

file

May 9, 1985

TO: Pat Merrick, Office of Public Affairs

FROM: John Dexter, Chief, Dam Safety & Lake Engineering
Engineering-Water Management Division
373-0208

SUBJECT: Lake Esau, Presque Isle County

I wish to answer your 9 questions which you requested regarding the above subject.

1. The names that will be placed on the bronze plaque are Presque Isle County Board of Commissioners; Judge Ferguson, Presque Isle County Circuit Court; Mr. & Mrs. William Painter; Mr. & Mrs. Mandenburg; Presque Isle County Road Commission; Michigan Department of Natural Resources; Presque Isle Corporation; Grand Lake Association, Harold (Robin) Spencer, President. The plaque is for the dedication of the Lake Esau inlet stream and to thank those who have given their efforts for its construction.
2. The plaque was provided through donations of the Presque Isle County Board of Commissioners, Grand Lake Association, and Presque Isle Corporation, the limestone mining operation in the Alpena area. The plaque is valued at more than \$500. Its actual cost was \$375. The cost was split equally between these 3 groups. Apparently the plaque is now planned to be placed in the Village of Presque Isle, a public area for viewing.
3. The Presque Isle Board of Commissioners, through their resolutions, enabled Lake Esau to have a legal lake level established through the Presque Isle County Circuit Court. Judge Ferguson presided over the Circuit Court hearing that established the normal level for Lake Esau. Mr. & Mrs. William Painter and Mr. & Mrs. Mandenburg gave easements for the construction of the inlet channel to Lake Esau. The Presque Isle County Road Commission constructed the channel which brought water to Lake Esau from the Presque Isle Corporation pumping operation.

The Michigan Department of Natural Resources advised the Lake Association property owners, as well as the Presque Isle County Board of Commissioners, of the procedures of

Act 346. The Department of Natural Resources reviewed and offered testimony at the circuit court hearing. Permits were reviewed and issued for the construction of the inlet channel, pursuant to Act 346, Inland Lakes & Streams Act. An NPDES permit for the discharge of quarry water to the inlet stream was issued by the Michigan Department of Natural Resources.

4. In June of 1979, Mrs. Frank Gaasch, a riparian property owner on Lake Esau, wrote to the Michigan Department of Natural Resources requesting assistance with the problem of a low water level in Lake Esau. It was reported by Mrs. Gaasch that the level was 3 foot lower than normal. She did not know the reason for this decrease in water level. It was suspected a nearby lime quarry could be the cause. This office indicated to Mrs. Gaasch that water levels were low throughout the County. It was suggested that a lake level be established for Lake Esau and that water currently being discharged to Lake Huron by the Presque Isle Corporation could be diverted to Lake Esau. We provided sample Petitions to the County Board of Commissioners for the Establishment of a Normal Level for Lake Esau to Mrs. Gaasch. Mrs. Gaasch gathered the necessary signatures of riparian property owners to implement the Inland Lake Level Act. Presque Isle County Board of Commissioners asked that the Grand Lake Association assist the Lake Esau riparians in gathering information to take action for the establishment of a lake level.

During July of 1982, a meeting was held with interested parties in Presque Isle Village. Those involved were riparian property owners on Lake Esau; Robin Spencer, President, Grand Lake Association and Commissioner for Presque Isle County; and John Dexter, Chief, Dam Safety & Lake Engineering; David Robinette, Presque Isle Corporation. The discussion included the necessary evidence for the Circuit Court hearing and permits and approvals pursuant to Act 146, the Inland Lake Level Act. A research of the Department of Natural Resources files provided some materials to be used.

In January of 1984, notice of a lake level hearing was given to the Michigan Department of Natural Resources, an internal review of several levels was made. It was determined that the Department would not object to an elevation of 597.0 feet NGVD (National Geodetic Vertical Datum).

On January 30, 1984, a Circuit Court hearing was held in Rogers City with Judge Ferguson presiding. Presque Isle County Board of Commissioners were represented by Prosecuting Attorney Donald J. McLennan. John Dexter presented a position statement from the Michigan Department of Natural Resources, proposing the level of 597.0 NGVD to the court.

Other evidence entered regarded the bottom contour map of Lake Esau, the drainage basin, the easements for the construction of a channel, and the need for Department of Natural Resources' permits and approvals. Information regarding current levels of Lake Esau were provided to the court from data gathered by the Presque Isle Corporation.

Prior to this hearing and afterward Harry Whiteley, Natural Resources Commissioner, has given his support for the resolution of the problem at Lake Esau.

Based upon the testimony given on the 30th of January, an Order was issued by Judge Robert R. Ferguson, Circuit Court Judge, ordering the level of 597.0, so that water would be pumped from Presque Isle Corporation quarry pit to the lake. Permit application for construction of the channel was received from the Presque Isle County Board of Commissioners and processed by the Michigan Department of Natural Resources. An agreement between Presque Isle Corporation and the County Board of Commissioners for maintenance water from the quarry pit was reviewed and accepted pursuant to the Inland Lake Level Act by the Michigan Department of Natural Resources. The NPDES effluent discharge permit was altered so that quarry water from the pit to Lake Huron would now be diverted to Lake Esau. Commencing approximately July 1984, discharge water was received at Lake Esau, after all approvals by the Department of Natural Resources. Water was discharged during mining operation at the pit to November 1, 1984, at which time the level of Lake Esau was 596.5. At this time the water level is 597.5, or .5 of a foot higher than the established level. However, during the course of 1985 summer, it is expected that evaporation and seepage will drop the water level to 597. Currently the property owners on Lake Esau are quite happy with the level. Perhaps the normal lake level, established through Presque Isle Circuit Court, will be increased in the future.

5. Lake Esau became a problem during 1979. Other lakes in the Presque Isle County area also experienced low water during this period. Lake Esau appears to be a sink hole lake; meaning that sink holes or failed caverns in the foundation bedrock (limestone) offer a leakage path from the bottom of the lake when ground water conditions are reduced.

The first riparian property owner to complain was Mrs. Helen Gaasch. She complained in 1979. This brought response by the Engineering-Water Management Division. During the course from 1979-1985 other complaints were received from other riparians, as well as State Representatives.

6. The damage caused by the low level on Lake Esau was primarily aesthetic and property value oriented. The use of an access site on Lake Esau was very much hampered by the lake's low level. The normal maximum depth of Lake Esau is 27 feet. The fisheries were not materially affected, although spawning beds and a good deal of the lake's volume was reduced.
7. There was no party responsible, to the best of our knowledge, for causing the low water level of Lake Esau. Lake Esau's surface elevation was increased during the operation of quarry pit pumping by approximately 1.5' during 1984. The greatest volume was probably added by spring runoff. The other lakes experiencing low water levels have been restored also.
8. Lake Esau has a normal surface area of 275 acres and a mean depth of 13.4'. It lies within a mile of Lake Huron and is accessible to the public for boating and fishing. The lake offers many recreational opportunities.
9. The water being pumped from the quarry is of good quality by NPDES standards and is clear.

If we can be of any other assistance, please let us know.

JWD:cg