mr. Chairman and members of the committee, by name is Fred A. Gilbert; my residence is Hampden, Maine. I appear here tonight before this committee as an independent citizen of this state interested in the Fish River proposition. I have been familiar with its history for the last 28 or 30 years, and I have tried a number of times in my own way to have it developed. It was first presented or offered by the firm of Stetson, Cutler & Company and George B. Dunn and Mr. William C. Donnell. At the time it was offered and considered it was examined by an engineer by the name of Ferguson, Hardy C. Ferguson or Hardy S. Ferguson, and at that time it was decided from the investigation made by Mr. Ferguson that the cost of the development was greater than the power development would warrant.

As I recall it, the power was estimated by Mr. Ferguson to be in the neighborhood of 5,000 horse power, or a little less than that. Then later on in the history of this proposition this power was bought in the dealings for some timberlands and the price of it as figured at that time was \$160,000 or \$165,000. Later on I had something to do with the selling of it and it was sold at the same price after being held for several years, and I think I would be safe in saying that the parties who first purchased it paid about that price for it.

As I listened to the engineer here tonight I gathered from what he said that there was in the neighborhood of 5,400 acres of land flowed. Coupling these two items together and reckoning the land at the value stated it makes a proposition of about \$220,000. I have sat back here tonight and heard the president of the International Paper Company say that it was the intention of that company, if it was allowed the charter, to develop that property and invest in the neighborhood of \$5,000,000. Now if that isn't a Yankee trade, then I don't know one, a party owning \$220,000 of property as the State of Maine can reckon it today, and that party coming in here with \$5,000,000 to put into it—really, I can't understand why there is any hesitation about it.

Now I have just one other point to make. It has been said at this hearing and also at another hearing that it would spoil the fishing in these lakes. I am a fisherman and probably own as much fishing tackle and use as much as anybody in Maine. I have fished these lakes. I have also fished other lakes that have been dammed. I have fished them before they have been dammed and I have fished them after they have been dammed, and I will say that if I am any judge, in my opinion it improves the fishing. You have got to allow a certain length of time for the fish to "feel out" or in other words, to get their food out from these extended areas, but after that time you will find more fishing and better fishing than you had before. I hope that I may live long enough to see Fish River developed, and that is all I have to say. I thank you. (Applause)

Mr. THAXTER: I will now call on Mr. Hart, to make a statement.

Mr. HENRY J. HART: Mr. Chairman and members of the committee, my name is Henry J. Hart; my residence is Bangor, Maine. I am general counsel for the Bangor & Aroostook Railroad, and I will state that our interest in this bill is in behalf of

the State of Maine and Aroostook county in particular, because our interests are inseparably linked with those of Aroostook county. As I conceive it, this committee in considering this bill has reached the economical crossroads of the State of Maine. We have urged and we have begged for new industries to come into New England and into the State of Maine. We now have an opportunity to let one come in at its request.

I am particularly interested because this is a development in Aroostook county. Aroostook county is unusually situated, and if you will excuse the expression I will say that it is a "single track," in the sense that its greatest income comes from but one source, the raising of potatoes. There is just one spot in Aroostook county where that is not true. I don't know how many of the members of this committee were here four years ago. I know that some were here, but probably the most of you were not here. But five years ago the Bangor & Aroostook was approached by interests in Canada asking if we would give up some of our land to permit the building of a paper mill in Aroostook county. Of course, we did. I had known Madawaska before that, a little cluster of a few houses, and in the year 1924 the project started. We came before the legislature in 1925, in the interest of the development of the paper mill at Madawaska, and at that time certain legislation was asked for. We did not at that time have the Maine Development Commission. There had been no invitations sent out for people to come to Maine, but this company "saw Maine and came." What is the story today? There is today a \$7,000,000 mill at Madawaska and it is a thriving community.

Now I just want to refer for a moment to the matter of freight charges going out of Madawaska in the year 1924 and in the year 1928. In 1924 the total freight charges collected going out of Madawaska, Maine, was \$67,000; last year it was \$550,000, and that was before they doubled the size of the mill. This indicates that the next two years there will be a million dollars of freight revenue on which the state collects its transportation tax.

This project which is now offered to the State of Maine means a pay-roll in the county of Aroostook that will be a splendid advantage, an opportunity for employment beyond anything that we have expected, and its results will reach from the St. John river to Kittery. Even Piscataquis county is bound to be benefitted because of the car shops located in that county. The more business there is done the more cars there will be to repair, the more cars at work.

Two years ago when this bill was presented, although fully in sympathy with the principle of the bill we could not favor the bill because it asked that something be given with no assurance of any return. I saw the present bill two weeks ago last Monday, and I feel that on the assurances that have been given you here tonight of the amount of money that is to be spent on the mill project, entirely apart from the power project and the guarantee of continued operation removes every objection that I can conceive, and to my mind it presents a new era to industry in Aroostook county, something which the State of Maine needs and which Aroostook county needs.

Mr. THAXTER: I will now call on Mr. Leonard Pierce.

Mr. LEONARD PIERCE: Mr. Chairman and members of the committee, my name is Leonard Pierce; my residence is Portland. I appear personally, representing myself, as a citizen of this state, and with the selfish interest that I have in other members of my family who are owners of land in the territory to be flowed by this particular development. I admit that my interest is to a certain extent selfish, but one's personal interest leads one to appear in favor of such a proposition as is presented here. I am more interested perhaps than most anybody else can be in having the guarantee of the mill running made effective. A mill that will run will cut stumpage off of land that I and my friends own. A mill that won't run is not a great asset to me or to anyone else. We want the mill to run.

Now this particular clause in the bill was inserted partly at my suggestion, and I know that it is intended to accomplish in absolute good faith what it purports to accomplish, and that is the assurance that the mill will run or else that the State of Maine through any company that it may charter has the right to take back not the paper mill, something that won't pay a dollar, but the hydro-electric development.

The provision that I would suggest in the bill in relation to that clause is that instead of it being the cost of the development of the hydro-electric power, dams and flowage, and so on, that it be the amount prudently expended, so that if there was any indication of their running wild and wasting money in building structures that all the state would pay, or any hydro-electric company that the state might charter would have to pay, would be the amount that the public utilities commission of Maine should say was reasonably and sensibly expended in

doing what they started out to do. In other words, make some provision that would apply to the development and that would not require that they should take back the mill. If the present language is ambiguous in that respect then the clause can be re-drafted to provide for that.

Now, supposing for instance they do cut wood off of our property and it is an advantage to us in that respect, and supposing the stumpage is worth five dollars and your wood at the mill is worth fifteen dollars, then the other ten dollars goes to the citizens of the State of Maine, those who cut the wood and those who sell groceries, flour, pork, beans, hay and oats, and everything else that goes into the cutting of wood. Everybody knows who is familiar with conditions in a lumbering country that when the men are operating in the woods there is a very large pay-roll, and that as a result of this, business is good for the traders, the farmers, the laborers and everyone in that vicinity, and that is something that is perfectly obvious.

And so I say that there is a great opportunity. We in the State of Maine have been talking about development, and here is a large company that comes and proposes to make a great development. We don't have to talk about the good faith of these parties. It is put in the bill in plain language, as plain as can be devised, and if it isn't plain enough we have enough capable men on this committee to make it plain, that if they don't do what they say they will, then they will lose what they have put into it. It seems to me there can't be any question about that. In addition to that, we have heard the statement of Mr. Graustein here tonight to the effect that he will sign a bond for the International Paper Company that they will run the mill for ten years.

It seems to me that this is one of the finest opportunities to hop on to the band wagon and go ahead and do something, instead of continually talking about it, that has been presented to the State of Maine since I can remember; and it seems to me that this little cartoon that has been passed around here is a very inadequate answer to the proposition advanced by a man who comes down here and offers you three or four or five million dollars which he is willing to spend in your state for the purpose of going ahead and doing something; and I certainly hope that this measure will receive the sanction of this legislature, and that as a result of that work will go ahead. I feel that this is conceived in absolutely good faith, and it must surely be possible with the number of lawyers there are in this

legislature, to get a bill that will provide in plain terms that what the International Paper Company agrees to carry out it will have to carry out, and if it is not carried out then that company will lose the franchise which is granted to it under the terms of this bill. If this is done you will know what you are getting absolutely. Like my good friend, Fred Gilbert, I am sort of a Yankee myself, and think if you can swap a quarter of a million dollars for five million dollars you are making money a good deal faster than you can in the law business.

Mr. THAXTER: If Mr. Laliberte is in the room I would like to ask him to say something about the situation on the Fish River and Eagle Lake, as he is well acquainted with that locality.

Mr. J. A. LALIBERTE: Mr. Chairman and members of the committee, my name is J. A. Laliberte. I live in the town of Eagle Lake. As perhaps you may have noticed, I am on the wrong side of the house. I am very much in favor of this bill but not exactly as it has been presented. There is one feature of this bill that we do not like, but the rest of it we agree to. The town of Eagle Lake is affected directly by the terms of this charter. We believe that a 19-foot dam is too much of a head for the town of Eagle Lake. We also believe that the company could get along, although perhaps not getting the same amount of water, by building more dams up above on the stream, and it seems to us it would answer the same purpose as it would by building only one dam down there. We don't want to stop progress in Aroostook county. We are broad enough so that we are willing to swim in order to keep the rest of the county above water, but we don't want to drown without giving notice to the world that we are going.

You have here some maps showing the locus, and they have called this the east branch of the Fish River, and it is only a third of the way from St. Agatha down to the foot of Eagle Lake. The main stream goes the other way, and we can't see for what reason the company didn't survey the head of that river. There is a very fine place at the foot, or about half a mile below Big Fish Lake, to build a dam. I will say to you that I am not an engineer and we have not employed any engineer. I am a lumberman and I have been cutting logs in that country for several years. I have been along all those brooks. I know when you reach that Fish Lake on the right-hand side the first thing you find is Chase Brook with two or three lakes on it, and

that is a flat country for about fourteen miles. When you go along a little further you strike Smith Brook and Fox Brook, and when you go further you strike flat country for fourteen or fifteen miles, and at the last you have a flat country that would be entirely covered. Then you strike another stream with seven lakes, and if you put a dam up there it seems to us down at Eagle Lake that they will get more water. We believe in order to be fair with everybody down there that they should build these dams so as to cause the least damage to the people in that section, and we can't understand why the company should not do it. The mere fact that it may cost a few dollars, and that is a great surprise to us because we thought it would cause a good deal of loss to the company, for them to build those few extra dams than for them to go ahead and pay these excessive damages which they will have to pay if they build only one dam, is something that we do not understand.

Therefore, I say to you on behalf of the people of Eagle Lake that we want the International Paper Company to come down there and build those dams. We need them. We have been waiting for them, and when they come they will be well received with open arms. I would like to have their engineer come here with their figures and have them show to your satisfaction that they cannot get enough water with those extra dams to do the business that they want to do.

Now don't forget that we have been up there in that country for over a century, and we have worked hard to open up that vast country. We are receiving very little for what we are doing. We are giving our all. They tell us that later on they will get a little pulpwood from us down there, and we believe that. No doubt they will. There is no doubt but what some of our men will have a chance to go to Van Buren or Fort Kent or anywhere else in order to get work to do, but of what importance is that as compared to a situation which means the forcing of fifty or sixty of our families out from the place where they have been living. We have our children growing up there and we are attached to our old places there. We have seen our fathers and mothers live and die there, and some of them are lying in their graves now, and if you should give this company the right to develop under a 19-foot head at Eagle Lake they will be disturbed in their graves, and I can assure you that is something we do not want to do if we can possibly help it. We do want this company to come there, but we want them to come, if such a thing is possible, without doing that.

The CHAIRMAN: The time of the proponents is up and the committee will now recognize Mr. Gurney.

Mr. GURNEY: Mr. Chairman and gentlemen, it seems to me that the interests of all Maine are at stake. We do not appear here as obstructionists because we believe that in the hands of this Legislature the problems that confront Maine will be fairly considered and that our interests will be protected.

There are two sides to this question. We have many witnesses who have come here from Aroostook county. I do not propose to take either the time of the committee or the time of those people to explain further our objections to this proposed bill, but that will develop during the course of the proceedings. Will the Chairman kindly inform me just how much time we have at our disposal.

The CHAIRMAN: You took thirty minutes in cross-examination so that you have one hour and a half.

Mr. GURNEY: I will call upon Mr. A. J. Nadeau.

Mr. A. J. NADEAU: Mr. Chairman and members of the committee, my name is Arthur J. Nadeau of Fort Kent. I am here this evening representing the citizens of the town of Fort Kent, and I hope I am at liberty to say that I represent also the citizens of the town of Frenchville and the citizens of St. Agatha who were present at a Chamber of Commerce meeting held in Fort Kent two or three evenings ago.

In the first place, I will say that I agree entirely with the views of by Brother Laliberte when he stated that we have no objection to the International Paper Company coming up on this Fish River water basin and expending money there for the purpose of creating storage, but we feel that when they ask to come up there and construct a 19-foot dam that they are asking for something that is going to do too great damage to that particular country, and that they should be satisfied with something less than that, something which will not create the amount of damage that this 19-foot dam which they propose evidently will create.

However, since the proponents of this bill, Mr. Graustein and the other gentlemen who have spoken here, have stated that nothing will serve their purpose but a 19-foot dam, I will have to proceed and deal with this proposition from our point of view on the assumption that this bill will call for a 19-foot dam at the foot of Eagle Lake and nothing else.

The location of the town of Fort Kent has been pointed out to you by the engineers of the International Paper Company as being at the mouth of the Fish River where it flows into the St. John River, and naturally we who live in Fort Kent are very much interested in the proposition of this International Paper Company's development. I do not believe there is a section in the county of Aroostook which will be so vitally affected as the section along the basin of the Fish River waters, Fort Kent, New Canada, St. Agatha and Frenchville. The town of Van Buren of course is vitally interested in this development because it means another industry for them. We are also interested for the reason that we feel it is going to cause a great loss, it is going to take money out of the pockets of the laboring men up in that section—and I might say right here that in that section of Aroostook county the greater part of the young men earn their living in the winter time by going into the woods and in the spring by driving the lumber that is cut and taken out of the forest down to the mills for manufacturing.

Now we have up back of us these huge water basins. Today this is one of the most beautiful recreation spots that we have in New England, and we feel that if this proposed development goes on, with a 19-foot dam at the foot of Eagle Lake, it will to a certain extent destroy these recreation grounds, and that it will reduce to a certain extent these water basins to a scene of ruin and desolation; that it will be almost a tragedy, in so far as the beauty of the place is concerned, and in so far as the recreational nature of it is concerned.

In addition to that, at the present time we have on Eagle Lake a manufacturing company which is engaged in the manufacture of long lumber, known as the Penobscot Lake Lumber Company. They have been in business there for some 26 or 27 years. When the business was first started I think it was called the Fish River Manufacturing Company, or perhaps it was a partnership composed of the late Hon. Albert A. Burleigh and other members. Subsequently to that it was incorporated and became the Fish River Manufacturing Company, and it is now the Penobscot Lake Lumber Company. They have done business there every year. They have cut lumber in that locality every year for the past 26 or 27 years. They take out of the forest approximately 12,000,000 feet of lumber every year. In addition to this mill there is another small mill owned by Mr. Laliberte at Plaisted, also another at Eagle Lake, and I am informed by Mr. Laliberte himself that he generally manu-

factures in the neighborhood of 2,000,000 feet. In addition to that there is another mill lower down which generally cuts approximately the same amount as Mr. Laliberte.

Now figuring on the basis of \$22 a thousand which goes into the labor of taking the lumber out of the forest, driving it to the mill and manufacturing and loading it aboard the cars, figured on that basis it will represent approximately \$350,000 to \$400,000 which will be taken out of the pockets of the laboring men of that section, and the men who take that lumber out of the forest come from Fort Kent, Frenchville, Wallagrass, Eagle Lake, St. Agatha and New Canada. We figure on that basis that it will be taking out of the pockets of these men, the laboring men of that section, \$350,000 to \$400,000, and we think that is a very conservative statement. We think there will be more than that, but we have purposely made it low. In addition to that we have on those lakes some of the finest fishing, salmon fishing, to be found in the State of Maine. Something like two years ago one of the owners of a sporting club up there, Mr. Michaud, spoke before our Rotary Club and he told us at that time he had taken in \$35,000 that year. There are also other sporting camps there. At that time Mr. Michaud told me that these camps took in over \$100,000. The supplies for these camps were bought from merchants in that locality, and we estimate at the present time that the income received from these lakes and that sporting opportunities they offer is in excess of \$200,000. So that from this we cannot see how this development, unless they cut this dam down to a 10-foot head, is going to be any great advantage to us, and if they do that then we will withdraw all objection as far as we are concerned in Fort Kent. But I am proceeding on the assumption that they will accept nothing but a 19-foot dam, and I think it is a conservative estimate to say that they are taking \$500,000 or \$600,000 out of the people in the immediate vicinity of these water bays.

Now they come here and tell us they are going to compensate us by furnishing these men, the same men who are now employed in the woods for the Penobscot Lake Lumber Company and the other mills, that they are going to furnish us sufficient labor for the loss that we will suffer by reason of these other mills going out of business. Mr. Graustein takes the position that his company is willing to move the mills back. I understand they are trying to negotiate at the present time to buy them, or rather I have heard something to that effect. Perhaps

the long lumber mills would prefer to take their compensation, and of course this Legislature couldn't pass any act to compel them to continue in operation and to have their mills moved back. We think if this 19-foot dam is built that these concerns will simply go out of business. They will take their compensation. I am frank to say that the long lumber industry is not thriving at the present time, although I do not think they are operating at a loss. But, nevertheless, we feel that they would be satisfied and feel very much better about it if they could get the money they have invested in these plants, and the result would be that we would be entirely dependent upon this concern to compensate us.

Now we have a mill at Madawaska that has been referred to, and you have heard my Brother Hart picture the great city that has sprung up over night. I go to Madawaska quite frequently, and I think I can safely say to this committee that there are 75 per cent of the people employed in the Madawaska mill who have their residence in Edmundston, New Brunswick, and as I understand it all of that 75 per cent are Canadian citizens, employed in the town of Madawaska, and having their residences in Edmundston.

The feature of this bill that we are a little skeptical about is the fact that it is admitted that there is to be run in connection with this paper mill which will be erected in Van Buren a pulp mill, and as I understand it the ground wood mill is to be erected at St. Leonard's in New Brunswick. We feel in regard to this, although the engineers have stated that it would be the logical thing to do, that it would be the thing you would expect for them to manufacture Canadian pulpwood when they have 550,000 acres of timberland in the State of Maine accessible to their mill by means of these very same waters. We suggested to one of their attorneys a proposition in order to compensate or to guarantee to us that there would be some compensation for the loss that we would have to suffer, and I made this proposition to one of their attorneys asking that this provision be incorporated as a part of their bill:

“In order to insure employment for the lumbermen of this section to compensate them for what will be lost a guarantee or its equivalent that not less than fifty per cent of the wood to be manufactured annually in the proposed mill be taken from the forests of Maine.”

When I made this proposition I was met with the reply that

the thing was out of the question and they couldn't consider putting any amendment or any proposition of that kind in the bill, and when they come here and say that they intend to take all the lumber out of the forests of Maine and refuse a proposition of that kind, then it seems to me that we have some reason to doubt their sincerity in that respect.

Now I am not going to proceed very much further. I want it to be understood that we are not opposed to a reasonable proposition. We are not opposed to a 10-foot dam at the foot of Eagle Lake which will not put these industries out of business, but we are opposed to any proposition that is going to put the town of Fort Kent and that vicinity out of business. It is a case of life and death with us. We have our back to the wall and we certainly are going to put up a fight against any proposition that is going to put us out of business. As the matter presents itself to me it looks as if they are going to take out of our pockets up in that section approximately \$500,000 or \$600,000 annually, and we want a guarantee that if this project goes through that we will get a hundred cents on the dollar in return. I thank you, gentlemen. (Applause)

Mr. GURNEY: Mr. Chairman, we would like to call upon Councillor Wilson if he is in the room.

Councillor WILSON: Mr. Chairman and members of the committee, I have listened to the presentation of this proposition this evening, and not only this evening but also two years ago when the matter was presented to the legislature. The statements which they make here this evening are absolutely not what were made two years ago, and until I can have some absolute proof of the sincerity of the International Paper Company to carry out what they promise to do I am opposed to the bill.

Mr. GURNEY: I will next call upon Mr. Hamilton.

Mr. WILLARD D. HAMILTON: Mr. Chairman and members of the committee, my name is Willard D. Hamilton, and I am an attorney-at-law practicing in Caribou. I am opposed to just one feature of this bill, and that feature you will find in sections eight and nine. When we look around and see the number of people here this evening and realize the expense this has been to the proponents of this bill and to those in opposition we can readily look back in history and see how a little mistake made by our ancestor, Daniel Webster, in connection with the

Ashburton Treaty, has caused a good deal of trouble, and we realize that if he had just set that line over a little further so that it would have gone up the river, then we would have had no difficulty here tonight and no opposition to such a measure as is here presented. We then would have half of the Grand Falls and the question of watershed would be only a matter of adjustment between the two countries.

In some way, somehow or other, that line was established in such a course so that they took Aroostook Falls, where all the watershed comes from Maine, and they took Grand Falls where a large percentage of the watershed comes from Maine. Now there were one or two things that they couldn't anticipate. One was the flowage from Grand Falls up along Hamlin Plantation and Van Buren. The people of Van Buren and Hamlin held them down to a certain extent, but they didn't do enough. They didn't show enough of the Yankee spirit. Instead of getting only 2,000 horse power or 6,000 horse power in that flowage they should have had ten or twenty, but they have got it and it is a factor and it is worth something; it is worth a lot more than mills or other things because they can build and depend upon it.

Now we find that we have a little something left which is mighty important to the Grand Falls project. We haven't any opposition to the building of mills; we haven't any opposition to whatever development this company wants to make; we want them to do it and we want them to build this mill in Van Buren; we want them to develop if possible along this Fish River. But what are we getting out of it? You take sections eight and nine of this bill, and you will find that there they ask you to recommend to this legislature the creating of a company and to give that company this important right, to "throw it into their laps," so to speak. And then what do they ask you to do? They ask you to make a trade with another company to make an exchange of power. Of how much power? Only just what you can develop naturally on the Fish River, just what you can make yourself. What will the Grand Falls project get? They admit it will be 8,000 horse power, and some have estimated it from 16,000 to 20,000 horse power. Now that is what Grand Falls is getting, and what Canada is getting out of it. What is the State of Maine getting? Simply a guarantee that they will use 3,900 horse power in the State of Maine that they can develop by these projects.

Now that is the situation as we look at it. We say that the

provisions of this bill are not fair, and that the company should go ahead and get a better guarantee for the State of Maine. In my mind it is not the building of mills as much as it is to get the fixture of so much of that "juice," as we call it, this hydro-electric power, and when you get it and get it allotted to the State of Maine then you are going to have something that will develop the State of Maine and something that will be a fixture in the State of Maine, and there won't be any question then when you build a mill as to whether you will discontinue it or not because you will have fixed power and you will want to continue it. Now that is one of the reasons why we object to the bill as it stands.

Now they ask us to cut our lumber and run it down the St. John River and do at least half of the work over in Canada, and then shoot it across into Maine in order to escape more or less of a tax. That is one of the things that is involved. Our friend Mr. Hart has told us what a great thing we did in 1925 by letting them shoot that across from Edmundston. I can't see that that is such a great thing. Canada don't give us anything. We are just simply helping Canada dispose of some of her products by doing so. When Canada is willing to give to us what we are willing to sacrifice, as these men have already told you, then we are willing to go ahead and stand behind this company.

Mr. GURNEY: I will now call on Mr. Briggs of the Department of Fish and Game.

Mr. ARTHUR BRIGGS: Mr. Chairman and members of the committee, my name is Arthur Briggs. My residence is Winthrop and I am in the employ of the Fish and Game Department. I will try and explain to you briefly the habits of the fish in the Fish River chain of lakes and what this proposition means to the State of Maine as to recreation and sporting in that section, which comprises a large part of the State.

I have been taking eggs since the fall of 1908 in the Fish River chain of lakes. We started in at that time with approximately 200,000 eggs a year. There has been a great increase in the number of eggs taken there and this last fall we took a little better than 800,000, and the fishing in those lakes has increased in proportion to the number of eggs right along. The commercial value of the eggs taken there this year is five dollars a thousand. I can take enough out of the Fish River chain of lakes to supply all the waters in Aroostook County and to exchange with the United States Government for sea salmon

eggs to stock your rivers, the Aroostook River and also the river at Houlton.

The spawning beds are nearly all in the thoroughfare as they require shallow water with some current, and if these thoroughfares are flowed under to a depth of more than three feet your landlocked salmon will stop spawning there and will have to hunt for beds in other places, and in order to get the proper places they have got to have gravel banks on the shores of your lakes. With this proposed flowage it is going to take a number of years, and nobody can tell just how many, to wash the soil off and get your gravel banks that will be suitable for spawning beds. When they spawn in the thoroughfares in running water it never freezes to do any damage. But in November if they are obliged to spawn on your gravel bars and on the shores of the lake that would naturally be in a time of high water, and they will draw that water down in the winter months, and in that event before your salmon eggs were hatched out nearly all, if not all of them would be frozen, and if anything like that should occur you would lose the whole reproduction of your salmon on that chain of lakes. I don't know as there is anything further that it is necessary for me to say, but if there are any questions that you would like to have me answer I would be glad to answer them if I can do so.

Mr. LINNELL: I would like to ask you a question. You take those eggs ordinarily in November?

Mr. BRIGGS: Yes.

Mr. LINNELL: So that in so far as the finding of new spawning ground is concerned, once you have found the spawning ground you will take the eggs for your purposes before you expect them to be damaged?

Mr. BRIGGS: If we could find them in quantities large enough, yes.

Mr. LINNELL: Would you say that it would take more than three or four years for that condition to become settled sufficiently for you to continue your operations there?

Mr. BRIGGS: I don't think anybody can tell that. It is simply a question of this soil washing off of your bars on to the shore of your lake by the action of the waves and clear them up.

Mr. LINNELL: What has been your experience with other storage basins?

Mr. BRIGGS: In our trout waters of course your trout go up the smaller brooks. Your salmon seek larger waters.

Mr. LINNELL: There are some salmon waters that have been dammed up?

Mr. BRIGGS: I wouldn't say whether they have or not. There have been several trout waters that have been dammed up and some salmon mixed with them.

Mr. LINNELL: But in so far as it has come to your attention the period of restoration of the salmon fishing has not been extraordinary?

Mr. BRIGGS: In the Maine lakes it has come back in from four to six years.

Mr. LINNELL: I understood you to say, your eggs represent five dollars a thousand, and you say you have taken out this last year 800,000?

Mr. BRIGGS: Yes.

Mr. LINNELL: If that is the fact, then you would expect that a contribution made from the company of \$15,000 or \$20,000 would go a considerable distance in making up for that loss in the value of those eggs which you would swap for sea salmon eggs, wouldn't you?

Mr. BRIGGS: If we exchanged for the sea salmon eggs. Of course we can buy sea salmon eggs, but so far as the landlocked salmon eggs are concerned, there are no commercial hatcheries, and no other State has the landlocked salmon except Maine.

Mr. LINNELL: You can swap those for sea salmon.

Mr. BRIGGS: Two hundred thousand we have exchanged with the government.

Mr. LINNELL: And the rest you planted?

Mr. BRIGGS: The rest we have planted in Aroostook waters.

Mr. LINNELL: You didn't intend to leave the impression that these waters would be reduced and the amount of salmon fishing there by reason of the eggs freezing? You have already stocked those lakes, haven't you?

Mr. BRIGGS: Yes, but we wouldn't have enough to stock them then. We do stock them now. We return 25 per cent of the spawn—

Mr. LINNELL: So that after a few years, after they have found their spawning grounds, you would take enough eggs to stock?

Mr. BRIGGS: After they have found the spawning beds.

Mr. LINNELL: As far as your experience would go, you say it would go from four to six years?

Mr. BRIGGS: Six years is the longest it has had any effect at Rangeley in those waters over there.

Mr. LINNELL: And in those waters the fishing has been better since the fishing has come back?

Mr. BRIGGS: The trout fishing is a good deal better. But there is one thing that I would like to explain to all of you, and that is that salmon don't spawn only every other year, where the trout spawn every year. After they are eighteen months old they spawn every year, and the life of salmon is about seven years. If there is any way that we can get our supply of salmon to re-stock these waters so that they wouldn't be exterminated it would be overcome in that way.

Mr. LINNELL: Have you any doubt but what some method may be devised if money is appropriated for that purpose?

Mr. BRIGGS: We have now only four places in Maine where we take salmon eggs, Sebago, Rangeley, Cold Stream Pond and Enfield.

Mr. LINNELL: And you would get a larger percentage of eggs?

Mr. BRIGGS: Yes, but this year the salmon eggs for the whole state was two million and a quarter, and 800,000 of those came from Fish River waters, practically one-third of our eggs come from the Fish River waters.

Mr. LINNELL: And you are increasing the amount of fish you are stocking your lakes with by increasing your rearing pools?

Mr. BRIGGS: Yes, each year.

Mr. LINNELL: So that by increasing your rearing pools it is possible to save a larger number of your fish hatched from those eggs?

Mr. BRIGGS: Yes.

Mr. LINNELL: Which would make up for the lack of eggs?

Mr. BRIGGS: It might be overcome in that way, if we get the eggs to start with.

Representative POWERS: There is one question which is not clear to my mind. Do you depend upon the eggs you return wholly to re-stock your lakes, or are they naturally re-stocked?

Mr. BRIGGS: You of course yet the natural reproduction, which I might say is very small, only one or one and a half per cent, or something like that.

Mr. POWERS: You think in the whole chain of these lakes you extract, or whatever your process is, all the salmon eggs except one and a half per cent?

Mr. BRIGGS: Oh, no; we don't take near all the salmon eggs there are in the lakes. We take simply enough to supply the Aroostook waters.

Mr. POWERS: What I means is this: Aren't there a great many salmon eggs that are not molested by man that hatch out and finally become salmon?

Mr. BRIGGS: I don't think that we handle perhaps a hundredth part of the salmon in the lakes. Our only operation is carried out on the thoroughfare between Cross and Mud Lakes, and then we take a hundred thousand in front of the screens where they come down in front of the mills there.

Mr. POWERS: Wouldn't there be a great many of the spawn destroyed under the process that you have explained?

Mr. BRIGGS: You mean by freezing?

Mr. POWERS: Yes.

Mr. BRIGGS: Yes, a great deal of the natural spawn would freeze.

Representative ALDRICH: What would happen to the fish if this development was made, within five or six years?

Mr. BRIGGS: That is pretty hard to tell.

Mr. ALDRICH: Would they die or stay in the water?

Mr. BRIGGS: The age of your salmon is less than eight years on the average.

Mr. ALDRICH: If it would take from four to six years for the spawning beds to be reproduced then a large quantity of your salmon would die?

Mr. BRIGGS: I should think your stock would be depleted. I wouldn't dare to say exactly, but I think we are planting now on the average of 90,000 now in the lakes. I think that is somewhere near correct.

Mr. LINNELL: I think you gave me the amounts of 45, 45 and 50?

Mr. BRIGGS: Yes, that would be 135,000 for the chain. I might say that if salmon have a possible show they would always deposit their spawn in running water instead of on the bars, and whether they would finally make their way into other inlets of course is a question that nobody can answer.

Mr. GURNEY: I will now call upon Mr. H. D. Collins.

Mr. H. D. COLLINS: Mr. Chairman and members of the committee, my name is Hershel D. Collins; my residence is Caribou, Maine. I represent perhaps a lot of people who believe we are giving up valuable rights without any proper guarantees, or without proper value received for the same. I am in favor of the development of the State of Maine, and of Aroostook County especially. I am in favor of allowing the International Paper Company to build all they wish on the condition that proper guarantees are given to us.

It may be that all do not thoroughly understand the conditions of the water stored in these lakes from the statements which have been made by the engineers. It looks to me, from what knowledge I have of water powers and the operation of them, and I have had quite a long experience with that question, that if the engineer acknowledges that he has 95 per cent prime power, or 70,000 horse power 95 per cent of the year, with an interchange between these two points only to be operated when they are emptying the reservoir in these lakes, that it brings the Grand Falls plant to a prime power of 70,000 horse power the year around, 365 days in the year.

One of the points that comes to my mind is this. If you locate your pulp mill on the Canadian side and your paper mill on the American side that all the labor and all the taxable property is over in the Province. Now why do they wish to locate on the Province side when they have really got enough timber to operate the mill on the American side? I say to you that it is for the purpose of getting that crown land timber down to this mill from the Restigouche waters. This Restigouche land lies parallel with the Grand Falls waters, and it

is only about thirty miles away from a given point at St. Leonard's. It seems to me that it is only a railroad proposition to bring that timber up to that point, but it is evidently one of their motives in locating this mill on the Canadian side.

Now here is one of the objections which I have to this measure, and I would like to call it to the attention of Mr. Leonard Pierce, who has already spoken to you. What acreage do they have of their own in Maine? It is a question of how much they take out of it for stumpage. They can put that lumber in competition with the Canadian lumber, and it will simply add to or take off from this stumpage.

I have been an independent operator all my life, and I think I can safely say to you that Mr. Pierce as a land-owner has made a great many more dollars as a land-owner than I have as an operator. And then here is another little point to be considered. As an independent operator I would have to go to him for a permit, and when I got ready to go for pulpwood I would have to go to the International, and the price would be made on the basis of what they could deliver their Canadian pulpwood to their pulpwood mill on the Canadian side, and not on the American side, on the American standards. Either he would have to reduce his stumpage or else I couldn't operate. So that that feature of this proposition I do object to. I have read this charter very carefully and according to my ideas it settles the price, the amount of investment for the Maine side at a million and a half dollars, and that was to include the pulp mill and it was also to include the power plant. I objected to it, and now inside of 36 hours that price has increased from a million and a half dollars to three million. And then they offer to give the Fish and Game Association \$15,000, and so I claim they are on the road to the point where they ought to come to, and we will wait for that point to be reached.

Mr. GURNEY: I will now call upon Mr. O. L. Keyes.

Mr. O. L. KEYES: Mr. Chairman and members of the committee, my name is O. L. Keyes. I am an attorney at law, practicing in Caribou. I cannot but note the difference in the point of view between the International Paper Company, as shown here by its officers and its agents, and also those other gentlemen who have spoken for it who admit their personal interest in the financial result, and the point of view of the rest of us who have come down here from Aroostook County at our own expense pursuant to what we regard as our solemn duty to

protest against the turning of our lakes into an inland sea or a set of "dismal swamps."

I feel very forcefully that if we turn over to this great International Paper Company these splendid lakes of ours, some of the finest lakes in the whole of New England, and give to them a great many acres of Aroostook soil we will be deserving of the admonition a wise man said should follow such results. You know where we live in Aroostook we are surrounded on three sides by Canadian soil. We have no recreational places. We are situated too far from the ocean to be permitted to go there very frequently. We have no mountain heights to go to in the hot days of summer, but we do thank Heaven that we have these beautiful lakes, and due to the great improvements being made on our roads we have continued to go there in greater numbers from year to year. From the first of May until the month of October we go there in constantly growing numbers, together with our wives and children. Our children have grown up spending their summers, a great many of them, around these lakes, and their lives have been associated with these lakes, until two years ago we heard from this International Paper Company that for the consideration outlined in this bill, and which could not be considered a full consideration, that we give over these lakes to them to be turned over into a "dismal swamp" or an inland sea.

I want to say that in the section where I live it is only 44 miles to Fort Kent, travelling on the road which passes these lakes, a most beautiful drive, a little more than an hour's drive in an afternoon, and I want to say that up in my section we don't hear any opposition; we hear only one side. We don't hear anyone, unless it is someone that is getting some money out of this proposition, that favors it. Everybody is against it up in my section, and that is the reason why we have come down here, down to our beautiful Capital City, because we feel it to be our duty to say to this committee that we unanimously protest against turning over to this great International Paper Company our beautiful lakes. (Applause.)

Mr. GURNEY: I will next call upon ex-Representative Cyr.

Ex-Representative CYR: Mr. Chairman and members, I substantiate everything that has been said by my friends, Mr. Nadeau and Mr. Laliberte. I think, however, that there is a phase of this argument that has been overlooked, the primary object of the International Paper Company coming here for this

hearing. Two years ago they came to the legislature asking for storage, and again this year they have come here for the same reasons, except that they are made to incorporate certain amendments to their measure. Now I am in favor of the proposition and always have been, providing that our interests are taken care of and guaranteed to a certain extent for the losses which we are subjected to. Working in a bank as I do, I am in a position to know to some degree so as to make an estimate of what the property loss may be. Of course it is problematical to a certain extent. It has been suggested that if they are given the right to operate for a period of years, as they say they will, that this committee will do something to make it binding that they shall, and in that case it will eliminate my opposition.

There was a hearing on this measure two years ago and at that time there was strenuous opposition by existing electric companies of Maine. Section seven of this bill seems to have eliminated entirely this opposition, if there is such opposition, and I am sure I haven't seen any this evening. It seems to be all smooth sailing. However, there is an old saying to the effect that when two heads get together it is time for you to put your hand on your pocketbook. In my mind this principle hasn't changed. The International Paper Company came here to obtain storage, and the electric interests of Maine as we know them are after electric power. Now if these two interests can agree upon a proposition like that, then it seems to me only logical that there must be some understanding whereby the electric companies will derive considerable energy from that power. If these people are sincere, as I hope they are, it seems to me if they build a paper mill in Van Buren of any magnitude that there will be very little electrical energy left to satisfy some electric company in order that this opposition may be withdrawn.

Now if our interests are not protected to some degree in this bill so that they will operate for a period of years we may find ourselves a good deal like the poor fellow who woke up one night finding that his house was being robbed. Coming downstairs he met one of the robbers and pleaded for mercy on the economical ground that it would ruin him to be robbed at that time. Whereupon, one of the robbers handed him a sack containing some jewelry. "Take this," he said, "and use it if you can; we took it from your neighbor's house." The International Paper Company will get the storage that they are after and the electric companies will run along smoothly if they get

the required energy, and we people will hold the sack, with the privilege of using that electric energy at such unreasonable rate as fifteen cents a kilowatt hour as we are paying now and six cents per hour for power. Now what inducement is that for industries to come up on the St. John river, unless the rates are adjusted so that they can exist? It seems to me that the inducements for companies to come and locate on the St. John river are not very attractive.

Mr. GURNEY: I will next call on Mr. L. S. Bean.

Mr. L. S. BEAN: Mr. Chairman and members of the committee, my name is L. S. Bean. My residence is Presque Isle. When I came here I was opposed to this bill, and since seeing the amendments which have been offered to it I am still more opposed. If you will look at section four you will see that they don't intend to get the shores cleaned of dri-ki until two years after the flowage. It seems to me that is going to ruin our fishing entirely for a good many years.

These lakes have been called the best fishing grounds to be found anywhere in the world. Since 1927 the amount of tourist traffic has increased around these lakes something like 30 per cent. They are now taking in from this tourist trade an estimate of over \$200,000 a year, which is all brand new money coming into this State without any great effort to get it. I believe if these lakes are left as they are, without any ten or nineteen foot dam, that that amount will be materially increased in the next few years. There is something more to be thought of than the almighty dollar. This is a recreation spot where we can go and enjoy ourselves and where we can take our families and enjoy ourselves. By this proposed development we will lose the beauty of the scenery along the shores, and I think it will have a great effect on our tourist trade. I don't think we can encourage our tourist trade to come in. And the \$200,000 isn't all that the tourists are spending around those lakes. It will cost another \$200,000 for them to get to this site, which the State receives.

I have just one other thought I would like to leave with you. This is what might be called a poor section. If these lakes are dammed in the Eagle Lake section it means that a lot of those poor fellows have got to take their packs on their back and walk out. I don't think we need to spend much time worrying about the International Paper Company protecting itself, or some of these well-off citizens who are trying to force this measure

through, but I do want to protect the poor fellows. There are probably in the neighborhood of one hundred houses located around Eagle Lake that this proposed flowage would come up to. They will have no way of earning a living except by guiding or working in the mills and in the lumber woods in the winter. It seems to me they will be obliged to take their packs on their back and walk out, and in my judgment their homes won't be worth 25 cents on the dollar. We have a fair example of that in Sheridan, where once there was a thriving community and now only a small community with one or two stores there. And those are my objections to this proposed measure.

Mr. GURNEY: I will next call on Representative Ashby.

Representative ASHBY: Mr. Chairman and members of the committee, my name is George F. Ashby. I live in Fort Fairfield and am the Representative from that town. I am not going to make any speech because I can't. However, I think Mr. Graustein has been shamefully neglected because he asked people to ask him questions, and no one seemed to have any questions to ask him. I like to see his glittering smile and I would like to ask him a few questions in order to gain a little information, and if the committee is willing I will ask a few questions of Mr. Graustein. I know you all will excuse me if I ask some wild questions because the lobbyists here have been telling us everything about this measure, and how the International Paper Company was going to develop Maine and make us all millionaires, so that we don't know what to think about it. I will ask Mr. Graustein, if there is no objection: "Is it true that the Fraser people have an interest in the Grand Falls Power?"

Mr. GRAUSTEIN: They have no interest whatever. They have bought power from us and their only interest is that contract. We sell them so much power and they pay us \$20 a horse power in our generating station, per year.

Mr. ASHBY: Is it true that the International Paper Company is either building or contemplates building a paper mill at Dalhousie on the north shore in New Brunswick?

Mr. GRAUSTEIN: It is under construction now.

Mr. ASHBY: About how many horse power will that mill require of electricity?

Mr. GRAUSTEIN: It will require initially about 20,000 horse power and later 40,000.

Mr. ASHBY: Is it true that the Fraser people are building another mill at Campbelton?

Mr. GRAUSTEIN: That is also true, I understand. I don't know definitely that it has been started, but I understand they are planning to build one and maybe they have started.

Mr. ASHBY: Is it true that both paper mills are going to be supplied with power from Grand Falls?

Mr. GRAUSTEIN: No, not that mill at Campbelton. They are not going to get any power from us in Campbelton.

Mr. ASHBY: You don't know where they will get their power?

Mr. GRAUSTEIN: No, I don't know. I shouldn't be surprised, with a pulp mill and cut paper mill, I shouldn't be surprised if they generated it by steam.

Mr. ASHBY: You don't believe they will buy power from you?

Mr. GRAUSTEIN: I am very sure they will not.

Mr. ASHBY: But the paper mill at Dalhousie will be supplied from Grand Falls?

Mr. GRAUSTEIN: That is correct.

Mr. ASHBY: How much power are you supplying the Fraser Company?

Mr. GRAUSTEIN: I think we supply them the whole 20,000 horse power.

Mr. ASHBY: At Edmundston?

Mr. GRAUSTEIN: We supply it to them at Grand Falls, and I suppose they transmit it up to Edmundston.

Mr. ASHBY: How much are you supplying now at Edmundston?

Mr. GRAUSTEIN: We don't supply it at Edmundston? We give it to them at Grand Falls and they transmit it to Edmundston. We are giving them the entire 20,000 and they are paying for it, and I presume they are using it all at Edmundston.

Mr. ASHBY: The power used at Edmundston and the power that you will use at Dalhousie is all generated at Grand Falls?

Mr. GRAUSTEIN: The total installation provided for at Grand Falls is 80,000 horse power. We are putting in machinery now for 40,000. We sell Fraser 20,000. We will use 20,000 ourselves in 1930, and later we will increase that to 40,000; so that we will start out next year using a total of 40,000, 20,000 for Fraser and 20,000 for ourselves, and we will increase that to 60,000 when we raise our requirement to 40,000.

Mr. ASHBY: This will all be in the Province of New Brunswick?

Mr. GRAUSTEIN: That is all in the Province of New Brunswick.

Mr. ASHBY: Is the storage plant on the Fish River going to supply the power in normal flow, average normal flow of the St. John river?

Mr. GRAUSTEIN: I can't answer that question specifically. I think Mr. Nelson answered a similar question, but I will say this, that we have no doubt of our ability to get it without the Fish River storage. On the other hand, we will get it better with it. That is to say, we can generate more power than we can without it. The 80,000 horse power at Grand Falls is all we have any power use for at the present time, but in designing our development we had in mind a possible further extension of that plant to a total of 140,000 horse power, and the average flow of the St. John is big enough if we have all the storage we needed to enable us to generate about 140,000 horse power at Grand Falls.

Mr. ASHBY: You think you can develop that at all times of the year without the Fish River storage?

Mr. GRAUSTEIN: That is correct.

Mr. ASHBY: This bill here is a little bit different from the one that was before the House before, and it has evidently been revamped a little.

Mr. GRAUSTEIN: We have tried to meet the objections that have been made.

Mr. POWERS: Mr. Graustein, you said something about the stronger leg of the three, that your primary idea in this development was to use wood in Maine and establish a mill in Maine.

Mr. GRAUSTEIN: To use our Maine wood in Maine, on our 550,000 acres of land.

Mr. POWERS: And build a mill in Maine.

Mr. GRAUSTEIN: Building a mill to use that.

Mr. POWERS: Why wasn't that idea expressed in the first charter?

Mr. GRAUSTEIN: Because, as I expressed it at that time we had the hope and expectation that we would build a mill in Maine, but as I said earlier, at that time our study of the possibility of that was based upon a newsprint mill, and we were not fully satisfied that we could build one, and we never have been satisfied. It was only after that hearing that we went into the question of building a fine paper mill, and it was on that question that we finally found a solution of our problem, and it is a fine paper mill that we are planning to build, and that means writing paper and book paper.

Mr. POWERS: And then your original idea was simply a proposition of storage, wasn't it?

Mr. GRAUSTEIN: The storage, but it also anticipated the utilization of that wood as a result of the extra power which we could get. But I was not able at that time to predict whether the wood would be utilized in Maine or in New Brunswick, because the newsprint mill would probably have been or might have had to be located in New Brunswick. That applies to a newsprint mill. But a fine paper mill presents a different problem, and as you know, newsprint comes into the United States free of duty, but fine papers are subject to a tariff. And so when we decided to build a fine paper mill we had the benefit of tariff protection against fine papers that were made abroad or in Canada, and two years ago we had not figured on the possibility of putting a fine paper mill up there.

Mr. POWERS: I have a copy of the original bill and I see that only asked for storage.

Mr. GRAUSTEIN: Yes, that is quite true, and I read over this morning the record of the previous hearing to check up on my recollection.

Mr. ASHBY: As I understand it, you intend to build your pulp mill at Van Buren on the Canadian side and your paper mill on the American side?

Mr. GRAUSTEIN: That is correct.

Mr. ASHBY: What is the idea of doing that?

Mr. GRAUSTEIN: It allows opportunity for greater expansion, because if we buy wood on the Canadian side it will allow use to make a corresponding expansion to our mill, and in the long run we hope to be able to accomplish that, and we feel clear that if we do it is best for all concerned, better than it would be to put both mills on the American side, because if you did that the mills couldn't grow through any utilization of the Canadian, or crown land wood. Under our present plans the paper mill we build in Maine can grow, not only by the utilization of Maine wood but also by the utilization of any wood in New Brunswick or Quebec. So that we feel that is the better thing to do. It leaves open to us the possibilities of greater expansion.

Mr. ASHBY: Is there any duty on pulp?

Mr. GRAUSTEIN: There is no duty on pulp.

Mr. ASHBY: Is there on paper?

Mr. GRAUSTEIN: There is on fine paper.

Mr. ASHBY: It might seem that one of your objects in making paper on the American side would be to save a little duty?

Mr. GRAUSTEIN: Oh, yes; that's just what I said.

Mr. ASHBY: And you are asking the State of Maine to aid and abet the International Paper Company to dodge the payment of a duty which they really owe to the United States?

Mr. GRAUSTEIN: No, that is not right. The purpose of the tariff is to encourage protection in the United States, and what we are doing is playing the game.

Mr. ASHBY: And incidentally you would be escaping the duty?

Mr. GRAUSTEIN: Escaping the duty by manufacturing the paper in the United States instead of in Canada. And that is what the duty is for, to give the American laborer work and not have to have the work done abroad, and that is what we are doing.

Mr. ASHBY: You think you would sell more of that paper in Canada than in the United States?

Mr. GRAUSTEIN: No, I wouldn't sell any paper in Canada. Sell the paper in the States.

Mr. ASHBY: I guess I am done, because it looks to me as if you are asking the State of Maine to aid and abet you in dodging a duty.

Mr. GRAUSTEIN: No, sir. The whole point is this, that under the laws of the United States pulp is admitted free, but fine papers are subject to a duty. The purpose of that is to protect the American manufacturer and lead to the manufacture of fine papers rather than have them made abroad and imported. When we build our mill in the United States we are then doing exactly what that tariff is intended to do; we are giving the American laborer work, and in this instance we are giving the men of Aroostook County a job. That is to say, the purpose of the tariff is to protect him in that job, and it is the purpose of the tariff to have fine papers made in the United States. That is what it is intended for. I am not saying that I am taking any position on the question of whether the tariff is a good thing or a bad thing. It is the law, and the purpose of the law is to encourage people to manufacture in this country, and that is just what we are trying to do here.

Mr. ASHBY: Do you think it is intended to encourage American manufacturers to manufacture paper out of Canadian pulp brought over free of duty?

Mr. GRAUSTEIN: If it was not the policy of the United States to do that there would be a tariff on pulp, and there is not. The American papers as a whole don't want a tariff on pulp. They buy pulp in Canada and in Sweden and Norway, and that is on account of the American tariff policy. I accept it and do business on the basis of the laws as they exist, and on the basis of those laws pulp is free from duty and fine paper is subject to a duty.

Mr. ASHBY: But you will admit incidentally by doing that it is saving the International Paper Company something well up into the thousands of dollars in duty?

Mr. GRAUSTEIN: No, I won't admit it because we wouldn't build a fine paper mill in Canada; and I don't know of any fine paper mill built abroad for the purpose of making paper for the United States market. I didn't make the tariff system. It is part of the law that has been established for years. A business man can't fight the tariff policy of the United States. He has got to do his business according to it. The tariff says that pulp comes in free and says that fine papers are protected by duty.

What that really means is that fine papers have got to be manufactured in this country or you can't stay in business, and you can't compete. It isn't any question of dodging duty; it is a question of doing business in the way that the tariff laws of this country indicate. There isn't a mill that can make fine papers in Canada and sell them in the United States and live. The laws are not intended to let that happen. I think you have the wrong idea.

Mr. ASHBY: That being so, why was the duty imposed upon fine paper if it couldn't be made elsewhere and brought in here?

Mr. GRAUSTEIN: To keep them out, to give the American manufacturer an opportunity to make it. I don't mean to say that there are no fine papers brought in, but I think the amount of fine paper brought into the United States must be very small. The purpose of the tariff is to keep out the foreign paper and give the American manufacturer business. That is the purpose of the law.

Mr. ASHBY: I will admit that your explanation is very clever and I hope that it satisfies the committee, but it doesn't me.

Mr. GRAUSTEIN: That is just exactly how the tariff policy works out.

Mr. ASHBY: I guess that is about all. I am afraid I don't measure up to your standard of dodging.

Mr. GRAUSTEIN: I want simply to be fair, sir.

Mr. GURNEY: Mr. Chairman, we shall not offer many more witnesses, because our list might take us into the early hours of the morning. If I could raise what we used to call the question of privilege I would like to say that none of us have read the exhibit or the cartoon that has been presented here. I will say that it did not emanate from our side. We had no knowledge of it until we came into the hall this evening. I merely wanted our opponents to know that we are not attacking them except openly. I will call upon Representative Daigle.

Representative REMI DAIGLE: Mr. Chairman and members of the Committee, my name is Remi Daigle, and I live in Madawaska. I will assure you that I shall be very brief in this little argument of mine in regard to this proposition, because I was here two years ago when the matter was presented to the legislature. I did not vote for the measure at that time, but this

year I must acknowledge that the International Paper Company, if it hasn't come up to the requirements of the opposition, it has made some strides in the right direction; and for that reason I would take the opportunity to declare before this Assembly that I sincerely hope that the officials of the International Paper Company and the people who are working in behalf of the State will come to some agreement in regard to this measure, and by that I mean arrive at something that will not simply satisfy the International Paper Company but something that will be satisfactory also to the County of Aroostook and to the State of Maine.

I don't think there is any need of my adding anything to the arguments that have been already made; I couldn't better them if I was to try. But in conclusion I will say that it reminds me of a little historical incident. At one time Mr. Lincoln, after a great many representations has been made to him, decided to appoint a certain officer to an important position. He wrote him a letter and told him "I am going to give you this appointment not on account of the things that have been said in your behalf, but in spite of them." Now here is a case where we can use good judgment and go ahead and prosper, and I say "For God's sake, give us victory." I would appeal to the people of this state and to this assemblage and to this legislature especially, try to bring reconciliation between the two factions and give us industrial development in Aroostook County. (Applause.)

Mr. GURNEY: I will say that we are very grateful to this Committee for listening so patiently to what we have had to say relative to this proposition. We still have a number of witnesses, but I realize that their testimony will be cumulative and along the line of that which has been already offered. We will waive the right to argument, excepting that we would like to reserve the right to submit something to the committee, possibly in writing, but owing to the lateness of the hour we will rest our case at this point.

Mr. LINNELL: How much time have we got for rebuttal?

The CHAIRMAN: Fifteen minutes.

Mr. LINNELL: I think I have only one more witness to call, although we have two witnesses whom we were unable to produce when we opened our case. One of these I would like to call, and perhaps one other to testify in regard to the fish and

game conditions, and I think he can testify very briefly, but if it were agreeable to the other side we would be glad to submit his testimony in writing, giving the other side a copy of it through the Committee later on, in order to save time, if that is agreeable to all concerned. I would like also to add this. It necessarily falls upon us to show the details of this plan, what this bill means, and all that. We have not had an opportunity, because of the lack of time, to call a large number of citizens of Aroostook County who have come here in support of this bill, and I think it is only fair to those people, inasmuch as some of them still remain here, and I think a large number of them have gone, with the permission of the committee, to ask those who appear here in favor of the bill and who have not been given an opportunity to speak, to rise in their places so that the committee may know what representation we have here from Aroostook County. Will all those citizens from Aroostook County who came here in favor of this bill, but who have not had an opportunity to speak, rise in their places?

(A large number of people in the hall arose and stood in their places.)

Mr. LINNELL: I understand, Mr. Chairman, that these men and women have come here at their own expense entirely, taking their own time and money to come here to indicate to you that they favor this bill. I would now like to call upon Mr. R. H. Wheeler.

Mr. GURNEY: How much time is left?

The CHAIRMAN: About eleven minutes.

Mr. LINNELL: I will state that Mr. Wheeler is now in charge of development of the Quebec Extension Railway. There has been some inference, similar to that which was mentioned about the Gould Electric Company, that there may be some combination here, and it is true that our land has been involved along the line of this railroad, and for that reason I would like to have Mr. Wheeler state the situation as it exists between himself and our company at the present time.

Mr. RICHARD H. WHEELER: Mr. Chairman and members of this Committee, my name is Richard H. Wheeler, of Lynnbrook, New York, with an office in New York City. I am president of the Quebec Extension Railway, and I have taken a very active interest in the development of this railway project since

November, 1927. I represent a group of men who saw an opportunity to carry forward the plans which Senator Gould found it necessary to lay down. I have worked assiduously to develop that project, having the aid of my associates, Sanderson & Pierce of New York City. I still have that connection and I want to state that I have no other connection with any business interest, and particularly the International Paper Company. I resent the statement that I am working in their interest.

I have carefully gone over the engineering features of the project. Our people have checked it. We have approached certain bankers to get their reflection upon the possibility of building this railway, because many factors including that of money were involved. The plan of development as Senator Gould had laid it forth seemed to be the one that could best be carried out, and I have been prosecuting that method. A certain amount of first mortgage bonds can be raised. This is a lumber road primarily, although it connects at one point with the Bangor & Aroostook and at another point with the Canadian Pacific. But being a lumber road the first mortgage bonds are limited. So that there must be other sources of raising the necessary money to build the railroad. One of the particular methods seemed to be the development of business from the operation of stumpage along the right of way. It seemed to be reasonable that the development and the location of the railroad improved stumpage. Therefore, there was reason to believe that the owners of timberland would assist the railroad to a certain extent. Another reason was that the operation of timberlands adjacent to the railroad, where the railroad could control a certain amount of that operation, would tend to equalize the traffic and perhaps build traffic through the first lean years.

I knew when I first took up the matter of the development of this railway what the response had been from the timberland owners, and I will say that I don't think the thing was thoroughly understood, and for some time I have developed that situation so that the old owners, and I refer distinctly to those owners along the line of railway who have seen fit to lend co-operation to this project such as you have never known before. I think I can say to you tonight that I do not know of any land owner who has lifted his hand and says he will not support this project. I have approached Mr. Pingree, because he is a very large owner, and have persuaded him of the facility this would give him, and he told me to arrange for his permits, and he also told me to go among others in Aroostook County

and interest them in the proposition. The papers are before those people today and they are signing them. In the same way I have approached the International Paper Company and for some time it seemed difficult to impress them with the fact that the railroad would be an advantage to their company. I found after some time that they were sincere in their belief that this railroad, without a mill in Aroostook County, would not be an advantage to their policy of operation. A year ago or so I don't think the International Paper Company was then far enough along in their plans to say they could place a mill there. When they found out that a mill could be located there they said to me "We will be interested in that railroad because if we build a mill in Aroostook County you probably will assist us in getting our supplies into the woods, and there may be other assistance." I asked them to draw up permits with me and they were drawn up and they are very good permits. They are ten-year permits.

But I will say to you, and I think it is correct, they still feel and have felt if that mill is not developed in Aroostook County they do not feel that the railway is of any advantage to them to the point of taking from the credit side of their ledger over to the debit side the assistance which I asked of them. There is no mystery at all about this thing. There has been a great deal of talk in which little reliance could be placed. I say to you that the project is moving along and it is in better shape than it ever was before. I would like to be able to clear up the mystery some people have thrown around this proposition. I have a stumpage permit, not only of the International Paper Company but a good many other corporations and individual land-owners, whose names are printed on the front. It is simply the common standard permit, and there is no secret or mystery about it, no different deal with them than with any others. And therefore I can assure you that that railroad will be built if this measure goes forward.

Hon. PETER CHARLES KEEGAN: Mr. Chairman and members of this Committee, I desire to be recognized.

The CHAIRMAN: The Chair recognizes Mr. Keegan.

Mr. KEEGAN: Mr. Chairman, it probably never has come to the knowledge of the members of this Legislature that this project has been considered of sufficient importance that the two greatest nations in the world thought it proper twenty

years ago to appoint commissioners to investigate this very question.

On January 9th, 1909, commissioners were appointed on behalf of the United States and of Great Britain, and among other things they were to inquire into the feasibility and advisability of developing Grand Falls.

Now even the county papers of Aroostook County have spoken of this as a "scheme," as though this was some organized effort to steal something. The commissioners appointed on behalf of the United States were the Honorable George A. Murchie, who, by the way, was the father of Senator Murchie of this Legislature, and the Senator himself was the Secretary of the Commission during its life, and your humble servant was the other Commissioner on behalf of the United States.

At that time the two governments joined in making surveys on the upper St. John, both in the Dominion of Canada and in the United States, to ascertain how much storage could be created there. In the course of that work they spent some \$80,000, or about \$40,000 each simply for the purpose of inquiring into that question. Now that is how much of a "scheme" it was. It was a scheme on the part of the United States and Great Britain to find out whether the people of this country could derive some benefit from that great power. That is what the scheme was. So there is no great mystery about it, and there was no attempt to deceive anyone. It was simply an effort to find out the truth of the situation.

Now we have heard talk to the effect that they have built part of their works in New Brunswick and part in Maine, but we must not forget the fact that all of Grand Falls is in New Brunswick, same as the Aroostook Falls, a power which is lighting the homes of the people of Aroostook County at this time. There has been no wrong and no injustice, and neither has there been any attempt to do any. Naturally they are entitled to the greater part of it. The only way in the world that we can get any benefit from it is by exactly this thing that is being worked out here by the International Paper Company. I can state to you here tonight that I do not represent the International Paper Company in any way whatever. I am not here at their request. I am here strictly on my own hook, as a representative citizen of the State of Maine, and I can say that up in our place we are not asking for any place to fish or to go sporting, but we do ask that the people of our section be allowed to live. Up there in that section of the State we have a large number of people

who have no employment whatever, and the towns in which they live are nearly crushed by taxation because we have so many of those poor people who are out of employment.

We have heard a lot of complaint from some of those towns, but I can't understand in what way, shape or manner the region of Eagle Lake can be injured. It will simply mean that you will move some parts of your town back. They will be made just as good as they were before, and they will be amply compensated by the damages accruing to them.

Now if this is wrong to have this thing then no development will be possible. If we don't get any benefit from Grand Falls, so far as our region is concerned, then it is a dead region. I have heard a good many remarks that were perhaps all right in their way, but to me they seemed a little bit childish. Somebody wants to play, and somebody wants to fish and then somebody else wants to have a good time, but I can assure you that the people of my section want to be allowed to live, and that to them is the most important thing. They want to have something to eat for themselves and for their wives and children. I feel that this development promises enormous returns, and I know that it will lead to other things; I know that the town of Caribou where my friend here comes from (Mr. Hamilton) will derive a great benefit from it. There is no question about it. And I claim that the fish will be just as big, and it must be so because of the deeper waters, and for the fellows who want to go fishing, if there isn't water enough for them, then give them the Atlantic and the Pacific. They can go fishing anywhere. The men who go in pursuit of these sports can go anywhere, but the poor man who depends upon his daily labor has to stay at home, and all he asks is the privilege of working; and that is practically all there is in this proposition. It is just the same development as an Indian would want; they don't want even any roads, and I am sorry to say that for the first time in my life I begin to realize that we are not so progressive as perhaps we ought to be. Now that is all there is to this proposition.

A lot of this talk that has been made in opposition don't amount to anything. We want development along the lines that Great Britain and the United States wanted it, and that is, that this power may be utilized, and so far as we are concerned we can't get anything out of it in any other way. The International Paper Company, whether we like it or not, owns Grand Falls and it is only by utilizing this connection with Grand Falls

that anything can be accomplished. Now there is no mystery about it; it is not a new matter; it is not a "scheme" on the part of anybody; it is a pretty old matter.

Now some of our folks are not so familiar with modern history as they ought to be, because they ought to remember twenty odd years back when this thing was first started by the two governments. And that is all there is to this whole measure. I thank you. (Applause.)

The CHAIRMAN: The committee will be pleased to receive any written statements that either the proponents or the opponents have to present.

Mr. ALDRICH: There is just a question I would like to ask Mr. Graustein. I think in the course of your statement you stated that the number of men to be employed in the mill as about 350.

Mr. GRAUSTEIN: From 350 to 500.

Mr. ALDRICH: And what would they receive, or what would their wages amount to for a year?

Mr. GRAUSTEIN: They would receive at least half a million dollars a year, and from that up to \$700,000, according to the number employed. That is just in the mill, you must remember, and that does not include the men who are employed in the woods.

Mr. ALDRICH: From 350 to 500 men would be employed in the mill?

Mr. GRAUSTEIN: Yes.

Mr. LINNELL: Mr. Chairman, I would like to state that I have here several petitions which have been received from people in different sections of Aroostook County, which I have not taken the time to present, but which will be left with the committee if that is desirable.

The CHAIRMAN: The committee will take the matter under advisement.

March 4, 1929.

Hon. Artemus Weatherbee,
Chairman, Joint Committee,
Public Utilities, Judiciary and Interior Waters,
84th Legislature State of Maine,
State House,
Augusta, Me.

Dear Sir:

As promised at the hearing on the Fish River Bill which was held on Wednesday evening, February 27th, we submit the following data on the alternate scheme which was proposed by the opponents of the bill.

The alternate scheme brought out by the opponents proposed that storage be secured by means of a 10 ft. dam at the outlet of Eagle Lake, a dam at the outlet of Square Lake, a dam at the outlet of St. Froid Lake and possibly another dam at the outlet to Big Fish Lake, instead of the 19 ft. rise in Eagle Lake for which the bill now provides. If the scheme of the opponents is carried out the available storage is as follows:

Location of Dam	Height in feet above present low water	Capacity billion cu. ft.
Outlet of Eagle Lake	10	2.6
“ “ Square Lake	12	7.0
“ “ St. Froid Lake	21	3.0
“ “ Big Fish Lake	10	1.4
		<hr/>
		14.0

Estimated cost per million cubic feet—\$147.00.

A dam could be built at the outlet of Square Lake which would impound more than seven billion cubic feet but the drainage area of 230 square miles would not yield sufficient water to fill a larger reservoir in the dry years. A higher dam could also be built at the outlet of St. Froid Lake which would fill every year but the cost of such a dam increases very rapidly as the height is increased. In fact, if the height of the dam at the outlet to St. Froid Lake were increased to 30 feet instead of 21 feet, the amount of additional storage would only amount to 1.6 billion cubic feet or a total on this lake of 4.6 billion cubic feet. We consider that the cost of a 30 ft. dam would be prohibitive.

The data on the capacity and practical height for a dam at the outlet of Big Fish Lake were taken from the Report of

the International Commission Pertaining to the St. John River.

In as much as there are sporting camps on the shores and islands in this lake we believe that the amount of \$150,000 which we have used in our estimates is a very conservative figure for the cost of acquiring the rights and building a reservoir dam on Big Fish Lake.

The additional storage which would be provided by a 10 ft. dam at the outlet of Big Fish lake is equivalent to a raise of only one foot in the height of the Eagle Lake dam.

Attached hereto is a map which shows the relative size of the drainage areas.

The estimated cost of obtaining 20 billion cubic feet of storage by means of a 19 ft. dam at the outlet of Eagle Lake is \$2,000,000, or \$100 per million cubic feet, whereas the estimated cost of obtaining 14 billion cubic feet by means of the dams suggested in the alternate scheme is \$147.00 per million cubic feet.

In addition to the fact that the original cost per million cubic feet is higher for the alternate scheme than for the original scheme by almost 50%, the operating cost would be practically four times as great for the alternate scheme, as it would be necessary to have attendants at four dams instead of one.

Taking into account the excessive cost of construction and operation of the alternate scheme I consider that this scheme is prohibitive in cost.

Respectfully submitted,

H. M. NELSON.

HMN:R

P. S. Perhaps I should have stated that the 19 foot dam at the outlet of Eagle Lake could have been filled with 20 billion cubic feet of water in every year except one during the past 23 years.

H. M. N.

(The postscript was added to the original also.)

JOHN W. TITCOMB
Consulting Fish Culturist
State Capitol
Hartford, Conn.

March 1, 1929.

John W. Titcomb, consulting fish culturist. Qualifications based upon experience as shown by the following record:

Nineteen years as State Fish and Game Commissioner of Vermont, during nine of which I was also Superintendent of a U. S. Fish Hatchery.

Seven years as Chief of the Division of Fish Culture in the United States Bureau of Fisheries, Washington, D. C., during which period I inspected federal hatcheries throughout the United States. During this period I also made explorations for the Argentine Government, South America, built the first hatchery in that country and successfully introduced various species of salmonidæ from the United States.

Five years as State Fish Culturist for the New York State Conservation Commission.

Seven years as Superintendent, Connecticut State Board of Fisheries and Game, which position I now hold.

I have twice been president of the American Fisheries Society, and actively identified with other conservation and scientific societies. My writings appear in the Bulletins of the U. S. Bureau of Fisheries, the Transactions of the American Fisheries Society and other magazines.

CONCERNING THE POWER PROJECT IN THE FISH RIVER
WATER-SHED, AROOSTOOK COUNTY, MAINE

The first question which presents itself to the fish culturist in connection with a storage development, such as that under discussion, is as to the proportionate area of newly flowed land to that flooded under natural conditions. A glance at the map used at the hearing and so well described by Engineer Nelson clearly shows that the fringe of additional flowed land around the various lakes is so small that the additional flooding can have no material adverse effect upon the water temperatures in hot weather. The habitat of such species as the salmon and trout, which require cool waters, will not be adversely affected as to water temperatures by the proposed dam on the Fish River.

The surface soil of this narrow fringe which is to be flooded

after being cleared of timber, etc., will be washed away by erosion and in a comparatively short time the new shore line will assume the appearance of the present shore line.

It is generally conceded by all who have experience in such matters that the reservoiring of a natural body of water invariably results in an abnormally rapid growth of the finny inhabitants of such waters, due probably to the increased range and to a large extent, to the immense amount of food which is temporarily added to the water system. There should be a marked improvement in angling conditions two to three years after the completion and filling of the dam, due to an increased average weight of fishes caught.

In the water system under discussion it is probable that the native speckled trout (*S. fontinalis*) and the rainbow trout (recently introduced) spawn in the tributary streams. This statement as to their habits has been confirmed by conversation with guides and fish culturists having personal knowledge of the fishes of the Fish River basin. Their breeding grounds will not be changed by raising the water level, or adversely affected by drawing down the water in the winter time.

The spawning grounds of the land-locked salmon in the thoroughfares between the lakes will probably be affected by the increased depth of water in these thoroughfares and the salmon will very likely seek other spawning areas at the mouths of streams or on sand bars. Salmon do not necessarily require a rapid current of water; they sometimes select spawning grounds very similar to those of the lake trout or togue. It is impossible for anyone to say that the salmon will change their spawning grounds or where they may go.

There is a possibility that the naturally deposited eggs of the salmon may be located in places where by drawing several feet of water during the period of incubation these eggs may become exposed.

Many of the salmon used for collecting eggs are caught at the screen on the present dammed outlet. Certainly the salmon which resort to this screen during the nuptial season are not leaving any naturally deposited eggs which will produce any results whatever. The deepening of the lake will make no difference whatever with reproduction, so far as it concerns the fishes which resort to this screen, or a deeper screen on the proposed development.

The most important fishery of the lake is for land-locked salmon which are the result of hatchery production and which

became so abundantly established that for the past twenty odd years it has been possible to collect the eggs of this species in much larger numbers than required for maintaining the angling in the lakes of this water-shed. It appears that by planting 25% of the progeny of the eggs collected on this water-shed it has been possible to maintain a satisfactory situation as to the angling conditions. Therefore, it is quite apparent that the angling in the lakes has been maintained very largely through the hatchery activities.

No one can tell how much the hatchery activities have been aided by natural reproduction. Mr. Briggs, who has had charge of the collection of eggs for many seasons, has stated that natural reproduction only amounts to 1½%. If his statement is true, the slight loss which might be involved in exposing the spawning beds can very easily be offset by a little more hatchery production. If there are some losses in natural reproduction through exposure of some of the spawning beds during the period of incubation, viz., during the months of November, December and possibly January, the loss from this artificial situation will be immaterial so long as the practice of catching the parent fishes prior to the spawning season and the taking and fertilization of their eggs is continued.

From inquiries made by the writer, it is apparent that a great many more salmon eggs can be obtained from this water system than have heretofore been collected. After the lakes have been reservoired, the collection of eggs will be speculative until the spawning grounds of the salmon are found. However, the breeding instincts of the fishes will not be changed by raising the water level of the lakes. They will immediately seek suitable spawning areas. The main difficulty is to find just where those spawning areas are in order to capture the breeders for obtaining eggs. The quickness with which that can be effected is dependent somewhat on the number of netting crews which are put on during the spawning season and the amount of lake area which is covered by their activities. It is my personal opinion that the reservoiring of these lakes, combining them into one, will not adversely affect the angling for more than a year or two if fish culture activities are properly handled.

Certain opponents of this development have suggested a ten foot dam at the lower end of the development, with intervening dams at the outlets of some of the lakes. I would consider such a project as very detrimental to the angling interests of

these waters. The land-locked salmon require free range and do not necessarily remain all of the time in one lake. Anglers and guides can testify to the fact that the salmon fishing varies in the different lakes at different seasons of the year. Apparently the salmon move from one lake to another, according to the water conditions—very likely guided to a large extent by water temperatures.

SUMMARY

1. The reservoiring of the several lakes in the Fish River district will not seriously jeopardise the angling interests, provided the State annually stocks the waters from the hatcheries.

2. There will be a rapid growth among all of the fishes of the various species inhabiting these waters immediately following the flooding of the various lakes, producing unusually good angling within two or three years after the dam has been filled.

3. The flooding of the area will not change the breeding instinct of the mature fishes and they will instinctively seek during the nuptial season areas which appear to be favorable for the spawning function. These spawning areas which they select may not prove entirely satisfactory when the reservoir is drawn during the period of incubation of the eggs, but inasmuch as it is perfectly practical for the fish culturist to find these spawning areas and capture the fishes for purposes of securing their eggs, the losses through natural reproduction are not worthy of serious consideration.