

Christine L. Fritz

D-109

HISTORIC RESOURCE STUDY
WATER-LEVEL REGULATION
COMMERCIAL FISHING
LOGGING
DAWSON TRAIL, GOLD MINING:
THEMES ASSOCIATED WITH
L VOYAGEURS NATIONAL PARK, MINNESOTA

BY:

DAVID L. FRITZ
and
LAWRENCE F. VAN HORN

Denver Service Center
Midwest/Rocky Mountain Team
National Park Service
United States Department of the Interior
Denver, Colorado

PLEASE RETURN TO:

TECHNICAL INFORMATION CENTER
DENVER SERVICE CENTER
NATIONAL PARK SERVICE

Color Scans

10/18/2002

ON MICROFILM

CHAPTER ONE: WATER-LEVEL REGULATION

by

David L. Fritz

TABLE OF CONTENTS

INTRODUCTION CONCERNING WATER-LEVEL REGULATION . . .	
A. Word on the Geography of the Rainy Lake Watershed . . .	

PART I - A BRIEF LOOK AT TWO RIVALS--BACKUS AND OBERHOLTZER . . .	
A. Edward Wellington Backus	
B. Ernest Carl Oberholtzer	

PART II - THE BUILDING OF THE DAMS AT INTERNATIONAL FALLS AND AT KETTLE FALLS	
A. Some of the Legal Background to the Construction of the Dams	
B. 30 Stat. 398, U.S.A., Ch. 238, May 4, 1898	
C. 31 Stat. 167, U.S.A., Ch. 346, May 4, 1900	
D. 32 Stat. 485, U.S.A., Ch. 1305, June 28, 1902	
E. The Two Ontario Contracts	
F. 33 Stat. 814, U.S.A., Ch. 797, February 25, 1905	
G. More Canadian Concerns	
H. 4-5 Edward VII (Dominion of Canada), Ch. 139, July 20, 1905	
I. The Ontario Act, Chapter 132, of May 14, 1906	
J. The General Dam Act, U.S.A., 34 Stat. 386, Ch. 3508, June 21, 1906	
K. Backus' Indenture to the Province of Ontario, dated November 1906	
L. President Theodore Roosevelt's Veto of a Time Extension Bill in 1908	
M. Further Ontario/Dominion Enactments	
N. Irregularities in the Candian Approval for the Dam at Fort Frances	
O. Amendment to the General Dam Act, U.S.A., 36 Stat. 593, Ch. 360, June 23, 1910	
P. The Boyce-Root Treaty of 1909 and the Establishment of the International Joint Commission	
Q. The United States Authorizes Construction of the Kettle Falls Dam: 36 Stat. 931, Ch. 156, February 24, 1911	
R. Kettle Falls Dam Application Referred to the International Joint Commission via the U.S. State Department	
S. The Rainy River Dam in Operation: Monitored by the Department of Public Works, Canada	

PART III - 1912: THE KETTLE FALLS DAM AND OTHER PROBLEMS	
A. March 1912: The Town of Fort Frances Rebels	
B. The 1912 International Joint Commission (IJC) hearings in the matter of the application of the Rainy River Improvement Company for approval of plans for a dam at Kettle Falls	

- C. The IJC Sessions of October and November 1912 in Ottawa and Washington
- D. Status of the International Falls Dam in Late 1912
- E. Decision of the IJC regarding the Kettle Falls Dam, April 18, 1913
- F. The Department of Public Works (DPW) approves the plans for the Kettle Falls Dam, September 1, 1913
- G. Control of Water Levels for Rainy and Namakan Lakes given over to the Department of Public Works, Canada, in 1914
- H. The 1916 Flood
- I. Revival of the 1916 Flood as a Debating Point at the 1925 IJC Hearings
- J. Effects of the Final Report for the Lake of the Woods on the Rainy Lake Watershed, 1917
- K. Some of Backus' Dealings with Canadian Authorities
- L. Damage Suits against Backus by Riparian Owners

PART IV - THE RAINY LAKE REFERENCE OF 1925

- A. The Public Hearings for the Rainy Lake Reference, Held at International Falls, Minnesota, on September 28, 29 and 30, 1925
- B. Oberholtzer's Presentation at the 1925 Hearings
- C. Dr. F. A. Dunsmoor Speaks
- D. Mr. Ralph D. Thomas, A Backus Ally, Speaks at the Hearings
- E. Canadians Oppose Backus Proposals
- F. Opposition from the Canadian National Railway
- G. Albert F. Pratt, Assistant Attorney General for the State of Minnesota, Speaks
- H. A Few Other Opponents of Backus' Scheme
- I. The Engineers go to Work Gathering Data on the Rainy Lake Watershed
- J. Backus' Expansion on the Seine River in Ontario and the Commencement of His Financial Difficulties
- K. Engineering Reports Delayed by Disagreement and Dissension
- L. The Engineers Final Report of 1932
- M. The Founding of the Quetico-Superior Council (QSC) in Late 1927 and the Intensification of Propaganda Against Backus' Proposals
- N. Backus' Declining Fortunes: But He Continues a Plucky Fight
- O. The 1933 IJC Final Hearings on the Rainy Lake Reference
 - 1. Oberholtzer's Presentation at Minneapolis on October 11, 1933
 - 2. Backus' Last Hurrah; His Presentation Before the IJC on October 12, 1933
- P. Final Report of the IJC on the Rainy Lake Reference, 1934

Q.	The Convention Between Canada and the United States of America Providing for Emergency Regulation of the Level of Rainy Lake and of the Level of Other Boundary Waters in the Rainy Lake Watershed (1938-1940)	.	.	.	.	.	.
R.	The IJC Hearings of 1941: St. Paul, February 24, 1941; Hibbing, June 19, 1941; Fort Frances, June 25-26, 1941	.	.	.	.	.	.
S.	Two Legal Briefs of 1942; The Faegre and Benson Brief for MANDO of January 15, 1942; Its Refutation by an Oberholtzer Brief for QSC, May 25, 1942	.	.	.	.	.	.
	1. The Faegre and Benson Brief	.	.	.	.	.	.
	2. The Oberholtzer Brief for the QSC, May 1942	.	.	.	.	.	.
T.	The Engineers Propose a Rule Curve for Regulating Rainy and Namakan Lakes	.	.	.	.	.	.
	1. The Ernest R. Gustafson Proposal	.	.	.	.	.	.
	2. The 1946 IJC Hearings and the Adoption of the Rule Curve Proposal	.	.	.	.	.	.
U.	The Adoption of the Rule Curve Formula in the Frame of the IJC Order of June 8, 1949	.	.	.	.	.	.
V.	The Flood of 1950	.	.	.	.	.	.
W.	The 1956 IJC Hearings at International Falls and the Modifications to the Namakan Rule Curve of 1957	.	.	.	.	.	.
X.	The IJC Hearings of 1969	.	.	.	.	.	.
Y.	Rule Curve Changes: The IJC Supplementary Order of July 29, 1970	.	.	.	.	.	.
Z.	Recent Development Since 1970 Relating to the Regulation of Rainy and Namakan Lakes	.	.	.	.	.	.
AA.	The Presence of Voyageurs National Park in the Watershed and Several Proposals Relating to Water Level Regulation Incident Thereto	.	.	.	.	.	.
	1. The Boise Cascade Proposal to Dispose of the Kettls Falls Dams	.	.	.	.	.	.
	2. The National Park Service and Cole's Proposals for Water Level Regulation on Rainy and Namakan Lakes	.	.	.	.	.	.
ILLUSTRATIONS:		.	.	.	.	.	.

INTRODUCTION CONCERNING WATER-LEVEL REGULATION

The seemingly innocuous subject of "water-level regulation" as applied to Rainy and Namakan Lakes in northern Minnesota and southwestern Ontario, has dramatic overtones that the uninitiated would never dream of. In a symbolic sense the fight for certain levels on these lakes was a struggle between two men: Edward Wellington Backus and Ernest Carl Oberholtzer. Even though Backus died in 1934, the interests that he represented continued the fight for the same cause into the present era. Equally, Oberholtzer, his rival, who died in 1977, has surviving ideological heirs who continue to carry on his battle for the conservation and preservation of natural resources on both sides of the international boundary between Minnesota and Ontario.

A third entity, besides these two antagonists, that plays a large role in this story, is the International Joint Commission.¹ The IJC can be conceived of as a neutral referee between and among the contesting parties that was eventually to establish a modus vivendi for the opponents. The IJC was established in 1909 by means of a treaty between Great Britain and the United States, a treaty sometimes referred to as the Root-Bryce Treaty of 1909. This treaty set down the powers of the IJC members, who were three Americans and three Canadians. The early representatives from the two countries interpreted the fourteen articles of this treaty to empower themselves mainly as investigators and advisors. Their purview was the boundary waters between Canada and the USA. Any case brought before the IJC was referred to as a "Reference" or an "Application." Interestingly enough, the first Reference or Docket placed before the IJC involved the Kettle Falls Dam and the Rainy River Improvement Company.

When the IJC was given the question of the Kettle Falls Dam in 1912, it first set about the establishment of Rules of Procedure on February 2, 1912. A recent staff member of the Canadian Section of the IJC, in talking about the early days of that organization, said that the IJC was hampered at first by having only lawyers as members.² In time, both the

United States and Canada sought to provide an even balance between lawyers and scientists, the latter group most frequently being represented by engineers. Failing that, the IJC staff would be well provided with such engineers, both Americans and Canadians.

Before launching into the narrative, a brief summary of the course of events relating to Rainy and Namakan Lakes is in order: the IJC defaulted on its responsibilities on Docket #1A, concerning the Kettle Falls Dam, when it published its opinion in 1913, expressing the view that it had no jurisdiction in the case, and therefore dismissed the application. As more cases came before the IJC, it soon became apparent that the organization had need of acquiring active powers. Another Reference from the same geographic region, the Lake of the Woods Reference, ran into a similar legal impasse; and the IJC recommended the drafting of a supplementary treaty or convention for the regulation of water levels on that lake. Such a treaty was completed in 1925 and a separate entity, the Lake of the Woods Control Board, was set up and is active to this day.

Things moved more slowly for Rainy and Namakan Lakes. The problems of that watershed were brought back to the IJC in 1925 as Docket #20R, The Rainy Lake Reference. Lengthy hearings took place at International Falls in late September of that year, and the IJC learned that suddenly there was a very avid interest in the subject of proper levels for Rainy, Namakan, and other lakes in the watershed. The various interests were sorting themselves out. Basically, the hydroelectric power companies found themselves at odds with almost every other type of riparian owner, both upstream and downstream. The reason for this was simple: the population of the area was becoming more numerous, and the possibility of utilizing lakeshore properties for homes and/or resorts was growing. Some of the groups who wished to be heard included farmers, town-dwellers, civic groups such as Chambers of Commerce, lumber interests, railroad interests, commercial fishermen, and a generic group that might best be characterized as conservationist/environmentalist. There were also mayors of towns, members of city councils and representatives of state, provincial, and federal agencies. A few of them

were modestly interested in promoting business and commercial interests that might depend upon the production of more hydroelectric power; but the majority were opposed to high or higher water levels and advocated a range of levels that would neither exacerbate flood conditions nor produce dried mud flats.

The basic result of the 1925 hearings was to have the IJC send its engineering experts into the field to tabulate data regarding all of the lakes in the Rainy Lake watershed. But a result unperceived by most observers at the time was the inauguration of Ernest C. Oberholtzer as the champion of environmentalists and the eventual organization of a group called the Quetico-Superior Council (QSC) in 1928.³ This non-profit organization put together a publicity oriented drive that had as its major objective the preservation of as much land area as possible in a state of nature stretching along both sides of the international boundary from Lake Superior to Rainy Lake. Even though its first cause was to save the natural beauty of Rainy and Namakan Lakes, its program continues to the present for the purpose of reserving as much as possible of the rugged Minnesota/Ontario Lake country as a protected natural playground for all time to come.

After the 1925 hearings, a team of engineers investigated the watershed thoroughly and turned out a series of data reports that included a volume of Tables in 1929, a volume of Plates and a Preliminary Report in 1930. There was one final report in 1932, but the IJC thought it necessary to conduct further public hearings late in 1933. By this time the QSC had organized a mighty army against the raising of water levels, but more importantly, the QSC had already won the battle for environmentalism by its successful advocacy of the Shipstead-Nolan Act both in the United States Congress and in the Minnesota Legislature. Provisions of these acts not only set aside large areas for preservation, but they also banned further manmade encroachments upon the natural wilderness, encroachments such as the inundation of greater land areas by means of dams whose gates would be set at higher levels to give more water storage and hence more hydroelectric power.

This greatest of the QSC's victories happened during the Great Depression which coincidentally brought about the destruction of the leader of electric power interests in the area, E.W. Backus. Backus himself died in late 1934. His death had been officially reported as coronary failure, but rumors persist that he may have taken his own life as a result of despondency over his business difficulties.⁴ At any rate, receivers for Backus' numerous companies continued to defend the causes for which the 74-year old magnate had fought so long.

The most significant result of the 1933 hearings and a second "Final Report" of 1934 on the Rainy Lake Reference, was a recommendation that an additional treaty or convention be negotiated between Canada and the United States to provide a mechanism for the day-in day-out regulation of water levels on Rainy and Namakan Lakes. This recommendation eventuated in the treaty of 1938 which was finally ratified on October 3, 1940, and was called the "Convention Between Canada and the United States of America Providing for Emergency Regulation of the Level of Rainy Lake and of the Level of Other Boundary Waters in the Rainy Lake Watershed."

The 1940 treaty touched off another round of IJC hearings in 1941 that generated a heated decade-long debate about what kind of conditions constituted an emergency in regulating levels in the watershed. Then, after another round of hearings in 1946 and more studies by the engineers, a plan was drafted in 1949 as a standing order whereby the levels on Rainy and Namakan Lakes would be governed by a system called the Rule Curve. Simplistically put, the Rule Curve consisted of two lines drawn on graph paper, depicting the maximum and minimum approved water levels that should be in force at any given interval during the calendar year on both Rainy and Namakan Lakes. The engineers had amazingly poor luck with the Rule Curve, when, during 1950, the first full year of application, the Rainy Lake watershed was afflicted simultaneously with both a rapid thaw of an abnormally large snow pack as well as torrential rains during the spring runoff. This Act of God prompted further regulatory orders for fine-tuning of the Rule Curves in 1957, 1970, October 1976, November 1976, May 1977, and May 1980.

During the same interval the IJC kept its thumb on the pulse of popular input by conducting hearings in 1956 and 1969. This, in sum, is a brief synopsis of the IJC's role with the issue of water-level regulation in the Rainy Lake watershed from 1909 until the present.

A. A Word On The Geography of the Rainy Lake Watershed

The newcomer to the Minnesota-Ontario boundary country has to re-orient himself to the fact that surface waters in this area drain generally in a westerly and northerly direction toward Hudson Bay. The dividing line between drainages along the border commences about fifty miles west of Lake Superior on the high ground known as the Canadian Shield. At that point the elevation of land above sea level is approximately 1550 feet. The Hudson Bay drainage system roughly parallels Lake Superior for about one hundred miles inside Minnesota, and then swings west. Near Hibbing, Minnesota, is a point where three watersheds split up, those of the Mississippi, Lake Superior, and Hudson Bay. The Mississippi watershed drains most of central Minnesota southward from Bemidji, while the northwestern sector of that state drains into the Red River and thence into Lake Winnipeg, the Nelson River, and ultimately Hudson Bay.

But the portion of the Rainy and Namakan Lakes system in which we are interested commences at North Lake, elevation approximately 1546 feet. All of the lakes in the system drain into their neighbors through channels of varying lengths. If such a channel has a noteworthy extension, the geographer dignified the passage by labelling it a "river." Depending on the season, some of the connecting channels are more frequently considered to be "portages" since the flowing water volume is insufficient to float a canoe. But North Lake flows into Gunflint and Magnetic Lakes with a drop of about three feet. There is a quite precipitous descent from the latter lake to Granite Lake at elevation 1459 feet. Granite in turn descends into Saganaga Lake at 1430 feet. Since nature never does anything in simple fashion, Northern Light Lake, a pretty good-sized body of water with 24 square miles of surface area, also runs into Saganaga but from a side-route entirely within the confines

of the Province of Ontario. Here the water level has descended to about 1430 feet.

At Lake Saganaga there are two routes by which the watershed drains itself. The northern of the two routes is entirely within Ontario territory, and together with the southern route, encircles a rugged piece of forested territory called Hunter Island. This island has about 300 square miles of woods, lakes, and hills, and comprises most of the area within Ontario's Quetico Provincial Park. The all-Canadian route proceeds from Saganaga to Saganagons to Kawnipi to Sturgeon to the Maligne River, which meets the southern route again at Lac La Croix. From Saganaga to Lac La Croix, the water level has fallen nearly 250 feet to 1182, over a number of waterfalls, rapids, and swift moving streams. Lac La Croix is the most frequently lauded beauty spot, praised for its numerous wooded islands, rocky cliffs, and rugged geography. It also has a considerable area, something around 42.3 square miles.

The international route from Saganaga to Lac La Croix follows the boundary between Minnesota and Ontario from Cypress Lake to Knife Lake to Carp to Birch to Basswood to Crooked to Iron to Bottle and once again to Lac La Croix. The largest interim lake in this group is Basswood with nearly 40 square miles of surface area.

Needless to say, the watershed gets contributions from a large number of lakes on Hunter Island. Some of these drain into the northern route, others into the southern. And there are an even greater number of side lakes, both in Minnesota and Ontario, that contribute to the central drainage. All this water is tending northward and westward.

From Lac La Croix there is a second double drainage; the northern being again entirely Canadian, while the southern conforms to the international boundary. The northern leg proceeds from La Croix via the Namakan River to Namakan Lake. Here there is a seventy-foot descent in about twenty miles of flow. The southern leg of this route goes from La Croix to Loon Lake to Loon River to Little Vermillion Lake to Crane Lake to Sand Point Lake and again into Namakan Lake. The largest of these interim lakes has only about fifteen square miles of surface area.

Namakan Lake has a side appendage called Lake Kabetogama and both of these lakes have about forty square miles of surface each. "Kabetogama" means "parallel lake" in Chippewa, but the parallelism refers to its lying side-by-side with the much larger Rainy Lake. Rainy Lake is of central interest to this study and has a normal high water mark of about 1108 feet. Its importance derives partly from its 345 square mile of surface area, which makes it a useful reservoir for water storage. The entire list of lakes enumerated above drains out of Namakan Lake via two falls, now called Kettle Falls and Squirrel Falls, but once historically referred to as Chaudiere Falls. Namakan's usual high water mark is at about 1118.5; hence the normal drop from Namakan to Rainy is about ten feet. The last three lakes of the chain, that is, Rainy, Namakan and Kabetogama, have relatively low and swampy banks, so that a small increase in the depth of these lakes tends to expand radically the surface area. Such a statement does not hold true for the upper lakes in the chain. That is, most of the higher lakes in the Rainy Lake Watershed have relatively steeper banks, so that rises in the levels do not flood as great an area as would a similar rise on the lower chain. All in all, the Rainy Lake Watershed drains about 14,500 square miles of territory.

Below Rainy Lake, that is, downstream, the watershed continues as part of a still larger system. The lake flows into the Rainy River and plunges over the dam at International Falls (once known as Koochiching Falls), and descends via the river into the Lake of the Woods after a seventy-five mile passage. The normal distance the water drops at International Falls/Fort Frances is 32 feet. There is only about another six foot drop throughout the entire course of the Rainy River between Ranier, Minnesota, and the Lake of the Woods. The latter body of water has an immense surface area, 1,485 square miles, and has a cumulative watershed area of 26,750 square miles.⁵ The Lake of the Woods drains northward via the Winnipeg River into Lake Winnipeg, Manitoba. This huge lake, 9,400 square miles in extent, permits its surplus waters to continue to flow northward through several smaller lakes into the Nelson River, which finally joins Hudson Bay.

ENDNOTES TO INTRODUCTION ON WATER-LEVELS

1. Hereafter referred to as the IJC.
2. Interview with Murray Thompson, IJC Engineer, by David L. Fritz, in Ottawa, June 1, 1981.
3. Hereafter referred to as the QSC.
4. Interview with Ernest C. Oberholtzer, Minnesota Historical Society, October 22, 1963, Acc. # 9529, Reel 2, p. 7 of transcript; hereafter referred to as Oberholtzer Interview.
5. The statistics regarding water levels and the areas of lakes and their watersheds in the preceding section are derived from Preliminary Report (Engineers) to International Joint Commission Relating to Official Reference Re Levels of Rainy Lake and Other Upper Waters, Tables, by S.S. Scovil, R.W. Crawford, and P.C. Bullard, Ottawa, 1929, pp. 7, 8, 31; hereafter referred to as 1929 Engineers Tables.

PART I: A BRIEF LOOK AT TWO RIVALS--BACKUS AND OBERHOLTZER

The underlying differences in the philosophy of water-level regulation in the Rainy Lake Watershed are personified in the two men E.W. Backus and E.C. Oberholtzer. Each in his own way perceived himself as the keeper of the keys to human happiness, Backus by offering sustenance to the body through physical employment; Oberholtzer by seeking food for the soul through renewal of the human spirit in a natural refuge away from the cares of modern life. Both, in a way, were only partial possessors of the whole truth. Backus gave first priority to the basic needs of man: food and shelter; Oberholtzer presumed that these needs had been taken care of and that man did not live by bread alone.

These presumptions by both men depended somewhat upon the state of the American economy. Adherents of Backus' vantage point should have been strongest when the economy was stumbling and struggling. Oberholtzer's supporters should have been in the driver's seat when the nation was prosperous and had leisure enough to seek ways for renewing the spirit by communing with nature. Quixotically, things did not work out that way. Backus was defeated during the depths of the Great Depression when people should have been most concerned about jobs and the necessities of life. At that moment Oberholtzer's allies rose into the ascendancy. As we shall see through the story's development, a second round of analysis is taking place today in the public's review of priorities. Perhaps it will transpire that the popular consensus will adopt a synthesis of the two antithetical views; they may opt for a balance between the basic needs of man and the preservation of a natural environment that feeds man's soul.

A. Edward Wellington Backus

Edward W. Backus was born into a generation that had to contend more with the rough frontier environment than the generation that succeeded it. He was born in 1860, twenty-four years before Oberholtzer. He came from a rural background near Red Wing,

Minnesota, and strove to better his family's prospects by going to college at the University of Minnesota. Working at odd jobs while going to school, he found the struggle for existence unequal and dropped out of the university during his senior year. Backus was not crushed by this setback. He became bookkeeper for a small lumber firm in Minneapolis and quickly worked his way upward through the ranks. By 1885 he was sole owner of the lumber company with which he had begun.

Because of the intensity of Backus' ambition and his comprehension of the business climate of this era, he never looked back, but always seemed to be expanding and acquiring new properties. The serious economic depression of 1893 did not daunt him in the least and this success may have deceived him into believing in the invincibility of Edward Wellington Backus.

To illustrate the nature of Backus' ambition, one need grasp only for occasional stories of his endless drive. The story of how Backus came to the northern Minnesota boundary country is a case in point. In 1898 this self-made millionaire rode to the end of the railroad line at Brainerd, Minnesota, donned a pair of snowshoes, and in company with his chief timber cruiser, trekked two hundred miles over the snows to the border lands. In the course of their explorations they found not only plentiful cheap timber and land along the border, but eventually gazed upon the opportunities afforded by Koochiching Falls. This latter apparition was at the water-exit to Rainy Lake and on the opposite shore stood the Ontario village of Fort Frances, which had once been a trading post for the Hudson Bay Company.

In the aftermath of this trek into the wilderness, Backus followed his business instincts to the fullest. Using credit freely, he involved himself in the ownership and construction of railroads to the falls area. He took this considerable economic risk without having any guarantee that his railroads would have any products to carry. He and his principal partner, William F. Brooks, planned to generate their own rail traffic by diversifying into extractive industries, mainly timber and other wood products.

Around 1905 Backus sold his lumber and sawmill companies in Minneapolis and concentrated his energies on the border country. About the same time he laid plans for the construction of a hydroelectric dam at the Koochiching Falls to provide his other enterprises with cheap power for the manufacture of lumber and various paper products. Backus' impetus in the area was the foremost influence for changing the name of the Minnesota village at the site from "Koochiching Falls" to "International Falls." Complexities arising out of the unique international border location for the dam held Backus up until 1909 before the structure was completed. The timber magnate was similarly hampered in building the storage dam at Kettle Falls, which was eventually completed in 1914.

Aside from such minor incidental obstacles to his progress, Backus received little vocal opposition to his vision of an industrial empire that would sit astride the Minnesota-Ontario boundary. He was able to brush aside complaints that arose in the aftermath of the unusual 1916 spring flood; but some older residents were taking notice that the level of Rainy Lake was affecting trees during normal years which had been untouched by high waters in the hundred years of their life. A few riparian owners did litigate, but usually they lost. Most of the victims of higher water levels were too poor to take Backus into court, and in the main their numbers were few during the early years, as not many Americans had discovered the beauties of the north woods lake country. One of the few was Ernest C. Oberholtzer who was only able to find a number of allies against Backus in the decade of the 1920s.¹

During that hectic period Backus sought to use the International Joint Commission, the Canadian-American waterways arbiter established in a 1909 treaty, to give its approval for the construction of additional storage dams in the Rainy Lake watershed. Backus was astounded in 1925 when the IJC hearings held at International Falls brought forth a hornet's nest of opposition. He may have thought that the size and power of his economic empire was sufficient to dazzle the public and brush aside any feeble attempts to thwart him. The printed transcript of the hearings presented Backus as a formidable personage, listing him under the "Appearances" page as representing five companies. Actually

there was even greater size to his conglomerate. He was merely identifying those units that had some relationship to the Rainy Lake watershed. These companies were: The Keewatin Power Company, Ltd., of Kenora, Ontario; The Ontario and Minnesota Power Company, Ltd., of Fort Frances, Ontario; the Fort Frances Pulp and Paper Company, Ltd., of Fort Frances; the Rainy River Improvement Company of International Falls, Minnesota; and the Minnesota and Ontario Paper Company, also of International Falls. The latter unit was often referred to by its employees as "MANDO," a acronym derived from the company title.²

When Backus found himself temporarily thwarted at one point, he tended to push on into new areas. Even though, in 1926, he had not as yet been totally defeated in the Rainy Lake watershed, he sent surveyors up the Seine River in Ontario to evaluate the potential of that stream for hydroelectric development. Here he could work more quickly, because he had only one government with which to deal; and he was able to convince the premier of Ontario and others that the building of three power dams on the Seine would benefit that province. The development was undertaken with borrowed money, perhaps as much as thirty million dollars; but the real significance of this expansion for Backus was that he did it at a time when he should have been consolidating his industrial empire. Business generally was contracting, not expanding, and soon the timber baron was in deep financial trouble. Eventually it led to receivership and near bankruptcy for his enterprises.³

Meanwhile, after the 1925 IJC hearings on the Rainy Lake Reference, a team of engineers tabulated the most detailed statistics ever developed for the watershed. These figures, together with the conclusions of their preliminary report, tended to cast the attitude of the engineers as something other than neutral. Backus adversaries thought that this report could very well have been written in the MANDO offices.

The environmentalists found a glimmer of hope in the engineers' report when they saw that Stuart S. Scovil, a Canadian engineer, printed a letter of dissent from the general views, with the report. The conservationists built on this foundation when they showed up well armed

for the final hearings before the IJC at Minneapolis in October of 1933. Although Backus' opponents presented a well organized and persuasive argument to the IJC, the final report of the body seemed to favor neither side. The IJC both admitted the potential of the watershed for further hydroelectric development as well as consented to the notion that a formal treaty between Canada and the United States might be necessary for the regulation and control of water levels in the Rainy Lake watershed.

While the bureaucratic machinery of the IJC droned on and on, Backus' financial affairs moved toward a disastrous conclusion. When his seventeen companies fell into receivership on February 28, 1931, Backus thought that he would be able to lead them out of calamity to prosperity when he was made one of the receivers. He served for nine months in this strange capacity as receiver to a crumbling empire that he had brought to the brink of destruction. Backus' major maneuver during this interval was to officiate at an attempt to bring about a merger of four of the largest paper companies in North America. Talk had it that the failure of the merger was not only due to their inability to agree on valuations for their assets, but also and mainly that the other principals to the proposal lacked confidence in any endeavor of which Backus was a part. Similarly, the bond and note holders for Backus' conglomerate indicated to the court that they had lost reliance in the old war-horse and desired a new set of receivers. The court granted their wish and all Backus could do was act as an observer and heckle them from the sidelines.

Backus spent most of the time after his ouster and before his death in filing suits to recover control of his companies and appearing at hearings of the IJC in a vain attempt to further his old plans for developing more hydroelectric power along the Minnesota-Ontario boundary. He died of a heart attack while on a business trip to New York City on October 29, 1934. A number of newspaper obituaries recited a list of innumerable stock certificates in his hotel room when he died, lending credence to the report that he was engaged in heavy and hazardous speculation to regain control of his empire. There was talk as well that he may have taken his own life because of the burdens of debt

and his apparent lack of personal friends. But this view contradicts the information from the early obituaries that tell of his summoning the house physician at the Vanderbilt Hotel by phoning the desk at 6:30 A.M. Dr. Francis J. Murray ministered to Backus promptly, but the timber baron was unable to rally and passed away at 6:45 A.M. He was but a month shy of his seventy-fourth birthday.

Despite Backus' reputation as a gruff and stern old competitor, the city of International Falls did not see him in the same way as his adversaries. The Falls Journal referred to him as a man of "extraordinary vision," "splendid personality, keen intellect and untiring energy," One paragraph eulogized:

Mr. Backus was a man of splendid physique, and it was truthfully said of him that he had the head of a statesman and the shoulders of a gladiator. His beaming eyes denoted his keen intellect, and his retentive memory caused all with whom he came in contact to marvel. Of commanding appearance, he was a man of note whether in village circles or in the financial centers of the east, and had he chosen politics as a profession, he would have graced congressional halls of the national capitol.⁴

The same issue of the local paper also reprinted a resolution of tribute to the deceased Backus and mentioned plans to close down business places for an hour on the day of his funeral. For years afterwards residents of International Falls and Fort Frances retained a respectful attitude toward the fallen magnate, many of them grateful for the steady employment provided by various Backus enterprises in the border cities. The newspaper eulogy took note of Backus' controversial nature when it said, "men in these times are often condemned, their motives misunderstood and much evil attributed to many of their public acts,⁵ but this was the only defensive statement in seven paragraphs of laudatory remarks. A copy of the memorial was sent to the bereaved family. Backus was buried in Lakewood Cemetery, Minneapolis. After his passage, his spirit lingered on in the continuing battle to regulate water levels in the Rainy Lake watershed. Many residents of the two adjoining border towns, mainly employees of the industries founded by Backus, still consider their personal interests to coincide with the well being of the power, paper, and timber interests.

B. Ernest Carl Oberholtzer

Ernest C. Oberholtzer was born in 1884, a generation later than his rival Backus, in Davenport, Iowa. "Ober," as his friends sometimes called him, received a Harvard degree in 1907, and took an added year of training there as a landscape architect. He first came to the north country for a vacation in 1909; and in 1912 he canoed all the way up to Hudson's Bay together with an Indian companion and guide, Billy Magee. A few years later he acquired some island property in Rainy Lake near Ranier, Minnesota. Coincidentally, E.W. Backus was a neighbor on an adjacent island. As Oberholtzer later recalled:

I already knew Mr. Backus personally, and we were always friendly when we met on the street. (c. 1925) I knew his wife. Their summer home was only half a mile from our own island, the small island where I lived with my mother, and they had a very elaborate home besides the senior Mrs. Backus' beautiful houseboat where she entertained. Mr. Backus was too busy to spend much time there himself, but occasionally he was there. My mother and I both knew Mrs. Backus, Sr., pleasantly, and occasionally visited there. But I knew nothing of Mr. Backus in his business, and so I was an entire outsider to his plans.

Oberholtzer was also an outsider in the sense that, at first, his Rainy Lake home was only a summer residence. Thus, in the early years, he made no public display of his views concerning dam building in the Rainy Lake watershed. He did not, for example, appear on the list of witnesses before the IJC during its 1912 hearings in Washington concerning the Kettle Falls dam. Instead, his early attachments were in Chicago where his family had found a position for him in a Chicago brokerage firm. For the sake of his health, which had been impaired by an early bout with rheumatic fever, and a considerable curiosity about Chippewa life and legend, Oberholtzer was drawn more and more to the north country. Eventually, he became so steeped in the borderland milieu that he could speak authoritatively as an expert witness in its defense.

Oberholtzer's moment came during the 1925 IJC hearings at International Falls. While his testimony covered only six pages of the

transcript, he eloquently and accurately summarized the previous historical debate on the watershed; but he disputed that the benefits derived from more hydroelectric power there would be a fair trade off for the destruction of 14,500 square miles of beautiful sylvan and aqueous territory. Oberholtzer's simple eloquence appealed to a number of like minded environmentalists who either witnessed or heard of his performance at the hearings. One of the most influential allies he gained through this appearance was Sewell T. Tyng, a rising young attorney of a Wall Street law firm. Tyng and another lawyer from Minneapolis, Frank B. Hubachek, approached Ober and asked him to serve as spokesman for conservationists who opposed Backus' plans. In time these men organized the Quetico-Superior Council (QSC) whose basic purpose was to preserve as much territory as possible on both sides of the international line in Ontario and Minnesota. Thus their area of interest encompassed a much larger region than merely the Rainy Lake watershed and over the years they concentrated their efforts on problems that were geographically rooted in places beyond the scope of this study. From start to finish they raised funds, set up a membership, and produced propaganda for their causes. Their representatives appeared at nearly every public function, particularly hearings of the IJC and the United States Congress.

Oberholtzer and the QSC had three big victories in the 1930s: the passage of the Shipstead-Nolan Act both in the United States Congress (1930) and in the Minnesota legislature (1933) and the standoff defense of the north country environment during the 1933 IJC hearings on the Rainy Lake Reference. The aforementioned legislative acts provided more of a philosophical framework for protecting wilderness areas than an actual instrument for performing the deed. Oberholtzer and his allies had to give teeth to Shipstead-Nolan in the years that followed by promoting other legislation. The original act, for example, favored the retention of current water levels on the boundary lakes, but until some act of government acquisition of any disputed region was effectuated, the law was a dead letter. So Oberholtzer's crusade was a continuing fight that did not end with his death.⁷

Oberholtzer and the QSC also got an artificial boost in thwarting Backus' plans to build more dams during the 1930s when the nationwide economic downturn of the Great Depression destroyed the magnate. But the environmentalists suffered almost equally with the industrialists. They were unable to generate sufficient funds from their membership between 1931 and 1933, so that Oberholtzer, as president of the QSC, worked without salary. At this point time the QSC was almost his only occupation. He had withdrawn to his Mallard Island retreat near Ranier and some of his acquaintances referred to him as "the hermit." He conducted most of the business of the QSC from this headquarters with occasional trips to Minneapolis, Washington, or IJC hearings.

At the passing of Ed Backus, Oberholtzer did not glory in triumph. Years later he told about his immediate reaction to Backus' death:

I heard of it suddenly. Somebody telephoned me, I guess. Two or three telephoned me--joyously. It didn't affect me that way at all. I really felt the other way. Of course, I said jokingly to people. Well, now we have lost our very best friend, because we haven't got anything to talk about now. He'd stick his head out where we could hit him, and the rest of these people don't do that. Ther're very cautious. So we haven't got anything to fight about. But, I don't wany anybody to think I'm so inhumane that I don't appreciate his state of mind. What an awful thing that was, [Backus' sudden death], you see. It was just enough to kill anybody.⁸

When Backus passed from the scene, Oberholtzer still had capable adversaries, mainly lawyers, representing the baron's old companies. Their usual meeting ground was at the widely-spaced IJC hearings. In time their contentions became less strident as both sides came to recognize that compromise was the wave of the future and the "multiple use" would become the method of dealing with reserved wilderness areas.

When the Final Report on the Rainy Lake Reference was issued in 1934 by the IJC, Oberholtzer no longer considered water levels in that watershed to be his number one concern. While the report was not a total victory for his forces, it led eventually to solutions acceptable to him. One of its recommendations was that a special treaty be negotiated for the governance of levels in the watershed. Such a treaty was

finalized in 1940: and the interpretation of the treaty brought about the establishment of the Rule Curves for Rainy and Namakan Lakes in 1949.

The same treaty set up the International Rainy Lake Board of Control that actively regulates water levels in the watershed. The latter board is under the IJC and since its inception has periodically issued orders changing the day-to-day regulation of water levels under its jurisdiction. The existence of this body demonstrates the reason for Oberholtzer's lessening concern for at least one facet of his northern paradise. That is not to say that Ober and his friends did not continue to provide input on every occasion when the IJC held public meetings regarding water levels. On the contrary, they continued to serve as watchdogs; but their main preoccupation was in putting together as large a natural refuge as they could along the Minnesota-Ontario boundary. Their success has been notable and the effort continues. Some of the other laws they played a role in passing through the United States Congress were the Thye-Blatnik Act of 1948, the Wilderness Act of 1964, and the Land and Water Conservation Fund Act of 1964.

Oberholtzer, of course was less active in the proceedings of the QSC as the 1960s arrived; but till the end of his days his ideas were solicited by the younger members. He died on June 6, 1977, at the age of ninety-three.

ENDNOTES TO PART I

1. Most of the biographical data on Backus is from R. Newell Searle's book Saving Quetico Superior; A Land Set Apart (St. Paul: Minnesota Historical Society Press, 1977), Chapter 3, pp. 34-59; hereafter referred to as Searle. Because of the circumstances surrounding Backus' death, there is no large collection of his personal papers. His rivals from the Quetico-Superior Council (QSC) tabulated considerable information concerning his life, and their papers, though restricted, are held by the Minnesota Historical Society, Archives and Manuscripts Division, St. Paul. Backus himself revealed occasional glimpses of his personal life in statements made at IJC hearings (1925, 1933) and before the United States Congress (1930). This latter can be found in the testimony of Edward W. Backus, U.S. Congress, House, Hearings Before the Committee on Public Lands, Part 3, 71st Congress, 2nd session, 1930, pp. 7, 11-13, 184-187.
2. Hearings of the International Joint Commission of the Reference by the United States and Canada in RE Levels of Rainy Lake and Other Upper Waters of the Lake of the Woods Watershed and Their Future Regulation and Control Being Public Hearings at International Falls, Minn., September 28, 29, 30, 1925, (Washington, D.C.: Government Printing Office, 1926), p. 1; hereafter referred to as 1925 IJC Hearings.
3. Certain aspects of Backus' Seine River developments are covered in the Oberholtzer Interviews of October 22, 1963, Reel #2, pp. 3-5 of the typed transcript. Other details of Backus' biography follow Chapters 3 and 5. There is also a thumbnail biography of Backus in the Voyageurs National Park Files intitled "The Lask of the Barons." It apparently is derived from the Grand Rapids Herald (MN), undated. Other biographical data is contained in obituaries in the International Falls Journal for October 29 and 30, 1934, The Minneapolis Journal of October 29, 1934, the St. Paul Pioneer Press of October 20, 1934, and the New York Herald Tribune of October 30, 1934.
4. International Falls Journal, October 30, 1934.
5. Ibid.
6. Oberholtzer Interviews, October 21, 1963, Reel #1, p. 11 of the transcript.
7. R. Newell Searle's book, Saving Quetico-Superior, while not functioning strictly as an Oberholtzer biography, does chronicle the sequence of battles undertaken by Oberholtzer and his environmentalist allies. While this subject matter is germane to this study, it goes far beyond the territory encompassed within the present Voyageurs National Park.
8. Oberholtzer Interviews, October 22, 1963, Reel #2, p. 7 of the transcript.

PART II: THE BUILDING OF THE DAMS AT INTERNATIONAL FALLS AND AT KETTLE FALLS

A. Some of the Legal Background to the Construction of the Dams

Soon after his trek on snowshoes to Rainy River in early 1898 Edward Wellington Backus made up his mind to build a dam for hydroelectric purposes at Koochiching Falls, opposite Fort Frances, Ontario. Though he quickly formed a corporate organization for the purpose of dam building, his preparation was insufficient: he and his partners had neither adequate capital nor transportational access to the site.

B. 30 Stat. 398, USA, Ch. 238, May 4, 1898

Nevertheless they succeeded, under the title of the "Koochiching Company" in lobbying a law through the United States Congress on May 4, 1898. This was "an act permitting the building of a dam across Rainy Lake River."¹ The law permitted the Koochiching Company, "its successors and assigns to construct across the Rainy Lake River, at any part of the rapids in section twenty-seven, township seventy-one north, range twenty-four west of the fourth principal meridian, in the State of Minnesota, a dam, canal, and works necessarily incident thereto, for water power purposes." The law also allowed for the construction of a suitable lock for navigation purposes, but it did not compel the company to build such a structure. In actuality there was an abandoned canal in place on the Canadian side, a part of the old Dawson Route. The law had several provisos, the first of which gave the government the right to take over the dam at cost at any time; the second providing for a fishway and log sluice; the third making changes and modifications of the dam subject to the approval of the Secretary of War; and the fourth providing procedures for litigation against the company. But Section 3 of the law was the one that had most impact: Backus and his associates were unable to begin construction within a year and to complete it within three years.

Another serious deficiency of the law was that it took no notice of the fact that half of the dam would be within the borders of the Province of Ontario, Dominion of Canada. Thus the wording of the law, speaking only of the "State of Minnesota," seemed strange, to say the least. But Backus obviously had parallel plans to persuade the Canadians at the same time, but none of these plans reached the public record for the time being.

As has been noted, there had been earlier legislation giving the Secretary of War controlling powers over dam building. Two appropriation acts, of September 19, 1890, and July 13, 1892, gave the secretary this power. Then, after Backus' abortive attempt to build a dam, a new appropriation act of March 3, 1899, provided the Secretary of War with the technical expertise of the Corps of Engineers for overseeing the construction of such works. Under Section 9 of the latter law the location and plans of such works had to be submitted to and approved both by the Chief of Engineers and by the Secretary of War before construction commenced. Any deviations from these plans had to be similarly approved.²

C. 31 Stat. 167, USA, Ch. 346, May 4, 1900

Despite Backus' failure to complete his dam as expeditiously as the 1898 law demanded, he nevertheless went to the Congress again and was able to get an extension of time that required the dam's completion by May 4, 1903.³

D. 32 Stat. 485, USA, Ch. 1305, June 28, 1902

Once again Backus' ambition overreached his capacities and he was unable to meet this commitment. With great pertinacity he went to the well a third time. The resultant Act of June 28, 1902 did give him the desired extension, but the text of the law reveals a new awareness in the Congress that environmentalist concerns were coming alive. The new law gave the Koochiching Company until May 4, 1907 to complete its work; but it stated that the dam can only raise the waters of Rainy Lake to

"high-water mark." In adding this limitation, the text provided "that said dam shall be furnished with such openings or gates or waste ways as will carry the waters of the river at flood stage without raising the water higher than it would rise in the natural condition of the stream." The act also made the company liable "for any damage inflicted upon private property by reason of the raising of the waters of the lake as aforesaid." The text also made mention of plans on file with the Secretary of War.⁴

Now, seemingly, Backus had sufficient time to complete his ambitious project. During the interval provided he had both to raise the capital for the enterprise and complete a railroad through the wilderness to his coveted Shangri-La. He put together a network of partnerships that partially solved his capital problems. He also sold his mills in Minneapolis and concentrated his resources along the Minnesota-Ontario boundary. He organized a syndicate to build the Minnesota and International Railway from Brainerd to the newly named town of International Falls (formerly Koochiching). Since this latter enterprise only came to fruition in 1907, we can readily understand why once again Backus was unable to meet his schedule.

E. The Two Ontario Contracts

Meanwhile, he was also dealing with the legal aspects of getting Canadian approval for his projects. A 1904 contract with the Ontario Government revealed the eagerness of that entity to welcome industrial development into the province. For some reason, probably construction delays, Backus was obliged to renegotiate the contract on January 9, 1905. On the Canadian side, the agent contracting with Backus was the Commissioner of Crown Lands for the Province of Ontario.

Both versions of the contract indicated Backus' intent to build a dam for electricity generating purposes and that he was willing to pay \$5,000 for a "grant in fee" of the lands and power on the Canadian side. Thus he did not own the land outright on the Ontario side. But the contract, while not stating Backus' obligations in Minnesota, did mention that Backus was an owner "in fee simple" of the lands and water power on the

Minnesota side. The dam was to be of masonry and concrete. Significantly, in the 1904 version of the contract, the Ontario Government reserved to itself the right to regulate water levels on Rainy Lake in the following words:

That the waters of Rainy Lake shall not at any time be raised to a higher level than high-water mark, as ascertained by such government engineer, and the height of water to be maintained in the said lake shall at all times be subject to such control and direction by the government as may be necessary to secure safety.

The second version (1905) of the contract retained the same strong control over water-levels as the first version, but, in addition, made reference to specific features of the dam whose plans had since been approved by the lieutenant governor in council. In this version, the text read:

The waters of Rainy River shall not at any time be raised to a higher level than may be authorized by the government, and the height of water to be maintained in the said lake and the use or nonuse of the flash boards as shown on said plans shall at all times be subject to such control and direction by the government as in the opinion of the government may be necessary to insure safety and protection of property.

Both versions of the contract stipulated Backus' obligation to spend \$50,000 on construction within nine months of the approval of the plans. The contract provided three alternative methods which buyers of electricity could choose for receiving their power, and the prices for each mode were exactly stated. Clauses in both versions guarded against price gouging on either side of the international boundary.

Both contracts allowed Backus to build a storage dam at Kettle Falls with an option to develop power there later as well. The Ontario Government reserved to itself and the Dominion of Canada the right of navigation on the waterway, the rights of timber owners to float logs, and the requirement for Backus to provide fishways around any of the dams. He was also prohibited from polluting the waters with sawdust, chemicals, refuse, or matters of any kind that might harm fish.

One clause that was peculiar in both the 1904 and 1905 contract was the one on liability for damages caused by floods. In paragraph 17 the government merely stated its immunity against such claims, and as for the purchasers (Backus and company), they were given "no permission . . . to overflow or cause to be overflowed any lands not the property of the Crown in Ontario and not under the control and administration of the said government." Thus, if there were any sanctions to be levied against Backus and his cohorts, they were unstated in the contract.

But more interesting than the similarities between the two contracts, were the differences. Doubtlessly the major reason for redrafting the contract was Backus' need for more time. He was given a one-year extension until January 1, 1907, to complete the dam. This coincided roughly with the American legislation on the same subject. Beyond this, the revised contract displayed some jealousy on the part of Ontario interests that Backus might be using the province to provide cheap electricity for Americans in Minnesota. So the first stipulation imposed on Backus was to build all of the powerhouses and buildings in Fort Frances rather than just half of them there. Next Backus was required "to develop and render available for the use on the Canadian side of the river by the said date, the total amount of horsepower to be capable of development." Even though such a clause seemed to forbid export of electricity across the border, another clause allowed selling or leasing of power in Minnesota. Yet, even here, a minimum of four-thousand-horsepower was reserved absolutely for the Canadian side. And beyond that, Canadians were given first preference for any power needs beyond the first four-thousand-horsepower.⁶

Needless to say, the second form of the contract was approved by the lieutenant governor by an Order in Council on January 13, 1905. On the same day, by the issuance of Royal Letters Patent, Backus and his associates were recognized under the Ontario Companies Act as a corporation with the title of The Ontario and Minnesota Power Company, Limited, with a share capital of three million dollars.⁷

The main reason for the supercession of the 1904 contract was that Backus was able to demonstrate to the Ontario government that for the time being there was "no market whatever" for electrical power on the Canadian side near the dam, and there was very little prospect for demand in the near future. So it was unreasonable to hold the company to an unprofitable proposition. But, as we have seen, the Canadians, even in accepting a revised contract, jealously guarded the privileged position of prospective Ontario consumers.⁸

F. 33 Stat. 814, USA, Ch. 797, February 25, 1905

A month after the Ontario contract problem was rectified, that is, in February 1905, Backus had to go again to the United States Congress for one more year of extension on the construction deadline. Once more he succeeded. This act, dated February 25, 1905, also found Backus transferring the rights and privileges of the Koochiching Company to a new entity, the Rainy River Improvement Company. This change was doubtlessly a mere stratagem to cover any embarrassment to the Koochiching Company, which had thrice failed to meet its deadlines.⁹

G. More Canadian Concerns

The question of the International Falls dam became a concern also of the government of the Dominion of Canada in January of 1905. The Privy Council together with the Governor-General were not quite certain that the Dominion's interests were being preserved in the project, so the Minister of Public Works was instructed to notify Backus, that in case of disapproval by the Dominion, he, Backus, would be obliged to remove the temporary coffer dams used in the construction phase at his own expense, and pay any damages caused by the presence of said coffer dams. The Privy Council nevertheless allowed Backus to continue construction, as removal of the coffer dams would cost the magnate another full season as well as considerable monetary loss.¹⁰

In May of the same year an assistant to the Governor-General in Ottawa expressed the view that permission would not be given by the

Dominion for completion of the dam. Major misgivings concerned navigation, fishing, and the old unfinished canal and lock in the city of Fort Frances. In the latter case the assistant was unsure whether the canal and locks belonged to the Dominion or the Province. But he did think that clauses of the contract properly preserve the rights of the Dominion in the case.¹¹

H. 4-5 Edward VII (Dominion of Canada), Ch. 139, July 20, 1905

All this became academic when, in July 1905, Backus put his Canadian permit on firmer ground. At that time he obtained passage of a law from the Dominion Senate and House of Commons entitled "An Act respecting the Ontario and Minnesota Power Company, Limited." This law closely imitated the contract Backus had with the Province of Ontario, but it also placed a great deal of the control for the future dam with the Board of Railway Commissioners of Canada. The board, however, did not acquire the power to regulate water levels; but it became, among other things, the arbiter for price disputes, the determiner of electrical apportionment, and the judge of matters of law and fact regarding the dam. This law, like the contract with Ontario, gave preference to Canadian power consumers and stated that the power house, generators, transmitters, and machinery appliances would all be on the Canadian side of the boundary.¹²

Even though Backus seemed to have clear sailing from Canadian authorities after the passage of the Dominion Act of July 20, 1905, the executive branch of the Dominion nevertheless placed one more hurdle in his way. A meeting of the Privy Council convened and recommended that seven conditions be placed on the authorization to build the dam, namely: 1) that in the interests of protecting navigation the company "shall not increase the height of water either by the construction of the dam itself or by placing flash boards upon the said dam in such a way as to reduce the natural depth of water below the said dam."; 2) that the Minister of Public Works shall have the power to regulate the flow or retention of water over the dam, also in the interest of navigation; 3) that the provisions of Backus' contract with the Province of Ontario be also

supported by the Dominion; 4) that the usability of the old lock and canal built in association with the old Dawson Route, be preserved; 5) that the dyke or retaining wall on the plans be first submitted to and approved by the Minister of Public Works; 6) that the Minister of Public Works be empowered at any time to stop construction of the dam if he deem it necessary; and 7) that the Minister of Marine and Fisheries have similar veto powers over the construction details of the proposed fishway. The provisions of this report were approved by the Governor-General on September 19, 1905.¹³

I. The Ontario Act, Chapter 132, of May 14, 1906

Then, on the Canadian side, a strange thing took place. By an act of May 14, 1906, the Ontario Legislature abrogated certain features of the Dominion Act of July 1905. The grounds given were that the Dominion Act had taken no account of the Town of Fort Frances' conveyance of the lands in question to the Crown in the interest of the Province of Ontario. Therefore, as the Ontario Act stated, the company was not bound by the Dominion law. The Ontario legislature therefore took away from the Board of Railways Commissioners the power of fixing prices and allocating percentages of the available electrical power. In the board's place, the legislature returned jurisdiction to the Lieutenant-Governor in Council. This law also extended the completion date for the dam to January 1, 1908.¹⁴

J. The General Dam Act, USA--34 Stat. 386, Ch. 3508, June 21, 1906

The frequency of dam construction during this era caused the United States Congress to draft a General Dam Act, which was passed on June 21, 1906. The act institutionalized many of the practices long established and used in specific dam authorizations. For example, it made the Secretary of War and the Chief of Engineers the regulators of dam plans, specifications, and modifications. In Section 2 the law reserved the right of the United States to direct the construction of locks for navigational purposes in conjunction with any dam. This same section empowered the United States government "to control the said dam and the level of the

pool caused by said dam to such an extent as may be necessary to provide proper facilities for navigation." It seems curious that navigation would be given such primacy, but that was a top level concern of the period.

Section 3, which followed, provided for the concern which became a more urgent consideration in later years: that the company was liable for damages caused by flood or overflow. This section also compelled the company to light its facilities and provide for fishways. The latter structures were to be controlled by the Secretary of Commerce and Labor. The act also looked with disfavor on such interminable construction delays as Backus had encountered by imposing a one year limit on commencement and three year limit on completion of construction.¹⁵

K. Backus' Indenture to the Province of Ontario, dated November 20, 1906

Late in the year 1906 Backus and his partners reduced to writing a personal pledge given in January 1905 that, as a consequence of their building a hydroelectric dam, he would provide the Canadians with several mills that would give gainful employment to residents in the town of Fort Frances. Backus therefore made an indenture with the Commissioner of Crown Lands for the Province of Ontario in which he pledged to build a flouring and grist mill, or an oatmeal mill, or a pulp mill, or some other manufacturing industry. The agreement was to be fulfilled within two years of the completion of the dam. He paid \$25,000 for the privilege. The flouring or oatmeal mill was to have a capacity of a thousand barrels of flour or oatmeal per day.¹⁶

In conjunction with this pledge by Backus, the Lieutenant-Governor of Ontario eventually issued Supplementary Letters Patent, formally extending the powers of the Ontario & Minnesota Power Company, Limited to include the right to operate and build pulp mills, lumber mills, and other manufactories in combination with its hydroelectric dam at Fort Frances.¹⁷

L. President Theodore Roosevelt's Veto of a Time Extension Bill in 1908

Just when Ed Backus seemed to have every legal barrier to his International Falls Dam cleared away, he ran into a serious obstacle in the form of the President of the United States. Even though Theodore Roosevelt had signed two previous bills extending the dam construction time, he balked in 1908. Something made Theodore Roosevelt aware of the public interests involved, and in his veto message, he expanded on these worries to the House of Representatives. Basically, the President was unaware of the difficulties Backus had to overcome merely to get the building materials onto the site at Fort Frances/International Falls. He did not know, for example, that Backus and his associates had spent four million dollars to complete the Minnesota and International Railway to the railhead on the Rainy River, without, at the time in 1907, having any useful products to export from the region. The rails could carry in building materials for the dam, but this was only adding to the red ink without remunerating Backus in any way.

Another preoccupation of the president was a concern to protect navigation in every instance where dams were built. He could not foresee that railroads would often make the need for water transportation obsolete. In addition, the high water Roosevelt wanted for navigation would eventually become a curse to riparian owners.

The veto message also dwelt upon the relative cheapness of developing water power as contrasted with coal generators, and expressed the view that entrepreneurs should pay for the privilege. Theodore Roosevelt wrote, "this natural wealth is the heritage of the people. I see no reason for giving it away, though there is every reason for not imposing conditions so burdensome as to prevent the utilization of the power." The President also voiced fears of monopoly of water power resources. He therefore suggested five provisions that should govern future dam building policies: first, that strict time limits should be attached to every project; second, that a designated official should be the enforcer of the first provision; third, that some designated official should be the caretaker who assures the maximum development of navigation and

power; fourth that dam builders should pay a fee for the privilege; and fifth, that such privileges should be set for a fixed interval, at which time they could be reviewed, extended, or terminated.¹⁸

The House Chairman of the Committee on Interstate and Foreign Commerce felt, in his reactive report to the President's message, that Roosevelt would not have opposed this particular bill if he had been apprised of all the facts in the case. The chairman, Frederick C. Stevens of Minnesota, explained that the Rainy River Improvement Company had expended, to date, \$750,000 on the dam. Additionally, the company had overcome serious legal difficulty in dealing with four governments, (state, province, Dominion and United States), in satisfying the requirements of each and all. Stevens' message anticipated the need for an international arbitrator in such cases, and showed that Canadians had in effect safeguarded one of the President's concerns, that of navigation. He said that the Canadians had authorized the project because "this improvement would maintain the waters of Rainy Lake at a higher level during the low water period and be of great advantage to navigation." Stevens insisted further that the company had made these investments in good faith and with due diligence, but granted that the rights of the people and the government should be protected and that the deficiencies in the present act could be remedied by amendments to the General Dam Act of 1907. He said, too, that the Company was willing to abide by whatever conditions exacted by the Congress. The Secretary of the Interior, James R. Garfield, added his to the committee's views, by sending a letter report that revealed the latest opinion held by President Roosevelt. Garfield repeated many of Stevens' ideas, and added that

the Rainy River Improvement Company, through its president [E.W. Backus], has filed with the War Department an agreement that it will submit to and abide by such conditions as may be imposed by the Secretary of War, including a time limit and a reasonable charge, when it files as it must, the new plans which must be approved by the War Department before it can proceed under the proposed law.

This letter from Backus later became a subject of controversy when various environmentalists referred to it before committees of the United

States Congress or at hearings before the IJC. On such occasions they either contended that Backus was not living up to his written promises or that the government was not holding him to obligations he had incurred by reasons of this letter. Ernest Oberholtzer, speaking in 1963, said that on a number of occasions between 1925 and 1934 he had provided certified copies of this Backus letter to members of the IJC and the United States Congress.²⁰

M. Further Ontario/Dominion Enactments

During the American close call, Backus had to fight for further extensions on the Canadian side as well. Three successive acts by the Ontario legislature kept the project alive above the border. These were:

1. 7 Edward VII, chap. 23, section 33, of 1907
2. 8 Edward VII, chap. 33, section 61, of 1908
3. 9 Edward VII, chap. 26, section 12, of 1909

The latter extension expired on January 1, 1910, but was sufficient to see the completion of the dam during 1909. But before this, on January 27, 1909, Backus asked for and received authorization for four more changes in the dam. The Lieutenant-Governor of Ontario approved the request in council on that date. The order allowed the company to enlarge the power output from 7,000 to 9,000 kilowatts, to place six floodgates instead of one on the Canadian canal (for reasons of safety), to change the apex of the dam from an angular shape to a curved one, and to replace an earthen embankment with a crib dyke upstream.²¹

Once the dynamos at Fort Frances were in operation during late 1909, Backus saw how little demand for electricity he had on the Ontario side, and immediately petitioned the Ottawa Government for relief. His problem was alleviated by an order of January 18, 1910. By this permit from the Board of Railway Commissioners, Backus was allowed to export 6,000-electrical-horsepower to the United States. This permit was

bolstered by a similar decree, an Order in Council from the Ontario lieutenant-governor of June 2, 1910. This latter instrument stated that the company "shall leave at least one thousand horsepower constantly available and unemployed for use or in use on the Canadian side."²²

On the same day as the Order in Council, that is, June 2, 1910, the Minister of Lands, Forests, and Mines for Ontario issued an indenture to Backus detailing the specifics of the authorization to export electrical power. This document, in turn, was confirmed by an act of the Ontario legislature assented to March 24, 1911. As if this were not enough, the Canadian Parliament passed an act in the summer of 1910 giving Backus a license to export 3500-horsepower of electrical energy.²³

N. Irregularities in the Canadian Approval for the Dam at Fort Frances

A few years after the completion of the hydroelectric dam at Koochiching Falls, the District Engineer for the Department of Public Works, Canada, sent a memorandum to his chief, expressing the view that the dam, as built, never received proper authorization from the proper Dominion authorities.

The engineer in question, S.J. Chapleau, summarized his knowledge of the Canadian documents as follows: The company had submitted original plans and received an Order-in-Council on September 19, 1905, approving these plans. The trouble with Chapleau's narrative is that he does not identify whether this Order-in-Council was from the Province of Ontario or the Dominion of Canada. Ostensibly it was the latter, because of what Chapleau claims later in the narrative.

Continuing with Chapleau's narrative, the engineer said that the company substituted new plans for the originals at some unspecified date, and proceeded to build the dam using the new or modified specifications. Then, in early 1909, when the work was nearly completed, the company applied for and received approval by Orders-in-Council, first from the Province of Ontario on January 27, 1909, and then by the Dominion of Canada, on February 1, 1909.

Chapleau insisted that this latter authorization was not legitimate because the enabling legislation stated that whatever plans were used for construction of the dam, had to be approved before construction began. Chapleau said, that for this reason, the Department of Public Works of Canada refused to approve the modified plans. He identified several of the relevant documents in the case as being two letters from the Deputy Minister of Public Works (Dominion), to the law firm of Blake, Lash and Cassils, dated May 27, and June 9, 1909. The law firm mentioned was Backus' solicitors for the Ontario and Minnesota Power Company in Toronto.

As to specifics, Chapleau contended that changes in the plans as to waste gates on the old canal on the Fort Frances end of the dam were never approved by a Dominion Order-in-Council, but did get the approval of the Ontario Privy Council. Thus, in sum, Chapleau was saying that the engineers in the Public Works Department had done their duty and could not be held accountable for any irregularities in the approval process for the Fort Frances dam. Bureaucrats in the executive branch in Ottawa, confronted with a nearly completed dam on the Rainy River, could not see their way clear to destroy a multimillion dollar business enterprise that would bring considerable benefit to Ontario. They therefore signed the requisite Orders-in-Council.²⁴

O. Amendment to the General Dam Act, USA: 36 Stat. 593, Ch. 360, June 23, 1910

Inspired by Theodore Roosevelt's veto of the 1908 time-extension for the International Falls dam, Congress provided, as recommended, revisions to the General Dam Act of 1906. Basically these changes provided for the guarantee of navigability on dammed streams and strove to enhance the navigability of an interlocking system of lakes and rivers by providing a comprehensive plan therefor. The new act also expressed the philosophy of imposing charges on dam owners and restricting such privileges to an interval of fifty years. The law repeated one injunction of the original General Dam Act of 1906 by reserving the power to control the levels of the pool caused by the dam to the United States. This

feature, as stated in the law, was to enhance navigation, and not to protect environmental concerns.²⁵

It appears that the General Dam Act of 1906 and its Amendment of 1910 stood as the only generic guidance for dam builders in the United States until the Federal Power Act (16 USCA Section 791 et seq.) was passed in 1920. Even then the Congress did not try to pass on technical problems regarding dams, but made the Secretary of War through his Chief of Engineers the arbiter of such details.

P. The Bryce-Root Treaty of 1909 and the Establishment of the International Joint Commission

E.W. Backus probably took little note of the negotiations in 1908 between Great Britain and the United States concerning boundary waters questions between Canada and the United States. At any rate, the treaty resultant from these negotiations was not ratified by the parties until May 5, 1910; and the consequent arbitral body established by it, the International Joint Commission (IJC), had only drafted its Rules of Procedure by February 2, 1912.²⁶ Therefore, until the IJC was called upon to exercise its function when difficulties arose along the boundary, dam builders and others continued to apply to the two governments separately for whatever authorizations the two entities could exercise.

Q. The United States Authorizes Construction of the Kettle Falls Dam: 36 Stat. 931, Chapter 156, February 24, 1911

Although Backus proposed to build a storage dam that abutted also on Canadian territory, the United States Congress approved the dam building proposal as if the entire dam would be "in Saint Louis County, Minnesota." Otherwise this specific law referred to the General Dam Act of 1906 and its Amendment of 1910 as being the limiting factors on Backus' proposals.²⁷

The geographic situation at the prospective damsite was a bit more complicated than that of the power dam on the Rainy River. In reality

there were two falls at Kettle or Chaudiere (older name) Falls. At this place American territory was to the north of Canadian territory. There were two channels connecting Namakan with Rainy Lake, and the international boundary ran down the middle of the northern channel. South of the international channel, therefore, was an island, now called Kettle Island. This island was entirely within the Province of Ontario as was the channel south of it. Thus Backus had only to refer to Canadian authorities for blocking up the latter place; while he had all of the same legal problems in regard to the northernmost or international channel. Undaunted by the complexities, Backus proceeded with his applications to the various governmental units.

R. Kettle Falls Dam Application Referred to the IJC via the US State Department

At the same time that Edward Backus was seeking a legislative permit for a dam at Kettle Falls, his Minneapolis lawyer, C.J. Rockwood, was sending copies of various maps and plans to the regional office of the Corps of Engineers in St. Paul. Rockwood, in his letter of February 7, 1911, was anticipating the requirements of the law soon to be passed.²⁸

Major Francis R. Shunk at the St. Paul's Engineer's Office forwarded the application to the Chief of Engineers, recommending the application be approved, provided that the dam construction be supervised by the Corps, that booms be furnished for guiding logs through the log sluice, that a fishway be installed, and that a place be made for a suitable navigational lock.²⁹

By the time the Chief of Engineers received this endorsement, the United States Congress had acted to approve the Kettle Falls Dam construction. Chief Engineer W.H. Bixby was aware of the ratification of the Bryce-Root Treaty on boundary waters and therefore stated that this case would require approval "by authority of the United States or the Dominion of Canada, within their respective jurisdictions and the approval of the said International Joint Commission." (Bixby's italics)³⁰

Since the IJC was, in a sense, attached to the U.S. State Department, Bixby recommended that the dam application be forwarded to the State Department to solicit the views and conclusions of the IJC. The Assistant Secretary of War, Robert Shaw Oliver, forwarded the application to the State Department in April 1911 without making further comment.³¹

S. The Rainy River Dam in Operation: Monitored by the Department of Public Works, Canada

One of the earliest reports giving data about the operation of the hydroelectric plant at Fort Frances was issued by the Resident Engineer, J.H. McLaren, on November 21, 1911. McLaren had been sent to the dam in August and was told by his chief in Ottawa, S.J. Chapleau, to commence tabulating daily records on the flow of water at the damsite.

McLaren reported, as well, general information concerning the performance of the works on both sides of the Rainy River. There were, for example, six 4-Runner, thirty-nine inch S. Morgan Smith Cylinder Gate Turbines operating in the Minnesota powerhouse. These turbines, at least for the time being, were not generating electricity. Instead they were directly connected to four 27- by 54-inch pulp grinders whose normal speed was 220 rpm.

He found on the Canadian side four 4-Runner, thirty-six inch Holyoke Machine Company Cylinder Gate Turbines, each directly connected to a 1250-kilowatt, 60-cycle, 6600-volt Westinghouse Generator. McLaren learned from the operators that these Westinghouse Generators, even when running at a maximum head of thirty feet, would only generate a thousand kilowatts. From this he computed a turbine efficiency of 70% and a generator efficiency of 90%.

The completed dam had sixteen waste sluices, each ten feet wide and twelve feet high. These sluices had sills or bottoms at elevation 1089.11 feet-a-level datum. The spillway crest was at 1108.61 feet. Next to the Canadian powerhouse was a log sluice whose sill elevation was at 1098.61 feet.

McLaren provided tables showing daily water surface levels, total flow past the dam, the average daily total horsepower developed, the average daily total electrical horsepower generated, the averaged daily electrical horsepower exported, and the average daily horsepower used in Ontario.³²

McLaren decried the insufficiency of a single water-level gauge which was emplaced at the Ranier Dock in Minnesota. His complaint was later remedied with the placement of several other gauges. By 1916 there were gauges also at the Northern Construction Company (unspecified location), at the Upper Power House on the Fort Frances side of the dam, and at the US Pulp Mill on the International Falls side of the dam. The reason for McLaren's complaint regarding insufficient gauges was that he could not make accurate daily determinations of inflow for Rainy Lake.

There is an internal contradiction in McLaren's report, for while complaining about the disadvantages of single gauge measuring; he does say in another place that the engineers instituted daily record keeping of levels on August 14, 1911, and as this appears in a 1929 IJC report as being from the Fort Frances station, we know that McLaren really had two gauge readings then available, and these were about three miles apart.³⁴

McLaren's report revealed something more than a mere recitation of factual data; it gave hints of friction between the monitoring engineers of the Canadian Department of Public Works and E.W. Backus. Periodically the resident engineer sent written requests to the Ontario and Minnesota Power Company seeking the maintenance of minimum flows. At times the company complied; at times it "manifested an inclination to disregard requests for the continuous maintenance of what I estimated to be natural flows." McLaren was willing to show some patience with the company at this lack of responsiveness, when he mentioned that the waste sluices could not be operated quickly when an unforeseen shutdown of machinery took place.³⁵ Another mitigating factor in Backus' favor was the fact that 1911 was a very dry year with lake levels way down. Rainy Lake, for example, started the year at 1100.61 sea level datum, fully eight feet below the dam's spillway crest. And at the highest point in August the

level stood at 1105.25, still three and a third feet below the crest. So it was understandable that Backus wanted to conserve water; for the greater head he had at the powerhouses, the more efficient became the turbines.

ENDNOTES FOR PART II

1. Statutes at Large 30, Chapter 238, p. 398, (1898).
2. Statutes at Large 26, Chapter 907, Section 7, p. 454 (1890); 27, Chapter 158, Section 3, p. 110, (1892); 30, Chapter 425, Section 9, p. 1151, (1899).
3. Statutes at Large 31, Chapter 346, p. 167, (1900).
4. Statutes at Large 32, Chapter 1305, p. 485, (1902).
5. International Joint Commission, Lake of the Woods Reference Proceedings, Volume II: Hearings of the International Joint Commission on the Reference by the United States and Canada in Re Levels of the Lake of the Woods and Its Tributary Waters and Their Future Regulation and Control; Being Final Public Hearings at International Falls, Minn., and Winnipeg, Manitoba, 1916, (Washington D.C.: Government Printing Office, 1917), p. 64, lefthand column; hereafter referred to as L.O.W. Hearings 1916.
6. L.O.W. Hearings 1916, Appendix, pp. 61-74, "Contracts Between the Commissioner of Crown Lands and Edward W. Backus." The 1904 and 1905 contracts are printed side-by-side, enabling line-by-line comparison.
7. Hearings and Arguments in the Matter of the Application of the Rainy River Improvement Co. For Approval of Plans For a Dam at Kettle Falls, (Washington, D.C.: Government Printing Office, 1913), pp. 108, 114-6; hereafter referred to as 1912 IJC Hearings.
8. 1912 IJC Hearings, Statement of Glyn Osler (attorney for the Ontario and Minnesota Power Company, Limited), of November 15, 1912, pp. 107-8.
9. Statutes at Large 33, Chapter 797, p. 814, (1905).
10. John J. McGee (Clerk of the Privy Council), "Extract From a Report of the Committee of the Honourable Privy Council, Approved by His Excellency the Governor General, January 31, 1905", filed in Voyageurs National Park Files; hereafter referred to as VNP Files.
11. E.L. Newcombe to Deputy Minister Department of Public Works, May 3, 1905, copy in VNP Files.
12. 4-5 Edward VII, Chapter 139, assented to July 20, 1905; reproduced in Entry 320. Box 1, Records of Boundary and Claims Commissions and Arbitrations, Record Group 76, National Archives, Washington, D.C.; hereafter referred to as NA RG 76; also in 1912 IJC Hearings, pp. 127-8.

13. Extract from a "Report of the Committee of the Honourable the Privy Council, Approved by the Governor General on September 19, 1905", copy in VNP Files; also reprinted in 1912 IJC Hearings, pp. 118-120.
14. Ontario Legislature Act of May 14, 1906, Chapter 132 - "An Act Respecting the Ontario and Minnesota Power Company, Limited", reprinted in 1912 IJC Hearings, pp. 121-3; and in NA RG 76. Entry 320, Box 1.
15. Statutes at Large 34, Chapter 3508, pp. 386-7, (1906).
16. Indenture of November 20, 1906, in 1912 IJC Hearings, pp. 117-8. Glyn Osler, a Backus lawyer, explained the origins of this indenture in Ibid., p. 107.
17. Supplementary Letters Patent of April 25, 1911, signed by John Morison Gibson, Lieutenant Governor of Ontario, copy in 1912 IJC Hearings, pp. 116-7.
18. United States Congress, Senate, Veto Message of the President Relating to House Bill 15444, To Extend the Time for the Construction of a Dam Across Rainy River, dated April 13, 1908, S. Doc. 438, 60th Cong., 1st. sess., 1908.
19. U.S., Congress, House, Report to Accompany H.R. 15444, Extending Time for Constructing Dam Across Rainy River, House Report #1767, dated May 23, 1908, 60th Cong., 1st sess., 1908, four pages.
20. Oberholtzer Interviews, October 22, 1963, Reel 2, pp. 8-10 of the transcript. After an extensive search, a copy of the Backus letter, dated May 22, 1908, was found as Exhibit C of a legal brief filed by Oberholtzer to the IJC in behalf of the QSC on May 25, 1942. The full title of the brief is as follows: International Joint Commission: In the Matter of a Convention Between the United States of America and Canada, Signed at Ottawa, September 15, 1938, Providing For Emergency Regulation of the Levels of Rainy Lake and of Other Boundary Waters in the Rainy Lake Watershed; Brief in Behalf of the Quetico-Superior Council in Reply to a Brief Dated January 15, 1942, and Submitted by Messrs. Faegre and Benson in Behalf of the Minnesota and Ontario Paper Company and Affiliated Companies, Quetico-Superior Council, 1218 Flour Exchange; Minneapolis, Minnesota; Ernest C. Oberholtzer, President; dated May 25, 1942; hereafter cited as 1942 Oberholtzer Brief; copy derived from Minnesota Historical Society, Archives and Manuscript Division, Collection M-211, Superior National Forest (hereafter referred to as Superior NF Film), Minnesota, Records, 1903-1969, on microfilm, Roll #7. Exhibit C does not really seem as onerous on Backus as Oberholtzer thought. The instrument, signed by Backus, promised to complete the dam in expeditious fashion, recognized liability to the government for future levying of charges and other impositions on the dam owners; but seemed to be illegal as an ex post facto law when it accepted the binding stipulation of some future general dam act. Backus may have been right in 1933 when discussing this document: He apparently received the letter back from Roosevelt

and passed it into Secretary Taft's hand. Out of Roosevelt's hearing Taft said: "You might as well hand me that much tissue paper because it does not mean anything." Backus replied: "I appreciate that but I do not want to go back and tell the President that; I have had trouble enough about this." In other words, it involved the unique doctrine of a law which would be retroactive. The quotes are from page 882 of Volume III of Hearings at Winnipeg and Minneapolis Between 5 and 12 October 1933, International Joint Commission, in Re Levels of Rainy Lake and Other Tributary Waters of the Lake of Woods Watershed and Their Future Regulation and Control, typescript format in three volumes, 1030 pages total, filed in NA RG 76, Entry 320, Boxes 86 and 87; hereafter referred to as 1933, IJC Hearings.

21. Copy of an Order in Council Approved by His Honour the Lieutenant Governor (Ontario), the 27th day of January, A.D. 1909, reprinted in 1912 IJC Hearings, p. 121.
22. The Order of January 18, 1910 is mentioned in 1912 IJC Hearings, p. 108; the Order in Council of June 2, 1910 is reprinted Ibid., p. 126.
23. The Indenture from the Ontario Minister of Lands, Forests and Mines, dated June 2, 1910, is reprinted in 1912 IJC Hearings, pp. 123-6; the Ontario law of March 1911, Chapter 7 "An Act Respecting the Ontario and Minnesota Power Company," is reprinted Ibid., p. 123; the Canadian Parliamentary law, the Electricity and Fluid Exportation Act, 6 and 7 Edward VII, Chapter 16, Dominion of Canada, is also cited Ibid., p. 108.
24. General Memoranda with Regard to Power Development at Fort Frances, Ontario-International Falls, Minnesota, from S.J. Chapleau, Resident Engineer, to the Minister of Public Works (Ottawa), dated October 1, 1912, held in VNP Files; hereafter referred to as Chapleau Memo 1912.
25. Statutes at Large 36, Chapter 360, p. 593-6, (1910).
26. I was unable to get a copy of the original IJC Rules of Procedure of 1912. Certain Articles and Sections of it are referred to repeatedly during the 1912 IJC Hearings. There is a Canadian Reprint pamphlets of April 1980 that contains a revision of the rules dated December 2, 1964. This pamphlet is titled: "International Joint Commission; United States and Canada; Rules of Procedure and Text of Treaty." Ottawa, Canada-Washington D.C., April 1980, n.p.; hereafter cited as 1909 Treaty & Rules.
27. Statutes at Large 36, Chapter 156, p. 931; An Act to Authorize the Rainy River Improvement Company to construct a dam across the outlet of Namakan Lake at Kettle Falls, in St. Louis County, Minnesota, dated February 24, 1911.
28. Letter of C.J. Rockwood to Major Francis R. Shunk, dated February 7, 1911, filed in NA RG 76.

29. First Indorsement (sic) to Rockwood's letter from Major Francis R. Shunk to the Chief of Engineers, dated February 16, 1911, Ibid.
30. 2nd Indorsement to Rockwood's letter from W.H. Bixby, Chief of Engineers to the Secretary of War, dated April 13, 1911, Ibid.
31. 3rd Indorsement to Rockwood's letter from Oliver to the Secretary of State, dated April 14, 1911, Ibid.
32. The data concerning the hydroelectric plant at Fort Frances/ International Falls in 1911 is from a report by J.H. McLaren, "Department of Public Works, Dominion Government Hydraulic Investigation of Rainy River at Fort Frances, Ontario," dated November 21, 1911, in the VNP Files; hereafter referred to as McLaren's Report 1911.
33. The daily levels from 1911 to 1927 as recorded at the four gauge stations are found in the 1929 Engineers Tables, pp. 131-145, 179-193.
34. Ibid., pp. 131,179.
35. McLaren's Report 1911.

PART III: 1912: THE KETTLE FALLS DAM AND OTHER PROBLEMS

As 1912 opened, Backus was unsure whether his projected storage dams at Kettle Falls depended on the approval of the new agency, the IJC, or whether his old method of applying to both governments would still suffice. He therefore provided for both alternatives: As we have seen, he had already gotten the tentative approval of the U. S. Congress through the 1911 law. Following this up, he had submitted his plans, maps, and diagrams to the Corps of Engineers for their supervisory ratification. Then, on February 15, 1912, he sent, via his Canadian solicitors, application to the Canadian Governor-General in Ottawa.¹

Eight days later Backus filed an application for approval of the Kettle Falls dams with the IJC. He sent duplicate originals of the application both to Ottawa and Washington. The American application was also addressed to the Secretary of State and the Secretary of War.²

A. March 1912: The Town of Fort Frances Rebels

Before Backus and his lawyers commenced negotiations with the IJC about the Kettle Falls dams, he had to settle matters with unhappy citizens in the town of Fort Frances, Ontario. The drought of 1911 was the root cause of the problem, but Backus added to it by looking after his own interests first.

Before the spring runoff and spring rains of 1912, the level of Rainy Lake was actually lower than during the drought of preceding years, standing at 1101.36 sea level datum in mid-April. During part of 1911 Backus was technically in violation of his mandate from the Department of Public Works, Canada, to maintain a discharge of at least 5,000 cubic feet per second (c.f.s.) during the navigational season (summer and fall).

Backus' solution to the shortage of water was to deprive the town of Fort Frances, as well as other private Canadian consumers (companies) of

electrical power. He justified giving the lion's share of the available electricity to his own company's paper mill and all its subsidiary works in Fort Frances, on the grounds that this fulfilled his obligation to provide at least half of the available power to Canadians.

The citizens of the town might have tolerated this selfishness except for the fact that Backus was still exporting power to International Falls to run his factories there. This latter course was legal, strictly speaking, as the Canadian Railway Commission had given him a permit to export as much as 6,000-horsepower. This was hard for the residents of Fort Frances to take at a time when the total capacity of generators on their side was only 7,000-horsepower, and that only when the lake was high. As we have seen, Backus' turbines on the Minnesota side were being used, at least for the time being, to grind pulp, and were thus generating no electricity.

Backus had new plans for further expansion of his industries, and that was his intended scheme for mollifying the irate residents of Fort Frances. In March 1912 the magnate got together with the Corporation of the Town of Fort Frances and signed an agreement. Basically, he was offering to build a paper mill with a capacity of a hundred tons of newsprint paper per day, that would provide jobs on a continuous basis for at least two hundred people. The local residents had been able to stop Backus' expansion plans by influencing the Minister of Public Works to disapprove the completion of a pulp mill in their city. They did this because they thought Backus would pump the resultant pulp through a pipeline over to International Falls to be made into paper on the Minnesota side.

Backus' principal promises to the town, in behalf of his Ontario and Minnesota Paper Company, were: (1) to build both a pulp and paper mill in Fort Frances; (2) to buy the necessary land in Fort Frances, said land to be released by the expropriation bill in the Ontario legislature; (3) that both prospective mills would be ready for operation within fourteen months of the removal of all legal obstacles; (4) that the company would operate both mills continuously, depending on availability of water power,

but with a guarantee to use at least half the power in Canada; (5) that the company would not seek to lift the Public Works construction ban on the pulp mill until after the passage of the expropriation bill; (6) that the company would not export any pulp to the U.S.A. until after completion of both mills in Fort Frances; (7) that the company promised the town of Fort Frances a minimum of a 1,000-horsepower (H.P.) electrical power at a bargain charge of fourteen dollars per H.P. per annum; (8) that the company would sell additional electrical power to Canadian interests in 500 H.P. increments at twenty-five dollars per H.P. per annum; and (9) that the town would get at least half of the power developed, whether it was hydraulic or electric.³

Thus we see, from the list of company promises, that the townspeople were interested in jobs, continuous employment, and a better definition of power availability in Fort Frances. As far as power goes, their major gain was the reservation of at least 1000 H.P. of electrical power for their homes; while the other power pledges were more to Backus' advantage than to their own, for these pledges sought large-scale consumers who would pay nearly double the price for electricity over the rate paid by home-owners.

The town, on its part, promised: (1) to give the company a favorable taxrate assessment on its properties, assessing them at only \$25,000 total value; (2) to give the company booming privileges in the Rainy River above the dam; (3) to cooperate with the company both in lifting the ban on construction of the pulp mill and also helping to promote the passage of the land expropriation bill in the Ontario legislature; (4) to aid the company in the acquisition of dock property for the pulp mill; (5) to support the company in a revised power distribution plan; and (6) to deprive the company of its tax privileges if it defaulted in any way on its pledges.⁴

Regarding the power distribution plan, the town corporation was acceding to Backus' desire to export any power that he could not use in Canada. It was a fair proposal, for otherwise the excess power would have been a clear business loss to the Backus company.

B. The 1912 IJC Hearings in the Matter of the Application of the Rainy River Improvement Company for Approval of Plans for a Dam at Kettle Falls

In the history of the IJC, the Kettle Falls dam was the first item of business on their agenda, and the case was listed as Docket #1. As we have seen, the IJC came into existence, on paper, with the ratification of the Bryce-Root Treaty on May 5, 1910. The three United States members of the commission were appointed on March 9, 1911 and the three Canadians by their government November 10, 1911. The two sections met at Washington in January 1912 and set about drafting their rules of procedure. These rules were adopted on February 2, 1912. On April 2, 1912 they convened in Washington to conduct hearings concerning the Kettle Falls dam.

At this first meeting C.J. Rockwood, Backus' attorney in Minneapolis, set forth the application of the Rainy River Improvement Company (another Backus subsidiary), the various credentials for the company to operate in the State of Minnesota, and the company's preliminary negotiations with the U.S. Corps of Engineers to solicit their approval of the dam plans.

Before Rockwood could speak, however, the chairman of the American Section, James A. Tawney, stated that since the company had made separate applications to the two governments, he saw no reason why the IJC should consider the matter at all.⁵

Rockwood's reply to Tawney's contention was that the U. S. Secretaries of State and War had forwarded his application to the IJC because they thought it essential to get IJC approval. As the argument progressed, it became clear that the commission members were absorbed in the legal language of the treaty as well as the rules of procedure they had drafted. A recent (1981) staff member of the Canadian section frankly admitted that the early composition of the IJC was heavily weighted in favor of lawyers so that the technical questions regarding water flow and levels got lost in the intricacies of fine legal distinctions.⁶

Rockwood, for example, was barely able to state a brief history of the water storage problem in the Rainy Lake Watershed before the members of the commission got hopelessly bogged down in lengthy discussions of Rule 9 and Rule 6 of the procedural manual.

But there was some merit to all this legal wrangling. Granted that the treaty of 1909-1910 might have been too general in character and that it might not have been imaginative enough to envision peculiar situations and problems; the lawyers, by their quibbling, were able to focus on specific powers that the IJC would need to become a useful arbiter of boundary water disputes. Thus, as we shall see in the case of the Rainy Lake Watershed, their disputations eventually resulted in an additional treaty or convention that dealt with these specific problems.

Despite the futility of lawyer Rockwood's quest in April 1912, he made a few telling points in behalf of his client, E.W. Backus. When Tawney expressed concern for private interests who might have riparian rights in the watershed, Rockwood said that this concern could be covered by a provision that this dam at Kettle Falls should not be used to raise water above the high-water mark. He went on to define high-water mark, as held in Minnesota and under Common Law in Great Britain and Canada, as being "not the highest point to which water ever rises, but the point at which it remains long enough to make its mark."⁷ Rockwood went on to say that under United States law, when streams are large enough to be considered navigable, the primacy of rights to navigation are asserted before every other right, including water power. That is, even riparian rights against flooding cannot be asserted up to the high water mark as defined in Common Law.⁸ This legal formulation would appear again and again later when arguments favoring recreation and ecology were asserted.

C. The IJC Sessions of October and November 1912 in Ottawa and Washington

In Ottawa Backus' principal legal representative was Glyn Osler of Toronto. When Osler told the commission that his client had received

permission from the Province of Ontario to build a dam at Kettle Falls, but had not as yet gained Dominion approval, members of the IJC again voiced doubts about having jurisdiction. Under Rule 6 of their procedures, Thomas Chase Casgrain (the Canadian chairman) said, the application should be in good order with both governments; and that the present application, at this juncture, was analogous to a request to build half a dam.

Once again little factual data that had any bearing on the merits of the case came out in the October hearings. One small exception was the presence of a George H. Watson, lawyer for a number of lumber companies in the Rainy Lake watershed, who stated one concern of his clients, that they feared their rights to float logs downstream might be obstructed or otherwise interfered with.⁹ Watson was wary not to express specific fears, because he did not desire to show his hand until Backus' interests revealed their total proposal for the entire watershed, which at the time was only rumored in its details. Watson merely indicated his clients' opposition to Backus' application, reserving his right to present refutatory argument after Backus showed his hand. At the root of Watson's fear, and that of his clients, was the suspicion that Backus might be given a blank check on the watershed, and end up as the absolute monarch of the region, who could decide whose logs might pass his dams and whose would not.

Watson's tactics, then, were obstructionist. He had already held up approval of the dam by the Dominion; and if he could get the IJC to decide that they had no jurisdiction at present in the case, he could have one more barricade in reserve when and if Backus received Dominion authorization. Watson therefore tried to encourage the commission members in their inclination to decline jurisdiction.

Meanwhile at the Ottawa proceedings, Rockwood, Backus' Minneapolis lawyer, joined his Canadian counterpart in the legal fray with the IJC. Eventually, Rockwood's patience became somewhat frayed and he displayed a little pique, "we want to keep peace with this commission, we want to keep the peace with the Secretary of War, we want to keep the peace

with the Department of Public Works in Canada and with the Governor in Council." To soothe him Casgrain said, "we are not throwing obstacles in your way, Mr. Rockwood; we would like to help you. We understand the importance of the matters you have put before us, but, on the other hand, we would not like to do a thing which we had not the right to do."¹⁰

As this exchange continued, Frank S. Streeter, an American, interjected the possibility that if the Dominion approved Backus' application there would be no need for IJC approval. Rockwood brightened at that notion, but another IJC member did not concur in the view and wished to hear further argument on it.¹¹

The Ottawa meetings ended on the discordant note of disagreement about the IJC's jurisdiction, so another session was scheduled in Washington on November 18, 1912, to address that issue specifically. The first appellant to take the floor was Frank H. Keefer, the King's Counsel for the Province of Ontario. His mission was to seek further postponement on the debate concerning jurisdiction. He did this without presenting any valid excuse. He merely stated that his superiors had given him no instructions on how to argue the question. He rambled on that the IJC was taking powers once held by Ontario exclusively but stated that such an outcome was preferable to abrogating those rights to the Dominion. Keefer freely admitted that it was a question of provincial rights pure and simple. He also said, in fact, that if the IJC did not have jurisdiction, it should get jurisdiction. He was perfectly content to see the IJC have wider powers for deciding controversies and regulating the waters.¹² Keefer preferred that the members of the IJC, as well as counsel for the Dominion, should first present their views on jurisdiction, so that he, speaking for Ontario, could present reactive arguments within thirty days. The commission, somewhat irritated by his tactics, gave Keefer the requested time, but did not promise to supply him with a straw-man argument to attack.¹³

After Keefer, George H. Watson again appeared, speaking for a number of lumber companies in the border country. This time he had

formulated his arguments against the proposition that the IJC had jurisdiction over the application for the Kettle Falls dam. He argued, first of all, that the application was not even before the commission, because no entity on the Canadian side of the line had submitted such a document.¹⁴ This, he said, was in violation of Rule 6 of their procedures, which cited Articles 3, 4 and 8 of the Treaty, the methods for bringing cases before the commission.¹⁵ Secondly, he argued that the treaty only dealt with cases where an obstruction or dam was on one side of the boundary. Thirdly, each of the two governments separately had the power to authorize the construction of a dam to the middle of a stream that was on the border, so what need was there for the IJC to get involved. With some relish, Watson belittled the language of the treaty:

the language is very badly expressed. . . . It is like a great deal of legislation that we have in our province and in the Dominion of Canada--I will not speak of Congress or the State legislatures--but it is framed without any regard to efficiency. It is framed in the loosest and most vague way, and it in the interest chiefly of members of the legal profession.¹⁶

Correlatively, Watson stated his conviction that the Bryce-Root Treaty did not repeal, modify, or vary the Webster-Ashburton Treaty of 1842, but that it was merely supplemental to it. The Ashburton Treaty, he said, provided that the boundary waters should be free and open to the use of all citizens and subjects of both nations without interference and without interruption. He held that the Dominion could not pass any laws that contradicted the Ashburton Treaty. In sum, Watson claimed, the Ashburton Treaty placed a bar to such construction as the Fort Frances dam, and that the Bryce-Root Treaty supported the Ashburton Treaty in such a ban. Thus, he concluded that the existence of the Fort Frances dam was illegal, saying, "the large dam has been constructed and is being maintained without any authority whatever, and that this company is wholly a trespasser upon the waters" [On the Canadian side].¹⁷

When Watson completed his brief, a cohort of his, R.J. Powell, counselor at law of Minneapolis stepped before the commission to make certain other points against the commission's jurisdiction. Powell, too,

spoke for several lumber companies, the Rainy River Lumber Company, the Shevlin-Clarke Company, the Shevlin-Mathieu Company, the Quetico Lumber Company, and the Martin Improvement Company.

Powell put together a systematic analysis of the articles of the Bryce-Root Treaty to define what powers exactly the commission did receive from the two high contracting parties, and which of those powers applied in the present case of the Kettle Falls dam. He concluded that only Article 3 gave a faint glimmer of applicability to that dam; but that Article 3 was also eliminated because the Rainy River Improvement Company had the consent of the United States Congress only, but not the consent of the Canadian Parliament. Powell made this assertion even though the treaty used the term "or" between the names of the two high contracting parties who have authority to grant such permits. The reason given was that a nation cannot authorize the construction of a dam that extends across a boundary beyond its own territory. That is, Canada could not authorize a structure inside the United States, nor could the United States authorize a structure inside Canada. On this basis, the assent of both countries was necessary prior to the IJC getting jurisdiction in the case. As it stood, the consent of Canada was wanting. Powell went a step further to state that if the Rainy River Improvement Company did have the approval of both countries for the dam there would be no necessity for the IJC to pass on the case, because then the company had all the authority it needed. According to Powell, the circumstances of this particular case placed the dam in a peculiar category that had no need for the ministrations of the IJC.¹⁸

In an aside to the commission, Powell made a very perceptive and somewhat prophetic remark. He said that, despite his stand against the jurisdiction of the IJC, in this case, he would prefer that the commission have more powers, mainly in the supervisory line. He thought that a necessary adjunct to the power of approval or disapproval was the power to regulate or superintend. It took nearly 37 years before the IJC would have regulatory powers to govern the day-to-day levels of Rainy and Namakan Lakes.¹⁹

The next lawyer to appear, John Thompson, the King's Counsel for the Dominion of Canada, argued for the proposition of the IJC having jurisdiction. He arrived at this conclusion by taking the same Article 3 that Watson had interpreted, and turned it on its head by applying to it the sense of the preamble to the treaty which said that the treaty was intended "to settle all questions" regarding disputes about boundary waters. Because of the preamble, therefore, he thought the treaty should be interpreted in a broad and liberal manner.

Thompson also found different meaning in two key articles of the treaty, numbers 3 and 13. He said that number 3 applied to private applications to the IJC and number 13 to public or governmental applications. He pooh-poohed Backus' lack of Dominion approval as a curable defect in the application and said the sense of the treaty set no order of precedence in the sequence of authorizations, so that it would be perfectly legitimate for the IJC to approve the Kettle Falls dam before the Dominion acted. He said that the Dominion's tardiness might be grounds for postponement, but certainly not for rejection of the application.²⁰

One important admission by Thompson was seized upon by Watson: Thompson had stated that the Dominion Parliament had implicitly sanctioned the Kettle Falls dam by a law passed in 1905, while the U.S. Congress acted in 1911. Besides, he said, the language of each varied so significantly that no one could claim that the two laws constituted concurrent or reciprocal legislation. This latter element was crucial for inclusion under Article 3 of the treaty. Watson hammered away at this theme in his reply to Thompson.²¹ At that point the arguments were concluded and it was up to the commission to decide whether or not it had jurisdiction.

Although the only interests that appeared before the IJC concerning the Kettle Falls dam were either lawyers for governmental agencies or large lumber companies, the IJC did get some reaction from humbler citizens in the form of a few letters of complaint against Backus' plans. One letter sent in March of 1912 was from Ray L. Washburn of Leola, South Dakota, manager of a small lumber company in that city. Washburn

owned a small amount of timber near Lake Namakan and he feared his efforts to float logs downstream would be at the mercy of the dam owner. He sent his protest to Senator Gamble and the senator forwarded it to the United States secretary for the IJC.²²

A second private protest was from the Commodore of the International Falls Boat Club who told of the large and growing boat traffic on the border lakes, both commercial and pleasure boats. The Commodore, Horace I. Bedell, feared that there would be no provision for a boat lock between Namakan and Rainy Lakes when the Kettle Falls dam would be built. Bedell did not know it, but he was the precursor of a very strong and active movement that was more interested in the aesthetic and recreational aspects of the boundary waters, rather than the purely commercial interests.²³

D. Status of the International Falls Dam in Late 1912

A report from the resident engineer at Fort Frances in October of 1912 revealed that Backus still did not have five of his nine hydraulic units on the line in the Fort Frances powerhouse. On the U.S. side all six units were grinding pulp rather than generating electricity. The totality of 15 hydraulic units on both sides of the border had a maximum capacity of 29,693-horsepower. Of this total, only units with a capacity for 20,588-horsepower were on the line. But because of low water in 1911 and 1912 the dam seldom had its maximum head of thirty feet. Thus, the daily average of horsepower development was only 12,582 or about 57 percent of current capacity, but only 42 percent of maximum capacity.²⁴

E. Decision of the IJC Regarding the Kettle Falls Dam, April 18, 1913

A majority of the IJC members decided that the commission did not have jurisdiction in the Kettle Falls Dam case. Curiously, the three Americans allied themselves with the Canadian chairman, Thomas Chase Casgrain, in forming the majority. The other two Canadians, Henry A. Powell and Charles A Magrath, wrote dissenting opinions.

Much of the debate on both sides hinged on the interpretation of Article 3 of the treaty. The majority view used Article 13 to construe the total impact of Article 3. Thus the majority said that the two separate laws, a Dominion Act of July 20, 1905, and a U.S. Congress Act of February 24, 1911, constituted "concurrent or reciprocal legislation," and hence there was no need for the IJC to intervene. Casgrain added that it was hardly fitting that the IJC should attempt to arrogate to itself the power to disapprove a project which the two high contracting parties had already approved. Casgrain's opinion was written with the assumption that Canada would finally approve the plans for the Kettle Falls Dam.²⁵

The dissenting minority wrote at greater length, eighteen pages in all, denying the basic premises held by the majority. Henry Powell argued persuasively, that by the articles of the treaty, the IJC had the power to decide in all cases where one nation placed an obstruction on its side of the border that caused higher waters on the other side. Therefore, by extension, the IJC should have jurisdiction when an obstruction extends across the boundary. Both dissenters, Powell and Magrath, posited hypotheses in which imaginary half-dams were suspended in air and lowered into a stream, a half at a time, arguing that each half fell under IJC jurisdiction, so why not the whole? Powell and Magrath also argued that there was no such thing as "concurrent or reciprocal legislation" because one law (the Dominion law) was passed before the IJC came into existence, and the second law came six years later; and the sense of the two laws did not coincide at all, except that they referred vaguely to the same general area where the dam was to be.

The dissenters seemed to be scolding their colleagues for defaulting on their obligations and thereby establishing a reputation for the IJC as a "do nothing" body. Powell wrote:

Even if the members of the commission have grave doubts as to its jurisdiction over this dam, it would be better to assume jurisdiction. By pursuing such a course no possible injury could be done to anyone. If on the other hand the commission has jurisdiction, a great deal of harm might be done by refusing to exercise it. In cases of this kind it is better to act

on the maxim, boni judicis est jurisdictionem ampliare. [For the good of justice it is best to amplify jurisdiction.]

Magrath added in the same vein:

If the commission is to take the position that it has no jurisdiction . . . [this] preclude[s] the riparian owners and state or provincial authorities on that side of the boundary, with undoubted rights in the water affected, from appealing or otherwise being heard by the commission when dealing with the matter. Such a course would hardly lead toward the attainment of the best results in at least one object of the treaty as expressed in its preamble,²⁶ namely the prevention of disputes regarding boundary waters.

Powell, however, was more prescient on future prospects when he foresaw a way to get around the present defeat by linking the Kettle Falls Dam with the larger question of the entire watershed of the Lake of the Woods.²⁷

F. The Department of Public Works (DPW) Approves the Plans for the Kettle Falls Dam, September 1913

As we have seen, the lack of authorization by the DPW held up the construction of the Kettle Falls Dam during all of 1912 while the IJC pondered the question. During that time the Resident Engineer at Winnipeg took up the question and investigated it. Also the District Engineer, S.J. Chapleau, made several trips to Fort Frances and environs in May and September to gather data.

A year later, September 1913, Chapleau made his report to the Chief Engineer of the DPW. He had consulted engineers with various Canadian offices including Marine, Interior, the Conservation Commissioner, and the Hydro-Electric Power Company of Ontario. He made a number of recommendations: (1) That the plans be approved which provided three additional 10' by 10' sluices be placed in the section of the dam which lies entirely on the Canadian side. (2) The company be required to build a permanent concrete stop log or other permanent dam of approved design on the site within three years. (3) That the company make provision for a site suitable for a canal on the Canadian side of the International

Boundary. (4) That the company agree that the control of the flow past the section shall be regulated by such Canadian and U.S. authorities that may be hereafter appointed for that purpose. (5) That an officer from the Marine, Interior, and this Department, (DPS), be authorized to confer with the U.S. Government and Minnesota authorities with the object of preparing a report recommending an adequate system of flow control throughout the district. (6) That Article 3 of the Waterways Treaty (Bryce-Root) provides that all questions affecting the change of levels within International Waters come under jurisdiction of the International Joint Commission (IJC), and that this report should be laid before the IJC.²⁸

Chapleau got much of what he wanted. Both of the dams at Kettle Falls had four sluices each with measurements greater than the 10' by 10' he recommended. Stop logs were used as requested. The canal was not built, but two fishways were, as was a log sluiceway. A system of regulation was inaugurated during the first year of dam operation. But it took more than thirty years before the IJC took tight control of regulatory problems.

In the aftermath of Chapleau's report the Dominion Government passed an Order-in-Council on February 23, 1914, approving the plans for construction of the dams at Kettle Falls. The order provided that certain officers be appointed by the Minister of Public Works to regulate water levels in that section. This was done soon after and the dams at Kettle Falls were completed later in 1914.²⁹

G. Control of Water Levels for Rainy and Namakan Lakes Given Over to the Department of Public Works, Canada, in 1914

During June 1914, several officials of the Canadian Department of Public Works put their heads together for the purpose of establishing a bureaucratic framework for controlling water levels on Rainy and Namakan Lakes. The Assistant Deputy dug out a copy of the Ontario and Minnesota Power Company's contract with the Ontario government (of January 5, 1905) and cited Clause XII as a basis for regulation. The

phrase in question read, "may raise the water of said lakes to a point not higher than the high water mark, as ascertained by an officer appointed by the Government, and maintain them at such point." The Assistant therefore suggested to the Deputy Minister, by memorandum, that S.J. Chapleau, the District Engineer, be designated the officer mentioned in the 1905 contract.³⁰ The Deputy Minister accepted the recommendation and appointed Chapleau as regulator on June 23, 1914. In the appointing letter he wrote, "you are hereby authorized to arrange for the control of the flow, and fix extreme water level, after consultation with the U.S. Engineer and other parties, if necessary."³¹

Chapleau immediately wrote to Colonel C.L. Potter of the U.S. Corps of Engineers in St. Paul, seeking a modus vivendi with the United States based on the appointment from his government. Chapleau revealed, too, that the Department of Public Works had finally approved the plans for the Kettle Falls Dam, the approbation that was wanting and so much debated at the 1912 IJC hearings.

Chapleau told Potter that the high water level determined in the plans was 1120.61 sea level datum; but that he desired to propose, arbitrarily, a level that was a half foot below that at 1120.11. Chapleau informed Potter that PWD had several gauges near the Kettle Falls dam, kept daily records, and sent them weekly to Fort Frances. Chapleau said that the Fort Frances office, equipped with these records, could order the company to open the dam at Kettle Falls when it approached the designated high water mark.

Chapleau also mentioned establishing a "system of flow control" for Namakan Lake when once the engineers had tabulated enough data and developed rating tables for the inflowing streams and lakes above Namakan.

Chapleau, of course, solicited Potter's approval for the 1120.11 level; and sought any suggestions the Americans might care to make as to levels, or opinions on the subject generally. Chapleau sent copies of his directive to the IJC Canadian Section and to the Resident Engineer of the PWD in Fort Frances.³²

Potter's cordial reply to Chapleau came in early July. Potter heartily approved of the Canadians regulating levels since there were no specific figures cited in the United States legislation or in the Corps of Engineers' approval of the dam plans. He added:

Since your Department has the data and technical force in operation to observe the levels and enforce compliance, it seems best for all concerned that you should undertake the regulation, and I approve of you doing so. The level you propose (508.5 arbitrary datum) [1120.11 sea level datum] is satisfactory, subject, of course, to reconsideration³³ by either Government or by the International Joint Commission.

In this letter exchange between Potter and Chapleau most of their attention was focussed on Namakan Lake and the Kettle Falls dams. This was due to the fact that these dams were newly completed and regulation had to be assumed for the first time. The dam at International Falls had undergone a similar process and the high water mark had been established at 1108.61 sea level datum. The accuracy of this figure is inferrable from the fact that the plans, as approved, set the spillway crest at that elevation.³⁴

H. The 1916 Flood

The coincidence of heavy snows in the winter of 1915-1916, plus considerable rain during the spring thaw, guaranteed trouble for people living in the environs of Rainy Lake. Two members of the IJC happened to be in the north country during the spring runoff and they quickly realized the unusual nature of the rising waters and decided to render whatever assistance they could. James Tawney, the American chairman, and Charles Magrath, a Canadian member, toured the area and made whatever recommendations that they thought would alleviate conditions.

At any rate, the two commissioners looked upon the calamity as an Act of God and were not seeking scapegoats or villains. Their tour illustrated how the watershed from Lake of the Woods to Rainy Lake and its tributary waters hung together as an interdependent entity. Residents around Lake of the Woods pressed for rapid release of waters

at the Norman Dam near Kenora, while begging the dam owners at Fort Frances to hold back as much water as they could. The people at Fort Frances viewed their situation in the same way, but in reality all of the lakes were full to the brim and water release was practically automatic.³⁵

The Norman Dam near Kenora was still only a storage dam with plans for conversion to power. The commissioners were shocked to see that not all of the stop logs for releasing water had been removed, as early reports had indicated. But removal of the rest of the stop logs was well nigh impossible. The dam had been built in 1893-5 with no provision for stop logs. Afterwards stop logs were added, but the system for removal was cumbersome and dangerous, using primitive hoists. Under such extreme pressure from a mountain of water, any attempt to get out the bottom logs was suicidal. The dam was discharging nearly four times the rated maximum flow compared to when the level reached the spillway crest. The normal maximum was about 10,000 cfs. In late May 1916 about 38,000 cfs were going over the spillway. The other two power-generating dams near Kenora were actually hampered from generating full capacity because the tailwater below the dams was so high.³⁶

Meanwhile the dam owners at Fort Frances were caught between Scylla and Charybdis. Reportedly, Seymour Backus, son of the magnate, was given telegraphic orders by a deputy minister at Ottawa to open all the stop logs at that place. Young Backus feared both the reaction from the people downstream as well as the detriment to company property. A log jam two miles above the Fort Frances dam might have come loose at greater flow velocity and the rush of logs might have smashed the dam. Even without removal of the stop logs, the flow of water was three times normal, more than 30,000 cfs, and nearly as great as the Norman Dam in a much larger watershed. Later, on June 11, 1916, the daily flow at Fort Frances reached a maximum of 37,281 cfs. Five days later, the water had hardly receded and poured over the top at 37,251 cfs.³⁷

At Fort Frances the waters continued to rise in early June, after the two commissioners made their report. When Magrath and Tawney watched

the deluge over the Fort Frances dam, the surface level was already three and a half feet higher than the spillway crest. In the following week the waters rose another half foot.³⁸

In the Fort Frances area there was considerable erosion and flooding damage. Some of the streets of the town were flooded. Pithers Point, a wooded park above the town, was under water. Northeast of the place, about twenty miles of the roadbed of the Canadian Northern Railway were flooded. Even Backus' mills in Fort Frances were threatened with shutdown. Here, too, the height of the tailwater below the dam was so high as to reduce generating efficiency.³⁹

On the Minnesota side, parts of the village of Ranier were under water, as were the farms of a few agriculturists around the perimeter of Black Bay and the Rat Root River. There were few complaints of high water from around the perimeter of Lake Kabetogama, but this was because few settlers had as yet established themselves there. Also, they were remote and isolated. Otherwise, only the Virginia and Rainy Lake Lumber Company, hoisting logs near the mouth of the Ash River, had difficulties with the high water. This company had considerable mileage of logging railroad near the south side of Lake Kabetogama, and their track was flooded in places. This resulted in slowdowns at their sawmills in Virginia, Minnesota, where they hauled their logs. The other small landowners in the area would be heard from only years later, when they learned they could appeal to the IJC.⁴⁰

The situation at the Kettle Falls dams was no different from the other damsite environs. The Kettle Falls dams, as storage dams with a primitive stoplog system, were hard to handle under normal circumstances, and nearly unmanageable during the spring flood of 1916. The operators could not remove nearly a third of the stop-logs because of the pressure and weight of the water. Because of the uneven levels of the logs in the eight different chutes, engineers could not even make an accurate computation of the flow. On May 24, the day of the commissioners' visit, the engineers made a rough estimate that between 15,000 and 20,000 cfs were going through and over the chutes. On that

date the level of Namakan Lake stood two and a half feet above the normal high level reading of 1120.11. The lake crested the day before at 1122.76.⁴¹

The commissioners drew useful, yet rather moderate, conclusions about the flood of 1916. At that moment they were wrapping up their investigations regarding the Lake of the Woods Reference and so were interested in the watershed as a whole. Magrath and Tawney drafted a report of their observations and forwarded it to Senator Knute Nelson of Minnesota, who in turn had it printed as a Senate document. The object of their literary effort was to gain support in the U. S. Congress for their advocacy of greater control and regulation of international waters by the IJC.⁴²

Toward the end of their report the commissioners wrote a summary and conclusions. From the data at hand they concluded that the flood was abetted by a winter snowfall that was 20 percent greater than the winter precipitation recorded in any one of the previous 45 years. They barely admitted that the dam operators should have anticipated the horrendous spring runoff. But rather than berate the operators, they chose to scold the various local elements for not being more understanding about the total condition of the watershed. Each locality thought people above and/or below them should sacrifice their interests for the locals.⁴³

The commissioners advocated a better system of control in these words:

The situation, however, has unquestionably been aggravated by the system of control that has prevailed, as it must be obvious where controlling dams are operated independently, as is the case on these waters, there must be an absence of uniformity in method, a lack of intelligent cooperation and foresight, resulting in extremes, high or low, developing abnormally; and it is safe to say that if such regulation as the International Joint Commission is now considering had been in force at the present time, the excessive high water would have been materially checked if not entirely prevented.⁴⁴

Their solution, for the moment, at least, was merely to "distribute the loss" among the various parts of the watershed. Magrath and Tawney held a conference with Dominion Engineers at International Falls, and by comparing notes, they determined that the larger surface area of the Lake of the Woods could tolerate, at least for a time, a greater influx of water. Rainy Lake did not have similar tolerance. At the end of May the inflow to Rainy Lake was about 40,000 to 45,000 cfs and the outflow was only about 32,000 cfs. They thus decided that the Fort Frances dam could tolerate an increase of 4,000 cfs for a time, so as to balance outflow/inflow. This recommendation was accepted and acted upon. The action was taken despite the risk that paper production at the falls would be interrupted, and several large American newspapers might have to shut down for an interval.

The two commissioners also favored similar remedies at other points in the watershed. For example, they urged the dynamiting of a narrow ridge of rock near the Norman Dam on Lake of the Woods, as potentially adding 10,000 cfs to the flow at that point.⁴⁵

I. Revival of the 1916 Flood as a Debating Point at the 1925 IJC Hearings

Nine years after the flood, various witnesses contributing to the hearings on the Rainy Lake Reference, brought up the experiences of the 1916 flood to make their arguing points. The disputants arrived at disparate conclusions; but everyone thought there was something to be learned from the flood.

One man more than the others, C.J. Lenander, a small landholder in the north-central part of the Kabetogama Peninsula, dwelt upon the flood in extenso. Lenander had taken note of the Magrath-Tawney report during 1916 and had correspondence with Tawney in the aftermath. He told the bureaucrat his interpretation of the flood: Lenander was convinced that the log jam at the railroad trestle near Ranier, Minnesota, had prevented greater destruction in the towns of Fort Frances and International Falls. He said that this flood proved conclusively the

impracticability of raising Rainy Lake by three more feet, a later Backus proposal. Lenander could see no benefit to the installation of the dams at Kettle Falls, and suspected that Backus built them because he (Backus) was interested in more power development downstream on the Winnipeg River and in Manitoba.⁴⁶

Lenander dwelt at greater length on Seymour Backus' refusal to release more water from the Fort Frances dam during the flood. He thought Backus (father and son) to be selfish, arrogant, and greedy in their refusal to take orders from a government minister. He depicted the company and its agents as follows:

Would it not be reasonable to expect the owners of this great aggregation of power dams and vast amount of property, to at least exercise good common horse sense? I do not think they showed much acumen in not getting ready for it [the flood], and even if they desired to save all the water they could for power, they should have, if only to protect their own immediate interests, as your report shows--and it was borne out by actual conditions that there was a backwater which partly flooded out their grinding rooms at the paper mill at International Falls and might have caused an indefinite shut down, and indeed they would have had this shut down had not Providence or otherwise, lodged the jam of logs against the Canadian Northern piers at Ranier--provided for a storage basin for the melting snow by drawing off a great amount of water just prior to the spring break up. I think for failure to do this the management of the⁴⁷ Minnesota and Ontario Power Company is solely to blame.

If they had to make good all the losses caused by the high water in the spring and summer of 1916, they perhaps would employ a competent hydrographer in the future to study conditions and regulate the flow of water accordingly. Here was a fall of snow amounting to approximately 4.86 inches above normal and the management took no account of it whatsoever. It is nothing short of a crime to do so, and it is charitable to lay it to ignorance on the part of the power company, although selfishness is of course, as nearly always, at the root of this. They wanted all the water,⁴⁸ whether from snow or otherwise, they hated to see it wasted.

Lenander was approximately right about the precipitation during the winter of 1915-16. The upper Rainy watershed had 12.5 inches of precipitation from November first to May first; that was 5.5 inches above normal. The lower Rainy watershed had only 10 inches, but that was 3.9 inches more than normal.⁴⁹

Lenander cast doubts, too, upon estimates by Backus' engineers that the spillway crest at Fort Frances was set at the normal high water mark. He said that already in 1914 he saw troubles coming when landmarks were submerged that had never been inundated before. The flood of 1916, of course, proved it to him. After the flood he cut down a pine tree on his property which showed 95 growth rings. During the flood the tree had stood in seven feet of water and he knew that pine did not grow in water; so that the 1916 flood must have been the highest rise in at least 95 years. Lenander thought a hundred year record was a poor basis on which to set a bench mark.⁵⁰

Lenander also sought the remedies of having the two governments employing a competent hydrographer, plus international control over setting of stop logs for all the dams in a coordinated system. He thought too, that the dams at Kettle Falls were supposed to have a lock for boats, but in this claim he was mistaken. The War Department had approved the plans without a lock.⁵¹

Commissioner Tawney answered Lenander's letter with a reply that sounded as if Tawney were an employee of the Ontario and Minnesota Power Company. He took issue with every Lenander contention: doubting whether the log jam at Ranier played any role in alleviating the flooding, and saying that the waters would have gone as high in a state of nature, although admitting in the latter case the spring levels would have begun at a lower base. Tawney thought the IJC would get the watershed under absolute control if they were empowered to regulate the system. He even doubted whether Rainy Lake would ever again rise above the level of the previous spring (1916); but hedged a bit by saying, "if at all, not more than once in 40 or 50 years." He was practically right, because the 1950 flood nearly duplicated its predecessor of 34 years earlier; but then the lakes were under the new control of the so called Rule Curve.⁵²

Lenander did not join battle any more with Tawney in 1916, but he did keep his eye on the proceedings of the IJC. He got a copy of the January 1917 hearings transcripts for the Lake of the Woods Reference

and found admissions in Backus' testimony that proved a log flotilla near Rainer could slow down the river flow, hence contradicting one of Tawney's contentions.⁵³

But the best evidence Lenander provided concerning high water levels on Rainy Lake was a series of photographs of the 1916 flood that he donated to the commission in 1925. Each of the photos identified the location by Section number and Township number, as well as date. The first picture, Exhibit A, demonstrated pictorially that logs could hold back flooding water, showing the scene beneath the Canadian Northern bridge at Rainer on May 26, 1916. The second photograph, of a lone pine standing in the center of the channel known as Brule Narrows opposite a point in Section 29-71-20, showed the tree with a two-foot diameter at the butt standing in five feet of water. Lenander thought the tree approximately 100 year old, and said that two weeks later, on June 12, the water was 6.5 feet deep and still rising.⁵⁴

Lenander's third photograph was of buildings owned by Sam Palmer on Cranberry Bay, in Section 33-71-21. Sam deliberately built his place on high ground and among large trees which had not been under water since the country was inhabited by white men. Lenander took this picture on May 25, 1916, and said that the waters rose another two feet after the photo was taken.⁵⁵

A fourth scene on Emerald Isle showed Lenander's ice house with five feet of water on the floor. The location is off the north central shore of the Kabetogama Peninsula. Lenander built the ice house among some pines that were at least forty years old and which had never been under water during the life of the trees. In mid-June 1916, when the waters went up two more feet, Lenander's ice house floated away.⁵⁶

Lenander's Exhibit F was a photograph taken on November 12, 1911, during low water. It was a picture of a huge boulder which had high water markings on it. The boulder was near his ice house and Lenander had used the boulder as a reference for placing his ice house on high and dry ground. On June 17, 1916, this boulder was one foot submerged.⁵⁷

Lenander was not the only irate citizen who claimed that the new dams were causing new high-water marks, but he was the first; and he stood battling for his views until reinforcements came to help him.

J. Effects of the Final Report for the Lake of the Woods Reference on the Rainy Lake Watershed, 1917.

The 1916 flood demonstrated to settlers all along the boundary watershed how each separate segment was influenced by the situation in other segments. Historically, problems had arisen in the immediate Lake of the Woods environs earlier than they appeared around Rainy Lake. The first dam at one of the outlets of the Lake of the Woods came in 1879. Since these outlets were entirely in Canadian territory, little note was taken of the dam's potential effects along the southern shore of the lake. From the start, flooding occurred on the low lying Minnesota shores. It was not much of a problem until the United States government opened up this land for settlement. By then, in the 1890s, all three outlets of the Lake of the Woods had been blocked by dams, and the lake level was at least three feet higher than the historic high level mark. Despite complaints by Minnesotans, no remedy was in sight until the IJC convened for the first time in 1912. The Lake of the Woods problem was the first one sent to the IJC as a "reference"; and it took five years of investigation and hearings before the final report was ready. Two consulting engineers with their crews made an exhaustive survey of the entire watershed. Topographic maps were made; water levels of many lakes and rivers were tabulated; precipitation and temperature records were compiled; and more scientific data was collected for the basin than had ever been done before. Much of the data was used again when the Rainy Lake Reference began in 1925.⁵⁸

Despite embryonic growth of antipathy for dams in the area, the IJC nevertheless had a predisposition that favored the power interests. In its conclusions the IJC decided to allow the Lake of the Woods to be kept at a stage two feet higher than the natural high water mark. They also recommended condemning and acquiring as a flowage easement 24,000 acres of land in Minnesota and 40,800 in Canada. This matter had to be

hassled out in treaty negotiations later in 1925, because the IJC had never before dealt with matters that amounted to an international form of "eminent domain."⁵⁹

The Lake of the Woods Final Report had additional recommendations that dealt with the Rainy Lake watershed as well. One engineering principle that applied to the problem was that large lakes, such as Lake of the Woods usually had greater inflow potential than outflow. As the report said, "On such a lake the outflow capacity must be increased or a large flood reserve must be provided, or both."⁶⁰

They, therefore, recommended that Lake of the Woods have a flood reserve of a foot and a quarter while Rainy Lake should have only half a foot. This would mean cutting back flow at Fort Frances from 10,000 cfs to 8,000 cfs and costing the power units there a thousand horsepower. To compensate for this, the IJC proposed to allow Backus to develop more power or storage east of Namakan Lake, or to apportion the costs of development in the entire system in accordance with the proportional benefits to each interest concerned. Similarly, the IJC would attempt to gain flowage easements for the companies, to relieve them of the burden of paying for damage to riparian owners. The Final Report went so far as to say that the two governments should reserve a flowage easement at least five feet above extreme high-water levels over all public riparian lands in the Rainy Lake watershed. Eventually this would not only restore to Backus the lost one thousand horsepower, but actually increase the force of Koochiching Falls by 2,500-horsepower, and also help the power interests on the Winnipeg River in similar fashion.⁶¹

Although the IJC was favoring power interests generally, the Lake of the Woods Final Report tended to place Backus in the role of victim, because the IJC's first concern was to get the large lake under control during a flood year; and their secondary recommendations were apt to be delayed until well after the primary problems were solved.

Even though Backus was thought to have allies on the commission, he did not rest with their assurances. Instead, he hedged his bets by

buying up damsites both above and below the Lake of the Woods, both in Canada, in the United States, and on the international boundary. Between 1918 and 1920, he bought the dams at the outlets of Lake of the Woods. Similarly, he was after sites on the Seine River, entirely within Ontario; and he sought locations all the way up the boundary chain of lakes, both for storage and/or power.⁶²

To return to the Lake of the Woods Final Report: the report also opined that the IJC should be given the power to regulate the waters of Rainy Lake and the lakes controled by the Kettle Falls Dams. In time, however, the Rainy Lake watershed would be separated from the Lake of the Woods watershed by a separate treaty or convention. Attached to the Lake of the Woods Convention of 1925 was a Protocol that addressed the IJC with a new Reference regarding Rainy Lake.

K. Some of Backus' Dealings With Canadian Authorities

In early 1921 Edward Backus learned that the legislatures of Manitoba and Ontario, plus the Dominion Parliament, were all contemplating legislation that might put curbs on his plans to develop more electrical power. Particularly, the various goverments contemplated the establishment of several control boards that would regulate waters within Canadian territory. Backus thought this would needlessly complicate his affairs, and because he now trusted the IJC to do his bidding, placed all his hope in that body. He therefore used his considerable political influence with friendly Canadian politicians. He wrote to the Premier of Ontario, C.E. Drury, to quash such legislation in Ontario. The tone of Backus' letter indicated that the magnate had aroused the ire and rivalry of power interests in the Province of Manitoba, and Backus tried to convince Drury that he (Backus) would do justice for Ontario and provide the province with industry and jobs.⁶³

Drury's influence in Toronto was sufficient to stifle the legislation there; but he was less successful in Ottawa. The Dominion Parliament established a control board for the Lake of the Woods by the Act 11-12 George V, Chapter 38, assented to June 4, 1921. The treaty of 1925

brought this control board under the jurisdiction of the IJC and changed the membership from Canadian, to one Canadian and one American.⁶⁴

The debates over this bill in the Dominion Parliament revealed considerable suspicion of Backus' motives and some of the members had no qualms about questioning his integrity. Backus had acquired control of the Norman Dam near Kenora, Ontario, had secured certain rights from the Ontario executive respecting the White Dog Falls farther down the Winnipeg River, and had won an agreement with the town of Kenora regarding its dam. Several legislators feared that Backus had obtained too free a hand and that it would be impossible to control him later.

The principle of Provincial Rights was visible here too. Mr. Pardee of Ontario argued that the Dominion had no right to interfere with Ontario's common law right to control its waters and its water powers and that this privilege was given in the British North America Act. Pardee similarly resisted Manitoba claims and said that if Backus were to become a problem to anyone, he was Ontario's problem.

A few members engaged in character assassination against Backus, calling him "King Backus," and said the magnate would soon have the ability to turn the lights off in Winnipeg whenever he pleased, simply by withholding the upstream waters at the Lake of the Woods. Mr. Blake, a member from Manitoba, stayed with the issues, and told what he knew about Backus:

The whole point with us is that we do not wish to be left in the hands of this man Backus. Backus got concessions in connection with the building of a power plant at Fort Frances. I lived at Fort Frances during the early construction days, and I know that his agreements with the Dominion Government were cast into the scrap heap and that he put most of his plant on the American side, paying no regard whatever to his agreement. . . . Backus seems to have it in his head that the Canadians are useful only to be exploited by the Yankees on every possible occasion and he has proceeded at all times to exploit the Canadians. . . . Backus is an American and his partner Brooks is a senator in the Minnesota legislature. During the time of the war we had a paper controller, and Mr. Backus even defied that official; he had tried to be a law unto himself on every possible occasion. An instance of that is when

he started to open one of the outlets of the Lake of the Woods without filing any plans with the Public Works Department. He does not seem to have changed for the better at all. I do not think that even the speech of the honorable member of West Lambton (Mr. Pardee) will have the effect of making him any better than he has been in the past or less inclined to exploit the public domain in the future. . . . There is no reason why the people of Manitoba should be held up and made to pay for the water which at present flows over the dam at Fort Frances to provide power for the Backus interests. Backus is undoubtedly already trying to get paid for the rights which have been granted to him in the water which flows over the Rainy River dam and on into the Lake of the Woods, over the Norman dam and down through the power plants of Winnipeg.⁶⁵

A few of the members damned Backus with faint praise. One man, who admitted he had never met Backus, said:

From what I have heard this afternoon it apparently takes all the brains of the provincial governments of Ontario and Manitoba to cope with Mr. Backus; in fact they appear to be too weak to meet him, and one of those governments anyway comes to the Prime Minister of Canada and says: Save us from the scourge. There is Backus coming. Ontario cannot do anything, and we cannot protect ourselves. This man Backus is going to run away with the Lake of the Woods in one pocket with Lac Seul in another, with the Winnipeg river in his vest pocket and with the English river somewhere else.

Baldwin added a soliloquy to this appraisal:

What I am about to say is purely in the interests of Canada. A good deal has been said about Mr. Backus, and the Backus interests. Well, I think one may safely say that Mr. Backus overrides towns, provinces, legislatures, and even federal laws of the United States when they conflict with his interests. He is a man of indomitable courage and outstanding business ability, and he never allows anything to stand in his way. He will not be turned aside in his pursuit of any object, and there was never a firm of lawyers in the United States smart enough to make any contract which they could not get Mr. Backus to sign before he had considerably altered and amended it to his own taste. He would erase, eradicate, add to, and rewrite anything if it did not meet with his approval. I know that this is an advertisement for Mr. Backus, but I wish that this Canada had men of his kind. He owns great territory in the United States, and he even overrides the assessor and the tax-gatherer. I think he has the brains to override the Prime Minister of this country, the Premier of Ontario, the Premier of Manitoba, and probably the leader of the Opposition.⁶⁶

Still other members of parliament frankly supported Backus' objectives. They said he was bringing industry, wealth, and jobs to the Province of Ontario, and he might do the same for Manitoba. They pointed out that the magnate had invested millions in Canada and that he therefore had a right to an honest profit, but the other side had the votes and carried the day. A year later, on June 19, 1922, the Dominion Parliament reversed itself and repealed the legislation.⁶⁷

L. Damage Suits Against Backus by Riparian Owners

After the completion of the Kettle Falls dams in 1914, both the State of Minnesota and several private owners of land along Rainy, Namakan, and Kabetogama Lakes filed damage suits against the Minnesota and Ontario Paper Company (Backus) because of high waters flooding their lands. The Minnesota attorney general held off with the suits believing that the IJC would make provision for a settlement. Backus welcomed such delay and he too advocated the usage of the IJC as an arbiter. Backus, however, did not wish to let things to chance, and tried to manipulate the IJC to his own purposes. The old magnate was very active in Minnesota Republican politics and even tried to exert some influence on a national scale. During 1924 and 1928 he was industrious in trying to pack the Minnesota delegation to the Republican National Convention with men sympathetic to his causes. He hoped thereby to elect a president who would pick desirable men to form the American section of the IJC. Thus, as an end result, he would need only to charm one Canadian on the IJC to get a favorable vote for his objectives.⁶⁸

The Minnesota attorney general therefore delayed the flood suits pending publication of the Final Report on the Lake of the Woods Reference. When that report failed to settle anything, the attorney general again set the suits in motion during 1919. This, too, was thwarted by the forlorn hope that the Lake of the Woods Treaty of 1925 would be the answer. Despite continued frustrations, the attorney general stayed with the problem when the Rainy Lake Reference was seen as the way to rectify flood damages. There were interminable delays with this reference as well, but Backus did lose a few damage suits to private

individuals in the late 1920s. He got some relief in 1928 with the passage of the Selvig Act, whereby the U.S. Government allowed itself to be sued for damages along the Lake of the Woods, where Backus was involved with the Norman Dam at Kenora. Minnesota eventually came to an agreement with Backus on state lands abutting on Rainy, Namakan, and Kabetogama Lakes, by finally accepting past damages and relying on the IJC to prevent future problems. The Lake of the Woods treaty of 1925 had established the precedent that one or the other of the two governments, or the IJC would accept responsibility for determining liability in flood damage cases. Needless to say, this principle gave a great deal of comfort to E.W. Backus.⁶⁹

ENDNOTES FOR PART III

1. Application of Blake, Lash, Anglin and Cassels, Solicitors in Toronto for the Ontario and Minnesota Power Company, Limited, to the Governor General of Canada, dated February 15, 1912, filed in NA RG 76, Entry 320, Box 1.
2. NA RG 76, Entry 320, Box 1, Docket #1, Paper #2.
3. Memorandum of Agreement Between the Power Company and the Town of Fort Frances as Submitted by the Joint Committee of the Town Council and Board of Trade, for the Consideration of the Ratepayers, dated March, 1912, copy in VNP Files.
4. Ibid.
5. 1912 IJC Hearings, p. 13.
6. Interview of Murray J. Thompson, Chief Engineer for the Canadian Section, IJC, by David L. Fritz, in Ottawa on June 1, 1981.
7. 1912 IJC Hearings, p. 22.
8. Ibid., p. 23.
9. Ibid., pp. 32-53, passim, especially pages 33 and 43. Incidentally, the floating of logs down the various waterways of the Rainy Lake watershed was considered to be classified under the category of navigation.
10. Ibid., p. 40.
11. Ibid., p. 41.
12. Ibid., p. 57.
13. Ibid., pp. 53-60.
14. Ibid., p. 60.
15. Ibid., pp. 713.
16. Ibid., pp.723.
17. Ibid., pp. 7881.
18. Ibid., Powell's Brief, pp. 8292, especially pages 85 and 86.
19. Ibid., pp. 87,92.

20. Ibid., pp. 96, 93.
21. Ibid., Reply by Mr. Watson, pp. 1036.
22. Copy of Ray L. Washburn's letter to Senator Gamble, dated March 20, 1912, in IJC Files, NA RG 76, Entry 320, Box 1, pp. 35 of a summary labelled "Case No. 1 Rainy River Improvement Company. Approval Erection of Permanent Dam at Kettle Falls. Docket Entries and Notes Thereon. F.S.S. January 20, 1913."
23. Ibid., p. 5, letter of Horace I. Bedell to the International Waterways [sic] Commission, dated June 1, 1912.
24. Letter of S.J. Chapleau, Resident Engineer, Fort Frances, to the Department of Public Works, Ottawa, October 1912, Copy in VNP Files.
25. [Majority] IJC Opinion in the Matter of the Application of the Rainy River Improvement Company for Approval of Plans for a Dam at Kettle Falls, filed April 18, 1913 at Washington and Ottawa, 11 pages; copy in NA RG 76, Entry 320, Box 1, Item #20, Docket #1.
26. IJC, Minority Opinions In the Matter of the Application of Rainy River Improvement Company for Approval of Plans for a Dam at Kettle Falls, filed at Washington and Ottawa April 17, 1913, 20 pages; copy in NA RG 76, Entry 321, Box 171, Item #22, Docket #1.
27. Ibid., p. 16.
28. G. Franklin Ackerman and Mary Lou Pearson, "A Partial History of the Kettle Falls, Squirrel Falls and International Falls--Fort Frances Dams," May 1980, pp. 11-12, typescript, copy in VNP Files; hereafter referred to as Ackerman/Pearson History.
29. Ackerman/Pearson History, p. 12.
30. Memo from the Assistant Deputy of the Department of Public Works, Canada, to the Deputy Minister, dated June 10, 1914, cited in Ackerman/Pearson History, p. 6.
31. Chief Engineer, Department of Public Works, Ottawa, to S. J. Chapleau, District Engineer, June 23, 1914, cited in Ackerman/Pearson History, pp. 67.
32. S.J. Chapleau (Ottawa) to Colonel C.L. Potter (St. Paul), June 30, 1914, NA RG 76, Entry 320, Box 1.
33. Col. C. L. Potter to S. J. Chapleau, July 7, 1914, cited in Ackerman/ Pearson History, p. 7.
34. See Plate 84, Series 47, Map 7 in NA RG 76, General Plan of Dam and Power Plants at International Falls and Fort Frances, Compiled From Data Furnished By Minnesota and Ontario Power Company, 1915. The map in question was filed with the Cartographic Division, National Archives.

35. U.S., Congress, Senate, Report on the Flood Conditions in the Lake of the Woods and Rainy Lake Districts, Minnesota and Ontario; Together with a General Statement of the Water Levels, Interests Involved and Methods of Relief, S. Doc. 467, 64th Cong., 1st sess., 1916, pp. 3-10; hereafter referred to as Flood Conditions 1916.
36. Ibid. The data about the early history of the Norman Dam near Kenora is from Canada, House of Commons Debates, Debates of May 31, 1921, Lake of the Woods Control Bill, Bill No. 216, pp. 4304-4326; hereafter cited as Canada Commons Debates.
37. Flow figures are from 1929 Engineers Tables, p. 149.
38. Ibid.
39. Flood Conditions 1916, p. 6-9.
40. Report of George M. Shepard, Assistant Engineer, dated May 31, 1916, titled "Report on Flooding of Log Loading Hoists and Track of the Virginia and Rainy Lake Company, Lake Namakan," filed with NA RG 76, Entry 320, Box 89. At the 1925 Rainy Lake Reference Hearing there were frequent remarks about the 1916 flood, such as the Statement of C.J. Lenander, a Minneapolis lawyer, on pages 71-83; also page 144 and local residents' statements, pages 363-394. The full citation is as follows; International Joint Commission; Hearings of the International Joint Commission on the Reference by the United States and Canada in Re Levels of Rainy Lake and Other Upper Waters of the Lake of the Woods Watershed and Their Future Regulation and Control, Being Public Hearings at International Falls, Minn., September 28, 29, 30, 1925, (Washington, D.C.: Government Printing Office, 1926); hereafter referred to as 1925 IJC Hearings.
41. Flood Conditions 1916, pp. 4, 6-9.
42. Ibid., pp. 1-10.
43. Ibid.
44. Ibid., p. 7.
45. Ibid., pp. 7-10.
46. 1925 IJC Hearings, pp. 71-83.
47. Ibid., p. 77.
48. Ibid.
49. 1929 Engineers Tables, pp. 19-20.
50. 1925 IJC Hearings.
51. Ibid., pp. 77-80. Tawney's letter reply to Lenander, dated October 29, 1916, is on the latter two pages.

52. Ibid., pp. 78-80.
53. Ibid., pp. 80-82.
54. Ibid., pp. 82-83.
55. Ibid., p. 82.
56. Ibid., p. 83.
57. Ibid.
58. Final Report of the International Joint Commission on the Lake of the Woods Reference, (Ottawa-Washington, D.C.: Government Printing Office, 1917), 261 pages; hereafter cited as L.O.W. Final Report.
59. L.O.W. Final Report, p. 39.
60. Ibid., p. 68.
61. Ibid., pp. 11, 16-20, 26, 28-31, 35, 37, 66-69, 75, 79, 222-234.
62. Searle, Saving Quetico Superior, pp. 42, 44.
63. Backus to Drury, February 12, 1921, NA RG 76, Entry 320, Box 89.
64. 11-12 George V, Chapter 38, assented to June 4, 1921, Law of the Dominion of Canada, copy filed in NA RG 76, Entry 320, Box 1.
65. Canada Commons Debates, May 31, 1921, Volume LVI, No. 75, pp. 4334-6.
66. Ibid., p. 4357.
67. Ibid., pp. 4303-4360. NA RG 76, Entry 320, Box 9, holds copies of quite a few days' of the House of Commons debates, from March and April 1921, and June 1921 and 1922. These all contain debates regarding Lake of the Woods Legislation.
68. Searle, Saving Quetico Superior, p. 44. The Minnesota Historical Society, Archives and Manuscript Division, Collection M-120. Quetico-Superior Council Papers (hereafter referred to as QSC Papers), Minneapolis, MN, 1922-1966, on a single roll of microfilm, has a considerable clipping collection, mainly from the Minneapolis Journal and the Minneapolis Evening Tribune that describes Backus' political involvement in 1928. The clippings on this subject are mainly from 1928, but they refer to Backus' political activities in earlier years.
69. Searle, Saving Quetico Superior, pp. 44-53, 90-103. There are a few pertinent newspaper articles on the subject of Federal damage suits in QSC Papers, such as the Minneapolis Journal for March 9, 1928, "\$1,000,000 To Pay For Border Dam Losses Forecast, Baudette Settlers Told United States Have to Settle Damage Claims;" and

Minneapolis Journal of 20, 1928, "500 North Lake Residents Claim \$817,000 Loss, Suits Against U.S. Filed by Lake of the Woods Property owners for Flood Caused by Backus Dam."

PART IV: THE RAINY LAKE REFERENCE OF 1925

The problems of the Rainy Lake Watershed were not handled by the Lake of the Woods Treaty of 1925, as anticipated. Instead, as an addendum, a set of four questions was tacked on at the end of the treaty. This constituted the Rainy Lake Reference of February 24, 1925.

Although a "reference," strictly speaking, is an information-seeking device, there was pro-dam bias built into the set of questions. The wording of the four queries implied that more water storage was necessary on the Rainy Lake Watershed, that the two lakes already dammed needed higher levels, that the only data needed was a determination as to how high the levels should be established and how great would be the cost. The wording of the reference also implied that the legal upper limit for water levels was 1108.61 sea level datum for Rainy Lake and 1120.11 for Namakan Lake. These levels were accepted because the engineers for the Public Works Department of Canada used them on a working basis from day-to-day. As we shall see, various advocates at the 1925 hearings challenged these levels.¹

Another feature that muddied the waters even more was the fact that newspaper articles appeared throughout the United States during the summer of 1925 telling of a Backus' application (in 1920) to the Ontario government seeking to build a series of new dams on the upper watershed. When the IJC announced about the same time that hearings would be held in International Falls, many observers identified the Backus application with the IJC hearings. The simultaneity of the appearance of both pieces of news tended to cause a great deal of excitement among lakeshore dwellers as well as others.

Backus' 1920 application addressed to the Ontario Minister of Lands and Forests, spoke of power dams, not storage dams, and sought to raise the level of Lac La Croix by about twenty feet, Iron Lake by about eight feet, Bottle Lake by about thirteen feet, Crooked Lake by fifteen feet, Basswood Lake by five feet, Birch Lake by three feet, Knife Lake by eighty-five feet, Sturgeon Lake by thirty feet, Kwynipi Lake by thirty

feet, and Lake Saganagons by eighteen feet. Many people were horrified.²

In actuality, Backus' plans were not cast in concrete, and as the years progressed, he presented innumerable variants of the early proposal. It was not always clear which locations were to be only for storage and which ones for power dams, but clearly he intended to change radically the face of the entire basin. In one variant of the plan, described in a letter to the Premier of Canada, William L. Mackenzie-King, Backus listed how he intended to develop 434 billion cubic feet of storage extending from Lake of the Woods to Saganaga Lake at a cost of 2.3 million dollars. This plan sought to generate half a million horsepower of electrical power at a cost of about five dollars per horsepower. In this letter Backus expressed his amenability to regulation of these facilities by the IJC, but doubtlessly at the back of his mind, was the belief that the IJC would perform its regulatory duties in accordance with Backus' wishes.

A. The Public Hearings for the Rainy Lake Reference, Held at International Falls, Minnesota, on September 28, 29, and 30, 1925

It became obvious, as the hearings opened, that E.W. Backus had more problems than he had anticipated. Early witnesses were corrected frequently by members of the commission that the purpose of the hearings was not to act upon Backus' application to the Province of Ontario. Nevertheless, that application was reprinted twice within the pages of the transcript of the hearings.⁴ Though many attendees at the hearings had the distinct impression that E.W. Backus was "in the dock," the IJC proceeded to solicit views that presented either the affirmative or negative position regarding the wisdom of raising the levels of the boundary lakes.

An early witness, C.J. Lenander was a lawyer from Minneapolis who also had lakeshore property in the north-central portion of the Kabetogama Peninsula. Lenander took considerable time dwelling on the baneful effects of the 1916 flood on his property. He culminated his

presentation by giving the commission a set of photographs that tended to show that the 1916 flood inundated some trees that were as much as a hundred years old. He contended that this proved that the Koochiching Falls dam was the cause of higher waters than had occurred during any other period in the past hundred years.⁵

Halfway through the first day of September 28, Backus took the stand to present his revised views. He tried to adopt the view of an amiable victim. He referred to the recent unfavorable publicity he had been getting in the press and stated that he was merely following up on the suggestions made by the IJC in its Lake of the Woods Final Report of 1917, which favored more storage for power in the Rainy Lake Watershed. This was a switch for Backus, this emphasis on storage over power. He belittled the effects of the 1916 flood, as merely an Act of God that was to be tolerated once every generation. His mind-set regarding floods was illustrated by his comment that "in 1916 we wasted [for power generation] in three months 180 billion cubic feet."⁶ But beyond that he viewed himself as a philanthropist who was going to rain benefits upon every conceivable interest in the boundary waters area, the interests of navigation, lumbering, paper and pulp, general manufacturing, summer recreation, fishing, labor, agriculture, railroads, mercantile and public advancement, plus health and sanitation.⁷

Even though Backus seemed to be surrendering to the pressures of adverse publicity, he still held out the lure of power-generating potential all up and down the chain of lakes and rivers. He recited lists of potential sites where great drops in the level of water could be harnessed to produce fantastic sums of electricity. His lists included the entire Rainy Lake chain plus the side alley in Canada (Ontario) up the Seine River. He had also looked at sites a considerable distance down the Winnipeg River, below the Lake of the Woods. Some of them were even in the Province of Manitoba.

Backus returned from this flight of fancy to posit his present hopes, which basically amounted to additional storage, an increase of 24 billion cubic feet of water on Rainy Lake alone. Generally, on Rainy Lake, he

hoped to raise the level by a maximum of four more feet. On Namakan he wanted only six inches to a foot more. Beyond that he suggested storage dams on Crooked Lake, Lac La Croix, Basswood Lake, and Saganaga Lake, that would cost him a little more than three hundred thousand dollars. The general tenor of the plan was vague and imprecise and he did not even mention the proposed levels he would want for the upper lakes listed above.⁸

Because of the indefiniteness of his presentation, Backus was interrogated extensively by both the members of the commission and many others present at the hearings. His role was purely a defensive one and he ably provided ideas upholding his proposals. He posed as a friend of the IJC and indicated his desire for them to regulate levels in the watershed. He even came up with a rudimentary proposal that could be considered the grandfather of the Rule Curve of 1949. Elmquist, attorney for a lumber company, asked Backus whether he recommended 1111.61 as the high water level for Rainy Lake. Backus replied:

That we be authorized to hold the lake at 500 [1111.61]. Of course the practical working out of that would not be that the lake would be at the 500 level very much of the time. If you work it up to the 500 level in the spring run-off, it might be held there for three months, possibly, during a year. If that level were authorized, I should say from a practical operating standpoint, it is very doubtful if it would be as high as that more than three months and then only in years when there was surplus water.⁹

Critics later challenged his 1108.61, much less tolerating 1111.61.

As Backus' interrogation progressed, he let slip details of an immense project. It became clear that he did not want to reveal all of his plan, for fear that it would provide his adversaries with a straw man to knock to pieces. It was apparent that he had pretty much of a free hand in areas that were purely Canadian, for on the Seine River he had already completed a storage dam at the outlet of Lac de Mille Lacs; and that at least three power dams were contemplated on that river at Sturgeon Falls, Moose Lake, and Steep Rock. It was manifest that he resented the need to be begging the IJC for help at installing other dams on the boundary line.¹⁰

The most abrasive notion that Backus let fall was the idea that his dams at Fort Frances and Kettle Falls were already benefitting power companies downstream. In future, for the new construction, he made it plain that he not only expected the other companies to pay a share of the costs for the benefits derived, but he also nurtured the hope that the two governments would pitch in and contribute something to the costs for the unspecified benefits that they received. Backus' adversaries later turned this idea into a propaganda bonanza, by casting it into a more arrogant form, and turning it against Backus to their advantage. They insisted that the shoe was on the other foot: that Backus alone should pay for the privilege of having power sites on the boundary waters, and that in fact, at least with the United States government, he could be made to pay an annual stipend for the privileges granted, by reason of earlier laws and agreements.¹¹

One other effect of Backus' imprecision was a proposal that engineering studies be made of the watershed. Backus had excused the lack of specificity in his plans by saying that his own engineers had not taken surveys of the contours of the basin, and hence could not tell very accurately what the details of construction would be. And he excused the absence of such surveys by saying that the two governments would not accept his figures in any case, so that it would be bootless for him to conduct such surveys. Thus, once again, he hoped to have the IJC provide him with the needed data for his project. At least in this one respect, however, Backus was successful; for the IJC did commission extensive surveys as part of the Rainy Lake Reference.

At the end of the afternoon session on September 28, Backus completed his testimony. He, however, stayed to attend all of the sessions held at International Falls, and continuously challenged statements that he thought unfavorable to his interests. It must have been disheartening for Backus to hear the mounting opposition to his program. There was a growing crescendo of voices who told him that times were changing. Suddenly there was a plethora of outdoor organizations who were interested in preserving wilderness areas. There were resort owners who wished to profit from the area in a different way

than Backus. Even some business interests turned on the power baron. Some lumbermen thought a Backus monopoly would box in their log floating attempts and prevent them from getting the timber to market. One man thought higher waters would prevent potential mineral exploration.

Backus was not readily discouraged by all of this opposition. At times he was able to turn some criticisms into arguing points for his own view, or at least so he thought. At one point, for example, when adversaries praised the beauty of Lac La Croix and all of its islands, Backus said his dams would make it even more beautiful by expanding the extent of the shoreline and adding even more islands.¹² When someone spoke about dead trees standing in high water, Backus rashly stated he would clear out the trees before raising the waters. If called upon to do so, Backus would have regretted such a promise since it cost as much as \$60 an acre to clear land, while the usual top price for merely acquiring an acre was five dollars.¹³

B. Oberholtzer's Presentation at the 1925 Hearings

Perhaps unrecognized at the time, the most formidable statement in opposition to Backus was made by Ernest C. Oberholtzer. Oberholtzer spoke briefly. His testimony took up only five pages of the hearings' transcript. At the end he submitted a resolution of opposition to raising levels from his fellow citizens of the village of Ranier, Minnesota. He spoke with simple eloquence, reciting sixteen years of familiarity with the area, and said that Backus' plan should not be adopted, for at least as far as he understood the proposal, it only advocated the additional production of 700 horsepower at International Falls and that downstream interests in Canada would receive the lion's share of the benefits of Minnesotan sacrifices. He thought that he and his neighbors had suffered sufficiently because of the 1916 flood and that the high water of that year was supposed to become the annual expectation resulting from Backus' proposals. Oberholtzer supported Lenander's contentions that Backus' dams had already killed some very old trees by allowing the water levels to exceed all levels known to historical record. He said:

Now there are standing at various points along the shores of Rainy Lake pine trees and Norway and white pine from fifty to one hundred and fifty years old and dead. Those trees could never have attained their height or age if at any time within the memory of man they had been submerged for more than a few days or possibly months, varying according to the nature of the trees.¹⁴ Some trees will stand submerged in water longer than others.

Oberholtzer admitted that the flood of 1916 did not alone kill the ancient trees, but that continuous long-abiding standing water, as during the very time of the hearings, was the cause of trees dying. He insisted that in the memory of man, Rainy Lake had never been permanently as high as it was then in 1925, otherwise those dead trees, as old as a hundred and fifty years, would not then be standing in water.¹⁵

Oberholtzer further denied Backus' claim and promise of improving navigation, as there were not now any locks to move boats around existing dams, and the likelihood of converting the waterway into a system of canals for small boats was almost nil. He did not mention the log sluices as included under the heading of navigation, but this was a small omission. He hit hard at Backus' notion that larger lakes were prettier lakes. On the contrary, he asserted that larger lakes would be uglier.

Perhaps the cleverest aspect of Oberholtzer's presentation at the 1925 hearings was the fact that he did not limit his argument to a negative attack on Backus' proposals. He made a positive proposal of his own, suggesting that the existing Quetico Provincial Park in Ontario and the Superior National Forest in Minnesota be joined and expanded into a huge borderland reserve holding inviolate a stretch of wilderness from Lake Superior to Rainy Lake.

C. Dr. F.A. Dunsmoor Speaks

After Ernie Oberholtzer sat down, an equally eloquent neighbor, Dr. F.A. Dunsmoor, got up in support of the proposition favoring an international preserve. Dunsmoor characterized Backus with considerable irony:

No one up to this time has ever accused me of saying behind anyone's back what I would not say to his face. I want to say first, something concerning Mr. Backus, and that is that when he was a very much younger and better man, we were very good friends. . . . I want to take off my hat to a man of such acute ability as can hornswoggle these two governments out of millions of dollars by giving him a concession of water power of such an extent that I need not attempt to enumerate it to you. I also say I have supreme appreciation of that gall which asks these two governments to go on and pay for half of what he has been given. But when he asks this intelligent body to believe that when he raises the level of a lake so as to submerge an island fifteen or seventeen feet it enhances its beauty and when he says that extending the shoreline and substituting for that which, we say, is provided by an Act of God, a bottom which is covered by either decaying vegetable matter or stumps of trees, no matter how short they may be made, constitutes an improvement. I think this man is excelling the assurance which he manifested when he got the concession from the government.

Dunsmoor developed a theme regarding the superiority of aesthetic values over mere commercial values. He told how he, as a Minneapolis practicing physician for more than fifty years, had set aside a little money for a lakeshore home in northern Minnesota, and that this was the best investment he had ever made for profit. By "profit" he meant health and happiness.

He summarized his own experience: he wanted other people to share the pleasure he had discovered in nature. He referred to himself as a person who did not have concessions from government, a person who earned every dollar he made. Dunsmoor had come to the area before any dams were built. He had bought several islands and had seen their beaches destroyed by the coming of the dams. He was willing to abide more dams and higher levels, but asked his adversaries not to lie by saying such "advances" would enhance the beauty of the place. His experience contradicted such contentions. He said, "there is an abomination and desolation along there." He concluded by saying:

Suppose the Commission instead of granting the request and accepting the proposition, went away and made a recommendation to their respective governments that a gigantic international park should be established from the shores of Lake

Superior to the Lake of the Woods. Such a thing would constitute such a great public benefit, so far beyond what will come to this great corporation that your children for generations to come will rise up and call you blessed.

D. Ralph D. Thomas, a Backus Ally, Speaks at the Hearings

It was surprising, after Oberholtzer and Dunsmoor had so ably questioned the wisdom of Backus' proposals, that an ostensible ally of the magnate would next take the floor. Actually, it is not altogether clear what was the relationship between Ralph D. Thomas and E.W. Backus. Thomas presented himself as a consulting engineer from Minneapolis. Obviously, a consultant is usually hired by someone else to do a study on a problem. Thomas never identified himself as being in the employ of Backus, but each referred to the other in an amiable fashion. Thomas spoke vaguely of interests in Minneapolis who were using his services, but this may have been a ruse to disguise Backus' methods. Backus frequently set up new corporations to hide his involvement in new projects. Thomas may have been nothing more than a stalking horse whose role was to determine what sort of a reception he would be given by both the IJC and other auditors.

Be that as it may, Thomas came forth as a staunch advocate for more power development in the boundary area. He used the IJC arguments in their 1917 report for the Lake of the Woods Reference, to argue that there was both great potential hydroelectric power available in the Rainy Lake Watershed as well as a need to develop the same. As a variant from Backus' proposal, however, he suggested that the potential power could be exported to either the Mesabe Range area for mining purposes or to the Duluth environs. He backed down partially from Backus' notion of having the governments pay a part of the cost, but he did have an expectation that other power interests who received benefits would pay a share.

Thomas' linkage to Backus became apparent at one point when an interrogator was interrupted by Backus who asked that Thomas be permitted to finish his report. The interrogator thought Thomas was

through, but Backus somehow knew better. Later, Elmquist, an attorney for a lumber company, probed the Backus-Thomas relationship further. Thomas said he had first negotiated about a year earlier with Backus regarding sale or lease of power resources, but he denied working for Backus. At one point Elmquist asked that Thomas' testimony be stricken from the record when he would not reveal the name of his employer. Thomas would not reply when asked whether he worked for the General Electric Power Company. Aside from these embarrassments, Thomas was also sniped at by various critics who cited instances where large power companies gouged consumers with high electrical rates when they had a monopoly of a region.¹⁹

It was more than coincidence that Thomas was followed on the witness stand by V.L. Power of Hibbing, Minnesota, who thought that boundary hydroelectric power might furnish electricity for smelters in his area so that northern Minnesota might some day become a rival to Pittsburgh and Gary and avoid the need to transport iron ore out of Minnesota and convert it into a finished product on the spot.²⁰

E. Canadians Oppose Backus' Proposals

A procession of Canadians next appeared whose consensus opinion was that they did not see any immediate need for additional electrical power on their side of the border. Some of them wanted to know more precisely what Backus had in mind and would withhold their comments until such time as they had reviewed the proposals. None of the Canadians were disposed to offer to pay for a share of a program about which they knew so little. R.W. Craig spoke for the Manitoba provincial government and pretty well presented an average Canadian view. Otherwise, he added only a moment of comic relief when he recited an old saying of an economist "who claimed that an Indian could not beat his squaw on the shores of Hudson Bay without affecting the price of beaver in London, England."²¹

J. Preudhomme, solicitor for the city of Winnipeg, spoke next opposing Backus' plans, denying both that Backus' original installation

had been designed for Manitoban benefit, and that present plans would bless them. He said flatly that Winnipeg had no past or present need for more storage on Rainy and Namakan Lakes, and that, in fact, he favored lower levels there.

R.E. Guy for the Winnipeg Electric and the Manitoba Power Company joined in the chorus against Backus. His clients wanted no more storage and were unwilling to contribute to Backus' proposals. Backus angrily stood up to remind Guy that Winnipeg interests had expressed contradictory views at Ottawa in 1922 to those now expressed by Guy. He said that they had promised to pay whatever was determined a fair share, if it were found that Winnipeg benefitted from an expansion program. Backus produced a letter that seemed to prove his contention, but Guy did not respond. Actually, the letter referred more to the cost of running a regulatory agency than to the cost for new works or structures.²²

F. Opposition From the Canadian National Railway

A series of witnesses for the Canadian National Railway appeared at the end of September 29, and the beginning of September 30, 1925 to air their views. Their presentation was fact-oriented, telling the role and volume of business of the CNR and what changes would have to be effected to give Backus three more feet of storage on Rainy Lake. Basically, it was a expensive proposition. The CNR would have to raise the roadbed of a considerable stretch of their track, but the main problem involved the raising of several bridges and trying to carry traffic at the same time. The officials did not think it could be done without disrupting traffic altogether during a crucial portion of the grain harvest season. This would entail the loss of millions of dollars worth of business to the rival, Canadian Pacific Railway, and the latter railroad might not be able to handle the volume of traffic. Thus some of the grain might be lost or go to waste by not reaching market.

Backus, of course, challenged the CNR officials by saying that they had no claim to a penny as long as the level did not exceed 1111.61 feet

because they had ample notice that 1111.61 was the level he had tried to secure when he built the dam at Fort Frances. The railroad men pointed out the difficulties they had experienced with the 1916 flood, and they maintained stiffly that at such high levels they had an insufficient margin of safety with the roadbed. Backus seemed unwilling or unable to comprehend the difference between an Act of God when the waters rose temporarily to 1112.51 and his proposal to hold the waters for lengthy intervals at 1111.61. Once again Backus saw himself as King of the Watershed and more or less told the railroad people that their problems were none of his doing. In the process he antagonized the chairman of the Canadian Section, Charles A. Magrath, in an exchange about their recollection of events during the 1916 flood. Backus told Magrath that he, Backus, turned the works at Fort Frances over to Magrath during the flood. Magrath replied, "I never knew you to turn anything over."²³

G. Albert F. Pratt, Assistant Attorney General for the State of Minnesota, Speaks

Albert F. Pratt, speaking in a sense as a spokesman for the State of Minnesota, steered a middle course between the opposing sides. He read a letter from the Commissioner of Drainage and Waters that supported his own views that higher levels were not necessarily deleterious to fish, birds, and plant life; but that substantial increases with irregular artificial variations in levels tended to be destructive of fish life, aquatic plant life, and migratory bird life. The letter from the Commissioner had a seminal formulation of the later Rule Curve of the 1940s. Pratt's major commitment was to find a balanced solution that reconciled the differences between environmentalists and power interests. He thought the forests, fish, birds, and beauty of the boundary waters area could be preserved at the same time as Backus was provided with a modest amount of water storage.²⁴

H. A Few Other Opponents of Backus' Scheme

After Pratt came a succession of humbler petitioners who wished only to save their tourist cabins, farms, fishing docks, or town dwellings from

the high waters. There were also a few attorneys for lumber companies and smaller business enterprises who appeared, all opposing the raising of the lakes.

The hearings were drawing to a close and Backus must have perceived that things had gone badly for his cause. He, therefore, rose one final time to plead his case, reciting his story of how thirty-one years earlier he had come to the region with his pioneering enterprises. He told how he had almost single-handedly developed the border country and provided jobs and livelihoods for thousands. He made the unfortunate mistake, however, when talking about his dams, of saying that when the early plans at Fort Frances called for levels up to 1111.61, the new settlers coming in later could have saved themselves a lot of heartache merely by entering his office and asking what the water levels were to be. Oberholtzer could not let that assertion pass unchallenged, and seemed to summarize the meaning of the hearing, by saying, "does it not seem strange, though, in a region of 14,500 square miles lying in two countries, it should be necessary for the new inhabitants, instead of going to the constituted authorities, to go to the office of a private individual in order to inquire as to what stage it is proper to erect their buildings and other works?"²⁵

1. The Engineers go to Work Gathering Data on the Rainy Lake Watershed

Since the ostensible purpose of the Rainy Lake Reference was a fact-gathering enterprise, the IJC set its engineers into motion gathering and tabulating data. A similar procedure had been inaugurated with the earlier Lake of the Woods Reference. In this instance, Major P.C. Bullard of the U.S. Corps of Engineers headed the American contingent and S.S. Scovil led the Canadians. Since the Rainy Lake watershed had previously been subsumed under the Lake of the Woods drainage, a great deal of factual information was already available. Nevertheless, Scovil and Bullard set about doing more topographical work and considerable field surveying. There were hydrological studies, stream gauging studies, aerial photography and triangulation, spirit and water level

leveling, timber cruising, and a valuation survey of structures as well. In the spring of 1928, most of the field work was completed. At an April engineering meeting in Washington, Bullard's assistant, Major Crawford, expressed the view that the problems of the Rainy Lake Watershed did not include questions of navigation and flood control. On the contrary, to his mind, the paramount issue was one of water storage for power purposes. The consensus of Crawford's colleagues, however, was that there was no need for the engineers to air any such views in their report. They would merely present the scientific data they had gathered and let others make judgments about those facts.²⁶

As 1928 wore on, some of Backus' representatives tried to get hold of some of the engineering data to use it to make arguments favorable to Backus' case. Similarly, the Attorney General of Minnesota inquired for results as an indication what the IJC would do about all of the long pending, damage suits by riparian owners.²⁷

During the summer of 1928 there was a number of congressional tours of the boundary waters area either to engage in fact-finding associated with the Shipstead-Nolan Bill or the Rainy Lake Reference or to merely enjoy the beauties of nature. During one junket Major Bullard was present and took notes of the proceedings. The Backus-Brooks interests were ably represented by Backus' top consulting engineer, Adolph F. Meyer. There were a number of professors from the University of Minnesota, scientists, a few representatives of the State of Minnesota, a few Forest Service people, a reporter or two, and several U.S. Senators.

Senator Henrik Shipstead, for example, was present, and he steadfastly advocated tighter governmental control over scenic areas as a matter of policy. Meyer, for Backus, was rather defensive at first, pointing out that such bills as Shipstead-Nolan might stymie all progressive development of watersheds such as this. But Meyer was forced to admit that his chief, Backus, really had no immediate need for any of the potential power available in the basin. He was looking down the long route, and speculated that Backus would take 25 years to

develop the power. He explained that the business depression was hampering development, as there was now an excess of newsprint paper over the demand. But Meyer steadfastly echoed his boss in insisting that the proposed dams would not be destructive of natural beauty. Backus had apparently decided to switch his strategy to a conservationist line, that dams were a flood-control device.

Meyer ran into trouble on the revised plan for Lac La Croix. Now his chief only wanted to raise it eighteen feet. Meyer calculated that 159 of the present islands in that lake would be submerged but that 110 new islands would be created. He, therefore, concluded, there should be a net loss of only 49 islands in a lake that had more than five hundred. One of the senators thought such a venture to be a severe gamble, but Meyer sought to reassure him that all unsightly timber would be removed, a procedure that would have made Backus wince, as the task would have had a considerable dollar cost. Both Meyer and Backus must have gone back to read the General Dam Act, because Meyer now started to stress the primacy of navigation. So Meyer claimed that higher waters aided navigation; but he would not guarantee that there would be boat locks with every dam.

Professor Otto S. Zelner of the University of Minnesota came out with a strong statement against the dams in the course of the cruise. He said:

It has not been shown that anyone but Backus hopes to benefit by the proposed development. What Backus hopes is to balance off his personal desires for control of this watershed against the pleasure of thousands of persons. As regards industry no clamor has been shown for the Backus products. The mills have been run on part time, and even now are running on part time due to overproduction. There is now an excess of power in the plants.

Among the boat riders there was a difference of opinion on Backus' recent project on the Seine River, a side entrance to the watershed from Ontario. Meyer said it was a thing of beauty since Backus' people had cleared out the submerged timber. But Professor Zelner said Backus had cleared out only a showcase area near the mouth of the river and that the

shoreline higher up was a nightmare of devastated timber standing in water.

Zelner told a story on the boat that jibed with an Oberholtzer version of the Outer's Club. Oberholtzer had said that Backus organized both a magazine and a club when the propaganda sting of various environmentalist groups got too much for him. First, Backus bought Outdoor Magazine and then he organized the Outer's Club, both to further his type of conservation. Oberholtzer got wind of a meeting of the Outer's Club in Minneapolis and was able to gain entry to speak to the membership. He was able to convince them to adopt a resolution opposing the dam development program, even though Backus had developed the organization for the exact opposite purpose. At first Backus tried to suppress their telegraphic resolution; but eventually had to content himself with a counterattack in his magazine.²⁹

The conversation on the boat excursion turned to reforestation. Dr. Raphael Zon of the U.S. Forestry Service complained of the overproduction by lumbermen. He included Backus in the indictment, "I know the situation in Minnesota. The forest will be cut out in about 20 years. Backus and the other lumbermen never gave a damn about the future. Backus was brave about it, and said so. He said it is all bosh about growing timber."³⁰ Zon thought it possible to combine industry and beauty. He thought that designation of a preserve as a national forest preferable to making it a park, because the former pays for itself and gives additional revenue, while the latter is a tax on the people.³¹

Adolph Meyer must have felt terribly uncomfortable on this trip. The rest of the party was not only hostile to Backus' proposals but to the man himself. Meyer was continuously on the defensive and could only defend his chief in such things as pointing out that Backus had won a few damage claim cases. Even that feeble plea was jumped on by Senator George Norris, the famed Progressive from Nebraska, "I have had many people who have written to me. It has been claimed that lands were overflowed in that case and that no damages were paid. These people should have damages. If a man has his land overflowed, damages must

be paid to him, and this must be done without his having to go to the trouble of a lawsuit."³² To Norris the question was one of elementary justice.

J. Backus' Expansion on the Seine River in Ontario and the Commencement of His Financial Difficulties

While government engineers surveyed the Rainy Lake watershed, Backus and other paper manufacturers were falling into a severe slump. The decline in prices for the industry began in the early 1920s and became marked by early 1927. The principal villain was overproduction. And Backus fell into the trap of continuing expansion when he should have consolidated his empire. His huge Seine River development included a storage dam at the outlet of Lac des Mille Lacs and power dams at Sturgeon Falls, Moose Lake, and Steep Rock. All of this power was to be transmitted to Fort Frances. Between 1925 and 1930 the Backus-Brooks companies engaged in an eight-million-dollar capital development program that included not only the dams on the Seine River, but also pulp and paper mills at Fort Frances and Kenora, Ontario. Before the roof caved in on Backus, his assets and properties were estimated in value at about eighty million dollars.

As the decline in the paper industry paralleled the general collapse of American industry and finance in 1929-1930, Backus continued to gamble. He issued five millions in bonds to cover debts and expansion. It was not enough. Then he commenced the risky practice of shifting funds between his subsidiary corporations. Through a series of steps, this eventuated in receivership for 17 of his companies on February 28, 1931. During most of 1931 Backus was able to continue his unsound manipulations when he was appointed as one of the receivers. Late in the year he was ousted when a second set of receivers came in. His participation in the remaining fight at the final hearings of the IJC in the Rainy Lake Reference took place under the cloud of impending disaster for his kingdom.³³

K. Engineering Reports Delayed by Disagreement and Dissension

In early 1929 it appeared that four volumes of a preliminary engineering report would be released simultaneously to the public. There were disagreements between the Canadian and American engineers about some of the numerical figures, with the Canadians questioning the validity of some of the statistics. The Canadians also wanted to expand the scope of the investigations. As a result, the volumes were released piecemeal. In 1929 a volume of Tables was released containing more than 320 pages of meteorological and hydrometric data on the entire watershed. A shorter volume of Plates was released in 1930. This volume had a series of graphs that illustrated the levels on Lake of the Woods, Rainy, Namakan, and most of the important lakes of the upper watershed. The text of the preliminary report and an atlas of maps were also released in 1930, but the Canadian engineers nevertheless thought further research was necessary. The textual report was solely factual in nature, with hardly a hint of interpretive opinion.³⁴

After the engineering reports were released, the IJC, Backus' advisors, and all interested parties studied the data to determine what use they could make of it for their different purposes. Almost no-one was completely satisfied because each party envisioned a different scenario for the watershed and each vision required a separate set of hypothetical questions to be addressed to the physical dimensions of the basin. Several senators, for example, asked the U.S. Engineers for a copy of a 1922 engineering study, called the Hussey Report, to find out what Backus intended at that time. The engineers thought the Hussey Report obsolete, since Backus had revised his plans several times after 1922.³⁵

Backus' own engineers, Adolph Meyer included, challenged the accuracy of the stream-flow data, and wanted new metering. Meanwhile, the newly created International Lake of the Woods Control Board, consisting of a Canadian and an American engineer, had serious differences in trying to fulfill their responsibilities for Lake of the Woods. Major Bullard, the American representative on the Board, accused the

Canadians of a breach of the treaty by drawing down the level of the lake below the designated figure during September to November of 1930. The Canadians excused themselves on the basis of keeping Kenora factories running during a period of high unemployment. But the complexities of the entire debate demonstrated how closely the outflow from the Lake of the Woods depended upon the inflow from Rainy Lake. The one system could not be successfully regulated without coordination with the upper watershed. Bullard lamented that he could not get any cooperation from the Backus-Brooks interests without some legal coercive agency for the Rainy Lake watershed.³⁶

Although Bullard could not blame his Canadian counterpart in the Rainy Lake Reference investigation for all of his difficulties regarding Lake of the Woods regulation, Bullard was equally frustrated with what he thought was a lack of cooperation from Stuart S. Scovil for the Dominion. Bullard pretended to be patient with Scovil, since the latter claimed ill health as the reason for his dilatory handling of the revised report. Bullard speculated that the Canadians had no desire to do additional research, since the business depression was making the building of dams a dead issue into the foreseeable future. Still, Bullard wrote repeated complaining letters to the IJC during 1931. At last, in the spring of 1932, Scovil said he would review a report drafted almost entirely by Americans, and submit comments on it. Bullard found these comments unobjectionable, but had misgivings about placing Scovil's name on the title page except as concurring in the report. Charles A. Magrath, as chairman of the Canadian Section of the IJC, smoothed Bullard's ruffled feathers by allowing both engineers to append explanatory letters at the head of the report. This was done, and neither letter reflected the true intensity of animosity between the two engineers. The Final Report that was released to the public contained only chapters two, ten, and eleven of the complete report, because the full report was so voluminous as to make printing costs prohibitive for the whole.³⁷

L. The Engineers Final Report of 1932

The Final Report of the engineers in 1932 was actually the first expression by scientists that actually seemed to state a bias in favor of the Backus proposals for development of the Rainy Lake Watershed. In point of fact, they merely reflected the inherent bias built into the wording of the four questions of the Reference. Since they were asked whether it was practicable and desirable to regulate Rainy and Namakan lakes to exceed 1108.61 and 1120.11 respectively, they could answer honestly, as scientists, that it was indeed practicable and desirable. As for desirability, that was predicated on using the additional water for storage, which in turn was to be translated into more power. In those terms it was desirable to raise the levels. When the question of damages came up, the engineers were equally cold and scientific. There was no expression of the volatile and emotional questions that were voiced by farmers and other riparian owners at IJC hearings. Instead, they translated the heart-rending issues into columns of figures that stated the cost of flowage easements by so many dollars per acre.

In chapter two of the report, the engineers came up with an hypothesis that would more than double the storage in the watershed. Besides Rainy and Namakan, only four other lakes were to be raised, namely La Croix by about four feet, Basswood by about thirteen feet, Saganaga by about eighteen feet, and Northern Light by about seven feet. While their figures claimed to be raising Rainy Lake six feet above the natural high water level, this would be only about two feet above the high level that had been adopted in practice. In other words, the engineers proposed to raise Rainy from 1108.6 to 1110.6. Similarly, while they said they were raising Namakan ten feet above natural high water level, in reality they would be raising it only five feet above the currently adopted high water level. In other words, Namakan would be raised from 1120.11 to 1125.

The cost of these five new dams and additions to three existing dams came to \$3,371,000. This price included the actual structures, structural modifications, plus the cost of clearing and the damages to land, and improvements thereon.

The engineers devised about a half a dozen methods of level regulation which differed from one another mainly in the amount of benefits bestowed on each portion of the watershed. In other words, one method might favor power interests on the Lake of the Woods and below, while another would favor the dams at Fort Frances/International Falls. In comparing these various methods, they determined that one method which pretty equitably balanced the benefits between Lake of the Woods and International Falls, was the best, in terms of cost efficiency, power generation, and fairness. This method was called Type B and was defined as follows:

The method of regulation (Type B) considered most advantageous contemplates, first, the maintenance of the maximum dependable flow at the outlet of Lake of the Woods, with second, the nearest approach to the maximum dependable flow at International Falls consistent with the above, third, the production of the maximum dependable outflow from the other boundary waters except Saganaga reservoir, which, fourth, is to be ³⁸regulated so as to produce the maximum prime power below.

The engineers recognized, with any system of regulation, that human nature tended to postpone action until a critical condition had been reached. They, therefore, favored the establishment of either a general plan, or control of a watershed by a single agency. They thought it essential to tie the Rainy Lake watershed to the Lake of the Woods basin with this control agency. This agency was to be guided by certain general principles which included a considerable margin of safety for flood allowance. But they had misgivings about any rigid plan (such as the later Rule Curve).³⁹

The engineers also devised several formulas for apportioning costs to the various power interests. Practically all of these computations tended to support Backus' contention that he was munificently assisting the reliable and consistent production of power downstream on the Winnipeg River. Oddly enough, Lake of the Woods' benefits were not enhanced significantly by Backus' upstream storage proposals. But the engineers' analysis would have given considerable satisfaction to riparian owners on Rainy Lake: they concluded that the current method of regulating Rainy

Lake worked to the maximum benefit of power production at Fort Frances, and that it resulted in the longest lasting continuously high levels possible. As a corollary to this conclusion, they stated that if Rainy and Namakan had been controlled by Type B regulation in the past, the floods of 1916 and 1927 would never have exceeded 1108.61 for Rainy and 1120.11 for Namakan.⁴⁰

M. The Founding of the Quetico-Superior Council in Late 1927 and the Intensification of Propaganda Against Backus' Proposals

When the 1925 hearings took place in International Falls, there was really no well-organized movement against the Backus dam proposals. True, there were two large environmentalist organizations represented at the hearings, the Minnesota Arrowhead Association and the Izaak Walton League, but neither one had a well informed member who was knowledgeable about the Rainy Lake watershed.

The hearings had received considerable publicity in the Twin Cities' press and many of the principals in the debate were residents of Minneapolis and St. Paul. Word got around in the Minnesota metropolis that Ernest C. Oberholtzer had made a fine performance at the hearings, and witnesses learned that he was intelligent, articulate, and a gold mine of information concerning the borderland country. Until 1927, Oberholtzer only worked among his friends at Ranier, International Falls, and Fort Frances. Then one day he got a letter from Frank B. Hubachek, a young Minneapolis lawyer. Hubachek invited Oberholtzer to the city late in 1927. At first Oberholtzer feared some form of trickery. Momentarily he learned that his new found allies shared his real apprehension of Backus' power. When he went to Minneapolis, the new group kept a very low profile that seemed almost conspirational in character. The group was made up of young business and professional men just getting started, who feared that Backus might try to destroy all of them in their businesses and professions, legally and in every other way.

While the spark that ignited them came from opposition to Backus' gigantic plan, they all agreed that a positive or affirmative program of their own was best, because it put them on the offensive. They drew their program from seminal ideas already generated by other environmentalists. Oberholtzer had seen an inspiring news article by a Canadian publicist, Arthur Hawkes of Toronto, in the autumn of 1927. Hawkes had suggested some form of international cooperation. The idea was taken up later in that same year at Duluth by members of the Izaak Walton League. They banded together with a few Canadians and many U.S. organizations like the American Legion, the Federated Farm Bureaus, the Federated Women's Clubs, and the Game Protective Association. The organizing phase culminated in the Minneapolis meeting where the Quetico-Superior Council was formed with Oberholtzer as President/Secretary. The name of the organization came from the two existing forest preserves on either side of the international boundary, as an indication that the membership intended to use those two forests as building blocks to be expanded into a much larger international park that would extend from Lake Superior to Rainy Lake.

For the moment, the Quetico-Superior Council (QSC) intended to raise money for the purpose of disseminating propaganda that opposed Backus' program of dam building and advocated the establishment of an international natural reserve along the borderland waterway. Oberholtzer had on hand a paper he had composed, so his new colleagues adopted it as the first pamphlet to be printed and disseminated. It was called "Conservation or Confiscation; An Analysis of the Water Storage Projects Proposed By Mr. E.W. Backus As Affecting International Boundary Waters, Particularly In Quetico Park and the Superior National Forest."⁴⁰ The first mailing of the pamphlet was of five thousand copies and eventually a total of perhaps 25,000 copies were sent out.

The pamphlet was a point by point analysis of Backus' presentation at the 1925 hearings and it expressed in an equitable way the tradeoff between the industrial and aesthetic evaluation of the Rainy Lake watershed. In the margin of the pamphlet Oberholtzer cited the page numbers from the 1925 hearings. It was very neatly done and an

effective piece of propaganda. When Backus was shown a copy of it, he was predictably infuriated. When asked to comment on it, he said that there was no truth in it whatever. He called it a "damned lie." When pressed further by his interrogators as to specific lies, reading him quotations of things he himself had said, he waved it all aside as being of no importance.

Probably though, the QSC's most effective propaganda reached the public by means of the newspaper. Hubachek and other Minneapolis members befriended several reporters and staffers for that city's newspapers, and whenever a news item involving the boundary waters came into print, the QSC people made sure there was some comment on the item from their vantage point. Pretty soon reporters and editors adopted their views without any pushing from the QSC. But Jeff Jones, an editor for the Minneapolis Journal, was also a member of the QSC. One day he was confronted by Backus about some Jones editorials. Backus shouted, "what in hell do you mean? . . . Don't I sell you my newsprint?" The veiled threat was quite obvious, but the market for newsprint was so bad, Backus did not dare cut the Journal off. Backus' mode of counterattack was to send Adolph Meyer, his chief engineering consultant, on the lecture circuit. The QSC would meet them by trying to get a member on the same speaking program. Usually Meyer got the worst of it, because he had a tendency to contradict himself, one speech as against another. The QSC people kept a good file of clippings and could cite old quotes by Meyer to point out his contradictions.⁴²

The QSC had set up parallel organizations in both Canada and the United States. From 1928 to 1930 their principal preoccupation was the promotion of the Shipstead-Newton-Nolan Bill. Their influence was paramount in the passage of the Act; but there were limitations in its provisions which did not necessarily apply to Backus' project. For instance the Act did not apply to private and state lands; but it did state that projects, such as Backus', required a special act of Congress when they proposed to alter the natural level of any lake or stream north of Township 60. Kettle Falls was in Township 70 north.⁴³ Additionally, the Shipstead-Newton-Nolan Act reserved all rights and powers granted to the

IJC. Backus had worked hard for the inclusion of that feature, because he continued to view the IJC as a savior and protector.⁴⁴

Besides propaganda, Oberholtzer and the QSC continuously provided the IJC with a series of legal briefs in behalf of their proposals and in opposition to Backus' program. One early brief, having more than seventy pages, was drafted with the assistance of two QSC lawyers, Sewell T. Tyng of New York and Ewen C. MacVeagh. This brief was released very early in the life of the QSC and was also duplicated and distributed to the public. In sum, it attacked Backus on nine points: First, that there would be no substantial benefit to navigation by an increase in the water levels. Backus had never provided any locks with his dams in the past and did not propose to provide any in the future. Second, the injury to the country scenically and for recreational purposes would be incalculable. Third, there would be no tangible or immediate economic advantages to be derived, and the growing tourist trade would be destroyed for an indefinite period. Fourth, the damage to property owners of all classes would be extensive, amounting to millions of dollars, and in many cases would be irreparable. Fifth, the additional water-power which would be made available at International Falls and Fort Frances would be negligible. Sixth, no assurance whatever exists that additional water-power would be available to the inhabitants of Minnesota, for the nebulous power interests which Mr. Ralph D. Thomas purports to represent are so vague and ill-defined, and their plans so speculative as to be unworthy of serious consideration. Seventh, additional flowage is neither needed nor desired by the Canadians on the Winnipeg River. Eighth, although constantly urging in general terms the advantages of his proposed increase in the lake-levels, Backus failed to present any concrete evidence of a need for such an increase by his own companies, or to cite a single specific instance in which additional water-power is necessary. Ninth, the communities and governmental authorities on both sides of the border are unanimous in their opposition. They are joined by the industrial interests and property owners of every class. Except for Backus not a single resident of the whole region appeared to support the proposal to raise the elevation of the lakes.⁴⁵

As to the ninth point, it became, in the months that followed the most debatable part of Oberholtzer's presentation. For as the demand for paper slackened, production at the Backus mills was curtailed, and men lost their jobs, or were cut back in hours. While few of the workers understood the economics of the situation, and none of them appeared at the 1925 or 1933 hearings in Backus' defense; it was afterwards remembered, when Backus was dead, that the old magnate had railed about a business conspiracy against him, and longtime workers then later identified their interests with the company's and were willing to speak up in its defense.

Nevertheless, from 1928 to 1933, Oberholtzer provided the IJC with a running commentary on the QSC's views about the Rainy Lake Reference. In late 1928 Oberholtzer complained about the continuing high water maintained at International Falls a whole year after the serious flood of 1927, "Rainy Lake is well above B.M.497 [1108.61 sea level datum] at present and there is no telling where it will go. The damage to property and business is continuous and lamentable and in some cases absolutely vital."⁴⁶ He said it was a humiliating experience that an American citizen should have to appeal to the Dominion Board of Public Works for relief. He wrote that the levels recommended in the Lake of the Woods Reference were destructive and impractical, there was continuous erosion and seepage, that the situation amounted practically to land confiscation, and that the power company exploited its privilege of holding the maximum height, by letting the waters frequently exceed those limits. He, therefore, recommended lowering the authorized height rather than raising it, regulating the levels strictly on a daily basis by a responsible governmental agency, and having that agency anticipate emergencies rather than reacting to them.⁴⁷

In a 1929 letter to the IJC, Oberholtzer succinctly repeated the QSC's proposal for a larger international nature reserve, and harkened back to the 1909 treaty which had established the IJC. He wrote that Article 8 of that treaty specifically referred to the continued applicability of the Webster-Ashburton Treaty when it said that "the foregoing provisions shall not apply to or disturb any existing uses of boundary

waters on either side of the boundary."⁴⁸ This passage, he wrote, applied to clause 2 of the Webster-Ashburton Treaty which protected canoeing when it said "that all the water communications and all the usual portages along the line from Lake Superior to the Lake of the Woods, and also Grand Portage, from the shore of Lake Superior to the Pigeon River, as now actually used, shall be free and open to the use of the citizens and subjects of both countries".⁴⁹

Oberholtzer also noted again that the 1909 treaty gave precedence to domestic and sanitary purposes, and to navigation over and above such uses as power and irrigation.⁵⁰ As the time approached for final hearings on the Rainy Lake Reference, Oberholtzer continued to remind the IJC of the QSC's existence. In September of 1932 he restated the QSC position:

We are not prepared to concede that any further dams or any further alteration of water levels on the border lakes are necessary or desirable. We agree with Mr. Scovil that the economic grounds are important and that on those grounds, if on no others, proposals for changes in natural conditions are unjustified. Our position in this respect is the same as that of the Shipstead-Newton-Nolan Act of Congress approved by the President on July 10, 1930. More than that we ask that the lakes already under control by dams be regulated in the public interest within a narrower range and at considerably lower maximum levels than heretofore recommended. We likewise oppose any settlement of flowage right⁵¹ at public expense or by international condemnation proceedings.

Shortly before the 1933 hearings, Oberholtzer had honed his proposals a step further: that the regulatory method for the waters coincide with that established for the Lake of the Woods watershed in 1925, to wit, an international board of control.⁵²

N. Backus' Declining Fortunes: But He Continues a Plucky Fight

As Backus combed the country for bankers and investors who would support his plans with capital investments, Adolph F. Meyer, his leading engineering consultant, continued to act as the magnate's standard bearer. Frequent newspaper articles would appear under Meyer's

auspices, defending the construction of more dams on the boundary. One such article, from 1933, presented a graph that purported to show that Backus' existing dams had given significant relief to the countryside during the flood of 1927. The text of the article stated that the enlarged outlet to Rainy Lake at the International Falls dam enabled the company to release 37,000 cfs, while in a state of nature the opening could have released only 32,000 cfs. Meyer's calculations were that the flood level would have exceeded 1112.21 sea level datum in a state of nature.

While Backus and his top lieutenant stood firm in the face of adversity, the receivers for his Minnesota and Ontario Paper Company submitted a much humbler proposal to the IJC in the form of a legal brief dated March 23, 1933. The receivers were C.T. Jaffray and R.H.M. Robinson. Since these gentlemen were relatively unfamiliar with the problem, having been appointed on November 30, 1931, they necessarily relied for their technical data, to a considerable extent, on Backus' man Meyer.

In the brief, Jaffray and Robinson adopted something of the attitude of Backus by claiming that the company's schemes were much maligned. They also assumed Backus' gratuitous assertion that more power was needed at his pulp mills without explaining who was going to buy all of his unwanted newsprint paper. They did express their awareness of the World Depression, but thought an upswing was in sight.

As regards past damages caused by high waters, the receivers thought the company was protected against all suits, since the authorizing legislation allowed the company to utilize the water up to high water marks. Thus the federal government was liable for all damages in the basin, and settlers who came in after the establishment of the dams, had no claim whatsoever, as the company had acquired the right of unlimited flowage by prescription, and floods were excluded as Acts of God. The whole brief was boilerplate Backus material.

An element of confusion was included in the receivers' brief, when they repeated some of Meyer's ideas from a conference in Chicago on

April 29, 1931. These ideas were labelled "suggestions," and the list included, as usual, a number of new power dams, as well as a number of storage dams. This factor tended to dismay the environmentalist opponents of dams, because the "suggestions" conveyed the notion that, if times were better, Backus still would want as much as he had ever wanted, even though the list of genuine "recommendations" which followed, was much more limited in scope.

The recommendations section stated that the receivers, at present, did not favor any increase in storage on either Rainy or Namakan Lakes. They still wanted a power dam at the head of Little Vermillion Lake, a power dam at Beatty's Portage on Lac La Croix, and several more storage dams on the upper watershed beyond Lac La Croix. What was not readily apparent in the wording of the Lac La Croix proposal, was the fact that one of the two major outlets to the lake would be blocked for a large portion of the year. Thus the Namakan River, entirely in Canadian territory, would lose most of its flow for at least half of the year. Oberholtzer, the QSC, and a host of environmentalists noticed this diversion feature immediately and attacked it with great vigor.⁵³

O. The 1933 IJC Final Hearings on the Rainy Lake Reference

The final hearings for the Rainy Lake Reference were completed in two segments during October of 1933. The first portion was held at Winnipeg, Manitoba, on the fifth and sixth; the second portion was held at Minneapolis between the ninth and twelfth of October.

At Winnipeg, W.O. Rogers appeared in behalf of the receivers for the Minnesota and Ontario Paper Company, and told that conditions in the paper industry had not improved, and that therefore the company could not afford to carry additional burdens. They had shut down the mill at Fort Frances and feared that the imposition of additional burdens would more likely result in the discontinuance of operations at International Falls as well. Despite this gloomy situation, Rogers nevertheless kept on the table the proposal submitted by the receivers on March 23, 1933, as a future project when times improved.

Immediately following Rogers, Oberholtzer presented a brief statement in continued opposition to the company proposals, and added, as usual, a few of the QSC's positive plans. He recommended again that the lake levels be regulated either by the IJC or an analogous control board as had been established for the Lake of the Woods. He also urged the drafting of a treaty between the United States and Canada that would create an international park for the purpose of preserving the wilderness. Under this proposal, some logging would be permitted under modern forest management practices, and all game, fish, fur-bearers, and other wild life were to be protected for maximum natural reproduction.

Adolph Meyer also spoke at Winnipeg in behalf of the dam-building projects; but he was much subdued and humbled. He had abandoned, for instance, the arrogant demands of his mentor and employer, E.W. Backus, that costs be apportioned according to benefits all up and down the watershed. He even specifically mentioned that no assessment should be made against the Winnipeg power interests or anyone else. The mighty had indeed fallen far.⁵⁴

1. Oberholtzer's Presentation at Minneapolis on October 11, 1933

When Oberholtzer got up to speak at the Minneapolis sessions, he must have sensed that victory was within his grasp. The intensity of the World Depression gave him and his causes an extra advantage. His presentation was graciousness to his adversaries. He had always been kindly to his chief opponent, E.W. Backus, and regularly referred to him as "neighbor." His talk, therefore, began with a consideration of the economic problems. He said that the QSC had not opposed power development as such, but merely unnecessary power development. In fact, he and his colleagues wished to insure the permanency of the paper industry, rather than its liquidation through overproduction. Furthermore, the rapid depletion of the forests portended even greater destruction to the Rainy Lake watershed because the forest itself guaranteed the regularity and evenness of runoff from the basin. Without the trees, drainage would be rapid, sudden, flooding, and erosive. In other words, the Minnesota and Ontario Paper Company was

working against its own best interests. Additionally, more storage in the Rainy River watershed would benefit power interests on the Winnipeg River far more than any generators in the upper basin. Otherwise, Oberholtzer was willing to sacrifice his dreams only if some stupendous mineral-find in the area would prove to him that the industrial importance of the watershed was of greater benefit to society than the aesthetic and spiritual values he had discovered there.

Oberholtzer proceeded to recite his usual litany of reasons why the Rainy Lake watershed should be preserved as a natural retreat from the cares of the modern world: That the Webster-Ashburton Treaty still held a protective umbrella over the region when it urged that the area be kept open to the enjoyment and use of the people of both countries; that the natural beauty of the territory was unique and should be preserved for that reason alone; that that country had served as a refuge for many Chippewa Indians and the region provided them with some of their traditional staples such as wild rice, wild hay, game, and fish; that no provision for locks was included in the development plans and this was one of the primary requirements of the 1909 treaty; that present regulation of levels for power was destructive of fish, game, and vegetation, and also made it impossible for a resident to keep a floating dock; and that scientific studies supported his contentions concerning wild life.

Oberholtzer spent considerable time attacking the Lac La Croix diversion proposal. He said that the receivers were hiding a very dangerous proposal as a harmless proposition. Where once Backus had sought to raise the level of Lac La Croix by about twenty feet and drown perhaps fifty islands; now he was not going to raise it at all, but he had kept the insidious aspect of diverting all the flow to the southern outlet. Oberholtzer not only challenged the engineers' ability to hold Lac La Croix at a continuously high level, but he attacked the diversion idea in every phase. In the lake itself, the steady high water introduced an entirely different regime through the four seasons and would affect every sort of life depending on those waters. Shutting off the Namakan River would deprive the Chippewas in the Indian Reserve of their fish supply,

their hay marshes and other forms of life. It would shut off the finest remaining river in this part of Ontario and would destroy innumerable beautiful rapids and waterfalls. The tributaries of the Namakan River would be mere dribbles for large portions of the year. The fish life in the tributaries would be devastated. Oberholtzer insisted that the receivers' claim about not affecting the scenic beauty of the place was hogwash because the periodic release of a flood of water down the Namakan River would destroy the scenic beauty, and to claim otherwise was unreasonable and contrary to the experience of all the people living in that area. Oberholtzer hit every other facet of the receivers' proposal, in like fashion, as every increase of levels caused by storage dams would cause harm similar to that around Lac La Croix.

Supportive of his contentions was the evidence Oberholtzer gave regarding the Seine River development. Oberholtzer had seen the destruction there and provided the IJC with photographic evidence of large tracts of denuded trees standing in water, stark witnesses to the human preference for industry over beauty. Oberholtzer had circulated copies of some of these pictures of the Seine as part of the QSC propaganda program. Besides, the three power dams on the Seine had no market for their electricity in 1933.⁵⁵

Oberholtzer moved from his negative criticisms to positive suggestions for remedying current problems. He wanted an international control board under the auspices of the IJC to regulate the Rainy Lake watershed. He desired a type of regulation that would anticipate emergencies rather than react to disasters. He cited the 1926-1927 season as a case in point: Heavy rains in the latter half of 1926, compounded by heavy snows during the winter should have alerted the Public Works Department, as well as company officials, to the coming flood. Instead, they kept Rainy above 1108 almost continuously from July of 1926 until the spring runoff of 1927. It was only the good fortune of a slow and gradual thaw that saved the day from worse destruction. As it was, the Fort Frances dam went a foot and three quarters over the authorized high level on June 9, 1927. Oberholtzer stated that this high water even worked against the company's interest, as it reduced the head over the

dam (higher tailwater), and they could not run the dynamos at full power. The company's reaction to this, predictably, was that "we need more dams." Oberholtzer justifiably heaped scorn on this notion.

Beyond water-level regulation, Oberholtzer added more of his positive suggestions, including the establishment of an international park that included both Quetico Provincial Park and the Superior National Forest, the entire area to be managed by modern forestry practices. Oberholtzer wanted some type of zoning on the fringes of the park such as limitations of the number of roads leading to the park. But the special zones would have included the already developed towns, which could participate in the tourism boom that would follow by becoming centers for providing services and supplies for tourists transiting the parkland.

Oberholtzer also supplied the IJC with a number of scientific reports that supported the QSC's stance on harm from dams to area wildlife and vegetation. He got one of them, Dr. Raphael Zon's report, printed into the transcript of the hearings. The thrust of Zon's report was that Backus' pulpwood harvesting was wasteful and unscientific, and that by doing a lot of clear-cutting, Backus was cutting his own throat. While Backus always claimed the pulp industry would be perpetual, Zon provided calculations and statistics to show that the industry could not last beyond twenty years if the current rate of harvest continued. Zon described how the forest also prevented floods by inhibiting rapid runoff. Backus' methods, said Zon, would convert wet swamps into dry muskegs and increase the hazard of forest fire. This, in turn, would remove such land from the tax rolls and pauperize the local government as it had already impoverished four borderland counties in the State of Minnesota. In contrast, Zon stressed the dollar value to these counties of the growing tourist industry.

From his presentation, Oberholtzer drew two major conclusions: First, that there was neither a general public demand nor a private need for additional power or storage in the Rainy Lake watershed either at present or in the discernible future, and second, that if at some future

date there should be such a need or demand, the resultant development should be tightly controlled and regulated.⁵⁶

2. Backus' Last Hurrah: His Presentation Before the IJC On October 12, 1933.

E.W. Backus surprised the panel when he spoke to the IJC on October 12. He more or less disassociated himself from the MANDO receivers by declaring that his proposed expansion plans in the borderland, were to be done under the aegis of his parent company, the Backus-Brooks Company, which was not in receivership. This company owned most of the proposed dam sites in Minnesota in fee simple. On the Ontario side, he said, none of his Canadian subsidiaries were in receivership; and while he did not own the land there (he held it by "grant in fee"), he did have the flowage rights. As Backus perceived his problems, there were only two obstacles to the development: obtaining loans for the project and getting permission from the Province of Ontario. He had presumed that the IJC would bless his enterprise.

Backus' talk was long and rambling and he touched certain motifs repeatedly. His favorite, of course, was that he needed more power at International Falls-Fort Frances. He said that from the first day of operating the generators, he was immediately short of power. He was able, somehow, to reconcile this assertion, with the reduced production at his mills since 1925. He talked about grandiose schemes that would provide perpetual employment for 12,000 men, without telling from where the unlimited quantity of wood pulp would be coming.

Another favorite Backus theme was the business conspiracy against him, particularly as manifested in the newspaper propaganda against his dam projects. He somehow concluded that political setbacks in 1908 and 1925 emanated from the same office, even though he hinted elsewhere that Oberholtzer was the ringleader of his adversaries, but had not formed an opposition until 1927.

Backus tended to contradict himself on the subject of tourism as well. At one time he would say that the tourist industry would not be harmed, but enhanced, by his new dams. At another time he said that tourism did not amount to much, and he suspected that the resort owner who counted 7,000 tourists at Tower, Minnesota, was counting them again when the same 7,000 appeared at Lac La Croix. He heaped scorn on a California man who asked the IJC to set aside a few thousand square miles in Minnesota and Ontario so that he could think about it, without planning to visit it.

As a plea for sympathy, Backus recited his version of the history of his enterprises along the boundary. He boasted of spending 45 to 50 million dollars in developing the region and even making it possible for tourists to reach the area. He cited the size of his operation, providing two million dollars in annual payroll outlay. He also gave a clue to the profitability of his mills by revealing that, in good years, his gross receipts amounted to between twenty to twenty-five million dollars.

Backus had no qualms of conscience either about the alleged damages filed against him in Minnesota and Ontario courts. He told of an early verbal agreement he had had with the Minnesota State Auditor, who promised Backus immunity from suits mainly because the acreage was worthless swamp land. The auditor tried to fulfill his promises, as governor, by running for that office, but was defeated at the polls. Backus thought that his few legal setbacks in the courts over damage suits were flukes, particularly the Algot Erickson case, where the Minnesota Supreme Court reversed a lower court's verdict. Otherwise, most damage cases were kept in a holding pattern, both in Minnesota and Canada. Backus added that Governor Jacob A.-O. Preus of Minnesota had urged him not to pay any damages because Backus was such a great benefactor to the state, paying out more than four million dollars a year in taxes to Minnesota alone.

In sum, Backus would have preferred to propose again his original plans, in which, among other features, he would raise the level

of Little Vermilion Lake by as much as eighty feet. The only reason he had drawn back from this ambitious plan was because of a lack of funds at the moment. He had always aimed high, and mentioned that from the beginning he had had stanchions in place at Fort Frances for mounting flashboards atop the dam. This would have given him three more feet of storage with only the cost of labor for emplacir.g the flashboards. Despite being placed in a begging posture, Backus still thought the two governments should pay for his expansion program, because it bestowed such magnificent benefits on them, "it would create a lake there [at Lac La Croix] that would be simply marvelous and it would improve navigation over the whole boundary country; but there is no use suggesting anything of that kind now."⁵⁷

Backus was an effective witness and it did not bother him in the least that Oberholtzer's lawyer friend, Sewell Tyng, went after him the way a fly pestered a horse. No one seemed to take special note of a number of documents Tyng filed in evidence as he interrogated Backus. One was a photostat of a letter Backus had sent to Secretary of War William Howard Taft in May of 1908, in which Backus made certain promises to the Secretary in return for the privilege of operating his dam at Fort Frances. The IJC accepted it as Exhibit #67 and filed it with the records of the commission. Backus said later that Taft did not consider the letter of much importance, saying it had the value of a piece of tissue paper. Oberholtzer thought, even thirty years later, that the letter was a way of getting leverage against Backus to force him to fulfill his obligations.⁵⁸

P. Final Report of the IJC on the Rainy Lake Reference, 1934

The conclusions and recommendations of the IJC in the Final Report for the Rainy Lake Reference were a compromise, and therefore a disappointment to both sides in the controversy.

The opening paragraph of the conclusions must have given the QSC members exalted hope for their cause when the text spoke of the "matchless scenic beauty" of the lakes, and determined that "nothing

should be done to destroy their charm." The next paragraph also endorsed the idea of a memorial park dedicated as a symbol of a hundred years of peace between Canada and the United States, a proposal of the QSC.

But the third paragraph showed that the IJC wanted a compromise between the opposing interests. It spoke of the large industrial investments in both countries and the thousands of people in Fort Frances and International Falls who had a perpetual stake in the continuing prosperity and operation of the electrical and manufacturing works there.

To please the QSC, the IJC saw no need to construct power works at the present time. To please the Backus interests, it left the door open for possible future development of storage facilities on the upper watershed. Yet in expanding on the various storage proposals, it gave a modest blessing to the last revision presented to them by Adolph Meyer at the Minneapolis hearings on October 12, 1933. Meyer's plan, as quoted in the conclusions, mentioned only Lac La Croix for regulation, at 1186 sea level datum, which was equivalent to the ordinary high level. The remainder of the proposal was generic, and contained an incipient notion of the later Rule Curve. By this plan, the lakes (unspecified), were to be allowed to fill up in spring to reach approximately their ordinary high-water level by about June 1, and then maintain that level as closely as practicable until fall. Beginning about October 1, the lakes were to be drawn down gradually so as to reach approximately their low-water levels by about April 1, in time to store the spring inflow.⁵⁹

After that point in the report the IJC members made some observations about the current situation. They noted the financial difficulties of Backus and his differences with his receivers. Because of this situation they doubted whether there were any prospects in the immediate future for dam developments. And when the time came for any interest to build dams, that interest could apply to the two governments and the IJC for permission.

In answering the four questions of the reference, the IJC was brief and to the point:

1. The Commission thought it impracticable and undesirable to regulate the levels of Rainy and Namakan at the present time. This view left the question open for some future application.

2. The Commission found it unnecessary to answer Question Two because of its response to the first question; but it did think it wise that someday the IJC be clothed with power to control and regulate dams in the watershed.

3. The Commission did not think it wise to answer Question Three for the present. This question dealt with methods of control.

4. The Commission did not think that any other interests benefited from the existing dams other than those who had built the dams; and that therefore there was no need to apportion costs among the beneficiaries.⁶⁰

Oberholtzer and Tyng for the QSC were disappointed. Tyng said that the report was a "nasty, pussy footing compromise, as uncourageous a piece of work as ever I saw." Backus was similarly disappointed, but for different reasons. At the hearings he had seen the total lack of support coming from Canadians and Canadian authorities. Their earlier support had been an enduring factor that sustained him. Nevertheless, Backus wore himself out trying to raise the credit he needed to restart his dam building schemes. He died on this quest while staying at a New York hotel on October 30, 1934.⁶¹

Little noticed in the Final Report was a statement that the Commission was desirous that Canada and the United States could establish the international park envisioned by the QSC and accomplish it by means of a treaty between the two countries. A treaty would result from the Reference, but not in the form foreseen either by the QSC or the IJC.

Q. The Convention Between Canada and the United States of America Providing For Emergency Regulation of the Level of Rainy Lake and of the Level of Other Boundary Waters in the Rainy Lake Watershed

In the aftermath of the Final Report, the President of the United States and the King of England appointed plenipotentiaries to negotiate a treaty regarding the recommendations of the IJC. The king designated William Lyon Mackenzie-King for Canada and the president appointed John Farr Simmons for the United States. The preamble to the treaty singled out a portion of the text of the Final Report as the basis for negotiation:

that it would be wise and in the public interest that the Commission be clothed with power to determine when unusual or extraordinary conditions exist throughout the watershed, whether by reason of high or low water, and that it be empowered to adopt such measures of control as to it may seem proper with respect to existing dams at Kettle Falls and International Falls, as well as any future dams or works, in the event of the Commission determining that such unusual or extraordinary conditions exist.

The resultant treaty or convention was short and sweet. It merely stated that the IJC "is hereby clothed with power" to do the things stated in the preamble. King and Simmons signed the instrument on September 15, 1938 and the two governments exchanged ratification on October 3, 1940. It now remained for the IJC to set up the regulatory machinery and define "when emergency conditions exist."⁶²

R. The IJC Hearings of 1941: St. Paul, February 24, 1941; Hibbing, June 19, 1941; Fort Frances, June 25-26, 1941.⁶³

The IJC held preliminary hearings in 1941 to get some public input regarding the proper interpretation of the 1938-1940 Convention. Most of the St. Paul meeting was taken up by governmental representatives, Canadian and American, Minnesota, Ontario, and Manitoba. Prominent among the private interests were representatives of the Minnesota and Ontario Paper Company, Messrs. J.H. Davidson and Wendel O. Rogers. There were, of course, a few representatives of private conservation organizations, such as E.C. Oberholtzer. Predictably, they were all

cautious and reluctant to make the definitive statement in behalf of their interests until the IJC had committed itself in one direction or another.

Oberholtzer repeated his favorite themes, and emphasized that when he spoke in behalf of the Quetico Superior Council, he spoke for an organization that had the blessing of the president. In 1934 President Roosevelt had honored the council by designating it a special watchdog committee to look after the welfare of the Rainy Lake watershed, serving without pay. Although the designation was mainly honorific, Oberholtzer maximized its effectiveness by prefixing his remarks with the statement that he spoke for that special committee appointed by the president.

Oberholtzer said that the basin had heretofore been regulated by the power companies and that not even they were satisfied with the results. He hoped, in the future, that regulation would balance the welfare of all interests in setting rules for the watershed. As usual, he recited his long familiarity with the area; told of the irretrievable loss of ancient hay marshes and wild rice swamps, opined that floods were less severe in a state of nature because the outlets were unobstructed, and generally defended wildlife and natural beauty. As regards water levels, he wanted lower highs and more narrow fluctuation. Ober allied himself with C. S. Wilson, deputy attorney general of Minnesota, who held the view that the long standing highs of 1108.61 for Rainy and 1120.11 for Namakan had no legitimate status in law and therefore were not sacred and inviolable. He believed that dead trees would give better witness than selfish power engineers. He wanted regulation and control that anticipated emergencies rather than a system that merely wrung its hands hopelessly in the time of flood crisis.

The Hibbing hearings of the IJC on June 19 were similarly brief. Here a few resort owners were present, as also a number of Minnesota officials. The state representatives held themselves to be neutral, as being interested in a solution that looked after all interests equally, realizing that the IJC probably could not satisfy all interests perfectly. There were also a few representatives of Canadian power interests, members of local civic organizations, a few observers from federal

agencies, the inevitable representatives of the Minnesota and Ontario Paper Company (MANDO), and quite a few private citizens.

The major event of the year for the IJC was the confrontation at Fort Frances of the 25 and 26 of June 1941. This was Backus territory and the tenor of the meeting seemed to have been orchestrated by some company representative, for nearly every speaker emphasized the necessity of keeping the mills going so that thousands of workers could keep their jobs. They, therefore, advocated the status quo, retaining water levels at the highest, so that the generators could produce the maximum amount of continuous power. There were represented innumerable union leaders and the rank and file, leaders of civic organizations, as well as power company representatives and the usual governmental spokesmen. One or the other sour note got lost in the chorus of voices favoring more power. For example, a few scientists disagreed on the affects of widely fluctuating water levels on the spawning grounds of various species of fish. One anomalous witness, Lee Allen, presented petitions from numerous organizations. But the most surprising portion of his presentation was a petition he presented in behalf of what he called the ten largest resort owners on the American side of Rainy Lake. While they would have been expected to favor lower summertime levels, their petition supported the power companies. When Allen was cross-examined, he admitted that a more numerous group of resort owners probably opposed the present high levels; but in a manner that reminded old timers of Ed Backus, he said that these newcomers knew the risks when they built their resorts on marginal land and that they should therefore be willing to suffer the inconvenience with good grace. After all, they were still prospering, despite the inconvenience.⁶⁴

One witness, J.J. Hadler, a member of the board of county commissioners for Koochiching County, provided the assemblage with a lot of statistical data to let them know how thoroughly dependent the county was on the industries in International Falls for tax revenues. Eight hundred thousand acres had never been on the rolls. Another 120,000 acres were managed by federal agencies, also untaxed. And during the Depression an additional half million acres had reverted to the state for

non-payment of taxes. Thus out of a little more than two million acres, 68% was unproductive. Koochiching County needed the industry to survive.⁶⁵ MANDO for example, paid 58% of the county taxes in the previous year. The county was recovering from the Depression, because in 1937 MANDO paid 65% of the taxes.

An important speaker at the Fort Frances hearings was Wendell O. Rogers for MANDO and the Rainy River Improvement Company. Rogers reported that earlier in the year MANDO had come out of receivership and that the interlocking corporation he represented intended to remain on solid financial ground. He indicated his firm's faith in the competency of the IJC, but wished also to notify them of certain rights the company retained from the 1905 contract with the Province of Ontario. He said that neither by the terms of that contract nor by the clauses of the Root-Bryce Treaty of 1909, did the interests of recreation have any similar privileged status. But when members of the IJC, as well as several Canadian members, pointed out a few irregularities in the company's permission to build dams, as well as there being no specified authorization in law for any designated water levels, Rogers backed down. He did not wish to stand on a strict technical/legal point of view, but would rely on the good judgment of the IJC. Rogers therefore reverted to a begging stance, pointing out how MANDO bondholders had gotten only fifty cents on the dollar for their Depression experience and he felt that they had suffered enough. He concluded by saying that MANDO had now so thoroughly integrated itself amidst the two border communities, that now the corporation had become the community and vice versa. It was a late paeon of praise for Edward Wellington Backus.⁶⁶

Rogers came back later during the Fort Frances hearings to define emergency conditions from the vantage point of MANDO. Rogers said that an emergency existed only when the water levels exceeded the authorized high water levels in use from the beginning, that is, 1108.61 for Rainy and 1120.11 for Namakan. He added, "we do not for a moment concede that the Commission has the right to regulate the lakes at all times."⁶⁷ He said nothing about low water conditions which had been specifically cited in the 1938-40 convention. The company's position

would be more closely defined later in a brief by its lawyers. The only other piece of information that Rogers gave was that the State of Minnesota had acquired all of the old prospective damsites in the upper Rainy Lake watershed in an out-of-court settlement to terminate the long standing damage suits between MANDO and the state.⁶⁸

The most closely reasoned presentation at the Fort Frances hearings was that of M.H. Wershoff of the Department of External Affairs, Dominion of Canada. He addressed mainly the question of defining the term "emergency conditions" from the Convention of 1938-40. He gave also an analysis of the early contractual/legal arrangements related to the construction of the dams. As a Canadian lawyer, he did not presume to interpret the legal status of the dams on the Minnesota side, but he did opine that the level control on the Canadian side was legally and fully under the Department of Public Works and that that department could have lowered the upper levels over the years, but had never done so. On the United States side, he guessed that there really were no legally designated levels unless they were specified in the plans submitted to the War Department for its approval. Otherwise, control had fallen into Canadian hands by default of the Americans; as the only concurrence on their side was from a District Engineer in St. Paul and not from the Secretary of War. He said he felt the Americans were equally free to change the designated levels downward. And even this was academic, as the IJC had now been given power to regulate emergency conditions in an appropriate manner.

When Wershoff came to the portion of his talk where he attempted to advise the IJC on how to define emergency conditions, he backed off from the strong line he had apparently been pursuing. His thesis was that the Commission had no jurisdiction under the convention to reduce the existing upper regulating levels on the lakes nor to raise the existing low levels on the lakes. He said that their jurisdiction commenced at these points. Despite this opinion, Wershoff favored anticipatory measures before the levels reached these critical points.

Wershoff went on to say that he knew of only one person, Oberholtzer, who held that the current range of levels was harmful. He, therefore, concluded that there was no reason to change the levels even if the IJC had the power to do so. He was willing to do something for the complaining resort owners only if the adjustments that were made would not sacrifice power output. He repeated Backus' perpetual defense that 95% of the resort owners came in after the dams were built and the levels set, so that they had no grounds for complaint. As a supportive argument, Wershoff cited the Manitoba and Winnipeg interests, who now favored more upstream storage. This was a turnabout from eight years previous when these same people denied that they needed more storage--but then their argument was economic; they did not have the money to expand their works. Mr. Stewart, the Canadian chairman of the IJC, took Wershoff to task, "your submission would almost seem to suggest that we have no power to do anything. I think we have."⁶⁹ Stewart asked the various interests to formulate their arguments in detail and submit them as legal briefs.

Before the Fort Frances hearings adjourned, one American got up to challenge Wershoff's views on emergency conditions. It was Chester S. Wilson, deputy attorney general of the State of Minnesota. Wilson said that while it was his position to stand neutral among the interests, he, nevertheless, believed that it was not the intention of the two governments in framing this treaty to limit the Commission rigidly to any mathematically fixed levels. In the manner of a schoolmaster, he stated that laws and treaties must be "construed first in the light of their language and second in the light of the objects to which they apply and the purposes which they seek to accomplish."⁷⁰ He advocated a liberal construction of the treaty. He said that the IJC's powers were now superior to any earlier governmental acts.

Wilson said that neither government (United States or Minnesota) had given the power company flowage rights on Minnesota lands. He said it took fifteen years of continuous flooding for any interest to claim acquisition of land by adverse possession in Minnesota and this had never happened. Nor had the United States government given the company any

flowage easement regarding Minnesota lands and the state was the largest single land owner on both flowages in question. In fact, the State of Minnesota could not give up its flowage rights, except by an amendment to its constitution. On the other hand, the state did not want to do anything that would ruin the business of the power company and throw large numbers of people out of work. He, therefore, favored a compromise settlement in the ongoing dispute. He proposed that the IJC establish an international board of control for the watershed as it had done for the Lake of the Woods after the 1925 treaty. This proposal was adopted by the IJC, and before 1941 was over, the International Rainy Lake Board of Control was in existence. The IJC set this board, consisting of an American and a Canadian engineer, into motion to draft a scientific proposal, based on the factual situation, for regulating the water levels in the watershed.

S. Two Legal Briefs of 1942: The Faegre and Benson Brief for MANDO of January 15, 1942; Its Refutation by an Oberholtzer Brief for QSC, May 25, 1942.

1. The Faegre and Benson Brief

In filing their 1941 brief to the IJC, Faegre and Benson of Minneapolis represented MANDO, The Rainy-River Improvement Company, and the Ontario-Minnesota Pulp and Paper Company Limited. Their basic purpose was to define the word "emergency" in such a way as to limit the IJC's impositions on the companies to the barest minimum. Faegre and Benson used several dictionaries, as well as selected quotations from IJC members and others at earlier hearings, to present the problems of definition. Webster's definition did not include the notion of "unexpected," while the Century Dictionary did. This became a crucial arguing point when Oberholtzer filed an opposing brief later.

Faegre and Benson first of all defined emergencies out of existence. They said that, of course, all levels between the assigned limits could not be emergencies. "Likewise, levels above ordinary natural high-water mark and below natural low-water mark are normal and

expected."⁷¹ They added further that the Convention of 1938-40 should not be used to disturb rights and obligations established under the contract of 1905. Their only concern about any kind of emergencies seemed to center around the notion of whether or not any given set of conditions might deprive the companies of water storage and power generation.

Faegre and Benson also opposed any interpretation of control and/or regulation that would anticipate problems in the watershed. Curiously, they excluded interferences during low water periods, even though it was expressly stated in the convention that low water problems were included. The companies wanted to use every drop of water left in the basin for power, even if a bare channel resulted. In explaining flood conditions, they tended to depict them as "Acts of God," without using that terminology, and urged their fellow sufferers to grin and bear it. They even pressed for popular sufferance on grounds of war time conditions at least for Canadians. The only "remedy" they seemed to recommend was that the IJC be given control when flood conditions were present; because such designations would enable the companies to point to some other agency as responsible. As it was, they used the same excuse at present: that the Department of Public Works had always been regulating the watershed, and the companies had been held up to ridicule by the public as scapegoats.

In one place in their brief Faegre and Benson wrote, "it is our considered opinion that the Commission cannot and should not attempt to determine today what will constitute an emergency in the future, and it cannot and should not attempt to prescribe today the methods of regulation which will become effective if an emergency arises in the future."⁷² Such a construction would have precluded the rumored day-to-day regulation idea and it would have practically deprived the IJC of any power whatsoever. If that were not enough, the brief scolded the IJC for not using the new convention powers during the autumn flood of 1941.

The entire MANDO brief was legalistic, reciting at great length the United States and Canadian statutes that applied to the dams; but de-emphasizing those portions of the laws that stressed company obligations and liabilities for flood damages. Similarly, Faegre and Benson cited some pages of court decisions that lent comfort to their interpretation of the companies' rights in the Rainy Lake watershed.

2. The Oberholtzer Brief for the QSC, May 1942.

Probably Ernie Oberholtzer had the legal assistance of Sewell Tyng and/or Frank Hubachek to draft the masterful QSC refutation of the Faegre and Benson brief. At any rate, the Oberholtzer brief is devastating in its cumulative effect on the credibility of the Faegre and Benson effort. With liberal use of sarcasm and irony, Oberholtzer reduced the opposition brief to a plea that power generation was the only defining parameter for declaring an emergency in the Rainy Lake watershed. Point after point, Oberholtzer turned arguments against their fabricators. Where Faegre and Benson held that recreation had no precedence in the list of watershed uses enumerated in the 1909 treaty, Oberholtzer points out that power is second last to every other usage designated by that instrument; and that indeed recreation is included in the order of precedence under "domestic uses." It would have been interesting had a judicial proceeding determined what uses were legitimately included under domestic uses, but Oberholtzer argued persuasively that recreation did fall under that category, and that it therefore had legal precedence over power.

Oberholtzer devoted some space to selecting the proper definition for emergency in his argument. Basically he adhered to the "unusual" and "extraordinary" delineations for emergencies, but he insisted that when the term emergency was applied to flooding conditions, it would not necessarily include the "unforeseen" or "unforeseeable" aspect. Applying the term to the facts in the case, he said:

The Companies' application of its own definition of the term "emergency" would in fact prevent measures being taken even at times like 1916, 1927, 1938, and 1941, which many observers

believe were foreseen and foreseeable. It would limit emergencies to tornadoes, earthquakes, and tidal waves. Though use of the familiar term "Act of God" is skilfully avoided, it is evident that the companies' brief intends to eliminate all the acts of man as affecting the levels of these lakes.⁷³

Oberholtzer delved into legal precedents just as Faegre and Benson had. From a Supreme Court of Canada opinion he derived the phrase that "dead trees are better witnesses" to the actual high water marks than are the facts as stated by lawyers. From the famous *Algot Erickson* case before the Minnesota Supreme Court he acquired a judicial declaration that the federal government had not given the companies flowage easements on lands once owned by itself; and that the companies retained liability for flooding both government and private lands.⁷⁴

Oberholtzer argued that the companies not only were limited in their rights by the language of the legislation authorizing the dams, but that Backus had bound himself to special obligations by means of a private agreement he had put into the hands of the Secretary of War, William Howard Taft, on May 22, 1908. Oberholtzer provided a copy of the document as an exhibit to his brief. There were four promises in the document, the two most important of which were that Backus (and all other future dam builders) could be required to pay charges for the privileges granted and that the government could levy "impositions" later, such as the lowering of authorized water levels on reservoirs.⁷⁵

Oberholtzer indirectly mentioned the continued applicability of the Webster-Ashburton Treaty to the boundary waters situation when he wrote that: "The waters are international in character and cannot be utilized for private use or even for the use of one country to the detriment of the other without the consent of both. Half the authority is really none. The child cannot be cut in two."⁷⁶ The wording of Webster-Ashburton was somewhat different, but the resemblance is obvious. The 1842 treaty said, "That all the water communications and all the usual portages along the line from Lake Superior to the Lake of the Woods . . . shall be free and open to the use of the citizens and subjects of both countries."⁷⁷ This passage of a treaty still in effect

would place the companies under the additional obligation to provide navigation locks on all their dams along the boundary.

Oberholtzer continued his argument by saying that flood damages were the issue that had brought about the Convention of 1938-40; and that that instrument had provided a means to prevent the recurrence of such damages. He then postulated four concrete instances of emergencies:

(1) Whenever the reservoirs are out of control, regardless of the levels.

(2) Whenever a large or rapidly rising accumulation of water in the tributaries, which has not yet arrived in the main basin, but can be expected to tax the facilities of these basins, is likewise an emergency.

(3) Whenever conditions provide more water for passage through the opening at Pither's Point (two miles above the dam) than can be proportionately discharged with the aid of the dam at International Falls, that is also an emergency and would seem to require suitable precautions and preparations.

(4) Whenever the inflow into either the Rainy or the Namakan basin threatens to become greater than can be handled at the dams, whether because of natural or artificial conditions, an emergency exists.⁷⁸

Oberholtzer used the most recent flood in the watershed as an example to illustrate the problems of regulation, and offered a suggested solution. The flood was fresh in everyone's memory because it had just happened during the autumn of 1941. Property destruction was greater than ever before because of all the recent building development in the region. Oberholtzer pointed out that, if the companies' solution had been utilized, the IJC would have assumed control when the lakes were over their banks, and would merely have assumed blame for a hopeless

situation. Oberholtzer said this flooding was all foreseeable and predictable because the upper reservoirs on the Seine and above Namakan were full. Rains continued for days with the stage far above the ordinary high water mark, and nothing was done. Rainy Lake was rising abnormally fast. Despite all this, no water was drawn off until 1108.61 had been reached. Even then five days were taken in opening the gates at Fort Frances to the capacity that the engineers regarded as helpful. Oberholtzer said this recent occurrence was a classic case demonstrating the necessity for anticipatory regulation. He said that the disaster was compounded by the state of the Seine River basin; wherein full dams were released at the worst possible moment for Rainy Lake. Ober had even heard that flood waters passed entirely over the top of the dam at Moose Lake on the way down to Fort Frances.

From all this Oberholtzer concluded that probably it was necessary for the IJC to lower the high water levels for both lakes in the interest of safety. Despite his vigorous attacks on the companies for their selfishness and greed for more water storage, he was willing to admit that the companies had substantial rights in law and in fact, and that they should not be taken lightly. He added that the welfare of several thousand workers depended on the continued prosperity of the mills, and that the well being of this industry should be balanced equitably against the other interests in the watershed which had legitimate claims for protection. Nevertheless, he advocated control of the basin that was "prompt, continuous, flexible, and dependable and based on exhaustive and unimpeachable data."⁷⁹ He concluded by pointing out that the 1938 Convention had used the phrase "emergency conditions," and that this combination of terms was of weighty significance, because "it is out of such conditions that emergencies arise. It is such conditions that the commission is charged to control."⁸⁰

T. The Engineers Propose a Rule Curve for Regulating Rainy and Namakan Lakes

1. The Ernest R. Gustafson Proposal

Both the American and Canadian engineers performed a thorough investigation of the Rainy Lake watershed as an after-effect of the 1941 hearings. Although there was considerable gathering of new data, most of their work consisted of an analysis of the data already available. The engineers had daily records of the lake levels since approximately 1912, and equally detailed precipitation and temperature information back to the same era. From this basic data, the engineers had composed a host of other analytical tables, including inflow and outflow rates at various levels, and the storage at various stages. The power parameter was also thrown into the computations.

Using this data, the engineers put together a number of hypothetical solutions as to what were the best levels of the lakes at given times in the calendar year. One hypothesis, drafted by Ernest R. Gustafson, an executive assistant at the Duluth engineer's office, found favor among his colleagues in early 1945. Gustafson's proposal for Namakan had a maximum high water level of 1118.61 starting at July 1. This level, a foot and a half lower than the old high, was to be maintained until October 1, when the winter drawdown was to begin. The lake was to be at its lowest, 1108.61, on the first of March. Thus Gustafson wanted only a ten-foot fluctuation, much less than the historic practice, and probably most satisfying to the resort owners on the perimeter of Namakan, Kabetogama, Sand, and Crane Lakes. He also wanted to increase the outflow capacity of Namakan by enlarging the outlet at Bear Portage, but his colleagues did not support him in this. When the various levels for each month were plotted on a piece of graph paper, the line took the form, roughly, of a sine curve, hence the adoption of the term "Rule Curve."

It should be noted that both of Gustafson's Rule Curve proposals had only maximum allowable figures for any given date. In

other words, there was no leeway between a maximum and minimum figure. This would be a later refinement of the curve.

Gustafson's first curve for Rainy Lake had much less fluctuation between the maximum and minimum during the calendar year. The high was to be 1108.11, from July 1 to November 1; and the low was to be 1104.61. Thus the total range of levels was to be only three and a half feet, much stabler than Namakan.

Along with the recommended levels, Gustafson's plan had several special regulations in times of drought or low water: If the lake level for Rainy was below the maximum on July 1, and the inflow was less than 10,000 cfs, the outflow was to be reduced to 4,000 cfs until the rule elevations were reached. He had similar regulations whenever the levels went two feet below the designated levels.

Relating these levels to power, Gustafson claimed that the minimum power under rule regulation would exceed that available under actual past regulation, but that the total power in the average year would be the same and the maximum power in both cases was limited by plant capacity and hence were practically identical. Gustafson also maintained that on the basis of his study more prime power (power available 100% of the time) could be obtained with a given capacity standby under rule curve regulation than under actual operation.⁸¹

2. The 1946 IJC Hearings and the Adoption of the Rule Curve Proposal.

One presumption was clear to all attendees at the public meetings of the IJC on the Rainy Lake Reference: that the IJC definitely favored the notion of anticipatory regulation in adopting their definition of emergency conditions in the watershed.

The first hearing at Kenora, Ontario, on June 27, 1946 was not a true test of public sentiment on the proposed Rule Curve regulation. The speakers there were mostly preoccupied with concerns that related to

the Lake of the Woods basin, so there was only a peripheral relevancy to the upper watershed in the discussion.

Chester S. Wilson, then Commissioner of conservation for Minnesota, did give an early indication of approval for the Rule Curve proposal. Wilson liked the idea of anticipating problems, and he said that this type of plan coincided with the sense of the United States Senate when it debated the ratification of the 1938-40 Convention. He speculated that the Rule Curve would need some fine-tuning adjustments in the future, but that it would serve well generally.

At International Falls on the following day, the meeting commenced with a reading of the engineers' report, which contained Gustafson's proposal in a practically unmodified format. Colonel Moore, the district engineer, after presenting the plan, suggested that anyone having questions on it, address them to Gustafson, who, he said, was authorized to speak for himself as the American member of the International Rainy Lake Board of Control. Moore had other suggestions besides the Rule Curve in his presentation. He wanted a comprehensive regulation scheme for the entire watershed that would have included more reservoirs properly controled, numerous meteorological observation stations, many hydrometric stations, a system of snow surveillance, many ground-water observation stations, and a system of quantitative precipitation forecasting. He recognized that such a comprehensive scheme was impossible of fulfillment because of poor communications in the area, the expense of the enterprise, and the complexity of the watershed. Nevertheless, it was an objective to be striven for.

While few questions were addressed to Ernie Gustafson, the traditional protagonists were present to deliver their comments to the assemblage. Most notable among these was Adolph Meyer, Backus' old consulting engineer and longtime advocate of more power and more storage. Meyer's questions and answers would have made the student of the Rainy Lake watershed believe that his chief, Backus, had returned to life. Meyer was curious why spring levels on Rainy were to be drawn still lower, when he thought the company could generate still more power

with a foot more of storage. While he seemed satisfied at Gustafson's answer, he nevertheless grumbled at the sacrifices the mills had been forced to make in deference to the Johnny-come-lately resort owners and canoeists. He also thought the power company would be hit especially hard by the new plan in times of low water. Despite his lengthy grouching, Meyer was willing to give the Rule Curve a try.⁸²

Beside Meyer, most of the other witnesses were also willing to give the new proposal a trial run. There were a few modest complaints, however. A resort owner on Namakan thought the curve still allowed too much fluctuation on that lake, and several scientists supported him because of the effects such fluctuation would have on fish and other forms of wildlife.

As usual, Ernest Oberholtzer was given an opportunity to speak. He offered cautious approval of the Rule Curve, basing his caution on the fact that he had only seen the proposal a few minutes before the morning session. Whenever Ernie had a chance to face a public audience, he seized the opportunity to repeat the facets of the QSC program for the entire border country. Besides, he stressed how riparian owners had sacrificed in the past by surrendering large portions of their land to the benefit of the power interests. He only differed with the proposal by suggesting the lowering of Rainy Lake by still another foot. He, too, thought that the Namakan fluctuations were too great. Once again he claimed that recreation had precedence over power, being categorized under "domestic uses." For the future, he urged that more emphasis be placed on an encouragement of navigation on the border lakes, possibly by adding boat locks at the dams. Otherwise, he felt that the Rule Curve proposal was a tremendous gain.⁸³

U. The Adoption of the Rule Curve Formula in the Frame of the IJC Order of June 8, 1949.

In 1946 the IJC tentatively adopted the Gustafson plan for regulating water levels, to be placed in trial operation. On June 8, 1949 the IJC issued a formal order that both incorporated the Rule Curve as well as

defined emergency conditions in the Rainy Lake watershed. On Namakan, emergency conditions were declared to exist when the level went higher than 1118.61 or lower than 1108.61. On Rainy the emergency parameters commenced above 1108.11 and below 1104.61. But the key paragraph was C, in which the commission authorized anticipatory regulation at all times. This last portion was, in effect, the Rule Curve as proposed by E.R. Gustafson. The calendar levels for Rainy were exactly the same as Gustafson's, but the Namakan levels were somewhat lower on the adopted curve during the winter and spring. For example, on December 1 the reality was 1.2 feet lower than the proposal; and by April 1 it was three feet lower. The high water mark for Rainy was set at 1108.11, a half-foot lower than the traditional level; and Namakan's high was set at 1118.61, a foot and a half lower than tradition.

The other portions of the regulation included Gustafson's special rules for low water times, but did not include Gustafson's proposal to tinker with the barrier at Bear Portage. In fact there was a prohibition against modifying that structure. The companies were to comply with the regulations under the immediate supervision of the International Rainy Lake Board of Control.

V. The Flood of 1950

The IJC and the Rule Curve ran into the unfortunate coincidence that the greatest flood in recorded history on Rainy Lake took place one year after the Rule Curve went into effect. In June of 1950 Rainy reached 1112.97, or nearly five feet higher than the authorized maximum. On Namakan, the level came within 17 hundredths of a foot of the all-time high. For four consecutive months Rainy Lake was over the authorized limit. On one day in June the maximum outflow from Rainy reached 47,800 cfs; and for a ten day interval in the same month the inflow averaged 59,090 cfs. Namakan made similar records: a maximum daily outflow of 26,000 cfs and a ten-day average inflow of 31,780 cfs.⁸⁴

Despite this horrendous cascade of water, residents of the basin did not wholly blame the flood on the Rule Curve or IJC regulation. Mostly

they decided to work with the IJC and its board to figure out what modifications to the Rule Curve would give them a better margin of safety in emergencies such as this. One oral report from the two members of the board of control in August of 1956 reflected this general satisfaction with the Rule Curve. The engineers claimed that during the floods of 1950 and 1954 the upper limits of the curve were exceeded only because of the inadequate size of the outlets for both lakes. They boasted that in 1955 and 1956 the anticipatory features of the new regulations had worked well. In 1955 the snow cover was minimal so that they permitted an early filling of the reservoirs lest they be unable to attain the normal summer highs. In 1956 the snow cover was exceptionally heavy, so much so, that snow surveys told them that the supply was even greater than during the record flood year of 1950. As a result, the engineers held levels below the Rule Curve during the pre-spring, to anticipate the heavy runoff. In both years the anticipatory measures worked. They avoided low summer levels in 1955 and a flood in 1956. The engineers were frank to admit that abnormal rains in June of 1956 could have thrown their planning into a cocked hat.

In summing up the results of Rule Curve regulation, the engineers also confessed that limitations on fluctuation for Namakan, as well as good control of levels on both lakes, had worked very well indeed for recreational interests. It remained to be seen how the power interests would respond at the upcoming IJC hearings on suggested modifications to the Rule Curve.

Besides commenting on the workability of the new water level regulation, the engineers put forward several ideas regarding changes on the dams at Kettle Falls and Squirrel Falls. They toyed with the idea of restructuring both dams with fixed crests. But even in their own calculations, this would have meant unacceptable flood levels for riparian owners in some seasons. Other proposals, such as adding an additional sluice at Kettle Falls, were rejected because of the prohibitive cost.⁸⁵

W. The 1956 IJC Hearings at International Falls and the 1957
Modifications to the Namakan Rule Curve

The purpose of holding public hearings again on the Rainy Lake watershed in 1956 was to test popular acceptance of the Rule Curve and to permit the engineers' presentation of some fine-tuning adjustments for the Namakan curve. On the latter subject, the major complaint with Namakan was that it had always been a lake with a wide range of fluctuation. The Rule Curve had lessened this problem considerably, but resort owners, sportsmen, and people interested generally in recreation and tourism were perpetually striving to stabilize the lake even more. Scientifically, it was unclear what effect this tampering had on fish propagation, but fishermen claimed that various species were disappearing despite considerable seeding of fish.

Very early in the proceedings, Colonel O.J. Rohde, the American on the control board, set forth the engineering proposals for changing the levels on Namakan. The most radical aspect of the new proposal was to add a minimum range of levels besides the already established maximums. In effect, the 1949 maximums became the 1957 minimums. The high water mark for summertime remained the same at 1118.61, which was a foot and a half lower than the old traditional maximum. The noticeable changes in levels occurred during the winter and spring months. Here the engineers proposed to allow relatively higher levels than previously. In April, for example, the new scheme would permit a high of 1112 which would be 3.39 feet higher than the 1949 curve. This was the greatest amount of proposed change for any time interval. Otherwise, the differences were less, with only a .57 foot difference in November; while during the summer months the maximum and minimum levels were identical. Also the lake would be brought up to summer levels a month earlier, in June. Naturally this proposal would displease the power interests, because it tended to reduce the amount of storage they could use in the winter and spring. When water was scarce, the power companies preferred to continue drawing the water as low as they must to keep the turbines turning.

Thus the testimony of the various witnesses at the hearings was predictable: The mayors of Fort Frances and International Falls promoted power generation so that their citizens would keep their jobs at the mills. Similarly, representatives of trade unions continued to support more power generation over less. A few witnesses went into specific aspects. Melvin Siegel, for instance, brought up an old question regarding the shoals at Pither's Point, two miles above the dam at Fort Frances. It had long been accepted by knowledgeable people that Rainy Lake could be drained more rapidly during floods if the obstructions near Pither's Point were removed. An old Corps of Engineers' study, conducted between 1910 and 1917, had determined that the cost would be prohibitive compared with the benefits.⁸⁶ The question surfaced periodically ever after, and the dollar-cost estimates rose proportionately as the years passed. In the beginning the proposal was considered to be an encouragement for navigation. In later years the idea was always viewed as a flood-control measure. Engineers perpetually repeated the explanation that at certain high water stages, with all gates wide open at Fort Frances, the dam could not release any greater quantity of water than the quantity allowed to pass at the Pithers Point obstruction. Equally, in 1956, no one at the IJC hearing could offer Siegel any comfort.

Siegel also asked questions about the use of stop logs at Kettle Falls. Since the logs were usually a foot wide, removal of any number of logs for level regulation resulted in fixed increments of water release. In other words no system of delicate adjustment, say an inch at a time, was possible. The IJC panel assured him that any drastic change in the system now, would be terribly expensive compared to the modest improvement derived.⁸⁷

E.R. Gustafson appeared at the hearings in a new role. He had retired from the Corps of Engineers and was now an engineering consultant for the Minnesota and Ontario Paper Company. He was, therefore, obliged to change his advocacy for all interests equally, to special pleading for his company and the power interests generally. He requited his mission admirably in a less abrasive fashion than some of his

predecessors. He naturally complained of the prospective loss of storage on Namakan, but made some good public relations remarks for his employers. He told how MANDO was using modern forestry practices in the harvest of trees for pulpwood, so that the supply would be perpetual. This was described along with the company's program of reforestation. As a good company man, he held the company interpretation of the Treaty of 1909, in which power was given mention on the list of precedences, while recreation was not specifically mentioned.

Of course E.C. Oberholtzer was there to take issue with Gustafson on this and other subjects. Oberholtzer was basically happy with the proposed new levels for Namakan, but, as usual, he took the offensive by saying that watersheds in a state of nature were always better regulated than by artificial means. He also hammered at some new cofferdams on tributary streams of Rainy on the Ontario side. He thought they would add more mischief to the general equation. Oberholtzer also thought the Spring 1956 regulation was not as good as the engineers' boasts. He said they closed the gates on Rainy too soon so that the June rule was violated on the high side.

Oberholtzer and Gustafson had some friendly disagreements about flood damages. Gustafson wanted to show that the company was hurt as much as anybody by the 1950 flood, but Oberholtzer wanted to stress that the company still had its most profitable year because of the high waters. Gustafson granted as how 1950 was a good year for profits, but that 1947 and 1948 were even better, and that the years after 1950 were progressively more profitable than the flood year. Oberholtzer and Gustafson also disagreed on the usefulness of the new Canadian dams on that side of Rainy Lake. Oberholtzer was skeptical that any dams could be beneficial. But when pressed by Gustafson, he was willing to admit that a dam that was expressly built for flood control purposes could be helpful if it indeed was regulated just for that purpose. But a storage dam, for example, had the innate temptation, within its walls, of luring its master into holding water levels abnormally high for the purposes of power, but with the side-effect of always being dangerous in the event of a heavy rain or the rapid thaw of a heavy snow cover.⁸⁸

Aside from this momentary flair of tempers, Oberholtzer proceeded point by point with his observations on the watershed. He was leaning more and more toward advocating a coordinated control all the way up and down the watershed. As regards the power companies, he always sought to put them on the defensive. He was perpetually stressing their obligations, such as preventing damages to riparian owners, or providing locks for navigation at the dams, or better sluices for moving logs. Ordinarily, Oberholtzer was deferential to the IJC and its control board, but on this occasion he scolded the engineers for not giving flood damages a more prominent place in their reports.

After Oberholtzer completed his remarks, several other witnesses got up to register their vote of confidence in the 1949 Rule Curve. These included a representative for the Canadian National Railways, a union leader, several spokesmen for sportsmen's organizations, and some Minnesota officials. Two witnesses were mildly discontented about the lack of discussion concerning the Lake of the Woods inter-relationship with the Rainy Lake watershed; but their dissatisfaction tended to lend weight to Oberholtzer's recommendation favoring an integrated system of control from Lake of the Woods to the height of land near Lake Superior.⁸⁹

As a result of the 1956 IJC hearings the commission issued a Supplementary Order in 1957 substituting the maximum and minimum levels for Namakan exactly as indicated in Colonel Rohde's report. This order was extended twice in 1962 and 1967.⁹⁰

X. The IJC Hearings of 1969

As the 1960s progressed, the International Rainy Lake Board of Control (IRLBC), an adjunct to the IJC, adopted the practice of holding informal hearings at either Fort Frances or International Falls. These were held annually, usually in April, and served both the purpose of giving the engineers an opportunity to summarize the previous year's operation of the Rule Curve, as well as to give the public a chance to comment on, complain of, or praise operations.

Influenced by pressures such as these, the IRLBC drafted a proposal in early 1969 to change the Rule Curves for both lakes. On Namakan the intent of the new proposal was to bring up the maximum by a little more than a foot in April so as to guard against shortages in dry years. The main adjustment was to be a delay in achieving full pool. Instead of having full pool for Namakan on June 1, it was put off until the 21st. Otherwise, the Namakan levels were pretty much the same as the 1957 Curve, except that the minimum levels were all adjusted downward, particularly in the spring months. These adjustments on the bottom side of the curve had a tendency to provide the power companies with more water storage.

The proposals on Rainy were somewhat similar, adding a foot to a foot and a half to the April maximums; and providing for the first time a list of minimum levels. Previously Rainy had had only a maximum curve. The new system would give Rainy a continuous range of levels from maximum to minimum that varied from .7 foot to 1.6 foot at any given moment. The range for the entire calendar year was to be only 3.5 feet from the lowest minimum to the highest maximum.⁹¹

When the various interests appearing at the International Falls hearings had an opportunity to comment on the new curves, it became apparent that the proposal had not successfully reconciled flood control with walleye spawning. The one interest warred against the other. The surprising aspect of the hearings was where the opposition to the new curves came from. It was the representatives of Canadian power interests, mainly from Winnipeg and Manitoba generally who shouted vociferous objections to the proposals. C.E. Birston of the Manitoba Hydro-Electric Board, and representing also the City of Winnipeg Hydro-Electric System, read an extensive statement by his colleague, Peter Able, in behalf of the downstream power companies. It was a curious turnabout from the 1933 Rainy Lake Reference Hearings when other representatives from these same interests had expressed their lack of interest in upstream storage and doubted whether they would ever need more hydroelectric power than they then had.

The company situation on the border had changed somewhat too. Although MANDO had become fiscally sound since about 1940, Boise-Cascade Corporation bought them out in 1966. On the Canadian side, the Ontario-Minnesota Pulp and Paper Company, Limited, remained a functioning reminder of what had once been part of the industrial empire of E.W. Backus.

Despite the fact that Rule Curve regulation had met with generally favorable response from the population in the watershed, there were still occasional problems with high water. Both Rainy and Namakan had had severe floods in 1950 and 1954. Nineteen hundred and sixty-four and 1966 were years of modestly high water for both lakes, and 1968 was the nearest thing to a severe flood for both systems in a decade. Rainy Lake would exceed the maximum figure on the curve almost annually, at least since 1949; but the intent on Rainy was to keep the maximum possible storage there during the summer time, as Rainy held almost three times the amount of water as the Namakan chain. In other words, Namakan's function was to keep Rainy "up to the mark." Thus Rainy held relatively steady levels over a year's span, while Namakan would fluctuate more widely.

Yet despite the high waters of 1968, local residents felt that things would have been worse without the Rule Curves. Many people, therefore, were interested in minor adjustments to the curves for purposes other than flood control. For example, sport fishermen and marine biologists from Minnesota had taken note of the declining abundance of walleyed pike in Rainy and Namakan during the 1950s. When the walleye population rebounded somewhat after the 1957 changes to the Rule Curves, scientists speculated that the higher spring levels on Namakan produced optimum conditions for walleye spawning in May. Studies during the 1960s tended to support this hypothesis, and academics from the University of Minnesota stated that it was sufficiently high waters, plus wave action over clean-gravel beds, that provided the best spawning grounds for the walleye. One study even specified the optimum level for spawning on Rainy, that the level should be about 1107.1 between the 1st and 15th of May.

Peter Able stated in his brief that the 1949 Rule Curve was beautifully designed to provide maximum storage for maximum power generation. He only mildly faulted the 1957 curve for its modest departure from this principle; but claimed that the new proposal was a radical deviation from tradition. He cited historical precedent from the conclusions drawn by the IJC in its 1917 Final Report for the Lake of the Woods Reference. Able was later called to task for using this particular historical source when it had been superceded by the 1938-40 Convention, which was now the regnant document. Dr. Rene Dupuis of the Canadian Section also reminded Able that several feet of storage in the upper basin provided only a few inches of storage on the Lake of the Woods. Thus the Rainy Lake people had to sacrifice much to give Lake of the Woods a little. Dupuis also half jokingly reminded Able that the upper basin could not permanently deprive him of their stored water; sooner or later they would get it.

Nonetheless, Able continued his attack on IJC regulation in the upper watershed. He pointed out how even the 1949 curve had cut Rainy Lake's storage in half, from a seven-foot range to three and a half feet. He added, "I would even be prepared to make the statement that downstream interests would be better off if there were no regulation of any kind of this lake."⁹² Able also thought that the Rainy Board of Control had previously taken better cognizance of downstream problems. Eugene Weber of the American Section called Able back to reality on this remark by saying that lower watershed power interests had very little trouble with riparian owners, as there were relatively few below Lake of the Woods on the Winnipeg River, while Rainy Lake and above had a major industry with resorters and other recreational interests. Weber argued that the IJC had to balance off the wellbeing of these new interests against power.

Able softened somewhat with this rebuke, by admitting that:

There are some aspects of this report [IRLBC's] that we think are commendable: the attempt to provide at least the same range throughout the year, the provision of a flood storage range, the attempt to narrow the divergence between Rainy and

Namakan as to the full supply levels; but we feel that the prospect of a summer storage range of only 0.6' [Namakan] and 0.7' [Rainy] respectively is entirely inadequate for summer carry-over. In other words, a wet⁹³ year cannot be held over to help with the subsequent dry year.

Eugene Weber tried to comfort Able and an ally, W.H. Winter of the Ontario Hydro-Electric Power Commission, by suggesting that lower watershed solutions lay closer to home. He asked them, for example, whether they had considered placing more generators on a widened channel. Winter replied that the widened portion would only function during periods of excessively high water and would be useless the rest of the year. Thus the proposal was not cost effective.

The only other outspoken representative of big business at the hearings was J.D. McQuarrie, spokesman for the Ontario-Minnesota Pulp and Paper Company Limited of Fort Frances. Once again the ghost of Ed Backus stalked the halls of the International Falls Civic Center. McQuarrie spoke as if Oberholtzer had never refuted Faegre and Benson's legal brief of 1942. He spoke of the company's old rights under the Canadian and American legislation and of broken faith by the IJC in not keeping its informal agreement to permit a six-inch leeway on the 1949 curve. Eventually, McQuarrie did settle down to suggest practicable means of adjusting storage problems. One suggestion involved power generation during low-flow periods. He urged that the lowest flows, 1000 cfs, be kept during the nights and mornings; and then, when power consumption in the two border towns was greatest, at noon and after 5 P.M., the company be allowed to utilize the higher flows of from 3000 cfs to 4000 cfs. This idea was taken under advisement by the IJC and adopted in a somewhat modified form.

Later in his talk McQuarrie hinted broadly that the IJC should assist the company by having the channel obstruction at Pither's Point removed. He stated the proposition in this way, "the only way in which the present flooding can be reduced is to provide greater discharge capacity [removing the obstruction] or further encroach upon the company's existing storage, or both."⁹⁴

McQuarrie's stand on the company's rights did not weigh too well with the commission; but his appeal for the jobs of two thousand and more company employees was a more effective entreaty. He added, "in fact, the very existence of these two communities is dependent upon the Company's Operations."⁹⁵

After McQuarrie sat down, a number of resort owners spoke to praise the Rule Curve and its anticipatory anti-flood features. One or the other speaker urged further downward change to the curve. The Hanson brothers of Ontario provided a momentary spark of excitement, when they blasted the stand of the downstream power interests. The brothers had lived on the Lake of the Woods for 56 years and were still running tourist-related businesses. Their complaint was that they had suffered from high water on innumerable occasions because of the power companies; and they knew that American riparian owners had been compensated for their losses (even by the Canadian government), but they knew of no instances in which Canadians had been compensated.

The most interesting irate citizen to speak, however, was an American, Frank M. Anderson of Hibbing, Minnesota. Anderson was the "Culligan Man" from his community, and he was not only angry, but he had an intriguing hypothesis:

He thought the Rainy Lake basin was still flooding because of the super-saturated state of its secondary tributaries. He recited a list of streams lateral to the basin both on the Canadian and American sides of the boundary. He believed that the Canadian lakes furnished as much water to Rainy Lake as did the Kettle Falls spillway. He urged the commissioners to canoe up some of these streams to see the old logging dams there blocking drainage, so that each of them was holding maximum pond at all times, and that when rains came, those drainages immediately and copiously released all new water.

He concluded:

They are backed up into large swamp areas, and the ground surrounding these lakes are in a super-saturated water condition. This means only one thing. In times of heavy rainfall or snow melt, these lakes do not possess sponge like characteristics. They are already soaked to the hilt. The

result is that they shed their rainfall immediately and throw your rule curves into a useless cocked hat. The ultimate result is excessive water held⁹⁶ back at International Falls, and expensive flooding occurs.

Anderson had not shot his bolt with that remark either, for, as he warmed to his subject, he irreverently referred to the IJC members as negligent and incompetent. The engineers received a ration of his sarcasm as well, when he said, "The St. Paul office must have been busy admiring their campaign ribbons," when Anderson tried to get them to act on one occasion. Talking about flood damages to private citizens, Anderson said, "On an Internal Revenue minimum of 20%, the government of the United States lost close to \$200,000 in revenue, because someone forgot to look out the window and see that it was raining and did not order the Boise Cascade Company to open the gates."⁹⁷ Anderson continued in this vein until exhausted. The thrust of his tirade was that he wanted the top of the Rule Curves lowered by another foot. A member of the IJC tried to end Anderson's testimony on a friendly note by playing with one of Anderson's phrases and saying, "I was wondering if Mr. Anderson was damaged by one cupful of water?" Anderson wittily quipped, "It is only that extra drop that makes Maxwell House coffee so good."⁹⁸

The hearings terminated shortly thereafter with Ernie Gustafson being the last witness. By this time, Gustafson had retired from active service and spoke neither for the companies nor for the IJC. He defended the new Rule Curves, praised their anticipatory features, but predicted continuing problems in the watershed. Problems would continue as long as a lake had limited discharge capacity at its outlet or outlets. He said that any lake had increased discharge capacity as the elevation rose; but floods would occur anyway because, unlike a cup or a saucer, lakes did not have 360 degrees of discharge capability. One simply did not have enough discharge capacity. With that the hearings ended.⁹⁹

Y. Rule Curve Changes: The IJC Supplementary Order of July 29, 1970

Weighing the arguments presented to them by the conflicting interests, the IJC nevertheless adopted the levels recommended by the IRLBC. The order of July 29, 1970 set the following levels for Namakan:

<u>Date</u>	<u>Minimum</u>	<u>Maximum</u>
January 1	1113.6	1115.3
February 1	1111.9	1114.1
March 1	1110.3	1113.1
April 1	1108.6	1112.0
April 21	1108.6	1113.1
May 1	1110.2	1113.6
June 1	1115.3	1116.6
June 21	1117.5	1118.6
July 1	1117.6	1118.6
August 1	1118.0	1118.6
September 1	1118.0	1118.6
September 11	1118.0	1118.6
October 1	1117.6	1118.6
November 1	1116.3	1117.5
December 1	1115.0	1116.4

The textual portion of the order specified what was to be done in flood and low water situations. In the latter instance the total outflow for both dams at Kettle Falls was set at 1000 cfs until the lake level returned to the minimum elevation.

Similarly, for Rainy Lake, the levels were set as follows:

<u>Date</u>	<u>Minimum</u>	<u>Maximum</u>
January 1	1106.4	1107.1
February 1	1105.8	1106.6
March 1	1105.2	1106.2
April 1	1104.6	1105.6
April 21	1104.6	1106.2
May 1	1105.1	1106.6
June 1	1106.6	1107.6
July 1	1107.4	1108.1
August 1	1107.4	1108.1
September 1	1107.4	1108.1
October 1	1107.4	1108.1
October 11	1107.4	1108.1
November 1	1107.2	1108.1
December 1	1106.8	1107.6

The Rainy Lake regulations also specified that the companies would operate the dam gates, but would do so as directed by the IRLBC. These rules also prescribed procedures at flood stages and low water stages. In the latter case 3300 cfs was the minimum between sunset and sunrise (for pollution-control reasons), and 4000 cfs between sunrise and sunset. The textual instructions also forbade any modification of the Bear Portage outlet from Lake Kabetogama until the matter had been studied and evaluated. These rules also permitted, for the first time, temporary deviations above and below the maximum and minimum prescribed levels. Otherwise, certain features of the 1949 and 1957 orders remained in effect.¹⁰⁰

Z. Recent Developments Since 1970 Relating to the Regulation of Rainy and Namakan Lakes.

During the 1970s the IRLBC continued to hold annual informal meetings at the border towns both to report to the public the regulation problems of the year and to solicit public feedback. It seems also that the companies, and more specifically, Boise Cascade, were more responsive than heretofore to complaints from private individuals regarding damaging levels whether high or low. There was, for example, a file of letters in the Corps of Engineers' files in St. Paul between James C. Klapmeier and the Corps concerning grievances of Klapmeier and some of his fellow sportsmen, for whom he functioned as a spokesman. Klapmeier built boats at Mora, Minnesota and had connections with resort owners on Kabetogama and Crane Lakes and was modestly knowledgeable about conditions on those lakes. He had mistaken notions, however, about how the lakes were regulated, occasionally sending abrasive letters to the Corps. A Boise Cascade officer patiently explained to Klapmeier how the process worked and was able to show that in certain instances the company's interest coincided with that of the resorters.¹⁰¹

Corps officers exercised similar patience with Klapmeier and sent him painstaking explanations concerning specific incidents when gates were or were not opened in timely fashion on the lakes. Part of Klapmeier's concern dealt with the growing obsolescence of the Kettle Falls dams. A

renovation project had commenced there in 1962, was continued in 1968, and completed in 1969. Extensive repairs were made to piers and abutments, including re-shaping of upstream faces of several piers, grouting of apron surfaces, and replacing of wood sills with concrete. Nevertheless, in 1977 Klapmeier sent a petition, signed by sportsmen and resorters, for further modernization of the dams. He contended that the mechanical operation of the stop logs was slow, cumbersome, and outdated. Klapmeier and his allies, of course, favored revision of the Rule Curves in a manner that would further enhance walleye spawning and recreational interests generally.¹⁰²

Besides pressures from Klapmeier, there were efforts by others to change the Rule Curves during the mid-1970s. The IRLBC conducted an extensive review of the question between 1974 and 1976, but the end result was a decision to keep the status quo, since the various proposed adjustments, mainly on Namakan, offered disproportionately high risks of flooding in exchange. Much of the rationale behind the move to seek changes was intended for the benefit of walleyed pike spawning.¹⁰³

During late 1976 and early 1977 Rainy and Namakan Lakes were troubled by abnormally low levels. Because of the length of the drought, the IRLBC sought and received special supplementary orders to reduce minimum flows to figures of 2500 cfs and 500 cfs on Rainy and Namakan respectively. If it had not been for pollution control problems, as well as dangerously low dissolved oxygen figures for fish, the Board might have sought to shut off discharges altogether. But these miniscule flows were approved to mollify the problems mentioned. Another drought during the spring of 1980 required a similar supplementary order in May of that year.¹⁰⁴

Since 1978, the IRLBC has continued to seek means for the rehabilitation of the Kettle Falls dams as well as more and better methods of collecting data on the watershed. The engineers wanted to add both newer and more numerous water-level gauges, as well as precipitation gauges, using radio and satellite telemetry to relay the data to Fort Frances. Cost on all these items was the limiting factor. There was also

a proposal to acquire newly-developed sensitive gamma ray equipment for defining the water content of snow on the ground. Hopefully, such equipment would supercede the laborious treks of a crew into the wilderness and would be much more accurate. R.H. Clark, the 1979 Canadian member of the IRLBC, had serious doubts about the gamma ray technique, saying that the large number of lakes and marshy areas, plus forested cover, could throw the readings into confusion.¹⁰⁵

AA. The Presence of Voyageurs National Park in the Watershed and
Several Proposals Relating to Water-Level Regulation Incident Thereto

1. The Boise Cascade Proposal to Dispose of the Kettle Falls Dams

Sometime in 1970 the Boise Cascade Corporation commenced negotiations with the Government of Ontario for the purpose of disposing of the Kettle Falls dams for a sum in the neighborhood of \$440,000.. The government did not consider such a transfer in the best interests of the people of the province and turned the offer down. Late in 1971 the offer was renewed, but the Ontario Department of Lands and Forests not only felt that the dams could not even be accepted as outright gifts, but also that the company should be reminded that it had serious responsibilities in maintaining the dams in a safe condition.¹⁰⁶

As the Voyageurs National Park was authorized by law in January 1971, various officials of the National Park Service learned of the Boise Cascade proposal, and, therefore, sought legal opinions concerning the feasibility of such an acquisition for the park. The Regional Solicitor for the Northeast Region, William H. Thornton, Jr., expressed the view that the Secretary of the Interior had neither general nor specific authority under existing legislation to acquire the Kettle Falls dams. He, therefore, opined that it would take an additional act of legislation. Thornton did not even go into the question of one of the dams being astride an international boundary and the other entirely in Canadian territory.¹⁰⁷

On July 5, 1973 the Corps of Engineers hosted a consultative meeting on this subject in their St. Paul offices. Two representatives of the Northeast Region NPS were present, as well as Merle Brooks, the designated first superintendent for the prospective VNP. The NPS people and the engineers took greater notice of the international features of the dam takeover and speculated that such a proposition would either have to be negotiated between the United States State Department and the Canadian Department of External Affairs, or there would have to be consultation with the IJC, or both. The group also decided that if the NPS took possession of the dams, it would have weighty responsibilities involving water-level regulation, upkeep of the dams, and the fulfillment of statutory requirements under Minnesota, Ontario, United States, and Dominion law. The consensus of the meeting, therefore, as expressed by Colonel Rodney E. Cox, was that such a takeover would not be wise and should not be undertaken.¹⁰⁸

Despite the dismal prospects that the dam acquisition could be accomplished, the Regional Director for NPS's Northeast Region continued to keep at least one member of the United States Congress informed about the prospects of the project. Thus, the Regional Director corresponded with John A. Blatnik, who coincidentally was a representative from Minnesota. The director had doubts, too, about the business aspects of the dam acquisition. Boise Cascade was asking "replacement value" for the two dams even though they had been amortized in their sixty years of existence. Despite this, the company was boldly asking for the price it would take to replace them. It would remind observers of old Ed Backus who would have sought to get the power benefit from such storage dams, have somebody else pay for them and their upkeep, and get a bundle of cash for the old dams which were to be knocked down. But the Regional Director seemed only to be haggling about price, as he was able to see that it was unreasonable to pay full price for dams that needed replacement.¹⁰⁹

NPS representatives continued to pursue the dam proposal for some time both via the legislative route and through the State Department. Representative Blatnik flagged in his interest when he

commented, "The disposition of these dams is turning out to be far more complicated than anyone had anticipated at the outset and taking on the character of high level international negotiations."¹¹⁰ Colonel Cox wrote Blatnik that he thought the question should at least be submitted to the IJC "for either its approval or statement of lack of jurisdiction."¹¹¹

Cox's suggestion was not followed and the matter lay in limbo. In 1977 Colonel Forrest T. Gay of the IRLBC revived the question again by writing to the IJC about the lamentable condition of the Kettle Falls dams. The stop logs tended to leak during low flow conditions, would freeze in winter, and never could be moved in a timely fashion. It now took nearly three days to fully open both dams. He appealed to the IJC that something be done; and mentioned that "The uses of the Namakan Chain of Lakes are changing, primarily because of the establishment of Voyageurs National Park, but also there are public requests to reduce the extremes of lake fluctuations that occur. In addition, future ownership and operation of Kettle Falls dams should be considered." To clarify the question of future ownership of the dams, he proposed to inquire of the National Park Service what its plans were regarding the Kettle Falls dams. Included in Gay's vision of the future fate of the dams was a need for a "water resource study" to determine both the benefits versus costs of a rehabilitation project for the dams as well as to learn the practicable alternatives for operating the dams. He thought that three to five years would be needed for such a study, and that the study was beyond the scope and authority of the IRLBC and should best be initiated by local interests along the border.¹¹²

As we shall see, both the superintendent at Voyageurs as well as local citizens in International Falls did take up the gauntlet. Colonel Gay wrote Voyageur Superintendent Brooks in February of 1978 to learn the latter's attitudes toward the Kettle Falls dams. He asked Brooks whether the NPS was studying water levels to ascertain which levels best served park needs, whether the NPS contemplated partial or complete purchase of the dams, or whether the NPS would contribute financially to the future operation and maintenance of the Kettle Falls dams?¹¹³

Brooks' reply to Gay's letter was not available in the Corps of Engineers files in St. Paul, but apparently he kept the option of NPS acquisition of the dams open, because a movement developed among private citizens in International Falls to create a small international park of about five hundred acres in the vicinity of Kettle Falls.

Meanwhile, in the spring of 1980, Boise Cascade Corporation transferred the dams to one of its subsidiaries, the International Falls Power Company, for the purpose of enabling licensing of the dams by the Federal Energy Regulatory Commission.¹¹⁴

This transfer of dam ownership had no effect on the tenacity of certain private interests to have a more direct influence on the regulation of water levels in the Rainy Lake watershed, as well as to have some form of control over the dams at Kettle Falls. Currently, during 1981, the Citizens' Committee on Voyageurs National Park (CCVNP), under the leadership of Donald D. Parmeter of International Falls, has as one of its projects, an intention to seek a monetary allocation from the Congress to proceed with a feasibility study regarding the disposition of the dams. In one of its information memorandums to Committee members, Parmeter outlined several options considered for the Kettle Falls dams. They included joint public ownership of the dams through some form of international ownership such as an international park; some other form of joint Canadian-American management of the historic Kettle Falls area; or the establishment of an international commission whose responsibility would be the ownership and operation of the dams. The latter commission was also seen as an advisory body to the IJC and IRLBC, as it would have water-level regulatory responsibilities. This commission would need to have administrative and managerial functions as well. The entire scheme needed adequate funding both for establishment of the park, payroll of its administrators, and upkeep and maintenance of the park and dams. The first step on the way to achieving Parmeter's and the CCVNP's goal of acquisition, was for an appropriation from Congress for a feasibility study. Parmeter, therefore, sent Senator Durenberger and Congressman Oberstar a proposal for them to amend Senate Bill 625 and H.R. 846 to authorize such a study.¹¹⁵

Don Parmeter and the CCVNP have involved themselves in many other facets relating to Voyageurs National Park besides water-level regulation, including fishing, navigation, wildlife preservation, ecological concerns, and recreational aspects. Parmeter was also mentioned as a possible nominee for the IJC membership when the Ronald Reagan administration replaced the members of the American Section.¹¹⁶

2. The NPS and Glen Cole's Proposal for Water Level Regulation on Namakan Lake

In early 1980, the second superintendent for Voyageurs National Park (VNP), J. Thomas Ritter, informed the Corps of Engineers in St. Paul that the NPS had several concerns regarding water levels within the park that included the adverse affects of levels on fish spawning, wild rice production, and shore and nesting birds. A member of his staff, Glen F. Cole, Resource Biologist for VNP, had drafted an alternative system for regulating lake levels that would consider these natural resources as well as the competing interests of flood control, hydroelectric power generation, and pollution control. Ritter submitted this proposal to the engineers for their appraisal.¹¹⁷

Cole's plan, from its analysis of the biological components in the total equation, hinted that the proposal would favor those elements to the neglect of power generation, always a sore point with the power companies in the past. Cole, for example, demonstrated his virtuosity with the needs of plants, fish, and other animals in his narrative section. His application of the strict mathematical formula of "three to one" in relating the water volume of Rainy Lake to Namakan and its adjuncts, however, did not take into account certain other scientific variables.

When Cole's Rule Curves were plotted on graph paper, the engineers would immediately attack them for violating many of the historical points of controversy that came up every time there was a public hearing on the Rainy Lake Reference. Cole's Rainy Lake curve formulation, while he said he was trying to more nearly imitate natural fluctuation, began the year nearly two feet lower than the present curve.

Based upon past performance, the engineers would have torn into this proposal as being much too risky for low runoff springs. It would also aggrieve the power interests for requiring at least three very low power generation months annually.

Next, Cole wanted Rainy to rise from its lowest point (1103.2) on April 1 to its highest point (1108) about May 15. The engineers would have pointed out at least four difficulties with this portion of the plan:

(1) It demanded that the spring runoff take place during that interval, a proposition that was problematical.

(2) It brought the lake to full pool a month and a half earlier than at present, and therefore took no account of June heavy rains.

(3) By its lower starting point, it made it highly improbable that the lake would achieve full pool about half of the time.

(4) Finally, Cole's Rainy Lake curve proposal permitted immediate gradual decline from the peak level, thus guaranteeing to the power companies that they would have daily declining amounts of electrical power, when it was axiomatic with them that their prime objective was to seek continuous unvarying power output the year around. It would also be an expensive proposition for the power companies, as they would have either to substitute expensive coal/steam generated power for the lost hydroelectric power, or lay workers off at the mills. This portion of Cole's curve would also irritate boaters during the summer season who wanted constant levels so as not to have to worry about shoals and rocks appearing.

Cole's Namakan curve proposal had similar difficulties, but it started in the spring three and a half feet higher than the current curve, thus probably guaranteeing more frequent floods on Namakan, which had always been famous for its wild spring fluctuations. Historically, the engineers thought that they had restricted Namakan to a very narrow band, nine feet; and now Cole wanted to limit it even more,

to five feet, a very risky and dubious proposition. Cole also had Namakan dissipating its storage immediately after reaching its peak, in mid-May, again anathema to power interests. Also this early peak did not make allowance for the usual heavy June rains.

The reaction of the engineers in St. Paul to Cole's proposal was diplomatic. In a direct reply, Colonel William W. Badger asked for time to study the plan. Obliquely, when Badger mentioned the idea to the Secretary for the American Section of the IJC, he referred to Cole as "a person unknown to us in the field of hydraulics and hydrology;" but he repeated to the IJC that the engineers would review the proposal in time.¹¹⁸

From a July internal "Memo For the Record" among the St. Paul engineers, it was obvious that Cole's proposal was given low priority. Peter A. Fisher of the St. Paul office had a July telephone conversation with Stewart Fonda, an engineering advisor with the American Section of the IJC, in which he told Fonda

that because of manpower and money shortage and the improbability of Mr. Ritter's [Mr. Cole's] proposal, work on the evaluation had low priority and would receive little effort unless local riparian citizens would be successful in getting positive Congressional action on a general investigation study for the area. Mr. Fonda was informed that this position was also related to Mr. Ritter during our May 8, 1980 meeting.¹¹⁹

On September 22, 1980 Colonel Badger of the IRLBC informed the VNP Superintendent by mail that the District intended to review Mr. Cole's work in October of Fiscal Year 1981. He wrote, "As a beginning, we have scheduled a reconnaissance tour of Rainy-Namakan for the staffs in late October after which we will begin our evaluation." Badger expected that his staff would complete a report and send a reply to the park sometime in January or February of 1981.¹²⁰

Also during September 1980 Glen Cole revised his original proposal, finding it necessary to do so because of "comments and suggestions received to date, and other new information." The Alternative Plan, like the original, addressed mainly Cole's basic interests

as a Resource Biologist. He was basically interested in providing a healthier environment in the park for fish, aquatic animals, wild-rice, shore and marsh nesting birds, and all other forms of life.

In the mathematical portions of the new plan, Cole again leaned heavily on simple ratios of water quantities available in Rainy and the Namakan chain of lakes. These ratios were doubtlessly based on his research in engineering literature for the watershed. Unquestionably, the engineers would frequently use such ratios in a "rule of thumb" way to make rough calculations concerning any ongoing water-level problem in the area. These ratios were indubitably the result of complex computations based on contour maps and actual statistics painstakingly compiled in the watershed over the years. The engineers knew, too, that there were many variables that could throw such "rules of thumb" out the window. For example, a heavy rain north of Rainy Lake, with little or no rain to the south and east of the lake, could cause flooding on Rainy without any significant inflow from the Namakan chain. Such a possibility was remote, but not implausible.

Although this writer was unable to get a copy of Cole's new graph for his revised rule curves, the narrative description available gives sufficient data to view its various components: Cole's objective again was to closely replicate the natural fluctuations of the lakes. He settled upon four feet for Rainy, while the operative curve had 3.5 feet; and five feet for the Namakan chain, where Namakan now had ten feet. Thus from the start, he was not duplicating nature; and oldtime residents, such as Oberholtzer, had claimed that Rainy Lake, in a state of nature, had fluctuated more than ten feet; and that Namakan had fluctuated as much as seventeen feet in a state of nature.¹²¹

Cole next proposed in his alternative plan to commence his drawdown after the peak level at the start of the summer season. This violated every historical practice since the dams were built, both during the era when Backus set his levels almost at will, and later, too, when the IJC regulated levels by means of the 1949, 1957, and 1970 Rule Curves.

Cole's purpose in commencing the drawdown during summer was to permit wave action to wash the spawning areas for walleye during that interval. Cole frankly admitted that a foot of water storage on Rainy would be lost for the winter when he began his early drawdown. He wrote, "Comparable summer-fall declines to about 1103 M.S.L. would probably also favor walleyes in Rainy Lake, but this would reduce overwinter allocations for generating hydroelectric power from 5 to 4 Rainy Lake feet."

It is not difficult to contemplate the reaction of power interests to such a proposal. They would cite the historic record since Backus' time, how the company was obliged to sacrifice foot by foot huge quantities of stored water. Backus had originally built three foot flashboards atop the Fort Frances dam so that when electricity demand warranted, he could immediately raise the level of Rainy Lake to 1111.61 without seeking permission from anyone. The 1933 hearings had lost these three feet of storage for Backus, and the coming of the Rule Curves had lost for his companies another half foot on Rainy. On Namakan, his people had lost a foot and a half of storage off the top, and several feet off the bottom end of the curve.

Cole's summation is interesting:

The use of this system, or any other system, should be guided by statistically derived predictions from past records; and projections from yearly snow station, rainfall, and gauging station measurements. Research should document the effects of changed fluctuations on different uses, test if desired results are obtained, and develop ways for improving a system and predicting potential emergency conditions. Such research should be cooperatively carried out by biologists, hydrologists, and engineers from the involved organizations. This technical group will make joint recommendations, with supporting data, to the heads of their respective organizations who would make joint recommendations to the IJC. The IJC would provide for public review and act on recommendations.

This summary very concisely lists the actual performances of the IRLBC and the IJC over the past forty to fifty-five years. Cole seems to hint at the necessity for creating an additional organization

between the public and the IJC, which in reality, is or has the functions of the existing IRLBC. It may be that the IRLBC from time to time might have the need for scientists from still other disciplines; but in the past, experts from a very wide range of fields have given input to the IJC, either from within its own organization, its various regulatory boards, or from the outside, at either informal hearings, before the IRLBC, or formal public hearings before the IJC. Both the IJC and its boards have need for technical expertise such as that of Cole as a biologist. He can tell the IJC what the requirements are for the various forms of life under his purview, so that the IRLBC and the IJC can attempt to give him what he needs, while at the same time trying to balance off all of the other interests and concerns in the watershed against the requirements for enhancing conditions for biological forms of life.

Colonel Badger forwarded copies of Cole's alternative plan to the IJC as well as to the Canadian Inland Waters Directorate in Ottawa.

Apparently, the St. Paul office still did not view Cole's plan with any great urgency, but they took note of his advice regarding biological problems in the watershed, and would consult them on the next occasion when a large scale proposal for modifying the Rule Curves was put onto their agenda.

ENDNOTES FOR PART IV

1. Treaty Series, No. 721; Treaty and Protocol Between the United States and Great Britain in Respect of Canada to Regulate the Levels of the Lake of the Woods, Signed at Washington, February 24, 1925, Ratification Advised by the Senate, March 14, 1925, Ratified by the President, April 9, 1925, Ratified by Great Britain, May 30, 1925, Ratifications Exchanged at Washington, July 17, 1925, Proclaimed, July 17, 1925, (Washington, D.C.: Government Printing Office, 1925), copy filed in NA RG 76, Entry 320, Box 10.
2. E.W. Backus to Minister of Lands and Forests, Toronto, Ontario, August 25, 1920, included with Superior NF Film, Roll 7, reprinted in the Duluth News Tribune of August 13, 1925, copy in NA RG 76, Entry 320, Box 95.
3. E.W. Backus to McKenzie-King, November 15, 1922, filed in NA RG 76, Entry 320, Box 96.
4. 1925 IJC Hearings, pp. 58-60, 213-5.
5. Ibid., pp. 71-83.
6. Ibid., p. 98.
7. Ibid., p. 99.
8. Ibid., p. 110-111.
9. Ibid., p. 116.
10. Ibid., p. 145.
11. Ibid., Backus' testimony extends from page 91 to 165. Thereafter, to the end of the hearings, his intrusions appear regularly.
12. Ibid., p. 193.
13. Ibid., p. 204.
14. Ibid., p. 229. Oberholtzer's testimony extends form page 228 to 233.
15. Ibid., p. 229.
16. Ibid., p. 231-2.
17. Ibid., p. 234-5.
18. Ibid., p. 236.

19. Ibid., pp. 242, 248-9. Thomas' testimony extends from page 236 to 254.
20. Ibid., pp. 254-5.
21. Ibid., p. 260.
22. Ibid., pp. 271-2.
23. Ibid., p. 342.
24. Ibid., pp. 353-4. Pratt's testimony extends from page 352 to 362.
25. Ibid., p. 403. Backus' summarizing statement extends from page 396 to 399.
26. Minutes of a Meeting of IJC Engineers, April 3, 1928, filed in NA RG 76, Entry 320, Box 96. Also see a Crawford/Scovil letter to the IJC, August 20, 1927; a Crawford letter to the American Section of the IJC, July 18, 1928; both Ibid.
27. Bullard to William H. Smith, Secretary to the American Section IJC, August 9, 1928; Smith to Bullard, August 14, 1928; G.A. Youngquist, Minnesota Attorney General, to IJC, September 5, 1928; all in NA RG 76, Entry 320, Boxes 95 and 96.
28. Bullard's Notes of a Cruise Between Little Vermillion Lake to Kabetogama Lake on August 28, 1929, filed in NA RG 76, Entry 320, Box 96; hereafter referred to as Bullard's Notes.
29. Oberholtzer Interviews, October 21, 1963, pp. 32 to 35 of the transcript, and March 13, 1924, pp. 29-30 of transcript, and Bullard's Notes, p. 11.
30. Bullard's Notes, p. 15.
31. Ibid., p. 17.
32. Ibid., p. 19.
33. Searle, pp. 90-4.
34. Copies of all these volumes were found on Superior NF Film, also filed in NA RG 76, Entry 320, Boxes 93 and 94.
35. Bullard to Smith (IJC), August 25, 1930, with undated enclosure about the Hussey Report, by R.C. Vogt, filed in NA RG 76, Entry 320, Box 96.
36. Meyer to Smith (IJC), September 26, 1930, and Bullard to Bartlett (IJC), November 13, 1930, both in NA RG 76, Entry 320, Boxes 96 and 90 respectively.

37. The Bullard-Scovil controversy is pretty well covered in the following letters: Bullard to Scovil, November 25, 1930; Bullard to Smith (IJC), March 4, 1931; Bullard to Bartlett (IJC), marked Confidential, March 31, 1931; Bullard-Meyer telegrams, March and April 1931; Scovil to Magrath (IJC), April 6, 1931; Bullard Memo to Smith, April 10, 1931; Bullard to Smith, April 21, 1931; undated "Memorandum on the matter of Preparation of Final Report of Rainy Lake Reference", 1931 and 1932; Bullard to Bartlett, February 29, 1932; Memo of Commissioner Bartlett, May 18, 1932; Bullard to Smith, June 2, 1932; Smith Memo, June 4, 1932; Burpee (Canadian IJC Secretary) to Bartlett, July 4, 1932; and Bullard to IJC, July 11, 1932; all in NA RG 76, Entry 320, Boxes 95, 96, 98, and 99.
38. Final Report (Engineers) to the International Joint Commission Relating to Official Reference Re Levels of Rainy Lake and Other Upper Waters; Chapters II, X and XI (Ottawa, 1932), p. 27; hereafter cited as 1932 Engineers Report.
39. 1932 Engineers Report, pp. 28, 33.
40. Ibid., p. 40.
41. Superior NF Film, Roll 7, NA RG 76, Entry 320, Box 90.
42. Oberholtzer Interviews, October 21, 1963, Reel 1, pp. 10-25 of the transcript.
43. Provisions of the Shipstead-Newton-Nolan Act are found in Searle, pp. 73, 81, 89, 115, 117, 123, 125, 180-3, 191, 192, 222, 223.
44. See Backus' testimony in 1933 IJC Hearings, pp. 881-2.
45. Oberholtzer Brief, undated (probably from 1928), entitled "Brief on Behalf of Ernest C. Oberholtzer in Opposition to Elevation of Lake Levels," filed in NA RG 76, Entry 320, Box 85.
46. Oberholtzer to Smith (IJC), October 1, 1928, in NA RG 76, Entry 320, Box 95.
47. Ibid.
48. 1909 Treaty and Rules.
49. Text of Webster-Ashburton Treaty, August 8, 1842, reprinted in Ackerman/Pearson History as Appendix A.
50. Oberholtzer letter to John H. Bartlett (Chairman, American Section, IJC), September 28, 1929, filed with NA RG 76, Entry 320, Box 95.
51. Oberholtzer to Bartlett, September 27, 1932, filed in NA RG 76, Entry 320, Box 90.

52. Oberholtzer to Mr. B. Mintener of Minneapolis, August 23, 1933, filed in NA RG 76, Entry 320, Box 88.
53. Statement to International Joint Commission in Behalf of C.T. Jaffray and R.H.M. Robinson, Receivers for Minnesota and Ontario Paper Company, March 23, 1933, filed in NA RG 76, Entry 320, Box 97, especially pp. 1113, 1617, 2731, 3546.
54. 1933 IJC Hearings, Winnipeg, Vol. I, p. 45.
55. Ibid., Minneapolis, Vol. III, pp. 700-701 refer to the pictures Oberholtzer had taken along the Seine and Namakan Rivers.
56. Ibid. Oberholtzer's presentation extends from page 657 to 702. His ally, Sewell Tyng, kept the floor from page 702 to 712 and beyond.
57. Ibid., p. 869. Backus' testimony extends from page 848 to 897; also page 1001.
58. Ibid., pp. 875, 882. Oberholtzer referred to this letter in his interview of October 22, 1963, Reel 2, pages 8-10 of the transcript (Oberholtzer Interviews).
59. Final Report of the International Joint Commission on the Rainy Lake Reference, Washington-Ottawa, 1934 (Ottawa: J.O. Patenaude, Printer to the King's Most Excellent Majesty, 1934), p. 49; copies filed with Superior NF Film, VNP Files, and NA RG 76, Entry 320, Box 99, Folder #3; hereafter referred to as Rainy Final Report.
60. Ibid., pp. 48-52.
61. Searle, pp. 102-4.
62. Treaty Series, No. 961; Emergency Regulation of Level of Rainy Lake and of Other Boundary Waters in the Rainy Lake Watershed; Convention Between the United States of America and Canada; Signed at Ottawa September 15, 1938, Ratification advised by the Senate of the United States August 30, 1940, Ratified by the President of the United States September 10, 1940, Ratified by His Majesty in respect of Canada May 19, 1939, Ratification exchanged at Ottawa October 3, 1940, Proclaimed by the President of the United States October 18, 1940, (Washington, D.C. Government Printing Office, 1940), copy filed in VNP Files; Canadian printing available at the Canadian Section IJC Files, Ottawa.
63. International Joint Commission; Hearings in the Matter of Emergency Conditions and the Adoption of Measures to Control With Respect to Dams or Other Works in Boundary Waters of the Rainy Lake Watershed, 3 volumes covering hearings at St. Paul, Hibbing and Fort Frances from February to June 1941, typescript reduplication; hereafter cited as 1941 Rainy Hearings.
64. 1941 Rainy Hearings, Fort Frances, Lee Allen's testimony, 3:96-124.

65. Ibid., J.J. Hadler testimony, pp. 150-178.
66. Ibid., W.O. Rogers testimony, pp. 234-264.
67. Ibid., p. 335.
68. Ibid., p. 343.
69. Ibid., p. 388.
70. Ibid., p. 393 (Wilson).
71. International Joint Commission, in the Matter of Emergency Conditions and the Adoption of Measures of Control With Respect to Dams or Other Works in Boundary Waters of the Rainy Lake Watershed, Brief in Behalf of Minnesota and Ontario Paper Company, Rainy River Improvement Company and the Ontario-Minnesota Pulp and Paper Company Limited, Brief by J.B. Faegre and Benson, 1260 N.W. Bank Building, Minneapolis, Minnesota, Attorneys for Minnesota and Ontario Paper Company, Rainy River Improvement Company and the Ontario-Minnesota Pulp and Paper Company Limited, n.p., January 15, 1942, p. 15; hereafter cited as Faegre & Benson Brief 1942.
72. Faegre & Benson Brief 1942, p. 26.
73. 1942 Oberholtzer Brief, p. 20.
74. Ibid., pp. 22, 23.
75. Ibid., pp. 24, 25, Appendix C.
76. Ibid., p. 27.
77. Webster-Ashburton Treaty, copy in Ackerman/Pearson History, Appendix A.
78. 1942 Oberholtzer Brief, pp. 30, 31.
79. Ibid., conclusion, page 46.
80. Ibid., p. 47.
81. Ernest R. Gustafson, "Memorandum to the District Engineer Re Regulation of Rainy and Namakan Lakes, dated January 19, 1945, filed in the Office of the Corps of Engineers, St. Paul, Minnesota; hereafter cited as O.C.E. Files.
82. IJC Hearings in the Matter of the Regulation of the Levels of Rainy Lake and Lake Namakan, and its Effect on the Regulation of Levels of the Lake of the Woods, held at Kenora, Ontario, June 27, 1946; and at International Falls, Minnesota, June 28, 1946, typescript, Meyer's testimony, pp. 127-145; hereafter cited as 1946 IJC Hearings.

83. 1946 IJC Hearings, Oberholtzer's presentation is between pages 96 and 106.
84. From tables derived from O.C.E. Files.
85. "Oral Report by the International Rainy Lake Board of Control for the International Joint Commission Hearing at International Falls on August 14, 1956," unsigned draft, August 9, 1956, copy filed in O.C.E. Files. (Probably drafted by Colonel O.J. Rohde, U.S. member of the International Rainy Lake Board of Control (IRLBC)).
86. U.S., Congress, House, Letter From the Secretary of War Transmitting a Letter From the Chief of Engineers, Reports on Preliminary Examination and Survey of Rainy River With View to Removing Obstructions in the Channel at Rainier (Ranier), and Rainy Lake, With a View to the Construction of a Breakwater at Ranier to Form a Shelter Harbor at the Western End of the Lake. H. Doc. 1942, 64th Cong., 2nd sess., 1917, 16 pages.
87. International Joint Commission (United States and Canada), (Hearings), Regulation of the Levels of Rainy Lake and the Namakan Chain of Lakes, Docket #50, Hearings held at International Falls, Minnesota, August 14, 1956, (typescript by Ward & Paul, 1760 Pennsylvania Ave. N.W., Washington, D.C., n.d.), p. 56; hereafter cited as 1956 IJC Hearings.
88. 1956 IJC Hearings, Gustafson presentation, pp. 61-73; Oberholtzer presentation, pp. 73-87, Oberholtzer and Gustafson crossed swords on pages 84 to 87; and Gustafson addressed some rebutting remarks to Oberholtzer on pages 121-2.
89. Ibid., pp. 88-115.
90. Supplementary Order of October 1, 1957; International Joint Commission in the Matter of Emergency Regulation of the Level of Rainy Lake and of Other Boundary Waters in the Rainy Lake Watershed; Supplementary Order to Order Prescribing Method of Regulating the Levels of Boundary Waters dated June 8, 1949, typescript, copies in VNP Files, O.C.E. Files, and IJC Files, Ottawa.
91. J.D. McLeod, the Canadian member of the IRLBC, presented and explained the new proposals for modifications to the Rule Curves at the IJC public hearings held at International Falls on June 24, 1969. McLeod, who was also a member of the Dominion's Department of Energy, Mines and Resources, took up fourteen pages on the official transcript of those hearings. See pages 9 to 23 of IJC Public Hearings in the Matter of Regulation of the Levels of Rainy and Namakan Lakes, held at International Falls, Minnesota, Tuesday, June 24, 1969; copy held in O.C.E. Files; hereafter cited as 1969 IJC Hearings.
92. 1969 IJC Hearings, p. 71.

93. Ibid., pp. 80, 81.
94. Ibid., p. 127.
95. Ibid., p. 133.
96. Ibid., pp. 153-4.
97. Ibid., p. 156.
98. Ibid., p. 159.
99. Ibid., pp. 163-4.
100. International Joint Commission; In the Matter of Emergency Regulation of the Level of Rainy Lake and of Other Boundary Waters in the Rainy Lake Watershed; OFFICE CONSOLIDATION of Order Prescribing Method of Regulating the Levels of Boundary Waters, dated June 8, 1949, as Amended by Supplementary Order dated October 1, 1957 and by Supplementary Order dated July 29, 1970, typescript, August 1970, copy in O.C.E. Files.
101. Copies of Klapmeier letters to and from Boise Cascade and to and from the Corps of Engineers are mixed evenly in the St. Paul O.C.E. Files, correspondence, most of them being between 1974 and 1977.
102. Petition signed by members of the Crane Lake Association, the Kabetogama-Namakan Sportsmen's Club, the Ash River Trail Resort Association, and the Kabetogama Lake Resort Association, as an enclosure to Colonel Forrest T. Gay, April 19, 1977, filed in O.C.E. Files.
103. See the O.C.E. Files, correspondence, for the years 1974-6, as well as the annual reports of the IRLBC, idem, especially a letter of Col. Forrest T. Gay, III to Mr. William A. Bullard (IJC), March 31, 1976, idem.
104. See the IJC Supplementary Orders of October 20, 1976, November 19, 1976, May 4, 1977, June 14, 1977, and May 7, 1980, all in O.C.E. Files.
105. Clark to Col. William W. Badger (American Member IRLBC), December 27, 1979, in O.C.E. Files.
106. Robert G. Code, Director of Ontario Department of Lands and Forests, to J.D. McLeod, Inland Waters Branch (Ottawa), March 3, 1972, in O.C.E. Files.
107. Thornton to Associate Director, Northeast Region, National Park Service, dated December 1, 1972, copy in O.C.E. Files.

108. Draft letter of Col. Rodney E. Cox to John A. Blatnik, Chairman, Committee on Public Works, U.S. House of Representatives, August 6, 1973, O.C.E. Files. The letter was sent in a slightly different format, August 31, 1973, idem.
109. Chester L. Brooks, Regional Director, Northeast Region, National Park Service, to John A. Blatnik, August 14, 1973, O.C.E. Files.
110. Blatnik to Col. Rodney E. Cox, August 28, 1973, O.C.E. Files.
111. Cox to Blatnik, August 31, 1973, O.C.E. Files.
112. Col. Forrest T. Gay III to William A. Bullard (Secretary to the American Section IJC), November 12, 1977, O.C.E. Files.
113. Gay to Merle Brooks (VNP), February 14, 1978, O.C.E. Files.
114. Larry Seymour, Director of the Department of Natural Resources, Minnesota, to Col. William A. Badger (IRLBC), March 12, 1980, O.C.E. Files.
115. Parmeter's letter to Col. William Badger (IRLBC), April 23, 1981; and CCVNP memo, April 16, 1981, and titled "Feasibility Study of Establishing an International Park in the Vicinity of Kettle Falls," O.C.E. Files.
116. See the following issues of the International Falls Daily Journal: March 9, 1981, "VNP Citizens' Committee to Seek Means to Correct Low Water Levels", p. 1, March 13, 1981, "VNP Committee Director Suggested for IJC Berth," p. 1, July 14, 1981, "Water Levels Still Complex Issue," p. 1.
117. J. Thomas Ritter to U.S. Corps of Engineers, St. Paul, April 15, 1980; and "Proposal for System for Regulating Water Levels With Minimal Conflicts Between Different Uses of Waters", by G.F. Cole, February 11, 1980, O.C.E. Files.
118. Col. Badger to David A. La Roche (IJC, Washington), April 21, 1980; and Badger to Ritter, April 21, 1980, both in O.C.E. Files.
119. Peter A. Fischer "Memo for the Record," July 28, 1980, O.C.E. Files.
120. Badger to Ritter, September 22, 1980, O.C.E. Files.
121. 1956 IJC Hearings, Oberholtzer testimony, pp. 84, 85.
122. Glen F. Cole, "Draft Alternative Plan for Making Different Uses of Water More Compatible in Voyageur's National Park," September 10, 1980, O.C.E. Files.
123. Badger to La Roche (IJC); Badger to Robert Clark (Inland Waters Directorate, Ottawa), both dated October 10, 1980, O.C.E. Files.

BIBLIOGRAPHY FOR WATER LEVELS

Primary Sources

District Office, Corps of Engineers, St. Paul, Minnesota

Office of the Corps of Engineers, District Office Files.

International Joint Commission Office, Ottawa, Canada

International Joint Commission Files.

Faegre, J.B., and Benson. Brief in Behalf of Minnesota and Ontario Paper Company and the Ontario-Minnesota Pulp and Paper Company Limited. Minneapolis: n.p., 15 January 1942.

Final Report of the International Joint Commission on the Lake of the Woods Reference. Ottawa-Washington, D.C.: Government Printing Office, 1917.

Final Report [Engineers] to the International Joint Commission Relating to Official Reference Re Levels of Rainy Lake and Other Upper Waters. Chpters II, X and XI only. Ottawa, n.p., 1932.

International Joint Commission: Hearings and Arguments in the Matter of the Application of the Rainy River Improvement Co. For Approval of Plans For A Dam at Kettle Falls. Washington, D.C.: Government Printing Office, 1913.

International Joint Commission. Lake of the Woods Reference Proceedings. Vol. II: Hearings of the International Joint Commission on the Reference by the United States and Canada in Re Levels of the Lake of the Woods and Its Tributary Waters and Their Future Regulation and Control; Being Final Public Hearings at International Falls, Minn., and Winnipeg, Manitoba, 1916. Washington, D.C.: Government Printing Office, 1917.

International Joint Commission. Hearings of the International Joint Commission on the Reference by the United States and Canada In Re Levels of Rainy Lake and Other Upper Waters of the Lake of the Public Hearings at International Falls, Minn., September 28, 29, 30, 1925. Washington, D.C.: Government Printing Office, 1926.

International Joint Commission. Hearings at Winnipeg and Minneapolis Between 5 and 12 October 1933, In Re Levels of Rainy Lake and Other Tributary Waters of the Lake of the Woods Watershed and Their Future Regulation and Control. Typescript. N. d.

International Joint Commission. Hearings in the Matter of Emergency Conditions and the Adoption of Measures of Control With Respect to Dams or Other Works in Boundary Waters of the Rainy Lake Watershed. Typescript. Hearings held at St. Paul on February 24, 1941; at Hibbing, MN on June 19, 1941; and at Fort Frances, Ontario, on June 25 and 26, 1941.

International Joint Commission. Hearings In the Matter of the Regulation of the Levels of Rainy Lake and Lake Namakan, and Its Effect on the Regulation of Levels of the Lake of the Woods. Hearings held at Kenora, Ontario on 27 June 1946, at International Falls, MN on 28 June 1946. Typescript.

International Joint Commission. Supplementary Order of 1 October 1957; In the Matter of Emergency Regulation of the Level of Rainy Lake and of Other Boundary Waters in the Rainy Lake Watershed; Supplementary Order to Order Prescribing Method of Regulating the Levels of Boundary Waters Dated 8 June 1949. Typescript. 1957, n. p.

International Joint Commission. [Hearings] Regulation of the Levels of Rainy Lake and the Namakan Chain of Lakes. Docket #50. Hearings held at International Falls, MN., on August 14, 1956. Typescript by Ward & Paul, Washington, D.C., 1956.

International Joint Commission. IJC Public Hearings in the Matter of Regulation of the Levels of Rainy and Namakan Lakes. Hearings held at International Falls, MN., on June 24, 1969. Typescript, 1969.

International Joint Commission. Supplementary Order Dated July 29, 1970; In the Matter of Emergency Regulation of the Level of Rainy Lake and of Other Boundary Waters in the Rainy Lake Watershed; OFFICE CONSOLIDATION of Order Prescribing Method of Regulating the Levels of Boundary Waters, Dated June 8, 1949, As Amended by Supplementary Order Dated October 1, 1957 and by Supplementary Order Dated July 29, 1970. Typescript. Office of the Corps of Engineers District Office, St. Paul, August 1970.

International Joint Commission; United States and Canada; Rules of Procedure [Revised] and Text of Treaty. Ottawa, Canada-Washington, D.C.: n.p., dated April 1980. [1909 Treaty].

Oberholtzer, Ernest C. International Joint Commission: In the Matter of A Convention Between the United States of America and Canada, Signed at Ottawa, September 15, 1938. Providing For Emergency Regulation of the Levels of Rainy Lake and of Other Boundary Waters In Rainy Lake Watershed; Brief in Behalf of the Quetico-Superior Council In Reply to A Brief Dated January 15, 1942, and Submitted by Messrs. Faegre and Benson in Behalf of the Minnesota and Ontario Superior Council, Minneapolis, May 25, 1942.

Scovil, S.S.; Crawford, R.W.; Bullard, P.C. Preliminary Report [Engineers] To International Joint Commission Relating to Official Reference Re Levels of Rainy Lake and Other Upper Waters. Ottawa: F.A. Ackland, 1929.

United States. Treaty Series, #721. Treaty and Protocol Between the United States and Great Britain in Respect of Canada to Regulate the Levels of the Lake of the Woods. Washington, D.C.: Government Printing Office, 1925.

United States. Treaty Series, #961. Emergency Regulation of Level of Rainy Lake and of Other Boundary Waters in the Rainy Lake Watershed; Convention Between the United States and Canada. Washington, D.C.: Government Printing Office, 1940.

Minnesota Historical Society, St. Paul, Minnesota

Quetico-Superior Council Papers. Collection M-120, one roll negative microfilm of clippings, 1922-1966.

Superior National Forest, Minnesota, Records, 1903-1969. Minnesota Historical Society Collection M-211. Microfilm. Rolls 7 and 8.

National Archives, Washington, D.C.

Cartographic Division.

Records of Boundary and Claims Commission and Arbitration. Record Group 76. Entries 186, 320, 321.

Voyageurs National Park, International Falls, Minnesota

Extract From a "Report of the Committee of the Honourable Privy Council, Approved by the Governor General [Canada] on September 19, 1905." Copy in Voyageurs National Park Files.

"General Memoranda With Regard To Power Development at Fort Frances, Ontario-International Falls, Minnesota, from S.J. Chapleau, Resident Engineer, to the Minister of Public Works [Ottawa]." 1 October 1912.

McGee, John J. "Extract From a Report of the Committee of the Honourable Privy Council [Canada], Approved by His Excellency the Governor General, 31st January 1905."

McLaren J.H. "Department of Public Works, Dominion Government, Hydraulic Investigation of Rainy River at Fort Frances, Ontario." 21 November 1911.

"Memorandum of Agreement Between the Power Company and the Town of Fort Frances as Submitted by the Joint Committee of the Town Council and Board of Trade, for the Consideration of the Ratepayers." March 1912.

Government Documents (United States and Canada)

An Act Respecting the Ontario and Minnesota Power Company Limited; Ontario Legislature Act of May 14, 1906. Chapter 132. Toronto, Canada.

Canada. House of Commons Debates. Debates of May 31, 1921, Lake of the Woods Control Bill. Bill #216. Ottawa, 1921.

4 - 5 Edward VII, Canada. Chapter 139, assented to July 20, 1905.

Statutes at Large. USA. vol. 30 (1898). vol. 26 (1890). vol. 27 (1892). vol. 30 (1899). vol. 31 (1900). vol. 32 (1902). vol. 33 (1905). vol. 34 (1906). vol. 36 (1910). vol. 36 (1911). "An Act To Authorize the Rainy River Improvement Company To Construct A dam Across the Outlet of Namakan Lake at Kettle Falls, in St. Louis County, Minnesota", February 24, 1911.

U.S. Congress. House. Hearings before the Committee on Public Lands. H. Rept., Part 3, 71st Cong., 2d sess., 1930.

U.S. Congress. House. Letter From the Secretary of War Transmitting A Letter From the Chief of Engineers, Reports on Preliminary Examination and Survey of Rainy River With A View to Removing Obstructions in the Channel at Rainier [Ranier], and Rainy Lake, With a View to the Construction of a Breakwater at Ranier to Form A Shelter Harbor at the Western End of the Lake. H. Doc. 1942, 64th Cong., 2d sess., 1917.

U.S. Congress. House. Report to Accompany H.R. 15444, Extending Time for Constructing Dam Across Rainy River, H. Rept. 1767. May 23, 1908. 60th Cong., 1st sess., 1908.

U.S. Congress. Senate. Report on the Flood Conditions in the Lake of the Woods and Rainy Lake Districts, Minnesota and Ontario; Together With A General Statement of the Water Levels, Interests Involved and Methods of Relief. S. Doc. 467, 64th Cong., 1st sess., 1916.

U.S. Congress. Senate. Veto Message of the President Relating to House Bill 15444, To Extend the Time for the Construction of a Dam Across Rainy River, Dated April 13, 1908. S. Doc. 438, 60th Cong., 1st sess., 1908.

Interviews

Oberholtzer, Ernest C. Quetico-Superior Council. Interviews by Minnesota Historical Society of October 21 and 22, 1963, and March 13, 1964.

Thompson, Murray. International Joint Commission, Canadian Section,

5. NEWSPAPER ARTICLES

Backus, Edward Wellington. "The Last of the Barons." Typescript in the Voyageurs National Park Files, derived from Grand Rapids Herald (MN), n. d.

International Falls Journal, October 29 and 30, 1934.

New York Herald Tribune, October 30, 1934.

St. Paul Pioneer Press, October 30, 1934.

"VNP Citizens' Committee to Seek Means to Correct Low Water Levels." International Falls Daily Journal, March 9, 1981.

"VNP Committee Director Suggested for IJC Berth." International Falls Daily Journal, March 13, 1981.

"Water Levels Still Complex Issues." International Falls Daily Journal, July 14, 1981.

Secondary Works

6. BOOKS

Nute, Grace Lee. Rainy River Country; A Brief History of the Region Bordering Minnesota and Ontario. St. Paul: Minnesota Historical Society Press, 1950.

The Voyageur. New York & London: D. Appleton and Company, 1931; reprint ed., St. Paul: Minnesota Historical Society 1955. [5th printing, 1979].

The Voyageur's Highway; Minnesota's Border Lake Land. St. Paul: Minnesota Historical Society Press, 1941. [9th printing, August, 1976].

Searle, R. Newell. Saving Quetico-Superior; A Land Set Apart. St. Paul: Minnesota Historical Society Press, 1977.

Treuer, Robert. Voyageur Country; A Park in the Wilderness. Minneapolis: University of Minnesota Press, 1979.

Manuscript

Ackerman, G. Franklin., Pearson, Mary Lou. "A Partial History of the Kettle Falls, Squirrel Falls and International Falls-Fort Frances Dams." Typescript, dated May 1980. Copy in Voyageurs National Park Files.

ILLUSTRATIONS FOR WATER LEVELS

Figure 1: Edward Wellington Backus. Undated. MHS Collections.



Figure 2: An Older E.W. Backus. Undated. MHS Collections.



Figure 3: E.W. Backus. Undated. MHS Collections.



Figure 4: Interior of E.W. Backus Wholesale Lumber Company. E.W. Backus in Doorway.
Ca. 1890, perhaps in Minneapolis. Photo Courtesy Ruth Camarillo. MHS Collections.

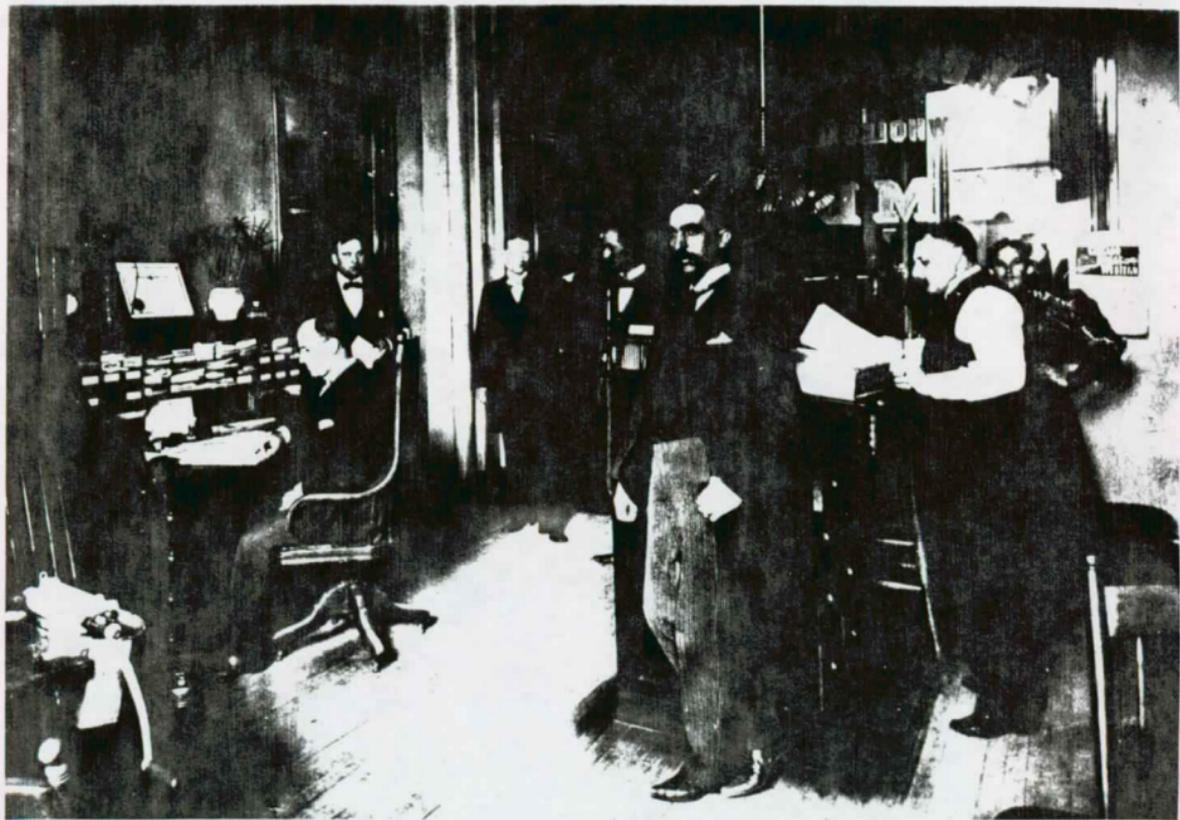


Figure 5: Mrs. E.W. Backus. Undated. MHS Collections.

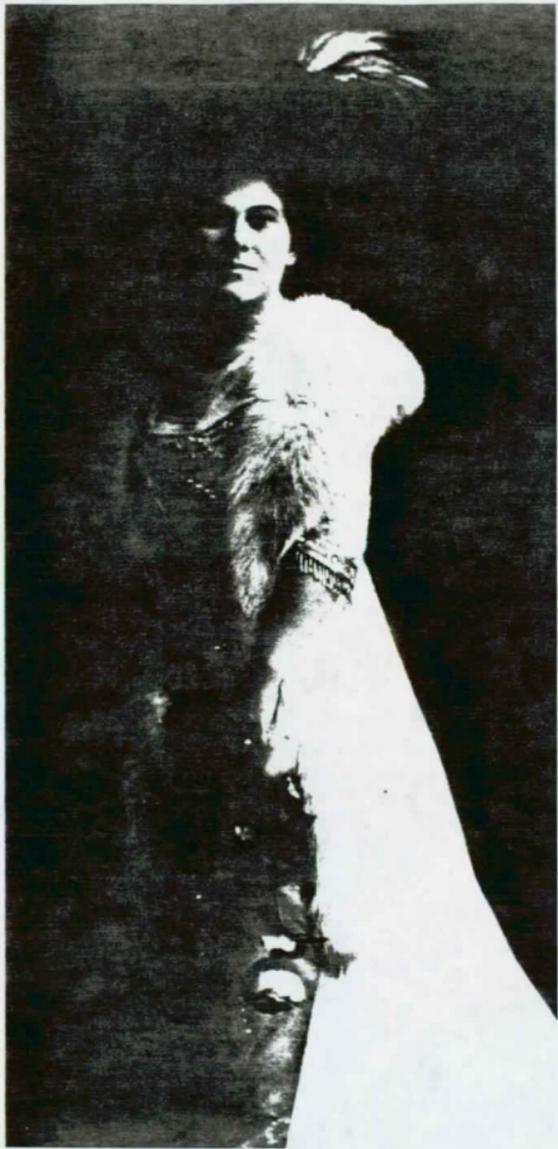


Figure 6: Koochiching Falls, June 1984. Houses of Fort Frances,
Ontario. MHS Collections.

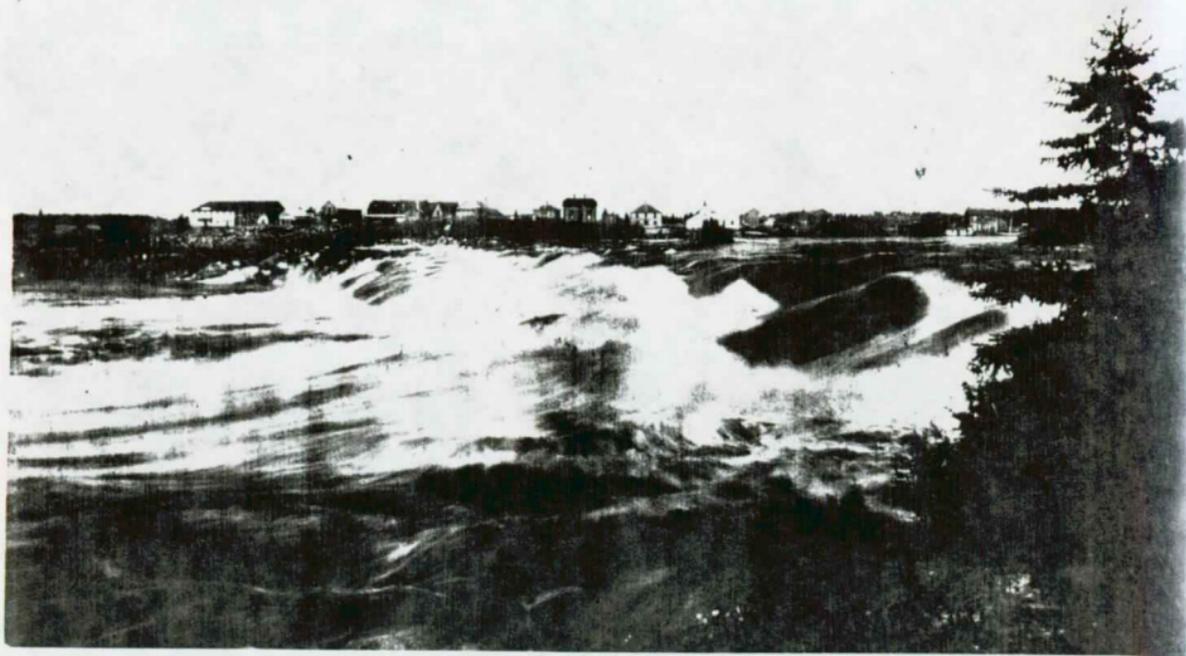


Figure 7: Koochiching Falls, June 1894. Closeup of Figure 6. Houses of Fort
Frances, Ontario. MHS Collections.



Figure 8: Koochiching Falls, ea. 1902. Photo Courtesy Bruce Lloyd. Ft. Frances,
Ontario. MHS Collections.

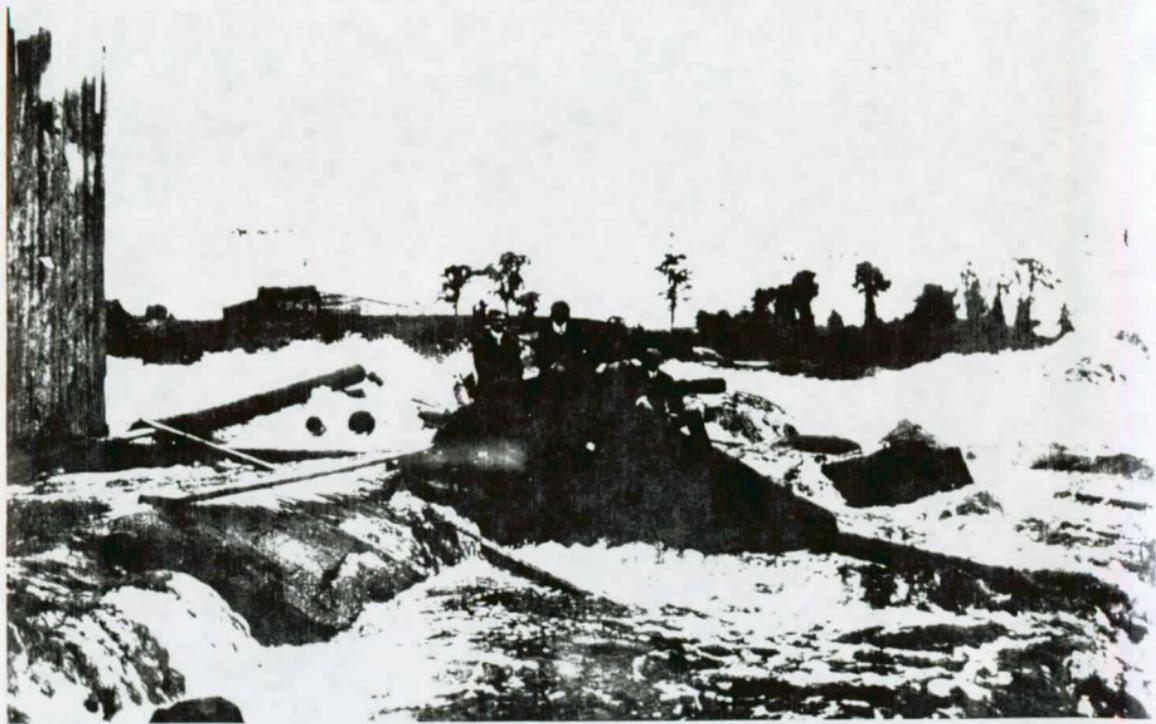
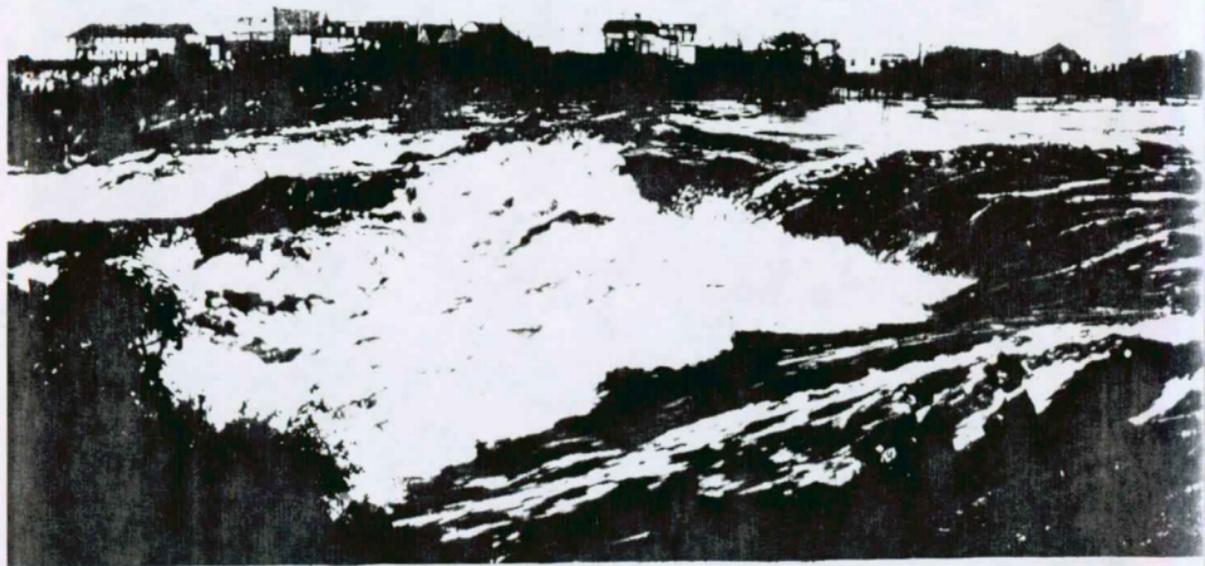


Figure 9: Photo erroneously identified as International Falls. Rainy River would be flowing backwards. Has to be Fort Frances, Ontario, ca. 1905. Also note resemblance to some of the buildings in Figures 6 and 7. MHS Collections.



International Falls, Minn.

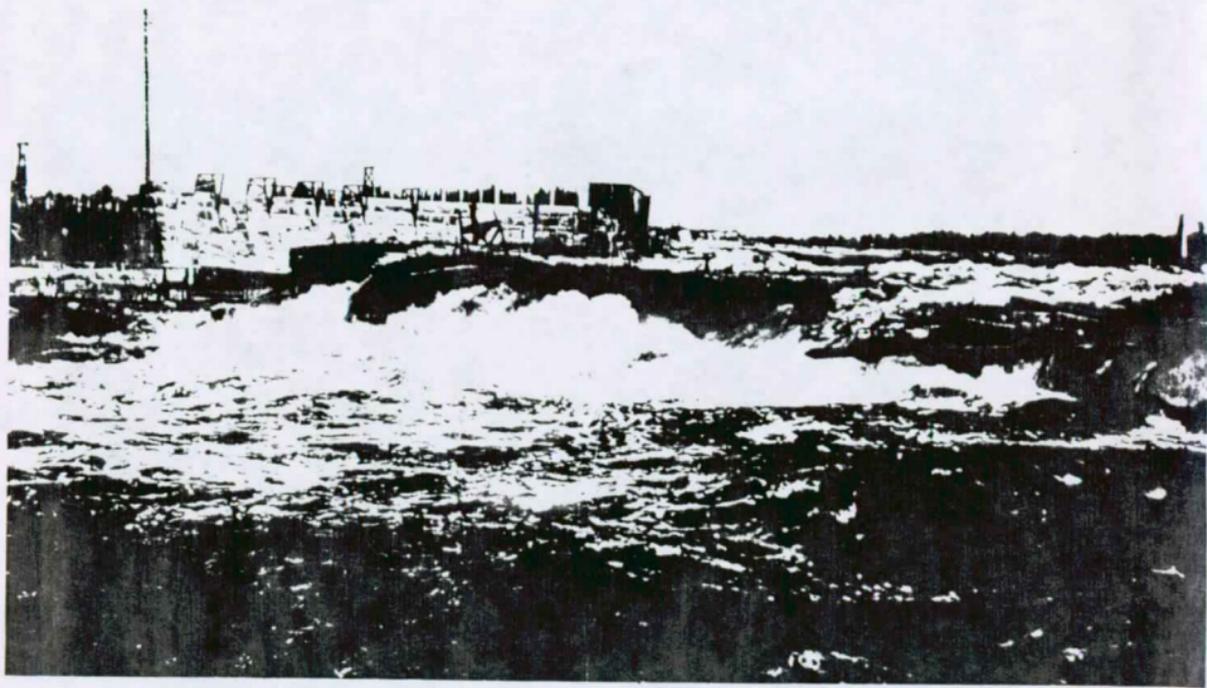
Figure 10: International Falls from Canadian shore of Rainy River, ca. 1905. MHS Collections.



International Falls, as Viewed from Canadian Shore of Rainy River

—THE ECHO

Figure 11: Photo either erroneously identified as International Falls or a mirror image, ca. 1910. Photo courtesy of P.R. Doherty. See Figure 9. MHS Collections.



International Falls, from Canadian Side.

Pub. by P. R. Doherty

Figure 12: Building the Big Dam at International Falls, ca. 1907. MHS Collections.

*Building the Big Dam
International Falls, Minn.*

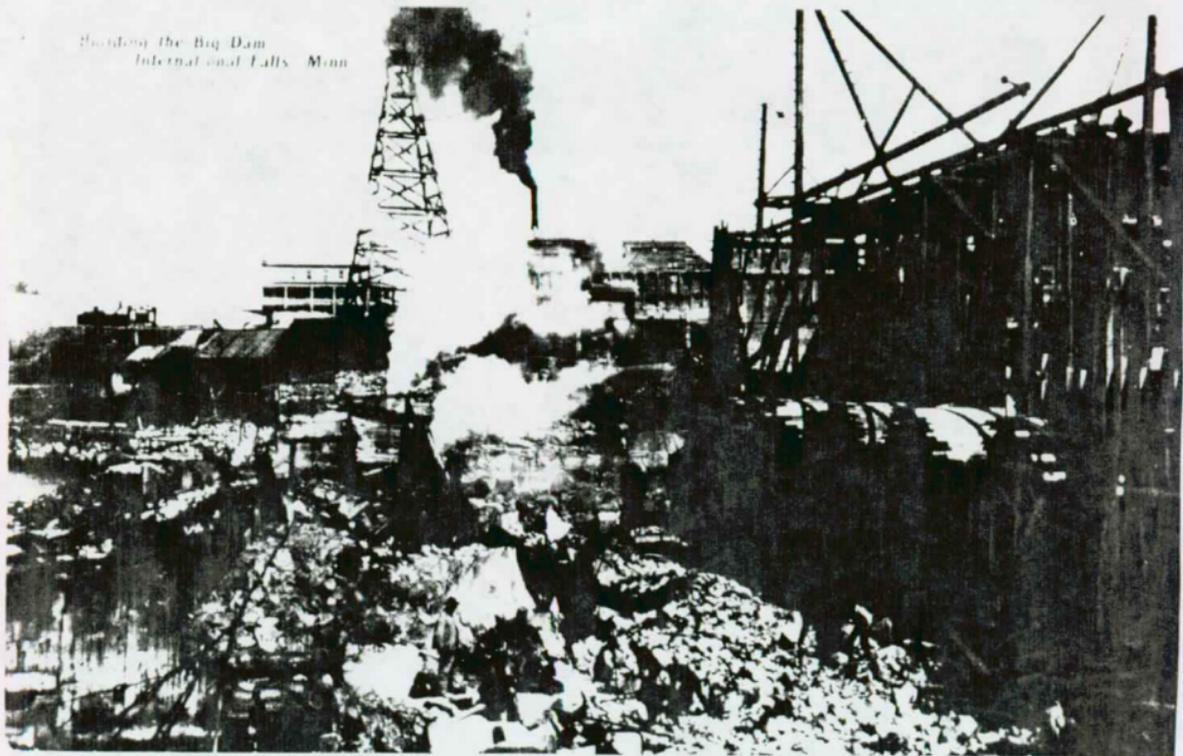


Figure 13: Minnesota and Ontario [MANDO] Paper Plant under Construction at International Falls, 1909. View Toward Ft. Frances. MHS Collections.

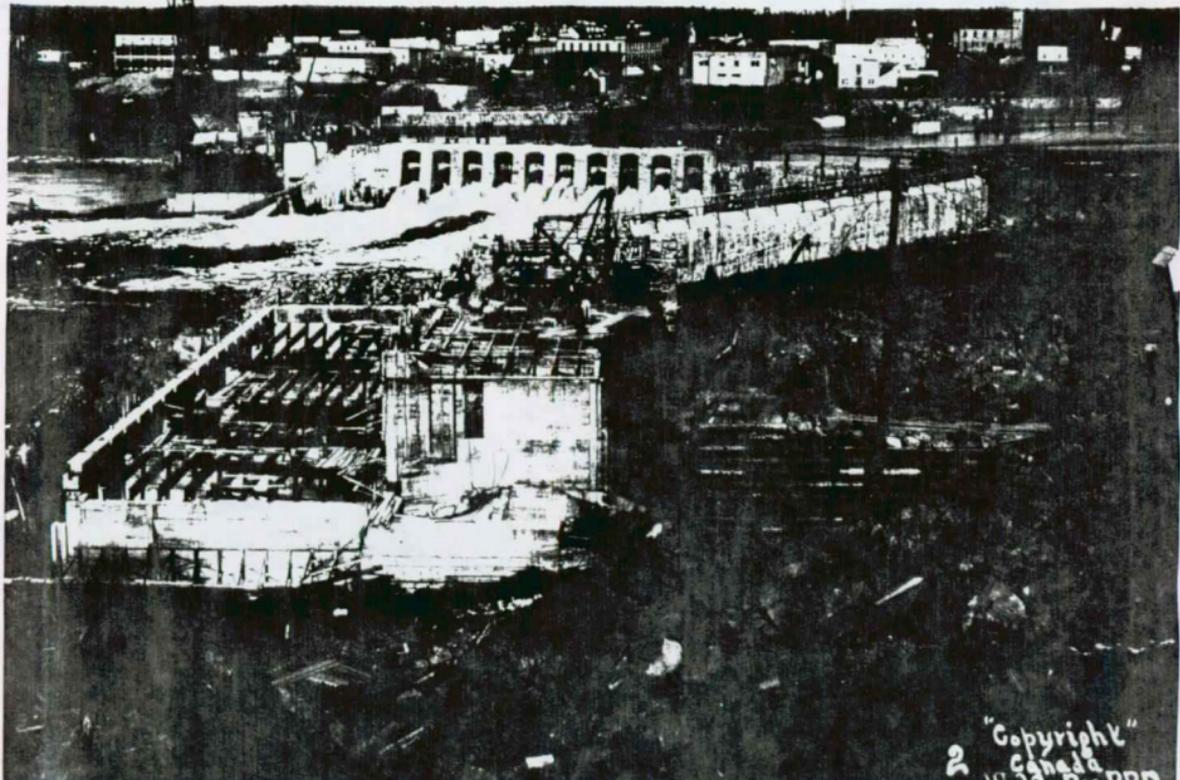


Figure 14: Power House, Dam and Mill at International Falls, ca. 1910. MHS
Collections.



Figure 15: Bridge across the Rainy River between International Falls and Fort Frances, ca. 1910. MHS Collections.

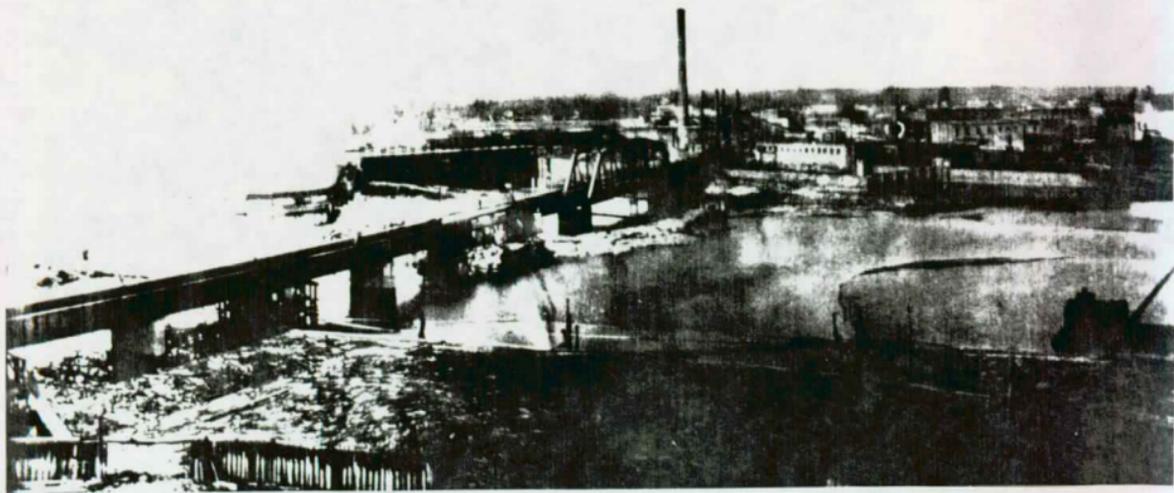


Figure 16: Minnesota and Ontario [MANDO] Power Dam, ca. 1910. International Falls.
MHS Collections.

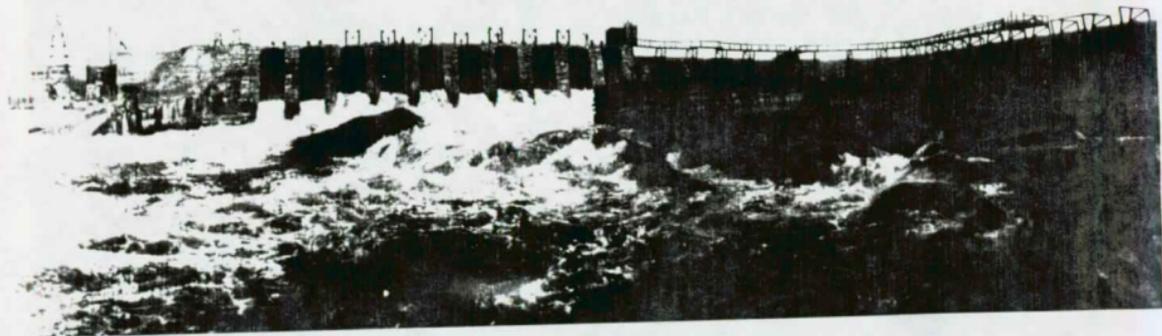


Figure 17: Paper Mills and Yards, International Falls, 1911. MHS Collections.



Figure 18: International Falls, Minnesota, in foreground; Fort Frances, Ontario, in background, 1912. Photo courtesy Koochiching County Historical Society. MHS Collections.



Figure 19: Bridge and Paper Mills, International Falls, 1913. MHS Collections.

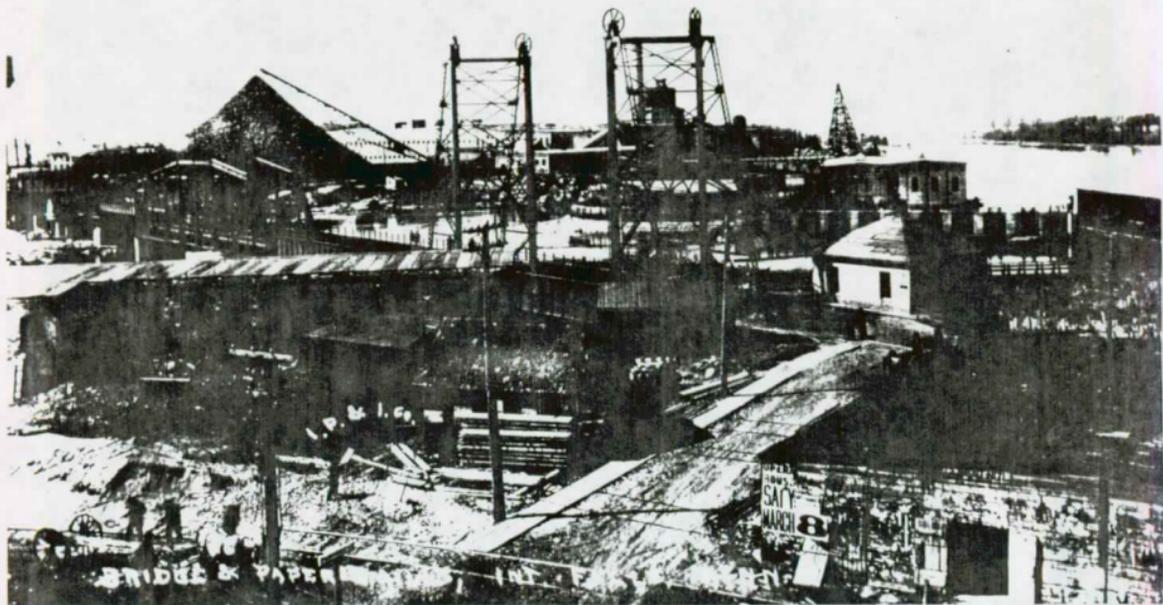


Figure 20: Bridge and Dam, International Falls, ca. 1915. Fort Frances in background. MHS Collections.



FRANCES, ONT.

BRIDGE & DAM, INT. FALLS, MINN.
P.M.C.

Figure 21: Power House and Dam, International Falls, ca. 1915. Fort Frances in background. MHS Collections.

Power Houses and Dam, International Falls, Minn.

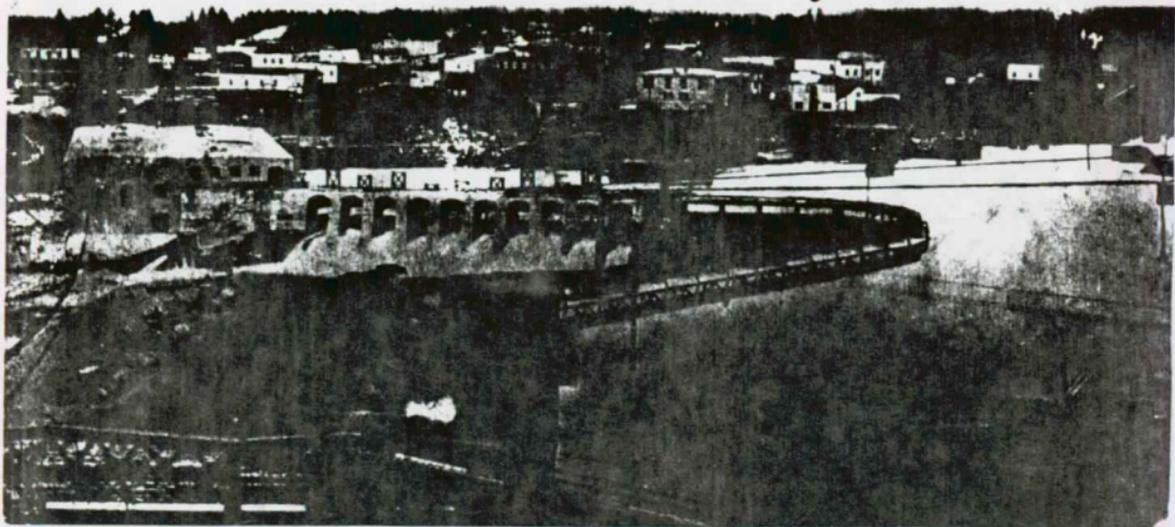
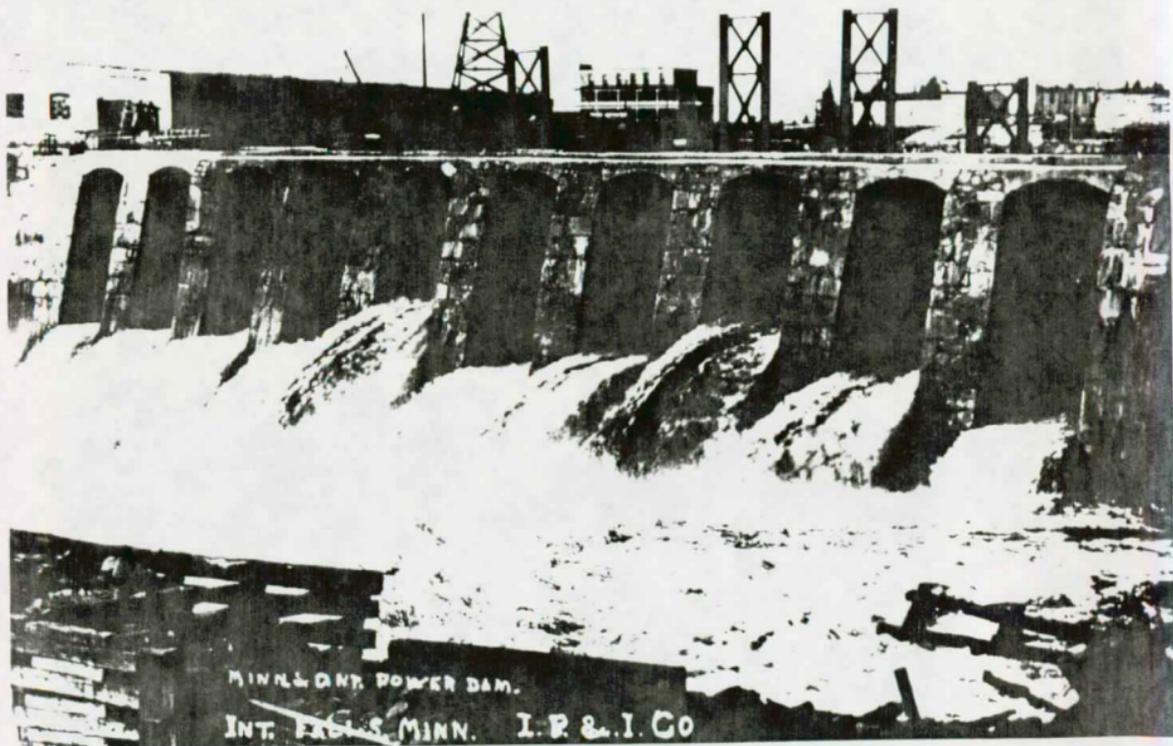


Figure 22: Power Dam at International Falls, ca. 1915. Buildings in background are in Fort Frances, Ontario. MHS Collections.



MINN. & ONT. POWER DAM.

INT. ENG'G. MINN. I. P. & I. CO

Figure 23: Ft. Frances, Ontario, on the left; International Falls, Minnesota on the right, ca. 1950. Photo courtesy Roy Swann, Minneapolis Star and Tribune.

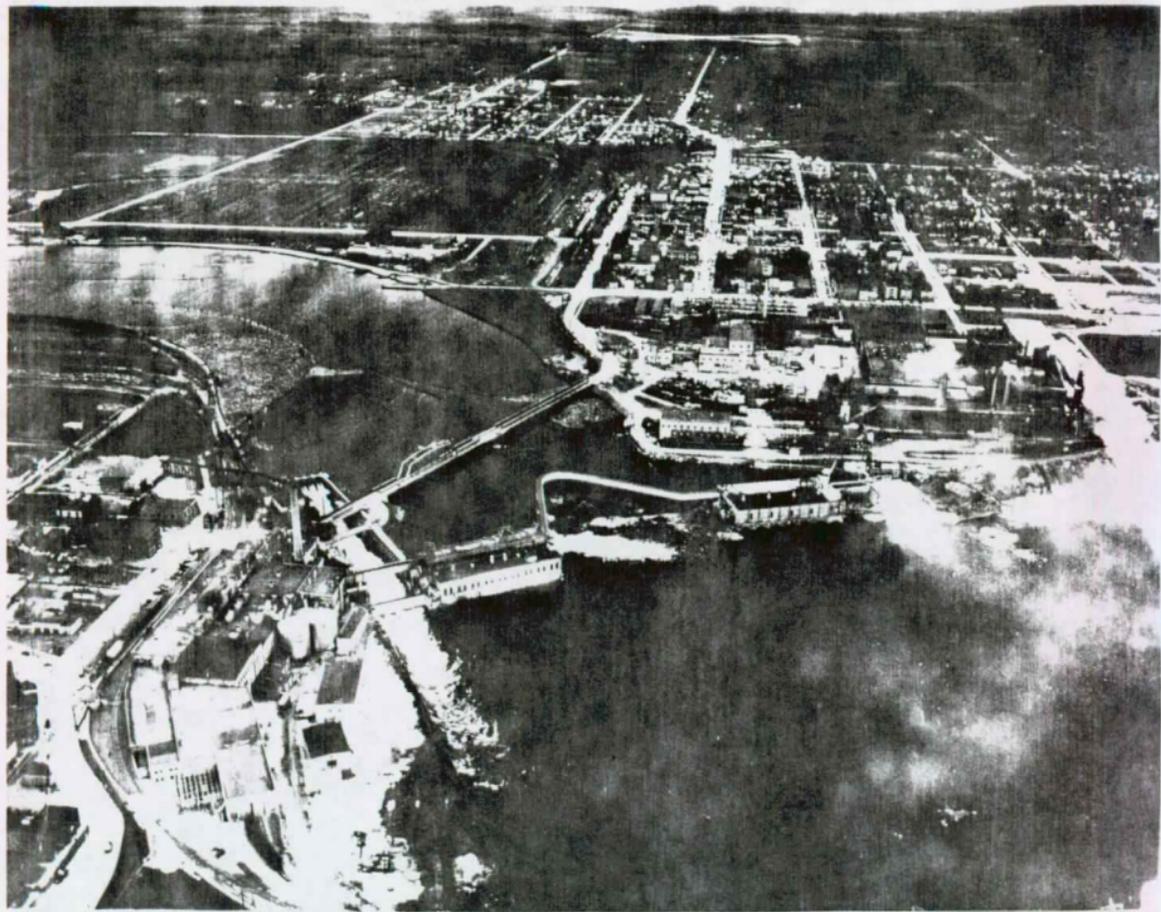
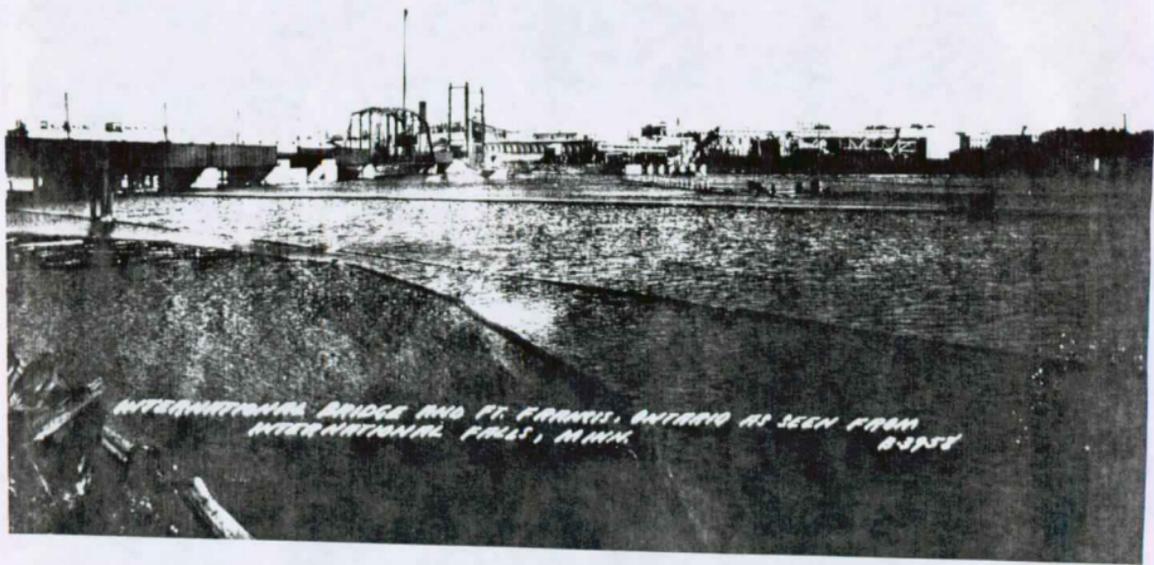


Figure 24: International Bridge and Ft. Frances, Ontario as seen from International Falls, ca. 1950. MHS Collections.



INTERNATIONAL BRIDGE AND FT. SNARKS, ANTWERP AS SEEN FROM
INTERNATIONAL FALLS, MINN. B3N5E

Figure 25: The Minnesota and Ontario [MANDO] Paper Company, International Falls,
ca. 1950. MHS Collections.

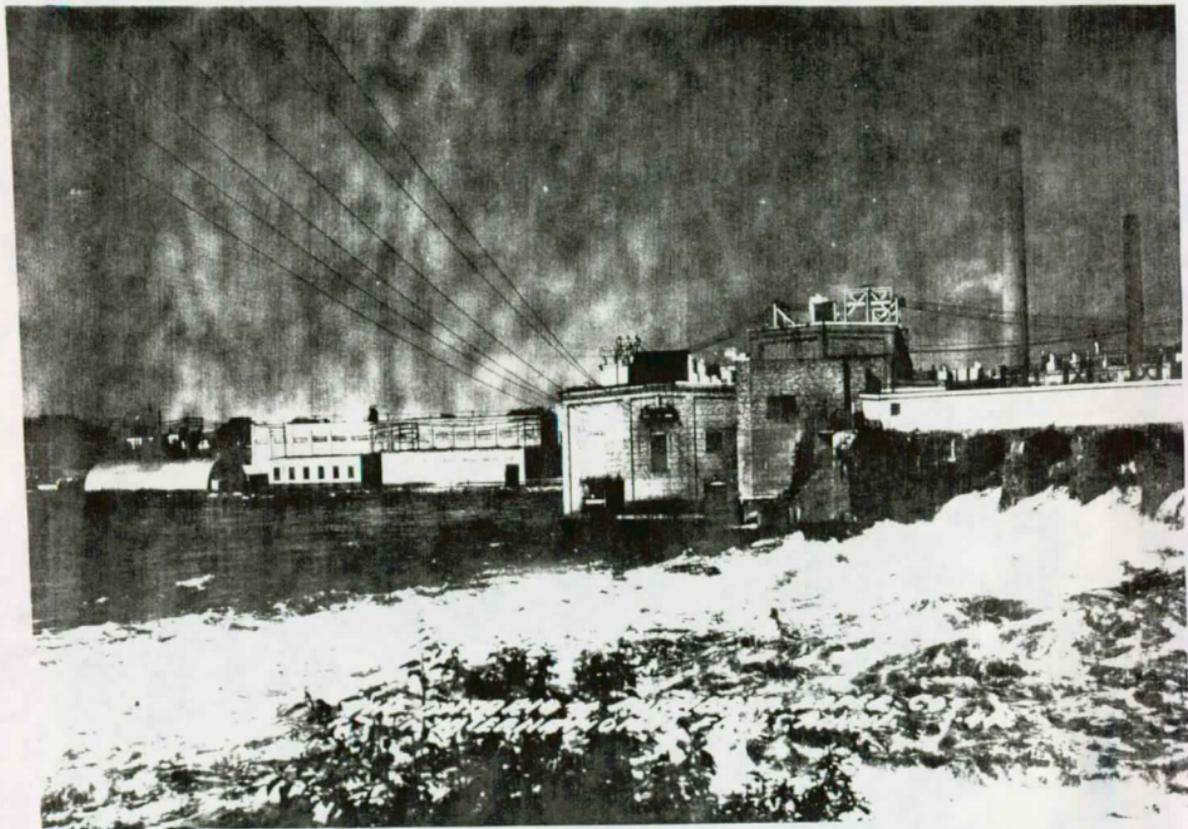
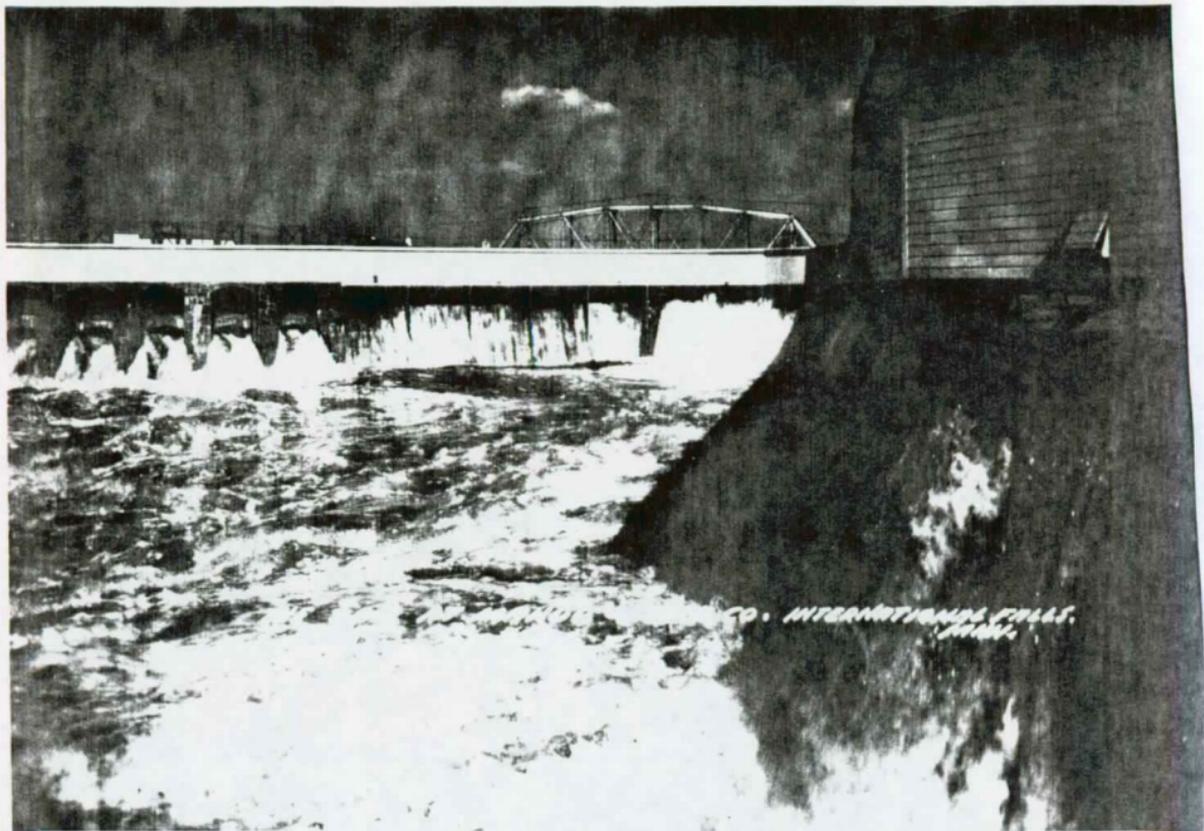


Figure 26: The Dam at Mando Paper Company, International Falls, ca. 1950. MHS
Collections.



INTERNATIONAL FILLS
1941

Figure 27: Aerial View of International Falls in foreground and Ft. Frances in background, ca. 1950. Photo courtesy of Minneapolis Tribune. MHS Collections.

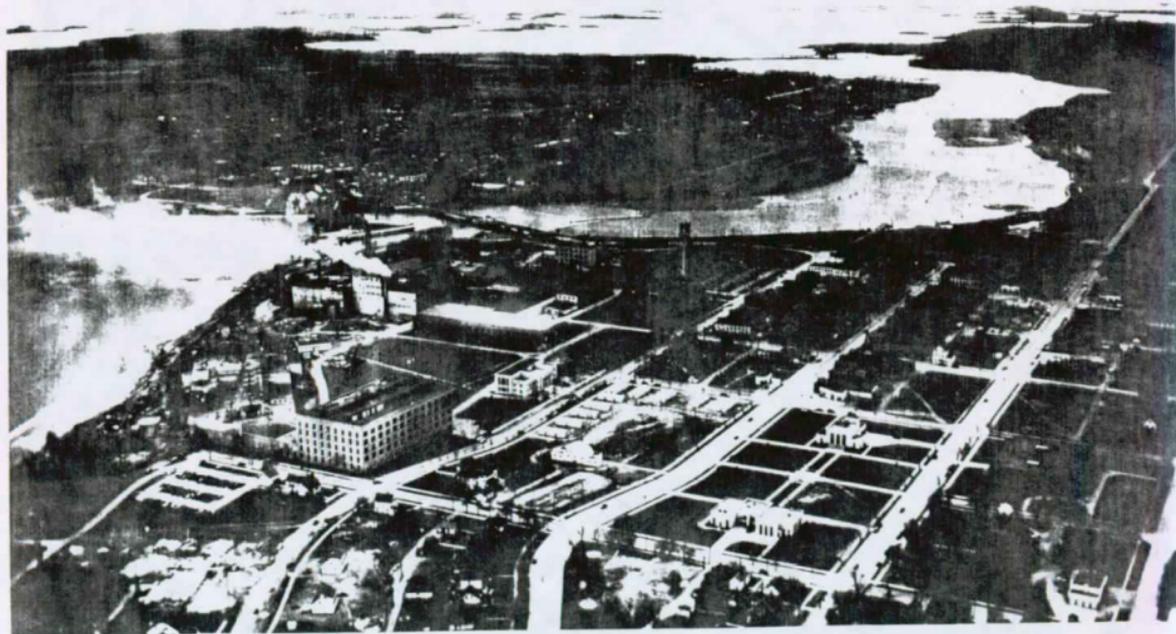


Figure 28: Damage Caused by Flooding, ca. 1950. Photo courtesy of Ernest C. Oberholtzer. MHS Collections.

