

DNR STUDIES OF WHITEFISH NETTING
ON TEN MILE LAKE CONTINUE

For the third straight year, studies have confirmed that delaying the whitefish netting season on Ten Mile Lake until mid-November reduces to almost zero the number of walleyes caught in whitefish nets.

The studies began in 1973 when the Association petitioned the Department of Natural Resources to close Ten Mile to whitefish netting because many members thought the netters were taking game fish illegally. It was the opinion of DNR officials, however, that there was insufficient information on which to base a decision and that some investigation should be made.

That fall, John Kollar and his DNR crew conducted a detailed study from late October well into December in order to learn all they could about the whitefish netting operations on Ten Mile Lake. The Association and a number of its members assisted. The study indicated that if the opening of the netting season was changed to mid-November instead of early November or late October as in other lakes few -- if any -- walleyes would be taken.

On the request of the Association, the DNR made this change in 1974 and again in 1975. At the same time, again with the cooperation of Association members, the DNR continued the research first undertaken in 1973. The 1974-75 results were virtually identical to the earlier findings.

The data and other information collected in these studies would fill quite a voluminous report and probably represent the most complete investigation of whitefish netting ever conducted on any lake in the state. Here are some typical data obtained from nets set by the DNR for the interval just after mid-November:

	Number of Fish Caught per 100-Foot Net per Set (per year)		
	Whitefish	Northern Pike	Walleyes
1973 (Nov. 15-20)	8.00	2.17	0
1974 (Nov. 19-21)	9.00	3.67	0
1975 (Nov. 18-20)	8.87	0.50	0.33

About a dozen residents or groups of residents put whitefish nets into Ten Mile Lake each fall, and also there are approximately half that many netters who come from elsewhere. Some of the non-resident netters come to Ten Mile Lake after they have been frozen out of other lakes inasmuch as Ten Mile Lake is usually the last to freeze in this area. The netting season runs through January but for the most part is finished when the lake freezes. As an extension of the 1974 study, the DNR crew put nets under the ice in Ten Mile Lake during the latter part of January 1975. The catch per set of a 100-foot net was 2.75 whitefish and 0.25 northern pike -- no walleyes.

Those of our members who accompanied the DNR people during these operations can attest to the fact that it can be bitterly cold out in a boat during November and December -- and occasionally hazardous. On last November 20, for example, the DNR crew tended its nets during the height of a raging blizzard.

MORE INFORMATION COMPILED ON
TEN MILE LAKE'S DWARF TULLIBEES

A fascinating fish story is unfolding on Ten Mile Lake as studies continue in order to characterize and learn more about the unique little "herring" found here. In a newsletter last year we reported that they appear to be a dwarfed form of a tullibee and that further research on them was being planned by Professor James C. Underhill, noted biologist and fisheries expert at the University of Minnesota. Ten Mile Lake seems to have no regular tullibeas -- just millions of these tiny dwarfs.

The further research is indeed being pursued. Professor Underhill and a graduate student, Jim Erickson, spent several days on Ten Mile Lake during the 1975 run at the end of October, with much assistance from John Kollar's DNR crew and members of the Association. Carol Buckmann also participated, and we think you will enjoy reading the enclosed article she wrote on the "Shimmering Dwarfs of Ten Mile Lake" which we have reproduced (with permission) from The Brainerd Daily Dispatch.

TESTING SERIES TENDS TO CONFIRM EARLIER
FINDINGS: TEN MILE LAKE RELATIVELY CLEAN

Preliminary results of the chemical and biological tests that were conducted on Ten Mile Lake this past summer tend to confirm our earlier findings -- the lake is relatively clean. As was mentioned at our last annual meeting in August, the Environmental Research Group of FMC Corporation in Princeton, New Jersey, conducted a study of Ten Mile Lake during 1975. At present, their staff of chemists and biologists are assembling and evaluating the data. We hope to obtain a full report in a few weeks.

Four of the FMC scientists spent several days on Ten Mile Lake last May, making observations and taking samples for chemical and biological analyses. Additional samples were taken at intervals during the summer from various sites on the lake. They have furnished us with some of the preliminary results (13 chemical analyses on each of 10 samples taken in May), but we cannot accurately draw conclusions until the rest of the investigation is complete.

These initial results do confirm, however, the indications we obtained from occasional chemical and biological tests in years past. The lake's content of nutrients, such as those resulting from man-caused pollution, is low. We dare not be complacent about this, however, for anyone who has observed the lake over the past five to ten years will have noted increased growth of weeds in shallow places and numerous other indications that eutrophication is taking place.

Among the important things we hope to learn from the FMC study are what chemical and biological analyses will be most meaningful and practical for us to conduct on a regular basis in order to maintain awareness of changes in the trophic condition of our lake. It might be possible that some of the FMC scientists can attend our annual meeting next August and discuss the results.

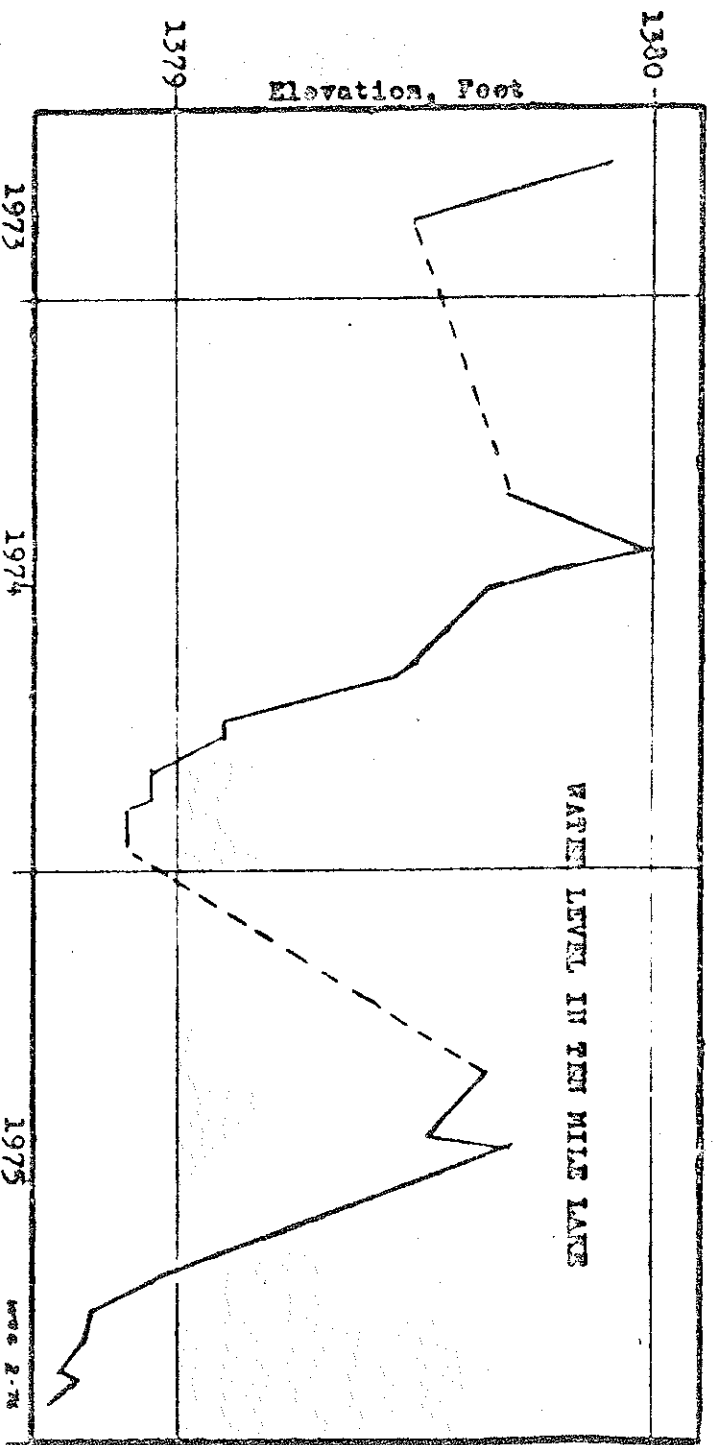
DEPARTMENT OF NATURAL RESOURCES
INSTALLS OFFICIAL WATER LEVEL GAUGE

Fluctuations in water level cause much distress to many lakeshore dwellers. Residents of Ten Mile Lake are relatively fortunate in this respect, but we do have our problems. In 1974 we experienced the highest level in the memory of old-timers (1380.00 feet on June 6), and many of us had to reinforce sea walls and make other repairs. Toward the end of 1975, on the other hand, we experienced a rather low water level (1378.76 feet on December 2), and some of the autumn fishermen could hardly get their boats to the dock.

We think that these fluctuations, which are far less than on many other lakes, were due mostly to unusual weather. Many other factors can influence the water level, however, and we have discussed these on several occasions with the DNR and other officials. The Association arranged with the DNR to install an official level gauge on Ten Mile Lake, and it had to be affixed to a permanent structure that is safe from damage by the ice.

There aren't many such structures. The one selected is a new dock erected by the Helschers, who consented to the gauge installation, near the entrance to Long Bay. Readings now are being made at frequent intervals by designated members and then are duly reported to the Division of Waters, Soils and Minerals of the Minnesota Department of Natural Resources. So henceforth we should have authentic records of the lake level, but what we badly need are accurate records extending back as many years as possible.

One member has made measurements at intervals of the water depth above a large and presumably permanent rock since 1973. Here is a plot of his data:



Please! Can anyone find similar records for prior years?

WALLEYE REARING PROGRAM IN
JAKE'S POND BEGINS TO PAY OFF

There was a welcome development for walleye fishermen on Ten Mile Lake this past summer. For the first time in many years, the walleyes caught included quite a few in the size range of 1½ to 2 pounds instead of being practically all large (and old).

It appears that at last we are achieving success in our program of rearing fingerlings in Jake's Pond and transferring them to Ten Mile Lake in the fall. The younger generation of walleyes now growing up in Ten Mile Lake probably consist largely if not entirely of fingerlings

from Jake's Pond that have been introduced into the lake each year, starting in 1972. In 1975 we again harvested a good crop.

The DNR crew to whom we are especially indebted for this success is under the direction of Mr. John Kollar and includes also Chuck Yliniemi and Howie Centerwall. They put last year's batch of fry into Jake's Pond on May 23. A preliminary netting on July 30 indicated that growth was proceeding satisfactorily. The final harvesting was conducted September 16 to 26 during which time 21,800 walleye fingerlings were trapped and replanted at various places around the shores of Ten Mile Lake. Here is a re-cap of what we obtained in Jake's Pond during previous years compared with our results in 1975:

Year	<u>No. of Fry Stocked</u>	<u>Lb. of Fingerlings</u>	<u>No. of Fingerlings</u>
1972	180,000	143 @ 130 per lb.	18,600
1973	160,000	196 @ 135 per lb.	26,500
1974	80,000	184 @ 75 per lb.	13,800
1975	60,000	272 @ 80 per lb.	21,800

In addition, the preliminary netting on July 30 yielded 635 fingerlings (5 lb. @ 127 per lb.).

We are encouraged as well as grateful not only to the DNR but also to the Chippewa National Forest people who made Jake's Pond available to us. We enclose a copy of an interesting article from The Brainerd Daily Dispatch, written by Carol Buckmann, which describes our efforts to improve walleye fishing in Ten Mile Lake.

WATER CLARITY TESTS CONDUCTED FROM EARLY MAY TO LATE NOVEMBER

Water clarity readings on Ten Mile Lake were conducted by Association members over a seven-month period in 1975, the most extensive program of the sort ever undertaken on our particular lake. Testing on the main lake began on May 9, shortly after the ice went out, and continued on a weekly basis (or oftener) until just before freeze-up in late November. Readings for somewhat shorter periods, but still spanning the summer months, also were taken in the lake's three major bays -- Kenfield, Lundstrom's and Long.

Although complete data are furnished in the accompanying chart, here is a summary of the findings:

Main Lake -- First reading, 22½ feet (May 9); maximum clarity, 25 feet (June 16); minimum clarity, 10½ feet (Aug. 14); final reading, 15 feet (Nov. 21).

Kenfield Bay -- First reading, 15 feet (May 27); maximum clarity, 18 feet (June 23); minimum clarity, 12 feet (July 11, Aug. 9 and 14, Sept. 13) final reading, 16½ feet (Oct. 11).

Lundstrom's Bay (inner bay) -- First reading, 7½ feet (July 11); maximum clarity, 12 feet (Aug. 14); minimum clarity, 7½ feet (July 11), final reading, weeds interfered with the test (Oct. 11).

Long Bay -- First reading, 13¾ feet (May 27); maximum clarity, 17 feet (June 20 and 23), minimum clarity, 10 feet (Aug. 9); final reading 15½ feet (Oct. 11).

Clarity readings for the outer bay of Lundstrom's ranged from a low of 15½ feet on May 22 to a high of 19½ feet on June 23. From then on readings were taken in the inner bay.

The testing is done by lowering a white disc (called a Secchi disc) over the side of a boat, watching until the disc disappears, then reading the depth on the marked line that is attached to the disc.

Turbidity -- or the lack of clarity -- is caused mostly by the growth of algae, and this in turn depends on such factors as sunlight and temperature; but especially important are the amounts and types of nutrients from pollution and other sources. The studies conducted by the scientists from FMC, mentioned elsewhere in this newsletter, placed particular emphasis on these nutrients in Ten Mile Lake.

