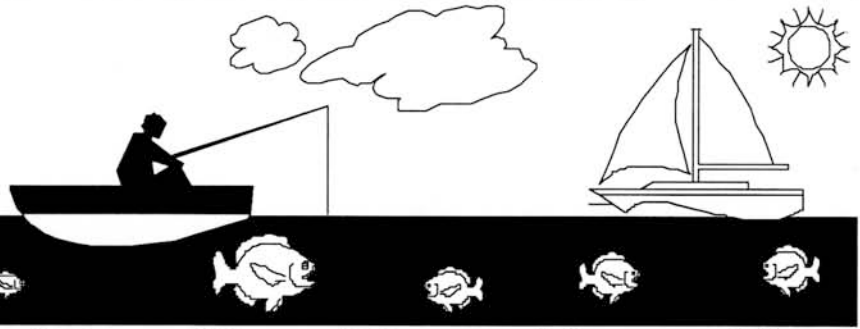


# Hardwood Lake Property Owners Association



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## Lake board update

Over the past several years lake residents have been complaining about the weeds and the "green gunk" on the lake surface. This is a serious problem that is going to require action from all of us on the lake.

The formation of a lake board is governed by state law. The law states we may request the formation of a lake board or the townships may make the request to the county. Our first step is to circulate a petition which requires signatures from 2/3rds of the owners of lands abutting the lake. This has been done. A lake board can be formed for the protection of the public health, welfare and safety and the conservation of the natural resources of the state, or to preserve the property values around the lake.

Because of the need for action and concern from the owners a petition to form a lake board was circulated. The board of directors now feels that it has enough signatures to proceed.

The petition will be submitted to the board of directors of both Richland and Logan Townships. They will then join us in requesting the county form a lake board.

State law provides that the lake board will be formed within 60 days of submission of the petition. The board will consist of a county commissioner, a representative from both townships the lake is in, the county drain commissioner and a member of the lake association. The lake board may request the Department of Natural resources to provide technical data and make recommendations in the interests of conservation.

The lake board may then determine the needs of the lake, form an assessment district and establish a special assessment to cover the cost of the project. Because the lake board is a governing body meetings are public and there will be published notices prior to the confirming of the assessment roll.

The bottom line is this: A lake board, which is a governing body much like a township board, will be formed. Our primary goal in establishing the lake board is to improve the quality of

the water. The board will determine the course of action to be taken. Bids will be taken and costs determined. The lake board then can assesses the taxes to accomplish the project.

## Help needed

State law requires that: The lake board shall retain a registered professional engineer to prepare an engineering feasibility report, an economic study report and an estimate of cost. If you are qualified to help the lake board with these services please contact Bill Falbe.

There may be grants available to assist in our lake cleanup project. If you have any experience in grant writing please contact Falbe.

## Green gunk and weeds

Aquatic plants are a vital part of any lake or pond. They convert by the process of photosynthesis chemical elements into living plant tissue. They themselves are then utilized by bacteria and animal life as food and energy.

Although they are important to the aquatic environment, plants frequently conflict with man's recreational and economic interests.

To manage these plants you need to know a little about them. There are two basic classifications of aquatic plants: algae and macrophytes.

The three types of algae are: planktonic, filamentous and macro-algae. The macrophytes are divided into three basic forms: submergent, emergent and free-floating.

The biggest complaint I have heard is about the green slime on the surface of the lake. This is planktonic algae.

The distribution and abundance of aquatic plants in a lake is dependent upon the lakes chemical and physical properties including: the quality and quantity of light available, water levels, water temperatures, particle size of lake bottom sediments and the concentration of dissolved gasses and nutrients.

Nutrients and light availability are most often the requirements which limit plant growth. Nutrients are the chemicals such as nitrogen, phosphorus, carbon, potassium, etc., which plants require for their growth. These nutrients originate in the rocks and soils within the lakes watershed. Man often adds more nutrients through farming, fertilizing lawns, septic tanks, etc.

Too often aquatic weed control is aimed at the plants and not the cause. The long term method requires a reduction of nutrients into the lake. The best time to begin a nutrient control program is before the plants have become a nuisance.

Unfortunately our weeds are at a nuisance level. We will however have to look into some long term control.

There are several methods of short term control. They include:

- Biological Control There are no specific techniques being applied in Michigan.

- Mechanical Harvesting Harvesting of algae is too costly for a variety of reasons and wouldn't really help us with our problems.

- Environmental Manipulation This includes dredging, aeration, nutrient inactivation, water drawdown, dilution, shading, covering of bottom sediments and intensive manual cleaning. None of these are viable options for us with the exception of manual cleaning. Each property owner would clean the rooted weeds in front of their property. This does not cover the weeds in the middle of the lake or the algae.

- Herbicides There are a large number of chemicals available. A permit is required from the DNR. The drawbacks are that herbicides control all forms of plant life to some extent. They also only offer annual control. The treatment will have to be repeated for as many years as control is desired. Also, the decaying vegetation releases nutrients back into the water creating a vicious circle.

There are three chemicals approved for use on algae. They are copper sulfate, chelated copper, and salt of endothall (liquid) and they are effective on all three types of algae. The

other aquatic plant that is a problem is Milfoil. It can be treated with salt of endothall (granular), endothall, Diaquat and 2,4-D.

Vice president David Sommers spoke with Ray Van-Goethem of Aquatic Nuisance Plant Control of Linden, MI . Ray lives near West Branch, 517-345-7574, and said he treats Lake Ogemaw. He said the green gunk on the lake is Blue-Green Planktonic Algae and is almost impossible to get rid of. An algicide is aimed at filamentous algae, which is commonly called "pond scum". Other types of plants are watermilfoil and curly-leaf pondweed. They require different treatments. Pondweed reproduces by seed and watermilfoil will root if cut up. He recommends a three year treatment program. The entire lake needs to be treated, not just spot treated as in the past. They could conduct a survey and recommend treatment depending on where they find weed concentrations. By killing the watermilfoil it will eliminate some of the places for the algae to collect on. This should help improve the water appearance near shore.

Long term control include lowering the amount of nutrients flowing into the lake. This includes agricultural runoff, better control of septic fields, applying little or no lawn fertilizer, water lawns sparingly to prevent leaching of chemicals and planting deep rooted plants along shore to absorb nutrients. Simple things like burning leaves concentrates phosphorus in the ashes which are easily washed into the lake by runoff.

Some of the long term items are very difficult if not impossible for us to accomplish. Education of property owners can be accomplished but again it will be very difficult to accomplish much as we are a very established group of owners. This means we can not move roads and housing to ease the human impact on the lake. Septic fields can not be moved but we can cut down of fertilizing lawns and burning leaves. Is leaf composting the answer to burning? We may want to look into something but phosphorous from the compost must be contained.

The DNR also offers a self-help program which is designed to measure long-term changes in water quality. This involves a weekly water testing from May through September. This would give us yearly comparisons of water quality. It would take a long term commitment by a lake resident to commit to doing the weekly measurements.