

BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

In the Matter of the Petition of)
A. E. Mayer and 73 Other Persons)
for an Order Fixing a Higher Min-)
imum Level for the Lakes Affected)
by the Rest Lake Dam in Vilas)
County Owned by the Chippewa and)
Flambeau Improvement Company)

2-WP-295

ORDER UPON REOPENING

On July 8, 1937 the Commission entered an order raising the winter minimum level of water to be maintained in the Rest Lake reservoir by the Rest lake dam by Chippewa and Flambeau Improvement Company, prescribing minimum levels for other seasons, and making certain requirements of the company with respect to patrolling the waters of the reservoir and improving the bed thereof in the interest of fish life therein.

On July 28, 1937 petitioners filed an application for rehearing and reconsideration of said order and a fixation of the minimum level of water to be held in the reservoir at 6'0" gauge height from November 1 until the spring break-up. In response to said application rehearing was held in the Town of Spider Lake, Vilas county, on October 14, 1938, before Chairman Fred S. Hunt and Commissioner Robert A. Nixon.

The history of the dam and of the regulation of the water levels impounded in the reservoir is outlined in our opinion and order of July 8, 1937 herein together with a statement of the essential facts which were shown by the testimony in the hearings held prior to that order. For the most part

these matters need not be repeated here. It perhaps should be noted, however, that the original establishment of maximum and minimum levels was prescribed, after reconsideration of an earlier order, by order of September 10, 1915. This order fixed a maximum level of 8'6" gauge height and a minimum level of 5'0" gauge height, but permitted the water in the reservoir to be lowered to a minimum of 2'6" on the gauge when the entire surface was covered with ice. In our last order now under reconsideration we reverted in effect to the original prescription holding the minimum at 5'0" throughout the year, but provided also that from the time of the spring break-up until April 15 the water should be raised to a minimum of 7'3" on the gauge providing the minimum discharge required by law and rainfall and runoff would permit. During the period from April 15 to July 1 we required that the water be raised to approximately 8'6", the maximum level, rainfall and runoff permitting, and from July 1 to September 1 the order permits the water to be drawn not lower than a gauge height of 7'3". From September 1 to November 1 under the order the water may be drawn to a level not lower than 5'0", and at no time may the reservoir be lowered at a rate exceeding 2" per day or lowered while covered with ice. The order also requires the company to patrol the reservoir and record the location and elevation at which water begins filling potholes and at which these potholes are cut off from the main reservoir, and to start a program of dredging the bars between the potholes and the main reservoir so as to allow fish to escape from the potholes, spending thereon not less than \$1,000 per year and continuing for a period of five years or until the objectionable

conditions are removed.

On rehearing Sid W. Gordon, aquatic biologist of the Wisconsin State Conservation Commission, testified that the operation of the dam as permitted by the last order would have a bad effect upon fish food in the reservoir. He stated that the water contains about 1,000 pounds of fish food to the acre; that an essential part of fish food is comprised of insects which live and hatch in the marginal waters of the lake and which are unable to follow sudden recessions of water quickly enough to survive; and that a variation of $3\frac{1}{2}$ feet in the reservoir would create on the margins what he termed an "aquatic desert" of sand in which nothing would grow. He further stated that in natural lakes fish food can follow down with the water owing to the gradual recession of the shore lines which takes place in such waters; that the variation in levels has the effect of cleaning out fish cover along the borders such as tree stumps and logs, making it necessary to put in minnow spawners, but that they can successfully be installed only where the shore line is reasonably fixed; and that he would not recommend such installation in waters with a variation such as takes place in the reservoir. The witness felt that a variation of $1\frac{1}{2}$ or 2 feet would not be harmful.

Mr. Otis Bersing, supervisor of lake and stream improvement for the Conservation department, testified that sudden fluctuations in water levels had a disastrous effect upon the life of such plants as sago pond weed, wild rice, arrowhead, pickle weed, and wild celery which are of particular value as food for ducks and in providing fish cover and fish food; that

these plants grow in depths ranging from 1 to 10 feet; and that when the water recedes those growing in shoal water dry up and die. He stated that when fish food becomes scarce the fish are smaller in size and in numbers because more apt to be eaten by larger fish.

Mr. Lyman O. Williamson, area biologist for the Conservation department, testified that he had made an intensive study of the spawning habits of wall-eyed pike in the Rest Lake flowage during the last two years. He stated that for spawning pike require a gravel or very coarse sand bottom which does not carry silt, and water not over 4 feet in depth; that there is no suitable spawning ground in the Rest lake area, because the shore lines contain too much silt and eggs become coated with silt and soon die; that 98 percent of the naturally-spawned eggs found in the flowage were fertile but died a short time after deposition. The witness attributed the lack of natural spawning beds in the Rest lake chain to the recession of the water and the action of the waves in bringing silt and other material down into the bed. Pike start spawning in this area around the first of May. A variation from 5 to $8\frac{1}{2}$ feet was said to be not favorable but a fluctuation of 1 or $1\frac{1}{2}$ foot would not make much difference. In Rest lake light necessary for the growth of plants penetrates but between 5 and 6 feet according to the witness, but because of the permissible variation of $3\frac{1}{2}$ feet which prevents the growth of plant life in waters shallower than that depth the area available for plant growth is reduced by the permissible fluctuation approximately 75 to 80 percent. A 1 or 2 foot raise in the minimum would make

a 60 or 70 percent greater area available for plant growth around the shore line.

Other witnesses testified to facts covered by the testimony at the previous hearings and to damage to riparian property caused by the fluctuation in the water level.

There was testimony on both sides as to the relative quantity of fishing in the flowage and the natural lakes. The petitioners' witnesses held the opposite opinion to that of the respondent's. None of the witnesses expressed an opinion that the fishing on the flowage was worse than it would have been in these waters had the dam not been erected at all. There is no proof on this record which would justify a conclusion that the fishing would have been better if the waters had remained in their natural state than it has been with the dam in existence and operation as has been heretofore permitted. It is indicated by the record, however, that while the existence and operation of the dam in accordance with the methods permitted since 1915, coupled with propagation of fish by the state, greatly improved and enhanced the value of fishing for several years, those improvements have gradually been diminished through the harmful effects of water fluctuations described by the witnesses. Whether such losses have now or will in the future entirely overcome the benefits to fishing created by the dam or will more than offset them is impossible to say.

The nature and extent of the jurisdiction of the Commission in the premises is to be resolved from the terms of the enabling act under which Chippewa and Flambeau Improvement Company operates the dam and the provisions of Chapter 31, Stat-

utes, covering the regulation of dams by the Commission. The enabling act, Chapter 640, Laws of 1911, provides:

"Section 1. 1. Subject to the supervision and control hereinafter provided for, authority is hereby given unto the Chippewa and Flambeau Improvement Company, in order to promote the purposes hereinafter set forth, to create, construct, acquire, maintain, and operate a system of water reservoirs . . . and for that purpose said grantee may construct, acquire, maintain, and operate all such dams, booms, sluiceways, locks, and other structures in, along, or across any and all of said portions of said rivers and their said tributaries as may be necessary or reasonably convenient to accomplish the purposes of this grant, and may clean out, straighten, deepen, or otherwise improve any of said rivers and tributaries in order to improve the navigation thereof and to prevent injury to property bordering on said waters."

"Section 2. 1. The said authority is granted for the purpose of producing as nearly a uniform flow of water as practicable in the Chippewa and Flambeau rivers, through all seasons, by holding back and storing up in said reservoirs the surplus water in times of great supply, and discharging the same in times of drought and a scarcity of water, and thereby, and by other means, improving the navigation of said Chippewa and Flambeau rivers throughout their entire length, for boats, barges, and other water craft, and for the running, driving, rafting, booming, storing, sorting, and delivering of logs, timber, and lumber, and other forest products, and for the purpose of improving the usefulness of said streams for all public purposes, and of diminishing the damage and injury by floods and freshets to property, both public and private, located along said waters.

"2. It shall be the duty of said Chippewa and Flambeau Improvement Company to so manage, operate, and maintain all of its said reservoirs and other works that the purposes aforesaid shall be accomplished to the greatest practical extent and so that as nearly a uniform flow of water as practicable shall be maintained at all times and at all points on said Chippewa and Flambeau rivers; and during the times when it may be found impracticable to maintain at the same time such uniform flow of water throughout the entire length of said rivers, the upper portions of said rivers shall be given preference."

"Section 6. 1. . . . Such railroad commission shall cause the height to which the water may be raised by any dam to be indicated by permanent monu-

ments and bench marks, and shall have supervision and control of the time and extent of the drawing of water from the reservoirs, and the power to compel the maintenance of all reservoirs established. . . ."

"Section 8. This act is hereby declared to be a public act and for the accomplishment of public purposes, and shall be favorably construed to the accomplishment of said purposes."

"Section 9. The right is hereby reserved to the legislature to repeal or amend this act at any time . . ."

In Chippewa and Flambeau Improvement Company v. Railroad Commission, 164 Wis. 105, it was held that the act was under the reserved powers in effect amended by the enactment of the general water power act of 1915, and that the dam was subject to the jurisdiction of the Commission under that law. The following provisions of Chapter 380, Laws of 1915, are still in effect as Section 31.02 (1) and (2) of the Statutes which follow:

"(1) The commission, in the interest of public rights in navigable waters or to promote safety and protect life, health and property is empowered to regulate and control the level and flow of water in all navigable waters and may erect, or may order and require bench marks to be erected, upon which shall be designated the maximum level of water that may be impounded and the lowest level of water that may be maintained by any dam heretofore or hereafter constructed and maintained in navigable waters; and shall establish and maintain gauging stations upon the various navigable waters of the state and shall take other steps necessary to determine and record the characteristics of such waters.

"(2) The Commission is vested with authority and power to investigate and determine all reasonable methods of construction, operation, maintenance, and equipment for any dam so as to conserve and protect all public rights in navigable waters and so as to protect life, health and property; and the construction, operation, maintenance and equipment, or any or all thereof, of dams in navigable waters shall be subject to the supervision of the commission and to the orders and regulations of the commission made

or promulgated under the provisions of this chapter of the statutes."

In the case just cited the improvement company attacked the 1915 regulation of the Commission as depriving it of property without due process of law. In its decision the court indicated but did not directly decide that while the primary purpose of Chapter 640, Laws of 1911, was certainly the creation of reservoirs "for the purpose of accumulating great stores of water during wet periods and gradually letting it out during dry periods, so that there may be as nearly as practicable a uniform flow of the rivers, thus doing away with disastrous floods and assuring to water-power owners below a supply of water during the entire year", there appeared to be "plain indications that the legislative thought indicated other public purposes than the mere storage of immense quantities of water for the creation of power and that it was appreciated that there might well arise a conflict between the various purposes, in which event all of the public interests were to be recognized and protected so far as practicable." (164 Wis. 105, 116, 117)

On the other hand, in Flambeau River Lumber Company v. Railroad Commission, 198 Wis. 134, it was held that the legislative purpose was to improve and not to destroy navigation and especially was to improve the navigation of the Flambeau for the driving of logs. And in Flambeau River Lumber Company v. Railroad Commission, 204 Wis. 524, in which the validity of the Commission's order of March 3, 1928 authorizing the improvement company to retain all of the flow of the river except 150 cubic feet per second during the time when logs were being driven upon the river was assailed, the court said:

"Manifestly this power must be exercised to accomplish the declared purpose of the act, (1st) to improve navigation for log-driving purposes, and (2d) to maintain as nearly as practicable a uniform flow of water in accordance with the provisions of the act. If the order of March 3, 1928, accomplishes one purpose at the expense of the other, having due regard to the situation with which the legislature was dealing, it must be apparent that the commission has not properly exercised its power. It is not enough for the commission to prescribe a minimum flow in the river regardless of whether the condition thereby created will destroy the practical navigation of the stream. No doubt the power was conferred upon the Railroad Commission to regulate the flow of the stream in order that flexible standards might be erected and maintained and the stream made useful for practical purposes. The trial court found, and the evidence sustains the finding, that if the dams be operated in accordance with the order, not enough water will be available during the usual and customary log-driving season to make the stream practically navigable for that purpose. It may well be that in the opinion of the commission the use of the water for hydraulic power purposes may be from a public standpoint more important than the use of the water for purposes of navigation. Upon that point the terms of the act foreclose the commission. Its duty is to improve navigation, not destroy it or substantially impair it. If one purpose may be said, under the terms of the act, to be more important than another, that place must be accorded to navigation. If with the passage of time navigation has been of decreasing importance, a new situation has arisen which must be dealt with by the legislature. The Railroad Commission is limited in the exercise of its authority to the power conferred upon it by the act.

". . . The order should be so framed as to improve navigation to the extent that navigation exists. The right of the navigator, on the other hand, should be exercised reasonably and not so as to be unreasonably destructive of other public interests."

The court further said:

"It is suggested that a spirit of reasonableness and cooperation would go far in solving the problems presented by the conditions which exist on many of the interior navigable waters of the state, to the end that the natural resources of the state shall be made available to the highest extent reasonably possible for all public purposes."

The court in this case furthermore recognized that the

creation of hydraulic power when authorized by the legislature is a public purpose, citing Wisconsin River Improvement Company v. Pier, 137 Wis. 325

As we collate these cases and the statutory provisions which they construe we deem that it is within our power to make reasonable regulations and requirements with respect to the maintenance and operation of the dam in question in order to obtain its greatest possible usefulness for all public rights and interests in the waters affected. This does not mean, however, in our opinion, that we can substantially destroy the usefulness of the dam for its recognized primary purpose, that is the evening out of the flow of water in the stream in order to improve the generation of hydraulic power and to prevent damage by flood, for the sake of other public interests such as recreation and fishing on the reservoir no more than we could destroy the usefulness of the dam for log-driving in order to promote the generation of hydraulic power. To do either would be to defeat the expressed purpose of the legislature.

It is manifest that the ideal condition for the promotion of the public rights of fishing and recreation on the reservoir would be the maintenance of a water level as nearly uniform as rainfall and runoff would permit, but to require the dam to be so operated would be to destroy wholly its usefulness for the purpose for which it was constructed and would remove all incentive of its owner for continued maintenance and operation. Likewise, the narrower the permissible spread between maximum and minimum levels the nearer the approach to the ideal condition for fishing and recreation and the greater the impair-

ment of the usefulness of the dam for power generation and flood control. If we were to determine that because of change in conditions fishing and recreation have become more important public rights than generation of power and if we were to conclude therefore that the dam should be hereafter operated to serve only such more important public interests, we would be not only oblivious of the limits of the reasonableness within which our requirements must be kept but also of the express legislative purpose in the authorization of the dam and the purposes which induced its construction. Just as it was held to be beyond our powers to promulgate a regulation designed to promote power generation to the extent of destroying log-driving, so would we be beyond our powers in attempting to promote fishing at the expense of power generation.

As we have already said, however, we feel that we may have due regard for the public right of fishing and that we are not without power to regulate reasonably having in view both of these public purposes. The maximum benefit of the dam for power purposes would be to permit the widest variation in the level of the water to be impounded. In 1915 the improvement company sought the establishment of a maximum of 10' gauge height with a minimum of 0 for the natural level of the water. We permitted only a maximum of 8'6" and a minimum of 5'0" during the period of the year when the reservoir was free of ice, and a minimum of 2'6" when covered by ice. This regulation was prompted by precisely the considerations now urged upon us by the petitioners and was held to be valid. It involved a compromise between the interests which were in conflict. By our order of

July 8, 1937, in response to the petitioners' showing, we further restricted the operation of the dam so as to provide a minimum level of 5' during the entire year and so as to regulate the rate and period of draw-off from the reservoir. We further required a work program to be carried on by the improvement company in order to minimize so far as seemed to us reasonably practicable the harmful effect on fish life. The present order permits only 65 percent of the previous capacity of the reservoir to be made useful under ordinary conditions.

The position of the petitioners on rehearing, however, is that the present order does not go far enough and that in order to give substantial protection to fish life it would be necessary to establish a minimum of 6'6" and a maximum of 8'0", which levels petitioners now request. This would limit the reservoir to about 290,000,000 cubic feet of storage which is but 29 percent of its previous capacity. Such a requirement would in our opinion go far beyond the limits of reasonableness and would in effect defeat the legislative purpose in authorizing the dam to be constructed.

The effect of the variation in levels upon the property of riparian proprietors has also been urged by petitioners. These are private rights, and as between the riparian owners and the improvement company they may have been acquired by the improvement company by prescription, since the dam has been operated for more than 20 years in accordance with the water levels authorized in the 1915 order. At any rate our conclusions make it unnecessary to determine the question.

It has also been urged that by the terms of the en-

abling act itself the waters in the reservoir are to be given preference over the waters below the dam. The act provides that "during the times when it may be found impracticable to maintain at the same time such uniform flow of water throughout the entire length of said rivers, the upper portions of said rivers shall be given preference." This provision does not have the meaning ascribed to it by the petitioners. It does not refer to the upper reaches of the river above the reservoir because the dam does not affect the flow in such portions of the river. Nor does it mean the maintenance of a uniform level, quite different from uniform flow, in the reservoir. In order to produce a uniform flow of water the dam must be operated so as to store water during seasons of plentiful supply and release it during seasons of drought. Thus, the uniform flow can be effected only below the dam. The upper portions of the river referred to in the act are those which are below and not above the dam.

We fully appreciate the importance of this proceeding not only to the petitioners but also to the public and the state. But as we have before indicated, we have gone as far in our judgment as we lawfully can in protecting the public interests of fishing and recreation within the mandate laid upon us by the legislature. In this connection it might also be recalled that the legislature to protect the interests of the state has provided for recapture of the dam, the dam site, and flowage rights by paying compensation therefor to the improvement company. Section 9 of the enabling act provides:

"The state of Wisconsin shall have the right at any time, whenever it may have the constitutional

power, to take over to itself and become owner of all reservoirs and other works and property acquired by the Chippewa and Flambeau Improvement Company, pursuant to this act, by paying therefor the cash capital actually paid on the capital stock of said company theretofore lawfully issued and outstanding or the actual value of the physical properties so taken over and without any allowance for franchises or good will of the business, such actual value to be determined by the railroad commission of Wisconsin."

Findings of Fact

THE COMMISSION FINDS:

1. That the storage capacity of the Rest Lake reservoir between gauge heights 8'6" and 2'6" is 1,010,000,000 cubic feet.

2. That the capacity of the reservoir between gauge heights 5'0" and 8'6" is 660,000,000 cubic feet.

3. That the capacity of the reservoir between gauge heights 8'0" and 6'6" (requested by petitioners) is 290,000,000 cubic feet.

4. That the withdrawal of water to a minimum level of 2'6" gauge height during the winter after the reservoir was frozen over has resulted in the destruction of large numbers of small fish which were trapped in potholes by such withdrawal of water.

5. That the sudden variations in the level of the reservoir as permitted by the order of 1915 has resulted in the destruction of insect life forming fish food on the margins of the reservoir and plant life furnishing food and cover for fish and ducks on such margins.

6. That such destruction of fish, insect, and plant life has substantially impaired fishing during the last

four or five years as compared with that which obtained prior thereto.

7. That the maintenance and operation of the dam has not been shown to have impaired fishing conditions as they existed in the waters above the dam prior to 1915, or as these conditions would have obtained had the waters affected remained in their natural state.

8. That in the interests of recreation and fishing in the Rest lake reservoir it is reasonable and necessary to increase the winter minimum level of the water therein from 2'6" gauge height to 5'0" gauge height; to require the water to be raised from the time of the spring break-up to April 15 of each year to a minimum level of 7'3" gauge height, rainfall and runoff permitting, and to 8'6" by July 1 of each year, rainfall and runoff permitting; to permit the water to be drawn off from July 1 to September 1 of each year to a minimum level of 7'3", and from September 1 to November 1 to a minimum of 5'0", but at no time at a rate exceeding 2" per day; and to permit no lowering of the level after the ice sheet forms in the early winter until the ice breaks up during the following spring.

9. That it is also reasonable and necessary in the interests of fishing and recreation to require the improvement company to patrol the reservoir during the filling and draw-off periods recording the location and elevation at which water begins filling each of the potholes and the elevations at which the potholes are cut off from the main reservoir when the water level is lowered, and to require a five-year program at a rate of expenditure of at least \$1,000 per year of dredging the

bars between the potholes and the main reservoir, so as to allow fish to escape when the reservoir is lowered.

Order

IT IS THEREFORE ORDERED, That our order of July 8, 1937 heretofore entered herein be and the same is hereby affirmed.

Dated at Madison, Wisconsin, this 15th day of February, 1939.

PUBLIC SERVICE COMMISSION OF WISCONSIN

FRED S. HUNT

Chairman

R. FLOYD GREEN

Commissioner

Commissioner

Dissenting Opinion by Commissioner Nixon

I concur in the foregoing opinion as to the law applicable to this case, but I am convinced that the evidence justifies raising the minimum level requirement above that prescribed in our order of July 8, 1937 for the protection of the public right of fishing and the rights of the riparian owners. It is quite possible that the levels requested by the applicants in their petition for rehearing would substantially destroy the usefulness of the reservoir for storage purposes, but we are not thereby foreclosed from finding a different minimum level which will meet the test of reasonableness and at the same time permit the use of a major part of the storage capacity of this reservoir for power purposes.

Dated at Madison, Wisconsin, this 15th day of
February, 1939.

ROBERT A NIXON

Commissioner

