

Original copy: Fish Division
cc - Mr. Ruhl
Mr. Steinbaugh

INSTITUTE FOR FISHERIES RESEARCH
DIVISION OF FISHERIES
MICHIGAN DEPARTMENT OF CONSERVATION
COOPERATING WITH THE
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THE ACCUMULATION OF MUD, AND THE LOW WATER LEVEL
IN WHITE LAKE, OAKLAND COUNTY, MICHIGAN

Recent correspondence to the Department of Conservation from Mr. E. G. Steinbaugh of Davisburg, Michigan has called our attention to the condition of low water in White Lake (White Lake and Highland townships, Oakland County, Michigan) and to the general concern among the local residents around this lake over the resultant appearance of the great accumulation of organic mud or peat in the lake basin. Mr. Steinbaugh, in correspondence, suggested that something might be done to improve the conditions in this lake for fish life. Thus, on August 27, 1936, Mr. A. T. Stewart and the writer called on Mr. Steinbaugh to investigate these conditions.

The area of White Lake is listed by the Michigan Lake and Stream Directory as 1,000 acres; however, the U. S. Topographical Survey Map indicates that its area is about 600 acres. Two large bays (about 75 acres each) to the north are separated from the main part of the lake (about 500 acres) by two narrow necks of water.

Judging from a high water mark on a bridge abutment, the lake level has dropped about four feet in (according to Mr. Steinbaugh) the last six years. This drop of the lake level has exposed in many places along the shore a wide strip of mud flats (50 to 200 feet or more wide) between the old lake shore line and the present one. This condition is very unfortunate from the standpoint of the local cottagers, and there are a great many located on this lake.

Mr. Steinbaugh was chiefly concerned with the two north bays of this lake (see topographic sheet). The low water level and the accumulation of mud have reached the stage of being seriously adverse to boating and fishing, only in these two bays.

Therefore our observations were confined to these parts of the lake.

We undertook to row about one of these bays (the one to the east). The conditions encountered were so unusual as to be almost unbelievable. We rowed about 200 yards toward the center of the lake and then returned to the dock; this trip took us about three-quarters of an hour. The water was almost uniformly of a depth of about two to four inches. Below this depth there was practically nothing but mud. Due to the shallowness of the water, rowing on the lake was extremely difficult as each stroke of the oars resulted in an advance of about one foot. Mr. Steinbaugh informed us that the water depth was essentially the same over the entire area of this particular bay, and the same over most of the other north bay (the one to the west). Soundings with a twenty-foot bamboo pole revealed that this accumulated organic mud in the basin of this bay was about six inches in thickness at thirty feet from the shore line, two feet in thickness at fifty feet from shore and ten feet at one hundred feet from shore. If this mud accumulation extends to within two to four inches of the water's surface over the entire seventy-five acres of this north bay, as was stated by Mr. Steinbaugh, it probably has an average depth of at least ten feet over this entire area. The condition is apparently the result of the deposition of organic material in the lake basin during past centuries (the lake has no important inlets) and has been brought to the attention of the resorters by the present low water level. If the water level does not rise, it will be only a relatively few years before both of these north bays are continuous marshes.

According to the Conservation Department's records and according to Steinbaugh, these north bays had a severe "winter kill" of fishes during 1935-36. The fishes affected were Bluegills, Rock Bass and Black Bass. It appears, therefore, that the lake level has dropped somewhat since the fall of 1935, for adult game fish could hardly be expected to live in these north bays at the present water depth of two to four inches.

Our advice to Mr. Steinbaugh and to other cottagers along these north bays could not be encouraging. The difficulty and the extent of the task of removing ten feet of mud from these seventy-five acre bays is practically prohibitive; it would probably

cost more than it cost to build the cottages. Also, the cost of removing enough of the mud to make the area suitable for game fish would be prohibitive.

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