

Fall Pond Management

Autumn is just around the corner and the aquatic vegetation treatment season in the northern states is slowly coming to an end. However, just because the plant growth is slowing down does not mean that our job as aquatic managers is done for the year. Fall is an ideal time to reflect on the season's management techniques to evaluate what was and was not effective. This is also a good time to get started on an aquatic vegetation management plan for 2012 even if you have not managed your pond in the past.

In developing your management plan you should consider the following items: what type or types of vegetation developed this season, when did this vegetation begin to develop, did the plant population develop to nuisance levels, when did these nuisance levels occur, what corrective actions were taken this season, did the corrective actions provide satisfactory results, what are my goals for next year. This list could go on but the focus here is gathering information to aid in developing future plans.

Positive plant identification is very important to effective aquatic plant control. Plants respond differently to control methods. Herbicides contain different active ingredients and have varying modes of action. Plant identification is also important in determining the appropriate application rate for the targeted species. As part of the management plan you also need to be prepared to take corrective actions at the appropriate time. For example most submersed plants are best targeted early in their growth cycle while emergent plants are best targeted during or post-

flowering phase. While some submersed plants may require more than one treatment for season long control, young actively growing plants are much easier to control than more mature, dense plant communities. Again the goal is to achieve the most enjoyment with the least amount of effort and cost to pond owners.

Autumn is a good time to have plants identified by a professional. This would include all types of vegetation in the aquatic system. We will help evaluate the benefit and possible negative impact associated with each species found. Keep in mind that most aquatic plants will eventually die off as the days get shorter and the water temperature decreases. Getting a good healthy plant sample for identification now can greatly improve the effectiveness of future treatments.

Aquatic Control offers plant identification and management planning. We can also help you identify your aquatic plants if you send detailed digital photographs of the plant(s). Plant photos should be sent to sales@aquaticcontrol.com with a brief description of the area and volume of your pond or lake, the area of infestation, the time of year when the plant(s) became a nuisance, and any other information about your body of water that may be useful (i.e. water recharge rate, overflow, water uses, etc). You can also check with your local Department of Natural Resources (DNR) Biologist or your local extension agent for identification and treatment suggestions.

Having an aquatic vegetation management plan in place before the 2012 growing season can help alleviate many frustrations in the future. Planning



ahead, knowing which product to use and when to apply can greatly decrease the amount of chemical needed as well as the amount of labor involved. Aquatic Control would like to help you manage your valuable aquatic resources. Feel free to contact us with any questions or concerns.

Electrofishing!

As discussed in the aquatic vegetation management article, vegetation management is sometimes necessary to achieve aesthetic enjoyment goals. Vegetation can not only create impacts on the aesthetics of a lake or pond but can also affect fish communities. Fish populations can become unbalanced over time due to many factors. Some of the occurrences that may negatively effect fish populations include heavy vegetation growth, lack of plants or structure, new species introduction, excessive fishing pressure, and/or fish kills. It is important to monitor the changes of a community over time to properly manage a body of water for a healthy balanced fishery.

Aquatic Control can help you achieve your fish management goals. Electro-fishing surveys are one scientific way to monitor the fish population in a lake or pond. An electrofishing survey includes the use of a non-lethal electric current deployed in the water from a boat to temporarily immobilize or “shock” fish. The fish are then collected with dipnets and placed in a live well to ensure that they

are not harmed. Important information such as fish length and weight for each species collected is recorded for further analysis. This data can then be used to determine the relative fitness of the fish community as well as for each species population. The methods we use for fish surveys result in an unbiased, scientifically proven representative picture of the fishery’s health. We can then take this information to develop a fisheries management report offering suggestions for successful management of your fishery.

Fall is a good time to conduct an electrofishing survey. The cooler water temperatures help slow down fish metabolism and allow fish to move into shallower water for more complete and accurate sampling. The cooler autumn water is also able to hold more dissolved oxygen which helps lessen the threat of stressing the fish being sampled. This combination of factors is the driving force behind our scheduling of electrofishing surveys. Our goal is to gather an adequate sample size for

analysis while at the same time placing an emphasis on having minimal impact on the specimens being sampled.

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Aquatic Control offers several electro-fishing survey packages to satisfy a diverse range of water bodies, budget constraints, and detail of information needed. Our fall schedule fills up fast so please contact Aquatic Control as soon as possible if you are interested in this service. Aquatic Control offers fish population service work in several Midwestern states. We can help pick the survey package that best suits your needs.





Benefits of Aeration

fall or early spring of the year. We recommend having the system in place early and turning it on by the end of May. The system should be run 24 hours a day, seven days a week through September. By doing this you will prevent the lake from becoming stratified, increase the overall dissolved oxygen levels in the lake, and provide more useable habitat for the fish community.

Most lake owners do not consider aerating their lakes until the middle of summer. Unfortunately by then it is too late to install and operate a diffused aeration system safely. It is important to plan ahead and have your aeration system in place and operating prior to the dog days of summer when you need it most.

During the summer most lakes in the Midwest are thermally stratified. In a nutshell, thermal stratification is the layering of the water that occurs when they have differences in water density. Warm water is less dense than cold water and by late spring you will find two distinct layers have developed in your lake. The upper layer is warm and usually has adequate dissolved oxygen levels. The colder, denser water stays at the bottom of the lake and is never able to come into contact with the atmosphere where it can absorb oxygen. Organic material at the bottom of the lake continues to decompose and the bacteria responsible for this decomposition process use up the oxygen that is available in that layer. Since no new oxygen is added, the deeper water in your lake will eventually become devoid of oxygen.

If you wait until the summer to install and turn on your aeration system you will rapidly mix the poorly oxygenated bottom waters with the top layer, thereby causing an overall decrease in the dissolved oxygen levels for a few days. This situation will correct itself in a short period of time, but a few days with low oxygen levels is stressful to fish and often leads to unintentional fish kills.

To avoid this you should consider installing your aeration system in the

Fall and winter operation of aeration systems can also provide additional benefits to your lake. As the leaves begin to fall, many of them find their way into lakes. Leaf litter can build up on the bottom of your lake and contribute to the “muck” that builds up over time. The decomposition rate of leaf litter and other organic material is greatly improved by increased levels of dissolved oxygen that can be provided by an aeration system.

During the winter most lakes in the Midwest are covered with ice which prevents gas exchange between the water and the atmosphere, effectively creating a closed system. Oxygen continues to be added to the water by the photosynthetic activity of plants and algae under the ice, but it is at a modest rate. However if this ice becomes covered with snow preventing sunlight penetration into the water problems can occur. The oxygen demand within the system is higher than the replenishment rate and levels can decrease enough to become unsafe for fish. It is under these conditions that a winter fish kill can occur. Winter kill is uncommon, but it does happen every year throughout the Midwest.

Operating a diffused aeration system during the winter will allow you to keep a hole open in the ice and allows for gas exchange. During the winter the water at the bottom of a lake is warmer than that at the surface so as bubbles rise from a diffuser on the lake bed, the warmer water is transported to the surface where it melts the ice. This combined with the surface disturbance caused by the bubbles escaping will keep a large enough hole open to prevent winter kill in most instances.



Lake management is a year round activity, and viewing it as such will improve your experience as a lake owner or user. Planning ahead will go a long way. Contact Aquatic Control if you would like assistance selecting the proper aeration system for your lake. We will help you formulate a plan to get the most benefit from your aeration system and improve the overall health of your water body.





Winter Fountain Removal and Maintenance Program

Floating fountains should be removed from the water in areas that experience freezing conditions. Aquatic Control can provide you with a Fountain Winter Maintenance Program to help take the headache out of winterizing your unit. The program includes:

- Removal of the fountain from your lake in the fall
- Cleaning and visual inspection
- Oil and seals changed as prescribed by the manufacturer
- Quotations will be sent for any additional repairs necessary, along with any light bulb replacement that may be needed.
- Storage in our heated warehouse
- Installation and unit startup in the spring.

Those of you that have been taking advantage of the Winter Maintenance Program will be receiving your proposals in the mail any day now. Please sign and return the proposal to our office if you would like to take advantage of this service. If you are a new fountain owner or one that is tired of wrestling with fountains every fall please call our office for your 2011-2012 proposal. Let our factory trained technicians keep your fountain in top working order for years to come.