

PUBLIC HEARING

Review of Keyhole Ordinance
 Monday, June 21
 7:30 PM
 Dexter Township Hall

ANNUAL MEETING

Monday, June 28
 8:00 PM
 Inverness Country Club

KEYHOLE ORDINANCE NEARING FINAL REVIEW

The Dexter Township Zoning Board has scheduled a public hearing on Monday, June 21 (7:30 PM) at the Dexter Township Hall to review a proposed keyhole ordinance. The proposal is similar to the draft ordinance submitted on May 5, 1981 to the Dexter Township Board of Trustees by the Township lake-wide advisory group, in which the North Lake Assoc. participated. Since then, Arlene Howe (Dexter Township Supervisor) has contacted the neighboring townships of Hamburg, Putnam, and Webster, and the Planning Commissions in Livingston and Washtenaw Counties to obtain their reactions. The Planning Commissions drafted the proposed ordinance from the proposal we submitted last year, as well as a draft prepared by Webster Township.

Both Planning Commissions and the lake-wide advisory group support the proposal, and the other townships have indicated that they plan to adopt it. The only objections have been voiced by the Dexter Township Zoning Board and a local real estate developer.

Essentially, the proposal would allow a lake-front lot to be used as a park for lots off the lake if it had at least 150 ft. of frontage on the lake. If it met this requirement, 30 ft. of frontage must be available for each parcel off the lake -- in other words, a lake-front lot with 150 ft. of frontage could funnel only 5 lots away from the lake onto the lake. The ordinance is effective, however, only if a particular lake is not exceeding a load factor that is based on the amount of existing development around the lake and present recreational usage. The result is that growth in a lake's watershed is controlled -- developers are no longer able to use a small lake-front lot to funnel as many people as they choose onto a lake. Existing keyhole properties would not be affected by the ordinance.

The Association's Board strongly supports the proposal. We have worked for over five years to achieve zoning restrictions that will control development and protect North Lake, and this is the first time our local officials have indicated a willingness to take action. We need your support and urge all Association members to attend the public hearing on June 21 and express your support.

TESTING RESULTS CONTINUE TO SHOW IMPROVEMENT

Testing results from our participation in the DNR Self-Help Program for last year improved more than any previous year. Don Warren and Dick Neff of the East End took depth readings every weekend last summer. The higher the depth reading, the better.

After improving about a foot in each of the previous three years, our average depth reading improved about two feet last year. (The test for chlorophyll levels is taken about every three years and was not taken last summer.) Results of the tests, compared with prior years, are shown below.

	<u>Average Depth Reading</u> (feet)	<u>Average Chlorophyll Level</u> (ug/l)
1976	8.4	4.9
1977	8.2	3.6
1978	9.3	---
1979	10.3	---
1980	11.3	2.5
1981	13.5	---
Memo: Percent Improvement Since 1976	61%	49%

In the table below, our depth readings are compared with a number of other lakes in the area.

	<u>North Lake</u>	<u>Cavanaugh</u>	<u>Portage</u>	<u>Half Moon</u>	<u>Horseshoe</u>	<u>Ford</u>
1976	8.4	NA	9.7	NA	5.1	4.0
1977	8.2	7.8	8.4	9.8	6.1	4.0
1978	9.3	NA	NA	NA	NA	NA
1979	10.3	10.2	8.5	NA	NA	NA
1980	11.3	9.7	10.8	NA	5.1	NA
1981	13.5	11.5	8.9	12.1	7.7	7.2

By comparison, Glen Lake near Traverse City consistently has depth readings of about 25 feet.

We recently asked the DNR for its analysis of our results. Dick Mikula, an aquatic biologist with the DNR, said that improved clarity of the water indicates that fewer nutrients are entering the lake each year and that algae growth (which clouds the water) is declining -- because algae feed on nutrients entering the lake annually. He indicated that the consistent improvement shows that our lake improvement guidelines are being followed and that they can achieve results. Dick also mentioned that we probably are experiencing more weed growth (which we are) because weeds feed on nutrients already in the lake lodged in the bottom sediment, and the greater water clarity allows more sunlight to reach the weeds. He pointed out, however, that weeds can be controlled more easily than algae and are not as potentially dangerous as algae contamination. (More on methods to control weed growth later in the newsletter.)

The lake improvement guidelines have been updated for new information, and a copy is attached as a reminder. If you know someone who is not following the guidelines, tell them about our success and let them know that they are undermining the efforts of the rest of us.

Also, if you see Don Warren or Dick Neff, say thanks -- they volunteered to do the testing for us again this year.

HOW TO GET RID OF THOSE WEEDS

For the long-term, the most important thing each of us can do to control weeds is try to starve them by following the lake improvement guidelines -- especially those concerned with fertilizing lawns and maintaining efficient septic systems. Weeds feed on nutrients in the bottom sediment, and we must reduce the level of nutrients entering the lake each

year (which we are) and, where possible, remove the weeds and soft bottom sediment already in the lake. If someone complains about weeds on his beach while he continues to fertilize his lawn or neglect his septic system, he has only himself to blame. The bigger problem, however, is that his lack of cooperation affects the rest of us who follow the guidelines.

Other actions we can take in the short-term to improve our beaches if weeds are a problem include:

Rake the weeds out with a tooth rake, let them dry on shore, and carry them away from the lake to decompose -- don't leave them in the water. Weeds will decompose in the water and return nutrients to the bottom for next summer's crop. If you rake the soft bottom sediment out too, that's even better because the weeds will have even less to feed on next year.

Actively use your beach -- walking on the weeds will kill them. The more a beach is used, the cleaner it will stay; this also can firm up the bottom sediment.

Write the DNR and request a permit to apply an aquatic weed killer -- it's illegal to put any weed killer in the lake without a permit because most poison the fish and are unsafe for people. Unfortunately, this process can be expensive (\$150-\$250 for an area 100 ft. by 200 ft.), it has to be applied just as the weeds are beginning to grow (usually early June), it must be repeated every year, and it is more effective if several people do it in an area at the same time. If you're interested for next summer, contact the DNR for an application at:

Aquatic Nuisance Control Program
Inland Lakes Management Unit
Dept. of Natural Resources
Stevens T. Mason Building
P. O. Box 30028
Lansing, MI 48909

Harvest the weeds -- this approach also is more expensive and achieves better results if several people in an area do it at the same time. Also, it must be repeated to be effective. The Association's Board is not familiar with firms providing this service, but the Huron River Watershed Council has compiled the following list that offer the service in our area:

Aquatic Weed Cutting (517)546-1550
Cost - 70-80¢ per foot of frontage; minimum \$250
Group Six Weed Harvesting (313)685-1973
Cost - \$1 per foot of frontage; minimum 10 homes
Inland Lakes Weed Harvesting (313)681-8813
Cost - \$50-\$80 per hour depending on equipment used
Maney's Aquatic Weed Harvesting (616)734-2770
Cost - \$80-\$90 an hour; minimum \$2000
Michigan Aquatic Weed Harvesting (616)665-4379 or 323-0808
Cost - \$70 an hour; minimum \$1500

If you decide to investigate these services, be sure to ask if there is an additional launching cost for the equipment, if they dispose of the weeds for the quoted cost, and how deep they harvest the weeds (most only go out to 5 foot water depth). Also, if anyone tries this approach let the Board know about it. We plan to investigate buying a machine that Association members can use if it works. At this year's Annual Meeting on June 28, a company that sells the equipment will discuss the advantages of this approach.

TOWNSHIP BOARD DISCUSSES COMMUNITY MANAGEMENT SEPTIC SYSTEM PROGRAM

On May 18, Barry Johnson of the Washtenaw County Health Dept. presented a proposal to the Dexter Township Board of Trustees to improve existing septic systems around the lakes. The proposal was developed because Portage and Base Lakes have found serious algae plumes during the last two years that result from septic systems draining directly into the lake.

Essentially, Mr. Johnson recommended that problem zones around the lakes be identified, assessment districts established, and agencies formed to develop and manage community waste treatment facilities away from the lake's watershed. He indicated that action must be taken or deterioration of the lakes will continue to accelerate, and his proposals would be cheaper than a sewer system that serves an entire lake -- the cost of which would be prohibitive. The proposals are very complicated, however, and would take years (and considerable cost) to implement. The Township Board recommended that the proposals should be assigned to the Township lake-wide advisory group or a concerned citizens action group for further study. If anyone is interested in studying the proposals, contact Arlene Howe, Dexter Township Supervisor.

Interestingly, Mr. Johnson's proposals included a number of actions that we have in our lake improvement guidelines for septic systems -- use of water conservation devices, periodic pumping of tanks, upgrading systems if a cottage is converted to a year-round home or if the system is faulty, and periodic testing with a septic system dye. The essence of his proposals, however, was that the actions should be required by law and that there are a number of actions that can be taken by groups of homeowners on a lake that achieve greater efficiency for less cost than individual property owners can realize.

SEPTIC SYSTEM DYE STILL AVAILABLE

Plenty of dye is still available if you wish to test your septic system to be sure it isn't draining directly into the lake. A system should be tested every three to five years. The dye is free, so attend the Association's Annual Meeting on June 28 -- it will be available to anyone who wants it.

STATE OF THE ASSOCIATION

The Association's Annual Meeting for 1982 will be held on Monday, June 28 (8:00 PM) at the Inverness Country Club. The agenda will include election of three new Board members to replace those whose terms expire and election of officers. Also, we have asked a company that sells weed harvesting equipment to discuss the advantages of this approach at the meeting, and we have asked Marcia Dorsey, Executive Director of the Huron River Watershed Council, to discuss the algae problems facing Portage and Base Lakes. All residents of North Lake are invited to attend, whether or not you're a member of the Association.

With adoption of by-laws at last year's Annual Meeting, all landings around the lake are represented on the Board. The Board of Directors, and their respective terms, elected last year are:

President	Don Ferguson (Gilbert Drive)	2 years
Vice President	Ron Buckenberger (Webb's Shore)	3 years
Sec./Treasurer	Renee Warren (East End)	2 years
Director	Bobbie Bacon (Stonehedge)	1 year
Director	Dave Classon (North Lake Farms)	2 years
Director	Kelly Kadlec (Parklawn)	3 years
Director	Tom Kessler (Watt Drive)	3 years
Director	Ken Klinge (Noah's Landing)	1 year
Director	Dave Knisely (Glen Oaks)	3 years
Director	Sheridan Springer (Sauer Drive)	1 year

Dues for 1982 are the same as they have been since 1978. For a new member, they are \$12.00 per household -- \$10.00 initial fee plus \$2.00 for 1982. For existing members, dues are \$2.00. They may be paid at the Annual Meeting or to the Board member representing your landing. Checks should be made payable to the North Lake Protection Association. Funds provided last year were used to continue enrollment in the DNR Self-Help Program and to print the newsletter. The remaining funds have been set aside to cover the cost of future projects.

See you at the Annual Meeting!

Board of Directors
North Lake Protection Association
June, 1982

NORTH LAKE IMPROVEMENT GUIDELINES

June, 1982

Our primary problem is an excessive level of nutrients in the water -- especially phosphorous and nitrogen that accelerate weed and algae growth, and ultimately bacteria growth. The following guidelines were developed from a number of sources, including the University of Michigan Biological Station, the study completed for us by Prof. Clifford R. Humphrys of Michigan State University, and the Michigan Department of Natural Resources. The guidelines are designed to reduce the level of nutrients entering the lake. We hope everyone will join together to improve our quality of life on the lake and to protect our property values for ourselves and our children.

**Don't fertilize -- lawn and garden fertilizers ultimately end up in the lake because North Lake is ground water fed, according to Prof. Humphrys. Instead, water from the lake and reseed your lawn with grass varieties that have low nutrient requirements. Watering from the lake uses nutrients already in the water and helps filter the water before it returns to the lake. If you absolutely must fertilize because your lawn is dying, do it lightly only during the growing season in May, and do not fertilize within 50 feet of the shoreline or over your septic system drainfield. Do not fertilize just before it rains. Remember, if a resident fertilizes because he thinks one person won't hurt, it undermines the efforts of all others on the lake who sacrifice lush green lawns for a cleaner lake.

**Improve septic system efficiency -- research by the University of Michigan has found that we can improve the efficiency and life of our septic systems by following a few simple rules:

1. Conserve water - the less water used, the better a septic system works. In addition, your electric bill is reduced because your pump runs less and you conserve energy. To reduce the use of water, you can:
 - add two or three bricks or a plastic jug filled with water to your toilet tank,
 - repair dripping faucets and toilet leaks,
 - use the dishwasher or washing machine only when there is a full load (along with low phosphate detergents),
 - use water conservation devices like flow-control shower heads and low-flush attachments for toilets,
 - reroute away from the lake rain gutters and footing drains that are connected to your septic tank.
 - replace old appliances and plumbing fixtures with new ones that are designed to conserve water -- dishwashers, washers, one gal. Thetford toilets, or 3 gal. conventional toilets (most have 5 gal. tanks).
2. Maintain your septic system - like anything else, it will deteriorate more quickly with neglect. Maintenance recommendations include:
 - pump and clean the tank at least every 3 to 5 years. If you don't sludge will flow into the drainfield and eventually clog it so there is no filtering process left. There are several local companies that will do this for you at a reasonable cost, and considerably cheaper than a new drainfield! Don't wait until you have problems to have the tank pumped -- if you do, the drainfield is probably already plugged.
 - avoid letting substances that kill bacteria get into the septic tank -- bacteria are essential to break-up the sludge. Substances that kill bacteria include poisons, drain cleaners, bleach, disinfectants, paint and chemicals.

- prevent wastes that will not decompose and clog the drainfield from getting into the septic tank including grease, hair, cigarette butts, band-aids, facial tissues, paper towels, and solid wastes from a garbage disposal.
 - don't exceed design capacity for a septic tank and drainfield or use a garbage disposal unless the system is designed for it. A common mistake is to convert a cottage into a year-round home without enlarging a totally inadequate septic system.
 - avoid parking or building on a drainfield because it compacts the soil and hinders the filtering of waste water.
3. If your system is not working properly, have it repaired -- as unpleasant and costly as it may seem, it won't get better by ignoring it! In the meantime, you may be contaminating well water in the area along with the lake. You can tell if your system needs attention if toilets back up, drains won't drain properly, there are foul odors around the tank or drainfield, or there is excessive moisture over the drainfield.
 4. If you must put in a new system, investigate systems with holding tanks, locate the system as far as possible from the lake, and obtain expert advice. In addition to the Health Department, we are fortunate to have experts on the lake who are willing to provide free professional advice; for more information, call any Board member.
 5. Test every three to five years with a septic system dye to be certain waste is not draining into the lake. The Association has purchased a dye and will provide it at no cost to anyone who will test their system. We encourage everyone to do so -- attend the Annual Meeting or contact any Board member if you're interested.

**Plant a tree or shrub - experts strongly recommend increasing green-belts between the water and the residential area -- especially between the lake and septic systems. Check for soil erosion; seed exposed soil or plant ground covers, trees, and shrubs to minimize sedimentation into the lake. Trees and shrubs act as a filtering system for run-off into the lake, reduce erosion, and add to the beauty of the shoreline. Any tree, shrub, or ground cover that will grow in existing soil or light conditions will work. Obviously, low-lying plantings should be used where the view may be obstructed, and flowering trees and shrubs will add more beauty to the shoreline. Imagine the effect in a few years if everyone on the lake planted one tree!

**Remove leaves and weeds from the water - fallen leaves, aquatic weeds, and other debris should be removed from the lake and taken away from the water's edge as far as possible. If they are left in or near the water, they will decompose and add nutrients to the water. Don't burn leaves near the water or in an area that will wash into the lake -- this is even worse than leaving them to decay in the water because of their high phosphorous content.

**Encourage Dexter Township Board of Trustees to enact zoning restrictions to protect the lake - this is the cornerstone of any lake improvement program according to experts. The Township Board publicly stated six years ago that it would seriously consider enacting a keyhole ordinance and increasing set-back lines for lake properties to minimize the effects of future development on the lakes. (A keyhole ordinance, if properly written, would prohibit a relatively small area of lake frontage from being used as a private park for a residential area not on the lake.) The Board of Directors of the Association asks all members to support these efforts by encouraging the Trustees to enact restrictions that will minimize adverse effects of future development on our lakes.

**Improve boating and swimming safety - Prof. Humphrys' study in 1977 concluded that we had too many boats for safe operation. There are simple rules that we can follow to improve the safety of everyone's enjoyment:

1. Check the number of boats on the lake before going out - the lake can handle safely only about 10 boats with water skiers, according to Prof. Humphrys, and substantially fewer if there are fishing boats, sailboats, and power boats on the lake. If there are too many boats, wait a few minutes until some have gone off the lake.
2. Stress with power-boat drivers and other boat operators observance of the Michigan Inland Lakes Safety Code before we have a serious accident.

Board of Directors
North Lake Protection Assoc.
June, 1982