

In many situations, aquatic herbicide use is the best approach to control nuisance aquatic vegetation due to their cost effectiveness and reliable results. For many people though, the thought of the use of "chemicals" in their lake causes feelings of concern. This concern is understandable given the majority of lake residents are unaware of the stringent process by which herbicides are labeled and approved for use. There is also misunderstanding about the intent and expectations when herbicides get applied to a waterbody.

### EPA LABELING & USE RESTRICTIONS

The Federal agency responsible for registering aquatic herbicides is the Environmental Protection Agency (EPA). The process of registering a pesticide is a scientific, legal and administrative procedure through which the EPA examines the ingredients, the site in which it is to be used, the amount, frequency and timing of its use. In addition, under the Food Quality Protection Act of 1996 both FIFRA and FFDCA were amended to require that the EPA must determine if a pesticide poses a "reasonable certainty of no harm" before a pesticide can be registered or reregistered.

The State of Michigan also requires any herbicides intended for use within the State, undergo additional screening before it is approved for use. State and Federal laws require that all herbicides only be applied by a licensed certified applicator and all EPA label instructions must be followed.

In addition, The Michigan Department of Agriculture & Rural Development (MDARD) mandates that any company offering aquatic weed control services must have both a Commercial Pesticide Business License and staff with Commercial Pesticide Applicator Certifications. Currently, PLM employs over 30 Certified Pesticide Applicators. For Certified Applicators to maintain their license they must either participate in MDARD approved continuing education courses or take a written exam every three years. They may also attend conferences and meetings that present the latest research concerning aquatic pesticides, proper usage and new application techniques within the industry.



### INTENT OF HERBICIDE APPLICATIONS

Many people in the general public wrongly assume when a treatment is being performed on a lake that the intent is to kill all of the aquatic vegetation. In reality, the vast majority of herbicide applications are targeted to control a single species of aquatic plant and have little or no effect on non-target plants or animals. Aquatic herbicides are very similar to many herbicides used to control weeds in your lawn. You can use an herbicide to kill dandelions while leaving your grass unharmed. Aquatic herbicides work in a similar manner. We can usually target specific species based on the herbicide used and rate of concentration.

# MICHIGAN LOCATIONS



**Alto Location** 8865 100th St. SE Alto, MI 49302-9221

Morrice Location 10785 Bennett Dr. Morrice, MI 48857-8760 **Evart Location** 9826 S Industrial Drive Evart, MI 49631

Sturgis Location 1169 N Nottawa St. Sturgis, MI 49091 Phone (616) 891-1294

Fax (616) 891-0371

Toll-free (800) 382-4434

#### WATER USE RESTRICTIONS

The vast majority of EPA labeled aquatic herbicides have no swimming restriction following treatment. However, the State of Michigan requires that PLM posts a 24-hour swim restriction whenever we apply an herbicide, other than copper products for algae. This restriction is in order for the area to be vacated of swimmers during the period when the applicator vessel is scheduled to go through the area. It is not due to body contact with the herbicide being applied. Also, there are no restrictions for fish consumption from treated water. None of the herbicides used bioaccumulate in fish or other animal species.

Some herbicide applications may have irrigation restrictions associated with their use. Each treatment requires PLM to post signage in the affected areas that describes the type and length of time for any irrigation restrictions.



#### TYPES OF HERBICIDES

There are essentially two types of herbicides, systemic and contact. Systemic herbicides are taken up and translocated throughout the plant. Systemic herbicides such as 2,4-D and Triclopyr are typically used for Eurasian watermilfoil control and provide longer term results than do contact herbicides. Contact herbicides attack and kill the exposed areas of the plants. They are not translocated through the plant. Contact herbicides tend to have shorter term control, but are typically less expensive than systemic herbicides.

## IN GENERAL

All pesticides may cause harm at some level of use. However, there is little chance for direct exposure to an herbicide in its concentrated form to anyone who is not a pesticide applicator. The risk associated with an aquatic herbicide is a combination of the toxicity of that herbicide and the amount of exposure to the herbicide. In the aquatics industry both the toxicity of the herbicides, at applied concentrations, and exposure are minimal. In the aquatic environment, herbicides generally break down quickly to natural components due to sunlight, water chemistry and microbial activity.

Understandably, many questions arise when the topic of aquatic herbicide use comes up for use in a waterbody. PLM will gladly answer any of your questions and discuss which options may be best for your situation.



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