WHITEWATER-RICE Lakes Management District newsletter
VOL. 1 NO. 3 FALL 1988

SUMMARY OF THE DISTRICT'S SECOND ANNUAL MEETING — May 28, 1988

Only 72 of the nearly 1,100 members of the District's electorate attended the meeting held at Lakeview School.

Treasurer Tom Ponyicsanyi reported that our District revenues to date amounted to $23,239.09, with expenditures to date of $3,191.42--leaving a balance of $20,047.67. There were no outstanding bills. Most of this revenue represented 1987 Property Tax assessments ($21,600) that became available to the District in March, 1988. The remaining revenues represented contributions by individual property owners, and loans negotiated with a local bank to bridge the interval until property tax monies became available. An independent audit committee composed of Laura Hicks, Mardell Winter, and Ann Zarach verified that the accounts were in order.

Because of the staggered schedule on which the District's Commissioners are elected, there was only one vacancy to be filled. Tom Ponyicsanyi was re-elected to a 3 year term. Except for changes in the unexpired terms of office, therefore, your District's Board of Commissioners remains unchanged, as follows:

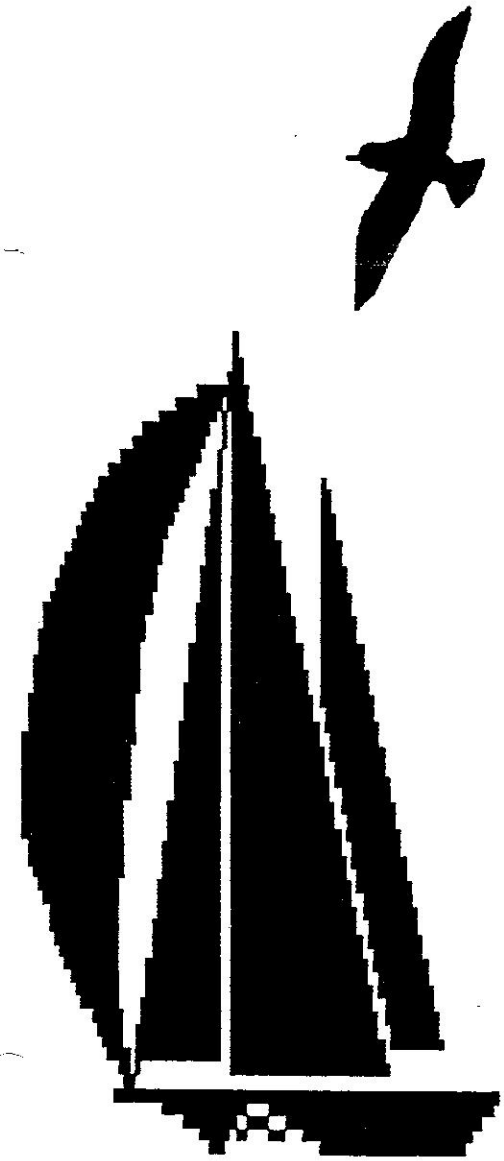
Chairman:
William P. Norris
term-1989
Secretary:
Willard Gross
term-1990
Treasurer:
Tom Ponyicsanyi
term-1991

Appointed Town of Whitewater Rep:
Kenneth Loehndorf

Appointed Walworth County Rep:
James Van Dreser

The proposed District budget for FY 1989 was presented and approved. The budget total was $19,000, and represents Property Tax assessments for the year 1988. These funds will become available in March, 1989. The breakdown of the FY 1989 budget is as follows:

Operating Expenses	$ 750
Newsletter	$ 1000
Insurance	$ 1000
Legal Fees	$ 500
Water Quality Analyses	$ 3000
Weed Harvesting	$ 8000
Septic System Survey	$ 2000
Fish Stocking	$ 750
Contingency Fund	$ 2000
Total	$19,000



Fall 1988
Whitewater-Rice Lakes
Management District

SUMMARY (cont.)

The Wisconsin Dept. of Revenue's certification of equalized full property values for 1988 are as follows:

Town of Whitewater
$33,913,638 or
79.558640 percent

Town of Richmond
$8,713,584 or
20.441360 percent

Thus the District's property tax levy for FY 1989 amounts to 0.446 mil.

Ken Loehndorf, Whitewater Town Chairman, reported that dry hydrants have been installed on both Whitewater and Rice Lakes. These units allow our local fire department access to lake water during the winter. Ken suggests that residents should notify their insurance company of this improvement because it may reduce insurance rates.

The chairmen of our various Ad-Hoc Committees reported on their respective Committee activities and suggestions. Certain of these will be discussed in more detail later on in this newsletter.

Mr. Dave Kendzorski of the Southeastern Wisconsin REgional Planning Commission gave an excellent presentation on methods for construction of sea wall and for controlling shoreline erosion. His talk was illustrated with photographs taken on Whitewater Lake.

It was agreed that the Annual Meeting of the District should be held later in the summer--a time when lake problems would be more readily apparent to the electorate. Thus the next Annual Meeting of the Whitewater-Rice Lakes Management District is scheduled for August 27, 1989.

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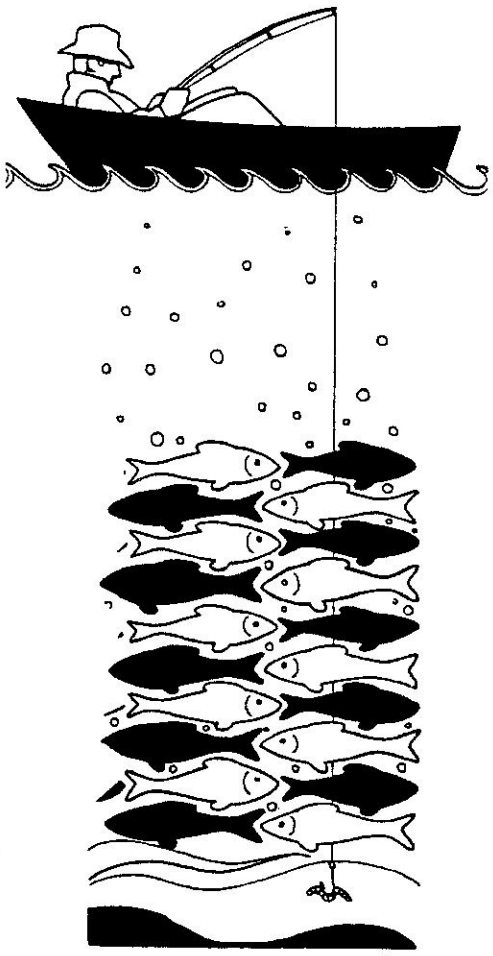
ON THE CURRENT CONDITION OF WHITEWATER-RICE LAKES:



The summer of 1988 was the hottest and driest that this area of the country has experienced in the last 50 years. In March and April, 1988 water from Whitewater Lake was flowing over the spillway of the dam at a level of 1.5 inches. In spite of limited rain, the water level of Whitewater Lake decreased steadily during the summer and by October had fallen to 14 inches below the dam spillway. Taking the area of Whitewater Lake at 650 acres, this represents a reduction in water volume of 840 acre feet, or 273,700,000 U.S. gallons.

Similarly, Rice Lake, lacking a flow of water from Whitewater Lake for most of the summer, fell from its initial level of about 3 inches above its dam spillway in March to 24 inches below its spillway in October. At an area of 175 acres, this represents a loss in water volume of 394 acre feet, or 128,365,000 U.S. gallons.

A quick and simple measure of water quality was made at intervals during the summer of 1988 using a Secchi disc. The results were reported to the DNR. When the disc is lowered into the water, the depth at which it disappears from view affords a reproducible measure of suspended solids in the water. In our lakes this is primarily a measure of algae concentrations. Measurements were taken in good weather when boat traffic was light. Measures were made at four locations in Whitewater Lake: A) the deep west lobe of Whitewater Lake (old Whitewater Lake); B) near the center of the south lobe of Whitewater Lake; C) center of the north end of the east lobe(old Bass Lake); D) midway up the narrow channel in the north end of Whitewater Lake near the State Park. Similar measurements were made at intervals at a single location near the center of Rice Lake. The results, shown below, are closely comparable to those (reported in Vol. 1, No. 1 of our Newsletter) taken in the summer of 1987, and suggest that the 1988 reduction in water level had little effect on algae concentrations.

LAKE CONDITIONS (cont.)

These data, as do those from 1987, show that both lakes are well fertilized and produce abundant algae, especially during periods when the water is warm and there is lots of sunlight.

Water clarity, as measured using a Secchi Disc, is only one indication of water quality. Nevertheless, it is useful to compare the above data from our lakes with the standards developed by the Environmental Protection Agency and adopted by the Wis. Dept. of Natural Resources (see Rumery and Vennie, Lake and Reservoir Management, 1988 4(1); 81-86) as follows:

Water Clarity Ranking

Secchi Depth

more than 20 ft.= Excellent

10-20 ft. = very good

6.5-10 ft. = good

5-6.5 ft. = fair

3.25-5 ft. = poor

less than 3.25 ft. = very poor

In our lakes, Secchi disc measures show improved water clarity during early spring and fall, with decreasing water clarity as algae multiply during the summer months. The 10.5 foot Secchi depth taken in Rice Lake on May 29, 1988 was the best we have observed during the last two years of observations of both lakes.

The combination of light snowfall during the winter of 1987-88, together with the lower water levels in our lakes, allowed for increased penetration of sunlight. This produced a massive growth of weeds--particularly in the east and south lobes of Whitewater Lake. In the center of the east lobe of Whitewater Lake, just south of the bogs, weeds reached the surface of the lake--even though the water is 12 feet deep, or more. Weeds reaching the lake surface were mowed by power boats and rifted ashore, creating problems for property owners who attempted to keep their swimming areas clear. Such weed growth could not have been anticipated from observations of the lake during recent years.

The competition for nutrients between weeds and algae was clearly evident in the weed beds this summer. The

LAKE CONDITIONS (cont.)

water in weed beds was remarkably clear, and where weeds permitted, Secchi depth measurements the disc was clearly visible at depths of 7 feet or more. Although both are undesirable in large quantity, weeds are clearly preferable to algae.

A survey of weed species in Whitewater Lake showed that one species, know as water milfoil, is clearly dominant, and has basically replaced all other aquatic weeds in this lake. This is unfortunate as water milfoil is the "crab grass" of aquatic weeds and is very difficult to eliminate. The presence of water milfoil also accounts for the relative absence of waterfowl on Whitewater Lake, because these birds cannot feed on this weed. The dominant weed in Rice Lake is curly-leaf pondweed, but this aquatic weed is rapidly being displaced by water milfoil.

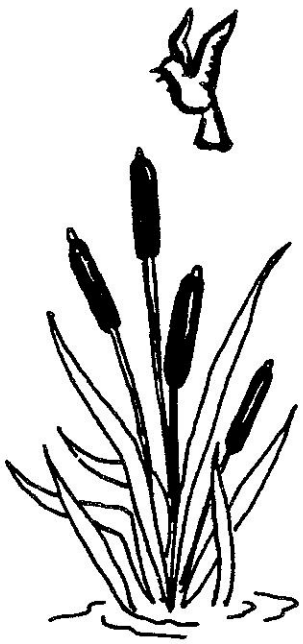
1988 WEED HARVESTING

Rice Lake was harvested early (May 28-30) because the dominant weed is curly-leaf pondweed (Potamogeton crispus) which develops early and then dies back in mid-July. The contractor worked a total of 25.5 hours on Rice Lake, removing approximately 90 tons of weeds. The weeds were spread on land. The harvesting program appeared to be quite successful in improving the recreational use of Rice Lake. Floating weeds were a nuisance for some property owners. As expected, the curly -leaf pondweed dies in July and Rice Lake developed am algal bloom similar to conditions that existed on Whitewater Lake several years ago.

The dominant aquatic weed in Whitewater Lake is water milfoil (Myriophyllum spicatum) which is an introduced species. According to a DNR survey conducted this summer, water milfoil accounted for nearly 87% of the total weeds in the lake. Because milfoil continues to grow almost to ice formation, harvesting on Whitewater Lake was delayed until late July (23-30). The contractor worked 101 hours and removed approximately 500 tons of weeds from the lake.

From the standpoint of improving recreational use of Whitewater Lake, the harvesting project was a failure. There were just too many

WEED HARVESTING (cont.)



weeds in the lake. Although some funds were not spent, the contractor could not work any longer than he did because of other contract commitments. Many lakes in Wisconsin and Illinois had problems similar to Whitewater Lake in 1988.

Weed harvesting in 1988 can be considered a success from the viewpoint that some of the nutrients (fertilizers) entering the lake were removed. Except for the small efforts of individual property owners to remove weeds from in front of their property, and the loss of nutrients when water flows over the dam spillway, this is the first attempt to purposely remove nutrients from the lake. A measure of the water content of the weeds and the nutrient content of the weeds is still forthcoming from the contractor. However values for the water content of weeds (91%) and the nutrient content of weeds (2.25% nitrogen and 0.3% phosphorus) from the literature can be used to estimate the amount of nutrients removed from each lake. It is estimated that approximately 8.1 tons of dry weeds containing approximately 365 lbs. of nitrogen and 48 lbs. of phosphorus were removed from Rice Lake. For Whitewater Lake it is estimated that approximately 2025 lbs. of nitrogen and 270 lbs. of phosphorus.

The weed problem on WHitewater Lake is a major concern of the Board of Commissioners. It is impossible to control the weeds to improve recreational use of the lake with the current budget limitations. Some District members have expressed a desire to purchase harvesting equipment and start a summer weed harvesting program. However, at the present time, the District does not know the source of nutrients entering the lake, the amounts of nutrients from the different sources, nor the amount of nutrient recycling within the lake. It appears unwise to commit a large investment in weed harvesting without some study to determine the most efficient and economical method of controlling the nutrients that promote the weed growth.

REPORT ON SEPTIC-SNOOPER SURVEY

The lake Management District contracted for a groundwater leachate survey of Whitewater and Rice Lakes during July using a Septic-Snooper. This equipment was described in the last newsletter. The project cost $2,000.

A total of 30 measurements were recorded along the developed shoreline of Rice Lake. Only one location, a very small ditch, showed a suspicious reading. The location should be checked further, but it appears that the ditch may only drain grey-water from some residence. Based upon the results of the survey, there is no evidence of any septic system wastes or similar wastes entering Rice Lake.

Measurements were recorded at 61 locations along the developed shoreline of Whitewater Lake. Approximately 45 of these locations gave suspicious readings of high organic material and/or inorganic material. Most of the locations could be grouped as localized areas most of which were embayments. Since the survey was conducted at the same time as the weed harvesting, we believe the decaying weeds may have caused some of the suspicious readings. The subcommittee and Board have recommended a second survey of 7 or 8 local areas again this fall.

The Septic-Snooper survey identified several areas which will require additional testing to determine if some septic systems or similar source are polluting Whitewater Lake. It is probable that several defective septic systems exist on Whitewater Lake. However, the survey did indicate that Whitewater does not have a major pollution problem from septic systems. District members who have been concerned about pollution of the lake from defective septic systems can rest more easily.

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ON THE WHITEWATER LAKE FISHERY:

We are making real progress in improving fishing in Whitewater Lake--thanks to the combined efforts of our Fisheries Committee Chairman, Dale Poeppel, and Rick Dauffenbach, DNR fish technician for Southeast Wisconsin. These two men deserve a lot of applause for the enthusiastic and effective manner in which they have implemented this

LAKE FISHERY (cont.)

program.

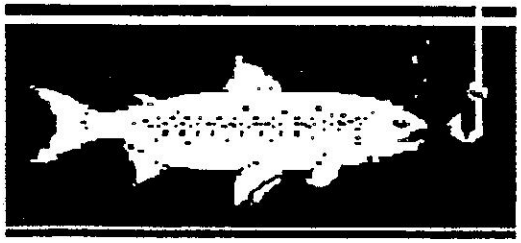
Walleyed pike have been planted in Whitewater Lake in three of the last sour summers. As a result, walleyes, ranging from 12-20 inches were caught this year. To monitor walleye growth the DNR made measures of fish sizes and numbers using an electrical "shocking" device that momentarily stuns the fish, causing them to float. This was done, after dark, on September 29, 1987 and again on October 31, 1988. A full scale fish survey, lasting for about 2 years, will begin in late 1989. This will provide information needed for further improvement and husbandry of fish in our lakes, as well as to determine how best to handle the carp population.

Walleyes were reared from fry (supplied by the DNR) in a nearby pond until they were large enough to be released in Whitewater Lake. Unfortunately, the dry weather of the summer of 1988 caused the pond to go dry and the walleyes were lost. To compensate, Dale raised $2,500 in private donations which, together with $1,000 from the Lake Management District, allowed the purchase of 9,000 four-inch walleye fingerlings. These were released into Whitewater Lake on September 13, 1988.

The DNR has now completed a new and better pond for rearing walleyes. The pond has a constant water supply, controllable water level, and will be devoid of weeds. So our cooperative fish rearing program will continue again next year with better facilities, and more productive results.

Bass fishing was outstanding this year, with many 6 pound fish being caught. White bass fishing is making a comeback on the lake. We hope this trend will continue.

Dale wished to thank everyone who contributed to walleye stocking of the lake again this year.



PROPERTY OWNERS ARE ENCOURAGED TO PARTICIPATE IN DISTRICT ACTIVITIES

Meetings of the Lake District Commissioners are held on the second Thursday of each month at 7:30 p.m. in the Whitewater Town Hall. District property owners are encouraged to attend.

District property owners who wish to take an active part in District activities are invited to contact one of the District Commissioners. Property owners who would like to contribute to the District's Newsletters may do so by contacting Bill Norris at 473-3354.

The Newsletter of the Whitewater-Rice Lake Management District is edited by Gareth Betts, University of Wisconsin-Extension, Elkhorn, Wis. We thank Gareth for his continuing interest and assistance in working with our lakes.

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