



Introduction

Aquatic plants play an important role in aquatic systems worldwide because they provide food and habitat to fish, wildlife and aquatic organisms. Plants stabilize sediments, improve water clarity and add diversity to the shallow areas of lakes. Unfortunately, nonnative plants that are introduced to new habitats often become a nuisance by hindering human uses of water and threaten the structure and function of diverse native aquatic ecosystems. Significant resources are often expended to manage infestations of aquatic weeds because unchecked growth of these invasive species often interferes with use of water, increases the risk of flooding and results in conditions that threaten public health.

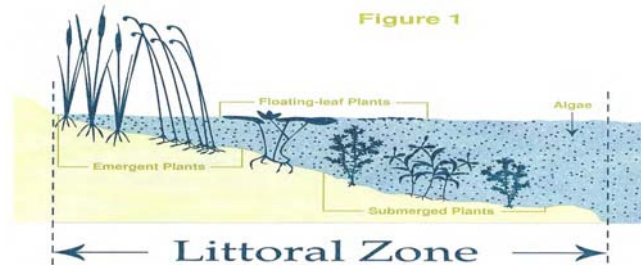
Identification.....Types of aquatic plants

Aquatic plants grow partially or completely in water. Macrophytic plants are large enough to be seen with the naked eye (as compared to phytoplankton, which are tiny and can only be identified with a microscope) and are found in the shallow zones of lakes or rivers. This shallow zone is called the littoral zone and is the area where sufficient light penetrates to the bottom to support the growth of plants.

Plants that grow in littoral zones are divided into three groups. *Emergent plants* inhabit the shallowest water and are rooted in the sediment with their leaves extending above the water's surface.

Representative species of emergent plants include bulrush, cattail and arrowhead. *Floating-leaved plants* grow at intermediate depths. Some floating-

leaved species are rooted in the sediment, but others are free floating with roots that hang unanchored in the water column. The leaves of floating-leaved plants float more or less flat on the surface of the water. Waterlily and spatterdock are floating-leaved species, whereas waterhyacinth and waterlettuce are free-floating plants. Submersed plants are rooted in the sediment and inhabit the deepest fringe of the littoral zone where light penetration is sufficient to support growth of the plant. *Submersed plants* grow up through the water column and the growth of most submersed species occurs entirely within the water column, with no plant parts emerging from the water. Submersed species include hydrilla, curlyleaf pondweed, egeria and vallisneria.



Algae also grow in lakes and provide the basis of the food chain. The smallest algae are called phytoplankton and are microscopic cells that grow suspended in the water column throughout the lake. Dense growth of phytoplankton may make water appear green, but even the "cleanest" lake with green coloration has phytoplankton suspended in the water. Filamentous algae grow as chains of cells and may form large strings or mats. Some filamentous algae are free-floating and grow suspended in the water column, but other species grow attached to plants or the bottom of the lake. Macroscopic or macrophytic algae are large green organisms that look like submersed plants, but are actually algae.

As part of our service, Aqua-Weed Control Inc. trained staff will survey and evaluate the aquatic plants in your lake.

Product selection

All aquatic herbicides used by Aqua-Weed Control Inc. are registered with the EPA and the Michigan Department of Agriculture. Additionally all products must be permitted for use in Michigan waters by the Michigan Department of Environmental Quality.

Products are selected for use based on the specie of aquatic plant/s causing a nuisance condition, specific lake conditions like expected lake water flow rates and water turnover, and of course budgeting limitations.



Aquatic herbicides work either systemically or as a contact plant killer. Systemic herbicides work by kill the roots of the plant. Contact herbicides work by destroying the plant above the soil level. With contact herbicides the roots remain intact but contact herbicides work faster than systemic herbicides.

Generally herbicides come in either a liquid or granular formulation.

The treatment process

After the nuisance plant/s have been identified, located, mapped, and the appropriate herbicides selected, a treatment date is established based on customer input, permit conditions, and weather.

Before the actual treatment the shoreline of the lake is posted via “Lake Treatment Notice” signs. These signs are yellow in color and list the water use restrictions, if any.



Specially designed spray boats with high pressure herbicide application equipment are employed as required. The size of the boat is selected based on the size of the water body and the amount of product to be applied.

About Aqua-Weed Control Inc.

Aqua-Weed Control Inc. specializes in aquatic plant control in lakes, ponds and marinas throughout Michigan. Additionally, we offer water quality testing for lakes and ponds plus aquatic plant surveys and complete lake water quality reports.

Aqua-Weed Control Inc. has been in the aquatic plant control business since 1975 and currently employs 22 certified aquatic applicators. We are fully licensed and insured. We one of the largest firms in Michigan typically filing over 300 permit applications with the MDEQ each year.

Sample of Professional affiliations :

- Michigan Aquatic Mangers Association (owner is current President)
- Midwest Aquatic Plant Management Society (owner is current President)