BEFORE THE
STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

In the Matter of the Modification of the Operating Levels for the Rochester Dam, Village of Rochester, Racine County	)))))	#3-SE-81-802

FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER

FINDINGS OF FACT

The Department finds that:

1. The Rochester Dam is located on the Fox River in Section 2, Town 3 North, Range 19 East, Racine County, Wisconsin.

2. The Rochester Dam is owned by Racine County, and its operation is supervised by the Racine County Highway Department.

3. The Rochester Dam is presently subject to Public Service Commission (PSC) order #2-WP-427, issued on March 23, 1951. The PSC order needs revision because the dam is no longer used for milling and it has four radial gates instead of the two gates it had in 1951.

4. Pursuant to complaints by the Norway-Dover Drainage District, Racine County and citizen groups, the Department of Natural Resources held a public informational hearing on June 3, 1981, to solicit public input on the appropriate levels for the Rochester Dam.

5. Approximately 110 persons attended the hearing, and 19 persons offered comments concerning operation of the dam. The Department also received 9 written statements concerning operation of the dam.

6. The water level at the Rochester Dam has been the subject of dispute for almost 100 years.

7. The water level at the dam is subject to large fluctuations as the radial gates open and close due to the drawdown effect of the gates. The Department, therefore, installed a gauge approximately 1500 feet upstream of the dam at the County Trunk Highway "D" bridge across the Fox River. This gauge more correctly represents the level of the flowage held by the Rochester Dam, and is not subject to the rapid fluctuations from gate operation. A reading of 0 on this gauge corresponds to a reading of 71.50' PSC datum, and a reading of 760.80', Mean Sea Level (MSL) datum.

8. The Department determined that the water level at the County Trunk Highway "D" bridge is approximately 0.25 feet higher than the water level at the dam during periods of low flow, and approximately 0.5 feet higher than the level at the dam during periods of high flow. The following order reflects the water surface elevation difference between the bridge and the dam.

9. The Department has determined that a minimum flow of 46 cubic feet per second is required through the Rochester Dam at all times in order to preserve fish life downstream, and to protect the rights of downstream dischargers who have minimum flow needs. The flow of 46 cubic feet per second corresponds to a minimum of two radial gates open at least two inches at all times.

10. The appropriate normal water level at the County Trunk Highway "D" bridge is 76.20' PSC datum, which corresponds to a gauge reading of 4.70' (765.50' MSL datum).

11. Water levels above 76.70' PSC datum, (5.20' on gauge; 766.0' MSL datum), tend to cause flooding of upstream agricultural land.

12. Water levels below 75.70' PSC datum, (4.20' on gauge; 765.0' MSL datum), cause navigation problems for boaters on the river.

13. To prevent spring flooding, the fishway boards on the dam must be removed prior to November 15 of each year, and may not be replaced prior to May 15 of each year.

CONCLUSIONS OF LAW

The Department concludes that:

1. The Department has authority under section 31.02(1), Wisconsin Statutes, to regulate and control the level and flow of water in all navigable waters, including the Fox River.

2. The Department has authority under section 31.02(2), Wisconsin Statutes, to determine reasonable methods of operation and maintenance of any dam so as to conserve and protect all public rights in navigable waters and so as to protect life, health and property; the operation and maintenance of dams is subject to the supervision, orders and regulations of the Department.

3. The Department has authority under section 31.34, Wisconsin Statutes, to require a minimum discharge of water through the dam.

4. The order contained herein is reasonable, proper and necessary to protect public rights in navigable waters and to protect life, health and property.

ORDER

The Department therefore orders:

1. That a minimum flow of 46 cubic feet per second be maintained through the dam at all times.

2. When the water elevation at the County Trunk Highway "D" bridge reaches 75.70' PSC datum (4.20' on gauge; 765.00' MSL datum), the gates at the Rochester Dam must be cranked down to allow the minimum flow release of 46 cubic feet per second.

3. When the water level at the County Trunk Highway "D" bridge exceeds 76.70' PSC datum, (5.20' on gauge; 766.00' MSL datum), all four radial gates are to be fully opened. If the water rises beyond 77.20' PSC datum (5.70' on gauge, 766.50' MSL datum), all other gates are to be fully opened.

4. The normal level at the bridge is 76.20' PSC datum, (4.70' on gauge; 765.50' MSL datum). The operator of the dam shall strive to maintain the water level as nearly as practicable at this level.

5. The fishway boards on the dam must be removed prior to November 15 of each year. The boards must not be replaced prior to May 15 of each year.

Dated at Madison, Wisconsin, this 27th day of August, 1981.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
For the Secretary

By George E. Meyer
George E. Meyer, Administrator
Division of Enforcement

0838K

Dan Holzman
WR2/5

BEFORE THE

STATE OF WISCONSIN

DIVISION OF NATURAL RESOURCES HEARINGS

In the Matter of the Modification of the Operating Levels for the Rochester Dam, Village of Rochester, Racine County, Wisconsin	))))	3-SE-81-802

ORDER AMENDING FINDINGS OF FACT
AND AFFIRMING CONCLUSIONS OF LAW AND ORDER

On August 27, 1981, the Department of Natural Resources issued Findings of Fact, Conclusions of Law and Order in the above docket establishing new operating levels to be maintained by Racine County in the operation of the Rochester Dam on the Fox River in Section 2, Township 3 North, Range 19 East Racine County. The dam was, at the time of the order, operated in accordance with the order of the Public Service Commission in Docket 2-WP-427 issued in 1951.

The Farm Drainage Board of the Norway-Dover Drainage District by its attorney, Kenneth F. Hostak, Racine, Wisconsin, on October 7, 1981 requested public hearing in accordance with sec. 227.064, Stats.

Public hearing was held December 18, 1981 at Racine before Examiner Maurice H. Van Susteren.

In accordance with sections 227.10 and 227.16(1)(c), Stats., the PARTIES to this proceeding are certified as follows:

Norway-Dover Drainage District, by

Kenneth F. Hostak, Attorney
840 Lake Avenue, Box 516
Racine, WI 53401

Racine County, by

Mark Janiuk, Assistant Corporation Counsel
730 Wisconsin Avenue
Racine, Wisconsin 53403

Department of Natural Resources, by

Marcia Penner, Attorney
P.O. Box 7921
Madison, Wisconsin 53707

FINDINGS OF FACT

Findings of Fact one (1) through thirteen (13) in the Department order of August 27, 1981 are affirmed and adopted as the findings of the Examiner.

The Examiner also finds:

14. The Norway-Dover Drainage District is a farm drainage district under Chapter 88, Stats., and is located in the Towns of Norway and Dover, Racine County. The district drains several thousand acres of land by means of ditches and canals which empty into the Fox River a short distance upstream of the Rochester Dam. The drainage system does not drain the land as intended and the farmers in the district believe the root cause is the operation of the Rochester Dam and the levels maintained by that dam.

15. The drainage problem of the district and its' cause is explained in the testimony of Daniel Holzman, the hydraulic engineer of the Department of Natural Resources. The explanation by Mr. Holzman of the cause of flooding establishes as a fact that the operation of the Rochester Dam has little if any effect on drainage in the district:

"There was quite a bit of discussion at the public meeting about the source of drainage problems in the Wind Lake canal area; one of the main factors that was possibly misunderstood or mis-interpreted was where is the flooding actually come from. My explanation of what occurs there is that the Wind Lake Dam is operated extremely tightly, it's got only .2 of a foot between maximum and minimum in the summer; therefore, when the levels reach the maximum there's no choice but to open the gates up, there are two radial gates on the Wind Lake Dam; given the fact that the Wind Lake Dam holds back a very substantial body of water, I believe it's 5,000 or 4,000 acres, plus its associated drainage area, as soon as the gates open up at Wind Lake large volumes of water start to flow out of the dam, there's approximately a four foot drop between the normal level of Wind Lake and the level in the Wind Lake canal. So, water starts to flow out of the Wind Lake Dam, Wind Lake canal is eight miles long, it varies in width but it has nowhere near the volume capacity of Wind Lake; so the Wind Lake canal rapidly starts to fill up as soon as the Wind Lake Dam is opened. Now, the gradient between Wind Lake downstream of the Wind Lake Dam and the Fox River is only about a foot and a half in eight miles; so the water flows extremely slowly from Wind Lake down to the Fox River. Even if the Fox River were kept at an artifically low level, the water flow would be extremely slow, on the order of one foot per second from the Wind Lake Dam downstream. So, my understanding or my interpretation of what occurs is as soon as the Wind Lake Dam opens up, the Wind Lake canal starts to fill up and when the water reaches a certain level flooding starts to occur. At that point many people felt that the appropriate way to handle the problem would be to drop the levels in the Fox River, which can only be done by dropping the levels at the Rochester Dam. But my opinion

is, even if the levels at the Rochester Dam are dropped to minimum, there'll be only a marginal increase---there'll be some increase but it'll be only a marginal increase in the flow rate of the Wind Lake canal due to the extremely low gradient; and as long as the Wind Lake Dam remains open the flooding will continue. This type of flooding tends to occur during prolonged thunderstorm activities; I would imagine in the summer after several days of rain Wind Lake is filled up and they've got to open the gates up and unfortunately around that time it's probably true that the Fox River is flowing fairly high also and at that point it's very difficult to keep the Fox River at minimum even with the gates open. So, my opinion of the source of the problem is that Wind Lake canal simply hasn't got enough gradient to take the water away quickly enough to promote drainage of the fields, given the fact especially that the Wind Lake Dam is regulated so tightly." (T-14, 15)

16. The levels as established by the Department constitute a reasonable method of operation of the Rochester Dam. The operation as proposed will conserve and protect public rights in navigable waters and will protect life, health and property.

CONCLUSIONS OF LAW

The conclusions of law as set forth in the Department Order of August 27, 1981 are affirmed and adopted herein the same as if set out in full.

ORDER

1. The findings of fact as set forth in the Order of August 27, 1981 and as amended are affirmed.

2. The Department Order of August 27, 1981 is affirmed and adopted herein as the Order of the Examiner the same as if set out in full.

Dated at Madison, Wisconsin April 22, 1982

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By Maurice H. Van Susteren
Maurice H. Van Susteren, Hearing Examiner