

Enjoy Your Lake or Pond...  
**THIS Year!**

## Your Watershed, Your Water

Carter L. Bailey, Aquatic Biologist, AQUA DOC Inc.

Any rainfall that doesn't soak into the ground or evaporate acts as runoff, draining downhill over the ground to the nearest stream, lake, or pond. All the land that drains to a particular body of water is known as its watershed. Our slower moving waters such as lakes and ponds tend to collect nutrients and other materials associated with this runoff. Over time, nutrient enrichment will cause our waterbodies to age and reflect the often poor condition of their watershed. This is the unfortunate reality that we face as water enthusiasts, lake residents, and/or pond owners. No matter how much we would like to, most people cannot control their watershed. *So, what can we do?*

Strategies  
to improve  
your water  
*inside!*

(continued on page 2)



## Your Watershed, Your Water (continued from page 1)

Watershed improvement projects can include swales, buffer strips, tree plantings, rain gardens, stream bank restoration, stormwater control structures, cover crops, and even livestock setbacks - just to name a few. These long-term strategies are always helpful, but don't forget about your water now! Proactive maintenance can go a long way towards reducing the impacts of your watershed issues. Managing your water with "in lake" solutions can often be the best and in some cases the only solution to your problem. Consistent management will



help offset the aging process of your waterbody. Safe and desirable water is usually the ultimate goal of any watershed restoration or improvement project, so consider the effects of an annual management program to help you meet these goals.

As a water body moves through time it will tend to reflect different stages of pond succession. The aging process of your lake or pond can be offset and slowed down through the continued stewardship of your water.

**“Ponds and lakes are going to age. Succession and eutrophication are natural parts of the process, but both can be delayed and controlled through thoughtful management of water quality, nutrient load, aquatic plant growth, and wildlife control.”**

– Dr. Michael A. Champ  
*Pond Boss Magazine*  
March/April 2017

## You Deserve The Best Water Quality Possible!

Nate Robinson, Aquatic Specialist, AQUA DOC Inc.

Why do so many of us put up with impaired water quality conditions in the places we love? Impaired water can be described as a lake or pond that is unable to be used as desired. This can be caused by nuisance plant growth, algal blooms, bacteria issues, lack of depth, water discoloration, or a myriad of other factors. Water quality is extremely important for anything you plan on doing with or in a lake or pond. Activities such as fishing, swimming, boating, water skiing, or simply enjoying the beauty of water, all rely on good water quality.

Take charge of the condition of your water. You are able to do this and AQUA DOC can help. AQUA DOC's Aquatic Specialists are experts in proper identification of aquatic plants, algae, fish, and other organisms. This information along with accurate size and depth measurements, will allow them to work with you to develop an effective management plan. This plan will establish goals and expectations for your waters now and into the future. Let AQUA DOC maintain your pond's water quality today and tomorrow, season to season.

When choosing a lake management company please take these thoughts into consideration:

- Are the personnel properly licensed?
- Does the firm utilize only approved aquatic materials?

- Is the company properly insured?
- What is the experience and knowledge level of the company? How long has the firm been in the aquatics industry?
- What are the application methods and what equipment will be utilized?
- Is a management plan for your water communicated in a way you can understand?

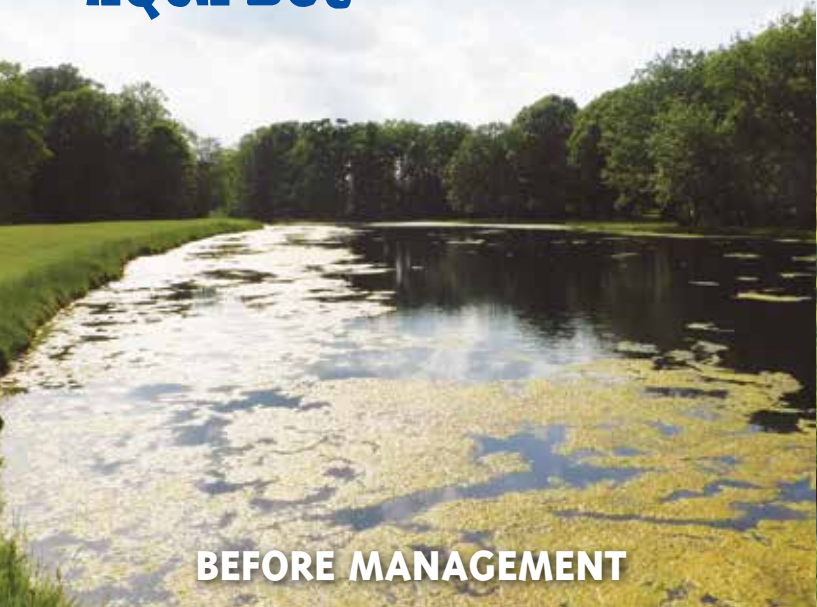


### What is an acre foot?

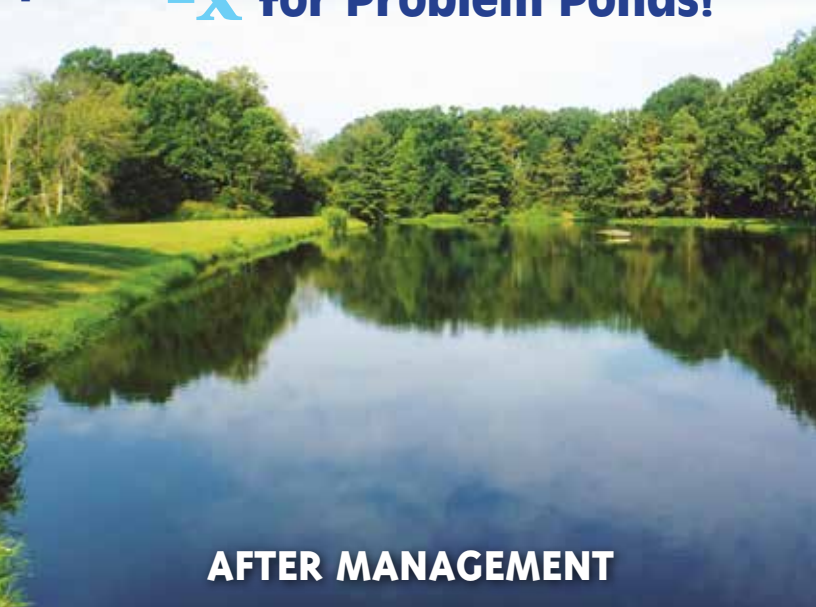
An acre foot is the volume of water that would cover one acre one foot deep. That equals 325,851 gallons!



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**BEFORE MANAGEMENT**



**AFTER MANAGEMENT**

## The Science of Aeration

Patrick Goodwin, Research Scientist, Vertex Water Features

Aeration is the process of pumping compressed air into the bottom waters of a lake or pond. When doing this two processes begin. The first process is circulation; water needs to be constantly moved in your lake to prevent stagnation and toxic gases (ammonia, hydrogen sulfide) from building up. The second important process is oxygenation (adding oxygen); insufficient oxygen levels in your lake can lead to poor water chemistry and cause a wide variety of lake issues.

Bottom diffusers continuously lift deep water to the surface where gases are expelled, and oxygen is absorbed. Stratification and all its resulting problems are eliminated. Colonies of beneficial bacteria once again flourish along the bottom while nutrient levels decline and water clarity increases. Oxygen-related fish-kills are eliminated and sport fisheries are improved.

To achieve the full benefit of aeration the system has to be sized accordingly, based on the size and shape of the waterbody. Aeration will improve every aspect of your lake physically, chemically, and biologically.

### Benefits of Aeration Include:

- Improved Water Chemistry
- Reduced Algal Blooms
- Increased Water Clarity
- Fishery Improvement
- Favorable Algae and Zooplankton
- Balanced Food Web
- Increase in Beneficial Bacteria
- Reduced Nutrients and Odors

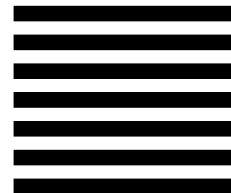


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