

# THE WATERMARK



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## Restoration Versus Management?

A complex and potentially controversial topic that can mean various things to different lake user groups.

Lake restoration often connotes attempting to return a lake to an original or previous condition - usually with a desire for clearer water (less algae) and fewer vascular plants, by the recreational user.

Management, on the other hand, typically refers to action(s) taken to produce a desired condition. Truly restoring many of our enhanced (dammed or raised water levels) northeast ponds/lakes, however, would mean breaching the dam and watching the lakes revert back to meandering streams or perhaps wooded swamps, as they were in colonial times. It's highly unlikely that today's lake front residents battling an infestation of Eurasian watermilfoil (*Myriophyllum spicatum*) or other invasive plants have this drastic action in mind when speaking of lake restoration.

Once the ecological balance has been altered, either through human intervention or acts of nature, the lake system can never truly be "restored" but only "managed." Prudent "management" of our valuable pond/lake resources is a shared responsibility between the lake user/owner, professional lake managers and the regulatory community.

## Dredging Not Always a Solution to Lake Problems

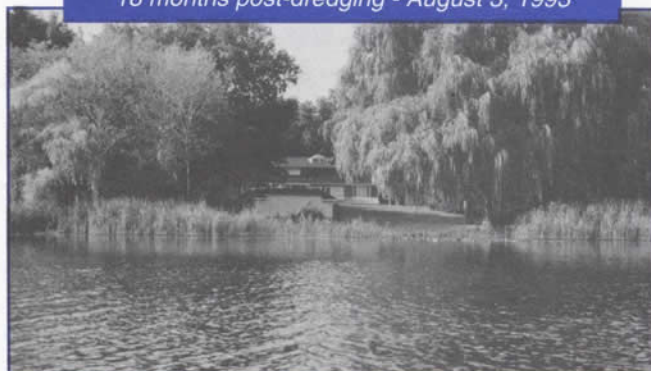
Dredging is often an appropriate lake management technique to provide added water depth and volume and potentially remove nutrient reserves that continue to support nuisance vascular plants and algae. In some situations, dredging will also reduce the abundance of rooted aquatic plants, primarily through limitation of light penetration and to a lesser extent by changes in bottom substrate. During the 1970's and 80's, USEPA and state agencies funded a number of New England dredging projects, each to the tune of

several hundred thousand dollars or more. Specific dredging projects that come to mind include; Nuttings Lake (Billerica, MA), Morses Pond (Wellesley, MA) and 1860 Reservoir (Wethersfield, CT). A primary goal in dredging all of these waterbodies was to provide long-term control of nuisance rooted vegetation and/or algae. Within roughly 1-2 years from completion of dredging, however, we were contacted by these same lake communities to address severe nuisance weed/algae conditions that persisted.

### 1860 Reservoir - Wethersfield, CT



18 months post-dredging - August 3, 1993



3 weeks post-herbicide treatment - August 23, 1993

At Morses Pond, there is reason to believe the pond dredging actually spread the plant (milfoil) infestation. What went wrong with these projects? To some extent, the potential benefits of dredging were

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"oversold" by the project proponents particularly in light of the limits imposed by funding and disposal options. In our experience, seldom will dredging alone, control invasive plants like milfoil through changes in bottom substrate. Beware of inexperienced or unscrupulous lake consultants attempting to convince you of moving forward with a costly dredging project that will allegedly solve all your problems until getting a second opinion. Proper design up front will often result in many added years of benefit and use, post-dredging, but a well done dredging job is never inexpensive.

### **A Better Way to Control Canada Geese?**

If you've tried unsuccessfully to control Canada Geese through conventional strategies (i.e. frightening methods, barriers, etc.) perhaps ReJeX-iT™ bird aversion agents offer a solution. According to the manufacturer, food sources treated with ReJeX-iT™ products are unpalatable to geese. Therefore geese will avoid treated areas for better food sources. The ReJeX-iT™ products were developed using food grade ingredients, having unique abilities to repel birds, but are safe to birds, humans and other mammals and are biodegradable in the environment. ReJeX-iT™ functions via aversion rather than toxicity. Several formulations of the product are available for treatment of turf/lawns, temporary pools of standing water and ponds. Contact us for further product information or professional contract treatment services.

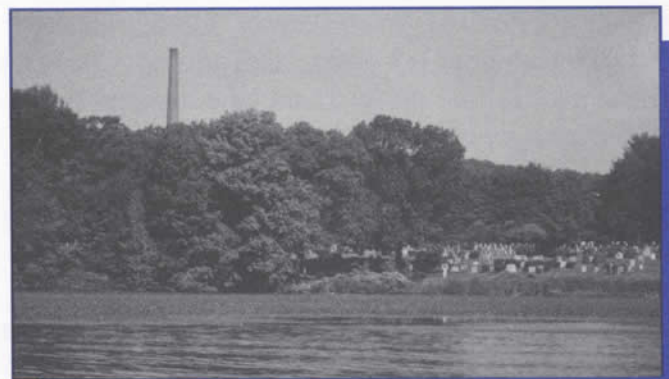
### **Connecticut DEP Revises Aquatic Permit Application for Pond/Lake Chemical Treatments**

In January, we received notice of changes in the aquatic permit application form and review procedures. The new applications require submitting a companion transmittal form along with DEP screening for chemical treatments performed in areas of rare/endangered species or in designated coastal zones. All ponds and lakes (regardless of ownership or size) are considered "waters of the state" and therefore require a permit from the DEP Pesticides Program. If you continue to chemically treat your pond yourself or would like a competitive price quote, please give us a call. Annually, we manage or work on over 75 Connecticut ponds and lakes, which we

believe is more than any other professional lake management company. We have numerous client references throughout all regions of the state that we'd be happy to share with you.

### **Charles River Lakes Invasive Plant Management Program Gains Momentum**

On March 7th the Massachusetts Senate Committee on Natural Resources and Agriculture heard testimony on Senate Bill No. 1148., "An Act for a Management Program of Non-Native Vegetation in the Charles River." Gerald Smith, President of Aquatic Control, along with representatives from the Charles River Watershed Association and the Save the Cove residents organization, spoke in support of the bill. Sponsored by Senator Lois Pines (Newton) this bill seeks funding for a three year program to control exotic or invasive aquatic plants in the Charles River Lakes District which extends between Newton (Route 128) and the dam in Waltham. Based on an aquatic plant survey of this area undertaken by Aquatic Control in September 1994, approximately 45% of this total area exhibited 75-100% surface coverage or very abundant weed growth. The predominant invasive plants include floating-leafed water chestnut (*Trapa natans*) and the submerged plants fanwort (*Cabomba caroliniana*) along with lesser amounts of Eurasian watermilfoil (*Myriophyllum spicatum*). There has been a dramatic increase in these plant species and overall vegetative cover compared to just 11 years ago when a similar plant survey of this area



*Water chestnut (Trapa natans) Infestation  
Charles River - Waltham, MA*

was performed in 1983. That survey revealed no water chestnut or fanwort. In addition to the obvious impacts of this dense vegetation on canoeing, fishing

and other recreational uses, residents' concerns relate to impairment of fish/wildlife habitat, effects on water quality and changes in sediment deposition patterns within the river system. Senate Committee Chairman, Robert Durand (Marlborough), an ally of responsible environmental regulation and supporter of lake management across the Commonwealth, expressed his desire to see the return of a comprehensive State funded lakes program to assist important projects such as this.

### **Lake George and Saratoga Lake (NY) Select Aquatic Control for Lakes Assessments**

During the past year, Aquatic Control has consulted to the Saratoga Lake Protection and Improvement District on a variety of topics ranging from review of lake water quality impacts from construction of a proposed Golf Course to preparing a Request for Proposals (RFP) for Aquatic Vegetation Mapping and Plant Inventory of this 3,900 acre lake located just north of Albany. Given the range of environmental and regulatory issues that routinely come before the District, they felt it was important to have such expertise "on-call".

The Lake George Commission has selected Fugro East, Inc. in association with Aquatic Control for developing an Eurasian watermilfoil management program for the lake. A contract is about to be signed with work due to commence later this spring. It will be a challenge (to say the least!) to find effective solutions that can be permitted under NY DEC's and the Adirondack Park Agency's (APA) stringent regulations. Other lakes work successfully completed in NY includes milfoil mapping and formulation of a management plan for Waneta and Lamoka Lakes in the Finger Lakes Region of the state. An assessment of a small, Long Island waterbody remains pending for this summer. We continue to expand the number of NY lakes/ponds where we provide mechanical hydro-raking and harvesting services as well as DEC permitted chemical treatments for control of nuisance aquatic vegetation. Now that Sonar® (Fluridone) and Rodeo® (Glyphosate) are registered in NY, we have two additional tools to effectively manage nuisance vegetation in New York.

### **Getting The Word Out...**

**The Massachusetts Congress of Lake and Pond Associations (COLAP)** held a well attended workshop on January 21st in Leicester, MA. Gerald Smith gave an informative talk on "Chemical/Mechanical Restoration Techniques for the Mid/Late 1990's - What Lies Ahead." Much is happening in Massachusetts that directly effects our ponds and lakes, particularly the revisions to Title V (State Sanitary Code) that have recently become law as well as nonpoint source funding and many other issues. For more information on COLAP, contact Carol Hildreth, 135 Washington St., Holliston, MA 01746. Carol may also be contacted for information on the New England Chapter of the North American Lake Management Society (NEC-NALMS). NEC-NALMS intends to hold a regional lakes conference during the last weekend of June in New Hampshire.

**Cromwell, CT was the Site of a Northeast Conference on Non-Indigenous Aquatic Nuisance Species** also held in January. Concurrent sessions on Exotic/Invasive Aquatic Plants and Invertebrates/Vertebrates in the northeast were held along with a morning Plenary Session covering federal and regional programs for preventing the spread and tracking mechanisms of exotic species invasion. Gerald Smith presented a paper on "Invasive Aquatic Plants of the Northeast; Current Management/Eradication Techniques."

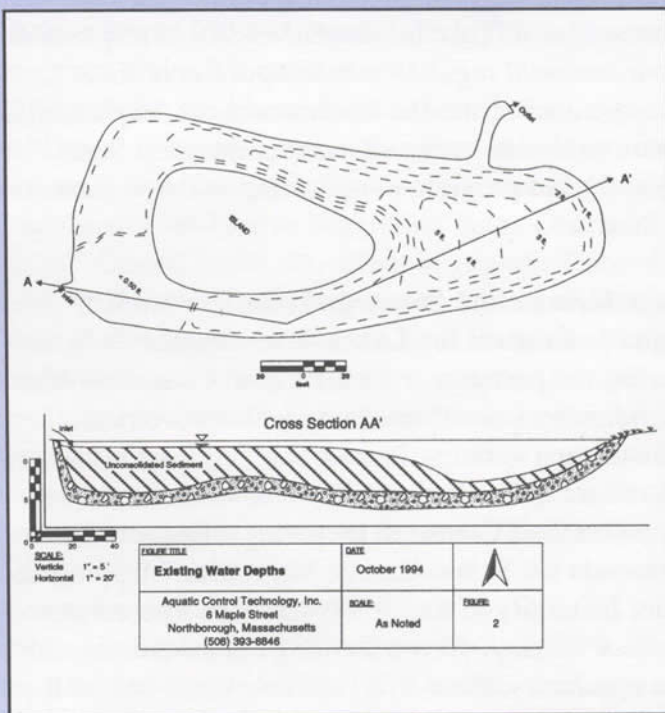
**The Long Awaited MA Generic Environmental Impact Report (GEIR)** covering Eutrophication and Aquatic Weed Management in Massachusetts is well underway. Researchers from the Water Resources Research Center, University of Massachusetts are doing the best job they can with a very limited budget. A Draft GEIR is targeted for year-end. If you have lake management/restoration project case histories for Massachusetts waterbodies that you'd like to share and possibly have included in the GEIR, contact Dr. Mark Mattson at the University Water Resources Research Center in Amherst. Gerald Smith is playing an active role in contributing information as well as the review of this GEIR. Call us for an update on the GEIR or to express your concerns and questions.

## Innovative Lake and Pond Assessment Techniques

Utilizing the latest technological advances available through our affiliate firm Fugro-East Inc., we now offer Global Positioning System (GPS) lake and watershed mapping services. Data points entered and stored in a hand-held unit on site, can later be down-loaded into a variety of digital formats including GIS and CAD to produce accurate computer generated maps of waterbodies, watershed boundaries or vegetation distributions. Interfacing GPS with a sonar (depth) unit provides us with the ability to create computer generated lake bathymetry and sediment thickness maps rapidly, without the need for a separate surveying crew. These new mapping abilities combined with proven, up-to-date monitoring and assessment methods, biological inventories and water quality modeling, facilitate accurate lake and pond evaluation and appropriate management recommendations. Both Aquatic Control and Fugro East are industry leaders in lake dredging feasibility studies, as well as the permitting and implementation of such projects. The two firms have carried out dozens of representative projects throughout the Northeast.

### Additional lake assessment services include:

- Diagnostic/Feasibility Assessments
- Water Quality and Biological Monitoring Programs
- Public Education Programs
- Groundwater and Shoreline Septic Surveys
- Watershed and Nonpoint Source Management Planning



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