INTERNATONAL JOINT COMMISSION

In the Matter of Emergency Regulations of the Level of Rainy Lake and other Boundary Waters in the Rainy Lake Watershed

ORDER PRESCRIBING METHOD OF REGULATING THE LEVELS OF BOUNDARY WATERS

June 8, 1949

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By the terms of a Convention between the United States of America and Canada signed at Ottawa September 15, 1938, and ratified by His Majesty in respect of Canada on May 19, 1939, and by the President of the United States, with the advice and consent of the Senate, on September 10, 1940, and proclaimed by the President of the United States on October 18, 1940, the International Joint Commission is clothed with power to determine when emergency conditions exist in the Rainy Lake watershed, whether by reason of high or low water, and is empowered to adopt such measures of control as the Commission might deem proper with respect to the existing dams at Kettle Falls and International Falls, and with respect to any other existing or future dams or works in boundary waters of the Rainy Lake watershed, the language of Article 1 of said Convention being as follows:

> "The International Joint Commission, established pursuant to the provisions of the treaty signed at Washington on the 11th day of January, 1909, relating to questions arising between the United States of America and Canada, is hereby clothed with power to determine when emergency conditions exist in the Rainy Lake watershed, whether by reason of high or low water, and the Commission is hereby 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 with respect to any existing or future dams or works in boundary waters of the Rainy Lake watershed, in the event the Commission shall determine that such emergency conditions exist."

And, WHEREAS, the Minnesota and Ontario Paper Company, the Rainy RiverImprovement Company, and The Ontario-Minnesota Pulp and Paper Company Limited (hereinafter called the Companies) operate and maintain the two existing Kettle Falls Dams across the principal outlets of Namakan Lake and the existing International Falls Dam across Rainy River, the outlet of Rainy Lake; the said Rainy Lake being at a lower level than Namakan Lake, and the said Namakan Lake being one of a series of connecting lakes known as the Namakan Chain of Lakes; and,

WHEREAS, the several lakes comprising the Namakan Chain of Lakes, namely, Little Vermilion, Crane, Sand Point, Kabetogama, and Namakan Lakes, ordinarily stand at substantially the same level, the outflow therefrom and consequently their level being controlled principally by the Companies in operation of the existing Kettle Falls Dams; the said Kabetogama and Crane Lakes being entirely within the United States; and,

WHEREAS, the International Boundary passes through Rainy, Namakan, Sand Point, and Little Vermilion Lakes; and,

WHEREAS, the outflow from and the level of Rainy Lake are generally and customarily determined and controlled by the Companies in the operation of the existing International Falls Dam; and,

WHEREAS, the Companies have artificially regulated the level of Rainy Lake continuously since March 1909, and have artificially regulated the level of Namakan Lake continuously since March 1914; and,

WHEREAS, on the north rim of Namakan Lake a natural high-level

outlet, known as the Bear Portage outlet, is now obstructed or partially obstructed by a crude timber and rock-fill barrier which apparently was constructed by the Companies or their predecessors without specific authorization, the effect of this barrier being to cause the Namakan Chain of Lakes occasionally to rise to a somewhat higher stage than would be reached if the barrier were not in existence; and,

WHEREAS, after due notice in each instance, the Commission has held public hearings on the questions raised by said Convention, in the course of which evidence was adduced and all interested parties were given full opportunity to be heard, and those appearing and so desiring were heard; such hearings having been held at St. Paul, Minnesota on February 24, 1941; at Hibbing, Minnesota on June 19, 1941; at Fort Frances, Ontario on June 25 and 26, 1941; at Kenora, Ontario on June 27, 1946; and at International Falls, Minnesota on June 28, 1946; and,

WHEREAS, the Commission and its International Rainy Lake Board of Control have made careful field investigations and technical studies of Rainy Lake and of the several lakes comprising the Namakan Chain of Lakes, and of other boundary waters of the Rainy Lake watershed, and of precipitation and runoff records of the drainage area tributary to Rainy Lake, and of the lands bordering and immediately adjacent to said Lakes and boundary waters in both the United States and Canada, and have given extended consideration to the effects of both extremely high and extremely low lake levels upon the interests of the Companies, which utilize a large part of the flow of the Rainy River to

produce power at their International Falls dam for use in their industrial operations at Fort Frances, Ontario and International Falls, Minnesota; and upon the interests of the State of Minnesota, the Province of Ontario, and riparian owners and proprietors; and it appearing to the Commission that:

During the 40-year period, 1909 to 1948 inclusive, the level of Rainy Lake has fluctuated between a minimum elevation of 1098.86 feet above mean sea level (equal to elevation 487.25 feet, Public Works of Canada datum) on April 11, 1909, and a maximum elevation of 1112.51 feet above mean sea level (equal to elevation 500.90 feet, Public Works of Canada datum) on June 8, 1916; and,

During the 37-year period, 1912 to 1948 inclusive, the level of Namakan Lake has fluctuated between a minimum elevation of 1106.18 feet above mean sea level (equal to elevation 494.57 feet, Public Works of Canada datum) on April 13-14, 1923, and a maximum elevation of 1122.86 feet above mean sea level (equal to elevation 511.25 feet, Public Works of Canada datum) on May 23, 1916; and,

Very high levels in Rainy Lake and the Namakan Chain of Lakes during the summer and early autumn of each year are desirable from the viewpoint of the Companies because under such conditions larger volumes of water may be held in storage to augment the production of power at the Companies' International Falls dam during the season of low runoff, and because the elevation of Rainy Lake is determinative, in part, of the power head available at the said International Falls dam; but under such conditions, with Rainy Lake and the Namakan Chain of Lakes at artificially high levels, riparian lands and the shore

properties thereon are adversely affected due to erosion and caving banks, fallen trees along the shore, flooding of shore improvements, and the disturbing of established shore lines with attendant unsightly conditions; and,

Very low lake levels result in unsightly and unsanitary conditions, and are otherwise objectionable; and they usually prevail for longer periods of time than do the very high lake levels; and,

High discharges at the Kettle Falls and the International Falls Dams are damaging to all interests affected thereby, including the Companies' power interests; and,

Both extremely high and extremely low levels in Rainy Lake and the Namakan Chain of Lakes are highly objectionable to the large segment of the general public concerned with recreational values in both the United States and Canada; and,

All of the lake elevations referred to or specified in this Order are shown first with reference to mean sea level datum as established at Ranier, Minnesota by the International Boundary Commission in 1913, the description and elevation of the Ranier Benchmark being as follows:

> Ranier, Minnesota, on shore of Rainy Lake, 6 feet back of waters edge; 85 feet west of boat shop, since burned; 150 feet east of mill building covered with metal; 200 feet west of pier in Lake, foot of Main Street; in top of flat outcrop of rock. Bronze tablet stamped (1111) feet.
>
> Elevation, mean sea-level datum (U.S.C. and G.S. 1912 adjustment) . . . 1110.69

--and are then shown with reference to the arbitrary "Public Works of Canada datum," established at Fort Frances, Ontario about the year 1909

by the Department of Public Works of Canada, the description and elevation of the Fort Frances Benchmark being as follows:

> Fort Frances, Ontario, top of iron bolt set vertically in solid rock 4 feet north of north side of canal, directly beneath the Canadian and of the Minnesota and Ontario Paper Company's bridge; established during construction.
>
> Elevation, arbitrary datum. 500.00
> Mean sea-level datum
> (U.S.C. and G.S.1912 adjustment) . . . 1111.61

And, with the object of securing to the peoples of Canada and the United States the most advantageous use of the waters of Rainy Lake and the Namakan Chain of Lakes for the combined purposes of navigation, sanitation, domestic water supply, power production,recreation, and other beneficial public purposes, it is desirable to formulate and put into effect a definite practicable method or rule for regulation of the levels of said lakes to prevent the occurrence of both extremely high and extremely low levels, and restrict lake fluctuations to a prescribed range, insofar as possible.

WHEREFORE this Commission DETERMINES that:

A. Emergency conditions exist in and along the shores of the Namakan Chain of Lakes when the level of Namakan Lake is higher than elevation 1,118.61 feet above mean sea level (equal to elevation 507.0 feet, Public Works of Canada datum), or lower than elevation 1,108.61 feet above mean sea level (equal to elevation 497.0 feet, Public Works of Canada datum), and,

B. Emergency conditions exist in and along the shores of Rainy Lake when its level is higher than elevation 1,108.11 feet above mean sea level (equal to elevation 496.5 feet, Public Works of Canada da-

tum), or lower than elevation 1,104.61 feet above mean sea level (equal to elevation 493.0 feet, Public Works of Canada datum); and that --

C. In order to prevent the occurrence of such emergency conditions, it is necessary to anticipate high and low inflows to said lakes and so regulate the outflow at the Kettle Falls Dams and the International Falls Dam as to preclude the occurrence of such conditions.

NOW, THEREFORE THIS COMMISSION DOTH ORDER AND DIRECT THAT:

1. The Companies, their successors or assigns, shall operate the discharge facilities at said Kettle Falls Dam insofar as possible, in such manner that hereafter the level of Namakan Lake, as determined at the Kettle Falls-Namakan Lake gage, will be at the following elevations on the dates shown; the elevations being referred to mean sea level, with the corresponding elevations above the Public Works of Canada datum shown in parentheses:

Date	Elevation	Date	Elevation
Jan. 1	1,113.61 (502.0)	July 1	1,118.61 (507.0)
Feb. 1	1,111.91 (500.3)	Aug. 1	1,118.61 (507.0)
Mar. 1	1,110.31 (498.7)	Sept.1	1,118.61 (507.0)
Apr. 1	1,108.61 (497.0)	Oct. 1	1,118.61 (507.0)
May 1	1,111.91 (500.3)	Nov. 1	1,116.91 (505.3)
June 1	1,115.31 (503.7)	Dec. 1	1,115.31 (503.7)

2. The Companies, their successors or assigns, shall, insofar as possible with the existing discharge facilities at and in the immediate vicinity of said International Falls Dam, operate said discharge facilities in such manner that hereafter the level of Rainy Lake, as determined at the Ranier gage, will not exceed the following elevations on the dates shown opposite thereto; the elevations being

shown in feet above mean sea level, with the corresponding elevations above the Public Works of Canada datum shown in parentheses:

Date	Elevation	Date	Elevation
Jan. 1	1,107.11 (495.5)	July 1	1,108.11 (496.5)
Feb. 1	1,106.61 (495.0)	Aug. 1	1,108.11 (496.5)
Mar. 1	1,105.61 (494.0)	Sept.1	1,108.11 (496.5)
Apr. 1	1,104.61 (493.0)	Oct. 1	1,108.11 (496.5)
May 1	1,106.61 (495.0)	Nov. 1	1,108.11 (496.5)
June 1	1,107.61 (496.0)	Dec. 1	1,107.61 (496.0)

3. When the level of Rainy Lake is below an elevation shown above on the date shown opposite the elevation, an average discharge of 6,000 cubic feet per second from the lake will be in effect, except that:

(a) When the level of Rainy Lake on July 1 is below elevation 1,108.11 (496.5) and the average inflow rate, as determined by this Commission's International Rainy Lake Board of Control, is less than 10,000 cubic feet per second, the outflow will be reduced to 4,000 cubic feet per second until the lake level shall have risen to the predetermined rule elevation shown in the above tabulation.

(b) When the level of Rainy Lake at any time during the year is more than two feet below that indicated in, or which may be interpolated from, the above tabulation showing the preseribed (rule) elevations, and the average rate of inflow to Rainy Lake since the first day of the month under consideration is less than 10,000 cubic feet per second, as determined by

said Board of Control, the rate of discharge at the International Falls Dam will be reduced to 4,000 cubic feet per second until the lake has risen to the predetermined rule level, or until such time as the average rate of inflow to Rainy Lake since the first day of the month under consideration exceeds 10,000 cubic feet per second.

(c) The existing barrier which now obstructs or partially obstructs the high-level Bear Portage outlet, hereinbefore referred to, shall not be repaired, strengthened, raised, lowered, or otherwise modified in any way whatsoever by the Companies, their successors or assigns, or by any other corporation or person without specific authorization from this Commission.

(d) Regulation of the levels of Rainy Lake and Namakan Lake in accordance with the method or rule definitely prescribed in this Order shall be accomplished by the Companies under the immediate supervision of this Commission's International Rainy Lake Board of Control, which shall apprise the Commission promptly of any substantial deviation from the rule elevations prescribed herein; it being recognized by the Commission that on

rare occasions, perhaps once every 12 years as an average, the inflow may be of such magnitude that it may not be possible to restrict the level of Namakan Lake to a maximum of elevation 1,118.61 feet (507.0), but even on such occasions past runoff records indicate that the lake level generally need not exceed said elevation 1,118.61 (507.0) by as much as 0.5 foot; and it being recognized further by the Commission that it may not be possible in all years, without exception, under the method of regulation prescribed in this Order, to restrict the level of Rainy Lake to a maximum of elevation 1,108.11 feet (496.5) and a minimum of 1,104.61 feet (493.0), but long-time runoff records indicate that the occasions when it may be necessary to violate these limits will be rare.

The Commission reserves the right to have the aforementioned Bear Portage barrier removed, or cause its crest to be lowered, in event the Commission shall find at any time that said barrier interferes seriously with the achievement of the objectives of this Order.

The Commission also reserves the right to amend or rescind this Order at any time, and to issue such supplementary or other

orders in the premises as it might deem to be in the public interest; but this Order, from and after the date of its adoption by the Commission, shall be in full force and effect until otherwise ordered by the Commission.

Dated at Crane Lake, Minnesota, this eighth day of June, 1949.