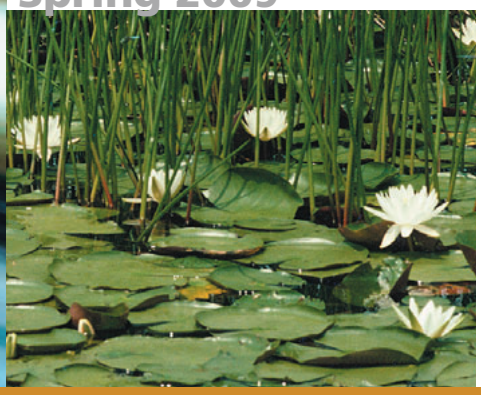
Spring 2009

AquaticsinBrief



Volume 3, Issue 2

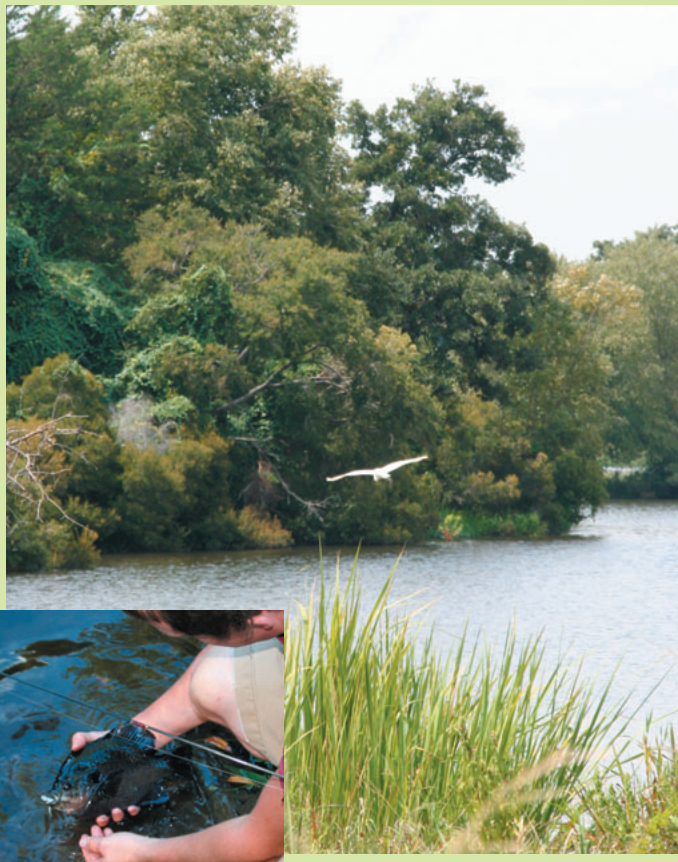
Inside:

VIRGINIA LAKE MANAGEMENT

A Full Service Lake and Pond Management Company

Value of Pond Management

By **Bob Lusk, Editor**
Pond Boss Magazine



From a window seat on an airplane, you look down and see little diamond-like sparkles dotting the landscape below. Ponds. Charming ecosystems teeming with life. Some are muddy, algae-covered puddles, while others are pristine-looking trophy fishing lakes.

What's the difference? Some are managed, most are not.

As landowners, we have choices. We are stewards of our land and water. Decisions we make today influence those parcels for years to come. Fire up a bulldozer to build a pond and we change that landscape for at least five generations beyond ours. Good decisions are paramount.

Managing your pond is an easy decision, too. Look at the value of managing ponds. Water is a natural resource we borrow. We don't own it, we don't keep it. We use it. When temporarily stored in a pond, water is ours to use and enjoy. Souls are soothed around water. Wildlife drinks it. The gurgling sounds as it moves, the clarity, the mystery of plants and animals which live beneath give us a peace and serenity we are hard pressed to find in our workaday worlds. Good water adds value to land as well. In my office, people ring our phones regularly, asking if we know of land for sale…with water on it. Well managed ponds often teem with healthy fish. Have you ever paid a fishing guide on a public lake or stream and watch him work for you to catch a limit? Your pond could provide as nice an experience…with better results. Better yet, how about those delectable grilled fish entrées at fine dining establishments?

Continued on inside.

Value of Pond Management

Continued from front

Guess where those fish were before they hit the platter? Well managed ponds add value to land, surrounding wildlife, your menu…and, most of all, your soul.

It just makes good sense to manage ponds and lakes. They deserve it. Better yet, you deserve it. You change the oil in your car, you vacuum the carpets at home, you manicure the lawn. Manage your pond, too. There are a few fundamental things that every pond owner can do. First, learn as much as you can. Knowledge makes decisions much easier. Pond management starts with clean water. There are ways to keep it clean by what grows and accumulates in it. Or, you can literally move the water to keep it clean. Next, think about the habitat under water and around pond's edges.

Every pond is a living, breathing entity of its own. As goes its habitat, so goes what thrives within. You can influence habitat. Each and every pond develops its own food chain. Most ponds grow plants, which feed insects, which feed larger insects, which feed small fish, and so on…up the food web. You can improve the food chain.

Nature does what Nature does, until you come onto the scene to give it a humanly nudge. That's where your goals and wishes come into play. A pond is like a fresh palette, awaiting the brush strokes of the artist. You are the artist. Want a healthy ecosystem with native plants and clean water which attracts surrounding waterfowl…and maybe a few deer? How about a swimming hole like you dunked your little brother in when you were kids? How about the best fishing hole in the county? You can do it.

Start with your goals, stir in some knowledge and then go to work. Need help? Call your favorite lake management expert and ask. That's why they are there…to not only teach, but to help. They'll raise the hood on your pond, check its oil, manicure its lawn or check the health of the fish that call it home.

Value? Absolutely. Managing your ponds adds to the value of life, extends a hand to Nature and brings value to the land…as you enjoy the fruits of your labor via the harmony you have a hand in bringing to life. ■

Bob Lusk is in his 30th year as a private fisheries biologist, traveling the nation helping people design, build, stock and manage private lakes and ponds. He also edits the nation's leading periodical, **Pond Boss** *magazine.*

What is the Purpose of Stormwater Ponds?

By **Kyle Finerfrock, Environmental Scientist**

Stormwater ponds are designed to be catch basins for developed areas. Stormwater ponds collect rainwater that runs over impermeable surfaces such as parking lots, roads, and buildings. In undeveloped areas rainwater can be absorbed into the soil, taken up by trees and plants or flow into rivers, streams or wetlands naturally. The daily activities of people cause pollutants to collect on impermeable surfaces and get washed into waterways during rain events. These pollutants include dirt, oil, fertilizers, yard waste and litter. Pollutants can be harmful to habitats and wildlife downstream if they are allowed into the ecosystem. With stormwater ponds in place, rainwater can collect, and sediment and pollutants can settle out before being released back into the watershed.

Stormwater ponds are often located in common areas and attract wildlife. Due to the contaminants being collected by the pond this can be potentially harmful to local wildlife if not properly managed. To keep the stormwater pond functioning properly, it may need to be periodically cleaned out to remove sediments that have accumulated over time. This can be an expensive and intensive process. Actions must be taken by community members to minimize contaminates entering the pond. We can all do our part to help keep our ponds healthy by being good environmental stewards in our community.

We can all do our part to help keep our ponds healthy by being good environmental stewards in our community.

Here are a few tips for keeping your pond and community safe:

1) Keep litter, yard waste and pet waste out of drainage ditches and storm drains.
2) Pesticides and fertilizers need to be used and disposed of properly. Fertilizers should never be broadcast over streets or sidewalks. Fertilizers and pesticides should only be applied at the label rate.
3) Properly dispose of oil and antifreeze.
4) Never hose chemicals off impermeable surfaces.
5) Reduce erosion from your property by planting plants and grasses over exposed areas.
6) Allow natural plants to grow up around your pond to help filter runoff water. ■

A Balanced Fishery

By **Dave Beasley, Fisheries Biologist**

Maintaining a balanced fishery is both challenging and fun. The standard requirements are good water quality, proper fish species, balanced predator to prey ratios and suitable habitat.

Water quality is a given, just like humans do not do well in poor air quality, fish do not do well in poor water quality. So if your pond does not have an ample clean water source, you most likely need to aerate. A simple water test will take the guess work out of the equation. If aeration is implemented, not only will the fish benefit, but the whole ecosystem will as well.

With an environment fit for fish, having the proper species is a must. The size of the pond along with water temperatures throughout the year will have a direct impact on what fish should reside in the pond. Fish species have different life cycles that need to match the pond's environment. Most fish are very picky, relying greatly on proper water temperature and the ideal environment in order to successfully reproduce.

Once the fish species of choice inhabit the pond, they need to be managed. Naturally the predator fish will feed on the smaller fish, reproduce, and over time overpopulate, forcing the pond out of balance. Without baitfish the predator fish can't grow and as a result, predators become stunted and skinny. This common problem can be corrected, but is best if prevented. Professionals have the tools and knowledge to keep ponds from getting out of balance.

Supplemental feeding is a great option. Most fish species can be trained to eat pelleted feed. Feeding predator fish artificial feed will relieve pressure on the bait fish, in turn keeping the pond from getting out of balance as quickly. The baitfish will also eat the artificial feed, creating healthier bait with better reproduction rates and better survival rates. As an added benefit of feeding, the pond will be able to support far more fish.

Whether you feed your pond or not, the fish population will still become predator heavy. One tool used to remove over populated fish is an electro-shocking research vessel. Using this type of vessel, excess fish can easily be removed from a pond.

The electro-shocking research vessel's primary use is to assess fish populations. Using direct current produced on board, the fish are stunned in a safe, harmless manor. The fish are then brought onboard using dip nets and placed into a holding tank. While aboard, the quantity of each species is recorded along with their length and weight. Using the data to determine the pond's relative abundance and relative biomass, we are able to make accurate management decisions.

With the fish populations in check, the habitat within the pond needs to be maintained. A pond consisting of 15% vegetation is good for a healthy fishery. Fish use plants as a source of cover when avoiding predation. Other fish use the vegetation to hide when preying on fish. Some species of fish even lay eggs on plants when spawning. Unfortunately many plants have the tendency (just like predator fish) to take over the pond. Using Grass Carp and/or aquatic herbicides, vegetation can be controlled and maintained as desired.

Creating and maintaining a balanced fishery can be a great deal of fun and a rewarding process. The benefit will be quality fishing time with your family and friends. ■

Stuck on You? Mussels and Barnacles

By **Dave Ellison, Aquatic Biologist**

Mussels and barnacles are animals that are usually found in marine habitats other than your lake or pond. In some geographic locations, many ponds may in fact be tidal, become brackish, and provide a suitable habitat for these two creatures. Some species of mussels, such as the non-native and rapidly spreading Zebra mussel, are found in freshwater lakes and ponds.

Mussels and barnacles produce a protein rich matter similar to glue that enables them to anchor to a substrate. Mussels attach feet first and use threadlike structures to keep them attached. Barnacles on the other hand anchor head first and feed with feather appendages that extend off their feet. The glue that both animals use to anchor themselves forms a bond that is extremely strong and makes the animals difficult to remove.

The problems that these animals often create in lakes and ponds can be devastating if not monitored. Fountains and aerators can become covered with the animals causing damage to power units and wiring. Preventive coatings can be applied that will provide some protection from mussels and barnacles accumulating on your equipment, but that is only a short term solution. Regular cleaning and re-application will still be required.

Ultimately, if not monitored, mussels and barnacles can accumulate quickly on fountains and aerators and the excessive weight could cause significant damage. Your best prevention is routine service by having your fountain or aerator checked regularly, especially if you are concerned about mussels or barnacles in your pond. ■

Getting to Know Your Local Turtles

By **Shannon Junior, Aquatic Ecologist**

During a visit to a pond last fall, I noticed a man and several small children leaning over a cardboard box at the edge of the water.

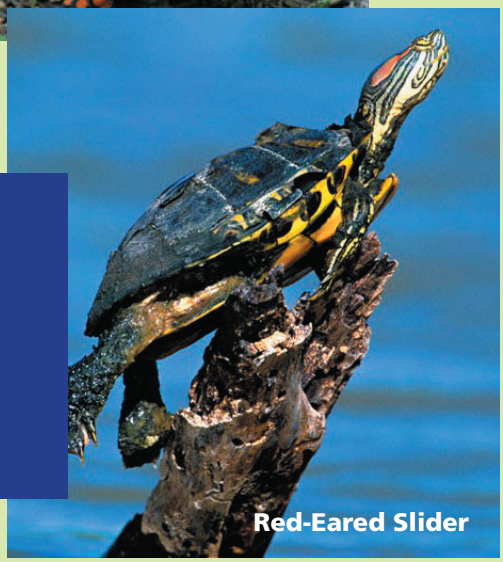
As I approached, I noticed a brightly colored brown and yellow turtle crawling out of the box. I watched with a combination of amusement and horror as the man prodded the turtle with a stick towards the pond. They had rescued the turtle out of the road near their house, and had rushed it over to the pond to return it to its "natural" habitat. But what he apparently did not realize was that the turtle was not an aquatic turtle, but an Eastern box turtle (*Terrapene carolina*). While these turtles may venture down to the water for a drink or a quick dip, they generally do not swim, and prefer forested or grassland habitats.

I realize that most people are not herpetologists, and may not be able to identify many of the turtles that live with us in our neighborhoods. But even a local stormwater pond can provide an excellent opportunity to become acquainted with some of the more adaptable pond residents. Turtles are an important part of the aquatic ecosystem, and can be easily viewed with a pair of binoculars or a quiet approach.


Common Snapping Turtle


Eastern Painted Turtle


Eastern Box Turtle


Red-Eared Slider

While there are reports of snapping turtle bites, this only happens on land when people are harassing the turtles or attempting to handle them. In the water they are actually quite reclusive, and will retreat when approached.

The painted turtle (*Chrysemys picta*) is the most widespread turtle in North America. These are the turtles that you see basking in large numbers on partially submerged logs and rocks, although they will quickly slide back into the water at any sign of disturbance. They get their name from the colorful markings on their shells and body. Their upper shell (*carapace*) is mostly dark, but it has bright reddish-orange crescents around the edges. The head, limbs and tail are brightly striped with red and yellow, and the lower shell (*plastron*) is yellow-orange. They are omnivourous, and eat insects, plants, algae, fish, and invertebrates.

The red-eared slider (*Trachemys scripta elegans*) is not actually native to our area. These are the turtles that used to be sold as babies in pet stores until it was found that they could transmit salmonella bacteria to small children. Many of these unwanted pets were released in local ponds, and have been able to survive and breed to form stable populations. They can be easily identified by the bright red marking behind the ear. The carapace is bright yellow and green when the turtles are young, but becomes darker as they mature. Sliders are very similar in diet and behavior to painted turtles. One interesting fact about both species is that they have fixed tongues and no saliva, so they are only able to ingest food in the water.

The common snapping turtle (*Chelydra serpentina*) is probably the most misunderstood of all pond turtles. Many are intentionally killed each year by humans for fear that they are aggressive, or that they will adversely impact fish populations. While there are reports of snapping turtle bites, this only happens on land when people are harassing the turtles or attempting to handle them. In the water they are actually quite reclusive, and will retreat when approached. Snapping turtles eat a variety of plant and animal materials, and are both scavengers and predators. Although they do eat fish, a few turtles in a pond cannot impact the populations enough to adversely impact the sport fishery.

So grab your binoculars and take a look around the pond to see if you can identify any of these turtles. And if you happen to see a turtle crossing the road, by all means help it out. Put it in the grass on the side of the road where it was heading — it knows where it wants to go! ■

Algae in Bloom

By **Dustin Kennedy, Aquatic Biologist**

As spring and summer start to approach the Mid-Atlantic States, so does the algae. Algae can show in many forms and colors. The most common types of pond algae are the green algae types. They are primitive plants closely related to fungi. They have no true leaves, stems or roots and reproduce by means of spores, cell division or fragmentation. It thrives from excessive nutrients in the water and needs sunlight for growth. Green algae are usually found in three forms: planktonic, filamentous, and macro.

Planktonic algae are microscopic plants, usually suspended in the upper few feet of water. They can cause pond waters to appear pea soup green and natural die-off may cause summer fish kill due to oxygen depletion. Some species are found to be toxic to livestock and wildlife.

Filamentous Algae forms greenish mats upon the water's surface. This algae usually begins its growth along the edges or bottom of the pond then eventually will take over the entire water body. The filaments are made up of cells joined end to end which give a thread-like appearance. Pithophora and Spirogyra are two of the most common that are particularly difficult to control with algaecides.

Pithophora is a dark green filamentous algae and is commonly referred to as cotton ball or horsehair algae. It usually grows in coarse clumps of tangled filaments resembling small balls of cotton. Individual filaments show extensive branching. Due to its high production of reproductive cells, growth can be very rapid.

Green algae are usually found in three forms: planktonic, filamentous, and macro.

Spirogyra is a filamentous algae that can be found in almost every pond or ditch. It gets its name from the spiral form of the chloroplast within the algal cells. Because of its fast reproduction this algae can grow in extensive mats that can cover and choke out an entire pond.

Macro Algae can resemble a flowering plant in that it looks rooted to the ground. In fact, they are just attached to a surface. This type of algae tends not to top out completely at the surface of the pond, but like all algae, it will reproduce very quickly.

Chara, the most common form of macro algae, is often called musk grass because of its musty, garlic-like odor. Chara is a green branched multicellular algae that is often confused with submerged flowering plants. It attaches to the bottom, but is not rooted. Chara usually has black, ball like structures called sporangia visible during its reproduction stages.

If any issues arise with algae and other aquatic vegetation, you should contact a professional lake manager to help you evaluate and identify exactly what species of plant or algae you have in your pond. Proper identification is the first step to developing a responsible and effective treatment and overall management plan. ■

Getting To Know Our Aquatic Pests: Coontail

By **Lee Abernathy, Environmental Scientist**

Aquatic pest managers run into a number of different species that need some form of control. At first glance many of these species may appear to be beneficial and should not be controlled. However, this is not always the case, even with native species. Native species can spread uncontrollably in certain situations, choking out entire lakes and ponds.

One of these species is Coontail, *Ceratophyllum demersum*. Coontail is a submersed aquatic plant with coarse, bushy stems and no roots. The stiff leaves are fork-divided (generally forked once or twice), flattened, and arranged in whorls of 5 to 12 leaves. The leaf margins are finely serrated. In some cases the teeth are tipped with a small spine. Whorls of leaves are more closely spaced towards the end of branches giving the plant a raccoon tail appearance. Tiny flowers, followed by spiny fruits are produced in the leaf axils.

Coontail is native to much of North America and is widely considered a beneficial species. Under many circumstances, this aquatic plant is very beneficial. It provides a valuable habitat for fish such as bass and bluegill. This plant protects smaller fish from predators while also providing a location for aquatic insects to live, resulting in an important food source. Coontail also helps with the clarity of water. The plant filters out sediments allowing a lake or pond to be very clear which helps with the production of dissolved oxygen in the water.

While Coontail is loved by fish, it is often despised by aquatic pest managers. Coontail can grow uncontrollably and can completely take over a lake or pond. Once this occurs, management is absolutely necessary. Grass carp can help control a Coontail population over time, but aquatic herbicide treatment will typically be required to control this plant in the short term. Again, this plant is a native and can be beneficial if managed properly, but you may find that treatment and other tools are necessary to do so. Turn to your aquatic pest managers to determine the best management options for your particular lake or pond. ■

Dredging: Planning for Your "Big Dig"

By **Terry Owens, Environmental Scientist**
Kimberly Niesel, CMCA- Director of Marketing

If your community has a lake or pond, it may have crossed your mind that dredging will be needed at some point. Hopefully your community has had a professional reserve study performed which includes funds allocated to a future dredging project. If you have reviewed this line item, you may see that it is one of the most costly projects that a community will ever undergo. Still, you may find that even though funds have been allocated, these funds may not be adequate to cover the scope of work needed. In order to prepare for the "big dig" that may be around the corner, here are a couple of tips to prolong the time needed between dredging projects:

Bathymetry: Your lake is a dynamic and unique ecosystem. Bathymetry allows you to better understand the changes that are going on in your lake. Bathymetry is the science of three dimensional lake mapping where surface area is shown with the corresponding depths. It shows the underwater mountains and valleys. Specifically it shows the very shallow parts of your pond. It also gives information on the quantity, location, and types of sediments sitting at the bottom of your pond. When compared to original plans, it will also allow you to calculate the rate at which your pond is filling in with sediment. This information allows you to tailor your dredging planning and budgeting to be more site and cost specific, reducing the unknown and taking the guess work out of your long term reserve planning and budgeting.

Aeration: Aeration is an important part of any lake management strategy but specifically it can help prolong the amount of time before dredging is required. The movement of water generated by aeration keeps sediments in a suspended state, not allowing them to settle out and add layers to the bottom of your pond. By adding oxygen and movement to the water, you can slow the accumulation of organic sediment and even help to break down a vast majority of sediments through the microbial processes that are enhanced by the aeration. Minimization of organic sediment accumulation on the bottom of the pond will greatly extend the life of your pond and push back the timeline for dredging.

Fish Stocking (Grass Carp): Fish stocking can be another effective way of increasing time before dredging is required. Stocking your pond with fish, specifically grass carp, is a biological control against nuisance aquatic vegetation and algae. These fish are herbivores and only go after the vegetation in your pond. Removing harmful vegetation improves the "look" of your pond and has the added benefit of removing organic matter that can build up and increase the "filling" of your pond. By consuming these plants the fish are effectively removing any of the nutrients that might be recycled and used for growth of new plants.

Biological Augmentation: Another way to decrease the nutrient build up in your pond is through biological augmentation which is the addition of natural bacteria and enzymes to your pond or lake, also known as "biologicals". Biologicals are naturally occurring bacteria that utilize excess nutrients in the water for their own growth. This means that they remove the food source that algae and other nuisance vegetation need to grow. These bacteria are also responsible for helping to break down the "organic sludge" sitting on the bottom of your pond. Coupled with aeration, biologicals effectively remove nutrients and break down the organic layer slowing the "filling" of your pond.

Overall there are multiple ways to prolong the time before you need to dredge your pond. These are just a few of the more effective strategies to help your pond from filling up. Through proper pond management you can have a pond that looks great and gives you adequate time to plan for your "big dig." ■

What Do I Plant Around My Pond?

By **Gregory Blackham, Aquatic Specialist**

You've decided you want to add some color and definition around your pond. You also know that creating a vegetative buffer around your precious water resource is vital on many levels. Attracting a variety of waterfowl and other wildlife is desirable also. There are so many advantages to having vegetation, but the question is…What do you plant?

Selecting plants is a lot more difficult when a body of water is involved. There are additional considerations that have to be taken. Erosion control has to be of utmost importance. Nutrient and pollutant filtering should also be of a high priority, considering it is one of the major causes of poor water quality and algae growth. Plants native to your area should always take precedence. Woody plants and shrubs too close to the bank can destabilize the compaction of the slope and speed up the erosion process; but, if they are planted far enough away from the slope, they can be highly beneficial. They can soak up a lot of the nutrients and filter contaminates before they ever reach the bank, and can also slow down the speed at which water runoff travels and suspends particles. Canopy interception of rainfall can also be helpful.

In the upland areas around the edge of a pond, you should select plants that can survive and adapt to occasional mild flooding during storm events. If the soil around the pond is particularly acidic, sandy, or of a compacted clay or rock, this might limit your options. Some suggestions of hardy plant types that fair well in a variety of applications that I've chosen are Red Maple,

An Ounce of Prevention

By **Randy Bolin**

How many times have we heard the statement "**an ounce of prevention is worth a pound of cure"**? When I was growing up (and I won't tell you how long ago that was, but will tell you that I am a little older than the current President) people of my generation practiced very little prevention. Mostly because we didn't know any better. Over the past ten to fifteen years, we have come to know that preventive health practices have not only increased the length of our lives, but have made them more pleasant.

The same is often true in lake and pond management. Some preventive and progressive measures will not only improve the overall health of your pond, but by improving the water quality, will provide an environment suited for the healthy growth of beneficial plants and animals in the future.

Most experts agree that a naturally vegetated shoreline buffer zone is critical to the long term health and quality of the pond.

One of the most significant preventive measures in a pond's new life is the development of a buffer zone. Buffer zones are defined as green zones along the shoreline of ponds, streams, rivers and lakes, and should be made up of a variety of natural shoreline vegetation. The most important quality of a buffer zone is the ability to filter runoff from surrounding properties by removing harmful chemicals and nutrients that would otherwise promote algae and other water quality problems.

The intricate root systems of natural plant life also help to stabilize the pond banks, thus preventing erosion, and avoiding sediment pollution. The shoreline buffer zone also provides a home for aquatic microorganisms, fish, insects and other animals so that a balance in the aquatic ecosystem is maintained. Most experts agree that a naturally vegetated shoreline buffer zone is critical to the long term health and quality of the pond.

We as humans have come to realize that regular exercise is a great way to slow the aging process; plus the by-product of a good exercise regiment is that we become more attractive to society and to our partners. Aeration is the pond's exercise. It is needed to break up the cycle of stratification and biological oxygen demand. During certain times of the year pond water becomes stratified, where layers of water form one above the other. Warmer, oxygen rich water develops near the surface, while cooler, nutrient laden and oxygen deficient water forms near the bottom. Aeration breaks this cycle of stratification to lower nutrient levels and restore dissolved oxygen at the bottom to levels safe for fish and other desirable organisms. Whether you choose a floating fountain aerator or a submersed air diffused aeration system; both will help reduce the growth of algae, break up organic muck accumulation along the bottom, reduce foul odors, and help maintain a natural and beautiful ecosystem.

No matter how well these preventive measures work to slow the aging process; we do get old; and sometimes we need the assistance from medical and therapeutic professionals to help improve our way of life. Our neighborhood ponds sometimes need the help of a professional. Even with the healthiest of ponds, which receive the best preventive measures, there can be a time when it becomes infested with invasive aquatic weeds. These plants are typically brought in by birds or other animals, wind, storm water flow, streams, boats, and various man made influences. Consulting a qualified, licensed, and experienced lake management professional should be the first step in addressing these problems. Qualified professionals will have many treatment options in their "bag" and will be best suited to pick the right tool or combination of tools to get the best long term cure.

Lesson: If you have practiced your "ounce of prevention," you probably wont need the whole pound of cure. ■

Bald Cypress, Black Willow, Elderberry, Black Cherry, Silky Dogwood, and Buttonbush. If you know for certain that the area never gets flooded, you can probably choose just about any tree or shrub that would typically thrive in that soil condition.

As you get closer to the water, you have to select plants that are more accustomed to flooding. They should be able to withstand some exposure, and also be able to survive mowing. You would preferably want something with minimal maintenance. A couple of my picks would be Switchgrass, various varieties of turf type grasses, and a variety of sedges.

One of the most critical vegetative areas in the overall pond's ecosystem starts in the shallow water and extends up into the bank. Choosing native plants for this area is highly recommended. An exotic species can completely overcrowd all other plants quickly, reducing the bio-diversity, and leading to numerous problems. These native wetland plants protect the shoreline, which is highly susceptible to erosion, and keep bottom sediments from re-suspending into the water, keeping it clear. They also provide habitats for a variety of insects that keep mosquitoes at bay. This buffer is also the last check on nutrients like nitrogen and phosphorous before they become available in the open water.

Plants located around the pond need to be highly adaptive to constant changes in the water level. Here are a few I recommend based on their hardiness and ability to provide food for waterfowl: Pickerelweed, Arrow Arum, Wild Rice, Broomsedge, Soft-stem Bulrush, Common Three Square, Lizard's Tail, Marsh Hibiscus, and Rice Cutgrass.

There are many plants that are suited for a variety of water related environments. If you are unsure which is appropriate for your area, you can contact your State's Department of Conservation and Recreation or Natural Reserve. Additionally, you can always contact your lake and pond management professional who is typically an expert in native pond plants. ■

Check Us Out…

Virginia Lake Management will be participating in the following events over the next couple of months. We encourage you to come see us! If you need information on attending any of these events, please call our office.

April 2 North Carolina Chapter of Community Associations Institute Manager's Luncheon, Speaker: Kevin Tucker, *The World of Storm Water Pond Management: What Every Manager Should Know*, Raleigh, NC

April 21 – 25 Community Associations Institute National Conference, New Orleans, LA

April 29 Pennsylvania/Delaware Valley Chapter of Community Associations Institute Annual Trade Show, King of Prussia, PA

"Pond"er These Thoughts

Virginia Lake Management wants you to be prepared for 2009. With this is mind, we recommend you consider the following tips as you start the spring:

- While "greening up" your lawn for the season, ensure correct fertilizer usage and limit use in areas directly adjacent to a lake or pond, avoid pavement and concrete, and use products low in Nitrogen and Phosphorus.
- During this growth season, limit mowing around your lake or pond to help establish a protective vegetative buffer. This will stabilize the bank and help act as a filter to reduce the amount of nutrient build-up in the water.
- For lakes and ponds that have healthy fish populations, you may think of adding a feeder.

Virginia Lake Management

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