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AquaticsinBrief

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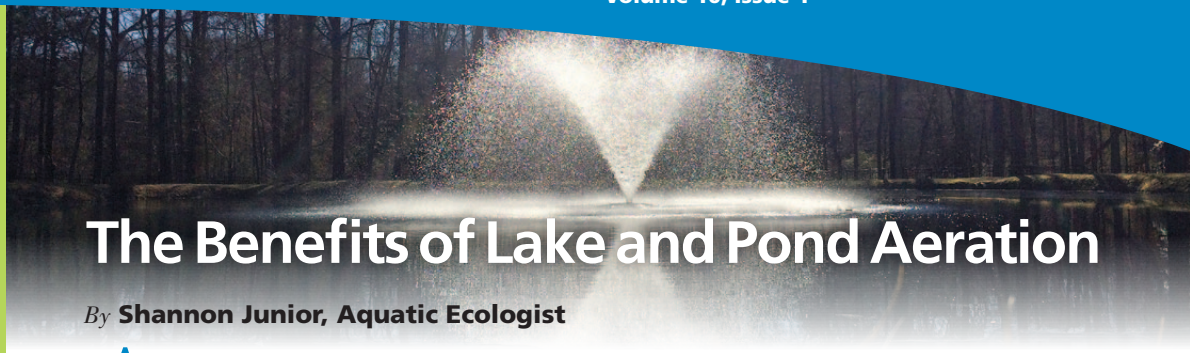
SOLITUDE LAKE MANAGEMENT

A Full Service Lake, Pond, and Fisheries Management Company



The Benefits of Lake and Pond Aeration

By **Shannon Junior, Aquatic Ecologist**

As the regulatory climate in the United States regarding aquatic pesticides becomes more stringent, it is becoming increasingly important to find alternatives to algaecides and herbicides for our algae and nuisance vegetation management programs. The continual and repetitive release of pesticides into the environment for vegetation control is not sustainable or effective, and more environmentally-friendly methods have become necessary. Integrated Pest Management (IPM) is a comprehensive approach to pest management that includes the use of many alternative strategies prior to or in conjunction with the use of pesticides. The implementation of a long-term, proactive IPM Program for lake and pond management helps to reduce the use of treatment products, while still providing for a healthy and aesthetically pleasing waterbody.

One of the most commonly recommended Integrated Pest Management strategies for water quality restoration is the installation of an aeration or circulation system. Aeration improves the health of a waterbody by adding oxygen to the system, which facilitates the conversion of phosphorus to forms that are not usable by algae as food. It also alters pH and other related water quality parameters to favor the growth of healthy green phytoplankton at the base of the food chain rather than potentially toxic cyanobacteria species. The end result is a healthier lake or pond with fewer harmful algae blooms, and a reduction in the need for algaecide treatments.

The two most common types of aeration systems are submersed diffused air systems and surface aerators. While both types can be extremely effective, each type has certain features that would make it the appropriate choice depending on the characteristics of a particular waterbody.

Submersed diffused air aeration systems utilize pumped air to de-stratify the water column and to infuse oxygen into the pond. The typical configuration involves an air compressor that sits on the shore, which pushes air through subsurface tubing to one or more diffusers located on the bottom of the pond. The membrane on the diffuser breaks the air into tiny bubbles that are released into the pond. As the bubbles rise to the surface, they carry the hypoxic (low oxygen) bottom water upwards, where it is mixed with the oxygen rich surface water. This constant vertical mixing causes the water column to de-stratify and allows harmful gases to be released into the atmosphere. It also brings more of the water in the pond into contact with atmospheric oxygen, which increases the overall dissolved oxygen concentration in the water column.

Submersed diffused air aeration is most effective in lakes and larger ponds with depths greater than 6 feet. In very shallow water, the bubbles do not have enough depth to spread as they rise to the surface, so less of

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Fisheries Management: Stocking Happy Fish

By **David Beasley, Lead Fisheries Biologist**

As a lake or pond owner stocking fish, one of the biggest keys to your success is the purchase of healthy and well cared for fish. Although reputable fish farmers have their own quality control measures in place, state regulations require that a sample of farm raised fish be tested to ensure fish being sold are healthy. This health certification is required by law. Although this law exists to help protect you, it does not ensure you receive high quality fish.

In addition to being healthy, it is important that the fish you are stocking have not been subjected to significant stress. Knowing if a fish has undergone stress is difficult to the untrained eye. To help ensure your success, it is always best to work with a reputable fish stocking company and experienced Fisheries Biologists.

While some species of fish can be stocked year round, many have a desired water temperature range that will provide the best odds of being successfully relocated. This is because the immune system of fish operates efficiently at some temperatures and inefficiently at other temperatures. For example, the immune system of largemouth bass and bluegill is at a crawl when water temperatures drop below the mid 50's. During these cool water temperatures, these warm-water fish are vulnerable to sickness and should not be handled and relocated when water temperatures are below 50 degrees.

In addition to fish having preferred water temperatures, each fish species has a specific tolerance toward swings in water temperature. Largemouth bass and bluegill prefer temperature swings less than 5 degrees per hour, whereas fathead minnows and grass carp tolerate immediate temperature swings of 15 degrees. Understanding the needs of the fish and not pushing them past their limits is how reputable fish stocking companies are able to provide quality fish on a consistent basis.

To stock warm-water fish with the least amount of stress possible, they are transported on trucks in water that ranges between 55 and 65 degrees. Transporting the fish at a colder temperature can compromise their immune system, while transporting at higher water temperatures increases the oxygen needs of the fish during transportation. These factors increase the potential for stress and mortality. Since many warm-water fish species are not able to handle broad temperature swings, most of them are stocked when pond temperatures are between 50 and 70 degrees.

Spring is the best time of year to stock warm-water fish followed by the fall which is also appropriate in many regions. While some lake and pond owners have a Fisheries Management Plan (FMP) in place that recommends which fish to stock and when, others are not sure what fish to stock and how many. To ensure your fish stocking process favors the health of your fish, it is best to make plans prior to the spring months. Effective planning will ensure that the desired fish are secured in a timely fashion while also allowing the fish stocking to be scheduled when water temperatures are favorable for the fish. Contact SOLitude Lake Management to set up a consultation with one of our experienced Fisheries Biologists for all of your fisheries management and stocking needs. ■

The Benefits of Lake and Pond Aeration

Continued from front cover

the water column is circulated. Diffused air aeration systems are less expensive and more energy efficient than surface aeration systems in large ponds, and also offer the advantage of no electric wires in the water. Additionally, these systems cause very little surface disturbance, which is attractive to people who like a smooth and natural looking lake or pond.

Surface aerators, such as fountains and high volume mixers, are floating on the surface of the pond. These units contain a float-mounted pump that sucks water from just below the surface and sprays it up into the air. Unlike submersed diffused air aerators, surface aerators are most effective in shallow lakes and ponds. The oxygenation from floating aerators occurs when the water that is sprayed into the air splashes back down onto the surface of the pond. This interaction allows for the venting of gases and the transfer of oxygen into the water. However, because all of the oxygen transfer occurs at the surface, very little benefit is gained in the lower depths near the sediment.

Surface aerators can also provide the benefit of an aesthetically pleasing spray pattern, with many different choices available. However, if the primary goal of installing the surface aerator is for functionality rather than aesthetics, it is important to select a spray pattern with a wide display to maximize the amount of turbulence at the pond's surface. This turbulence is beneficial not only because it creates oxygen transfer, but also because it keeps the surface of the water clear of debris and biofilm.

In most cases, a combination of subsurface and surface aeration would provide the greatest benefit, but it is important to consider the goals of the stakeholders, the size, depth and water quality of the lake or pond, and the installation and operating budgets of the facility when selecting the optimal aeration strategy. Whatever system is implemented, the long-term result will be a more balanced waterbody that requires fewer applications of algaecides to maintain it in a healthy and aesthetically pleasing state. ■

Mother Nature and Father Time's Influence

By **Jeff Castellani, Director of Mechanical Operations**

Every waterbody, no matter how big or small, natural or manmade, evolves through Mother Nature's influence. This influence is unique to each individual waterbody, depending on the surrounding watershed's characteristics such as: water flow, topography, human land use and development. As a lake or pond ages, it continually collects the surrounding surface runoff which contains suspended sediment and nutrients, such as phosphorous and nitrogen. These excess materials disperse throughout the water column and pond bottom and as a result, water quality diminishes and nuisance growth of aquatic plants and algae is escalated. These influences accelerate the build-up of organic matter from resulting decaying aquatic life, leaves, tree limbs and other debris decreasing the water depth. If left unmanaged, these inputs will lead to the filling in of the waterbody's basin, eventually creating wetlands and later developing into a land mass. To prevent a waterbody from succumbing to the influences of Father Time, hydro-raking is an ideal management option.

What is hydro-raking?

Hydro-raking is the process of removing detritus (leaf litter, debris, decaying organic matter and unwanted nuisance aquatic vegetation and root systems) from a waterbody. As shown above, the hydro-rake is essentially a floating barge with a backhoe, powered by hydraulic paddle wheels. The 12-foot hydraulic arm is equipped with a rake attachment, which is used to scrape or rake the pond bottom and remove detritus and aquatic vegetation with attached root systems.

Each rake-full is transported and deposited onshore. The detritus is then allowed to dewater before being moved to the compost or disposal site.

The hydro-rake can operate in water depths ranging from 1.5 feet to 10 feet. Each rake-full of organic matter can range from 300 lbs. to 500 lbs. depending on the compositional makeup. The duration of a hydro-rake project is contingent on the project objective, plant type and density, detritus depth, management area, and other logistical factors such as onshore offload locations.

Benefits

Employing hydro-raking as a management tool provides many biological benefits. To start, hydro-raking involves the removal of large amounts of organic matter which increases the overall water depth. This technique is ideal for the health of any waterbody, recouping habitat for aquatic flora and fauna to thrive in.

Further, hydro-raking can rid the waterbody of undesirable vegetation, whether that be invasive plants such as Common Reed (*Phragmites australis*) or native nuisance plants such as Yellow Water Lily (*Nuphar lutea*). These plants have the ability to form large monocultures over lakes and ponds that outcompete native species for nutrients and light. The abundance of vegetation and decaying organic material can also cause a reduction in dissolved oxygen through decomposition. Reclamation of a waterbody's open water space increases its capacity to intake oxygen through wind currents, which is beneficial to aquatic organisms.

In the process of removing the detritus and nuisance vegetation, the hydro-rake is also removing nutrients such as phosphorus and nitrogen. If these nutrients are left unmanaged, the waterbody can become overloaded with nutrients, a process known as eutrophication. This condition can lead to ecological degradation through excessive algae growth, oxygen depletion, and death of aquatic life.

Hydro-raking is an ecological and economical alternative to dredging. The rake attachment allows aquatic organisms to escape, whereas wet/dry dredging with an excavator permanently removes aquatic life. Hydro-raking is also valued for its ability to sustain the condition of the shoreline during operation. Having a back hoe and the capacity to float allows the hydro-rake to off load material up to 8 feet from the water's edge, without damaging the shoreline. Furthermore, the hydraulic system of the hydro-rake is powered by bio-fluid which is a renewable, bio-degradable, and non-toxic substance.

Overall, it is aesthetically pleasing to see a lake or pond that has been recently hydro-raked because it is deeper and clear of unwanted vegetation and debris. In the end, the fish are swimming, the birds are chirping, the water is flowing, and we just sit back and enjoy Mother Earth. ■

Hydro-raking services are an option for almost any property type. Feel free to contact SOLitude Lake Management or visit our website www.solitudelakemanagement.com/services to get further information regarding this effective management option.

Creating a Better World

We invite you to join us in becoming part of The SOLution. Throughout the year, our team and partners donate time and resources to benefit a variety of non-profit organizations and under resourced families in the communities we serve. Whether you follow us on our social media pages, where we pledge to donate to a great cause on your behalf, join us at the Foodbank, meet up at a local park for a creek cleanup, or inform us about a non-profit's lake or pond that is in need of our donated services, we welcome you to join us in the excitement! **www.solitudelakemanagement.com/community**

Making "A Splash" in 2015

The SOLution was a HUGE success and we exceeded all of our volunteering goals! Here is a brief look at some of the impact this program had on our local communities in 2015:

Company SOLutions

Although geographically we have a large footprint, we are still a local company with a lot of local ties. Each office plans team volunteering events several times a year, in addition to each employee's personal volunteering passions:

- The Foodbank's Backpack Program
- Fishing Tournaments and Outdoor Kids' Events
- River, Bay and Beach Clean Ups
- Dog Adoption Events
- Lake Restorations for Kids' Camps
- And so much more!

Little GOBBLERS

Our Little GOBBLERS program helps under resourced families, in the markets we serve, bring home a Thanksgiving turkey or grocery store gift card to purchase needed food and supplies. 14 elementary and middle schools located in Virginia Beach, Norfolk, Newport News, Fredericksburg and Charlottesville, VA, Raleigh, NC, Lincoln, DE, West Grove, PA and Jackson, MS all identified a need within their schools and 163 families were extremely grateful for SOLitude's assistance this time of the year. The SOLitude teams also donated time to the Virginia Peninsula Foodbank, the Foodbank of Delaware, and Food for Others in Fairfax, VA to assist in preparing thousands of bags of food for under resourced families during the holiday season.

HOLiday Cheer

This holiday season, we partnered with B-Strong Foundation, a non-profit that assists families with children who have been diagnosed with cancer at The Children's Hospital of Philadelphia (CHOP), as well as the Children's Hospital of The King's Daughters (CHKD), in Norfolk, VA. SOLitude donated $800 total to both hospitals in toys and games, which increased $10 for every new social media follower SOLitude received in the month of November.

The "HOLiday Cheer" families adopted this year live in Lincoln, DE and Lynchburg, VA. These families, which include eight children in total, were selected by SOLitude staff, clients and faculty at local schools based on nominations showing a true need for additional HOLiday Cheer and financial support during a very trying time. Employees on the SOLitude team generously purchased items from the children's wish lists to help bring Christmas morning smiles.

We also supported several under privileged children throughout the communities we serve by donating to Toys for Tots in Massachusetts, along with donating Christmas turkeys and toys to 45 families with elementary aged school children in Virginia. ■

The SOLution Stats for 2015:

Dollars Donated: $38,825
Hours Volunteered: 1,453
Under Resourced Families Helped: Over 7,600
Forever Homes Found For Dogs and Cats: 291
Trash Collected From Cleanup Efforts: 37,137 lbs.
Plastic Pesticide Containers Recycled: 13,030
Recycled Cardboard, Plastics & Paper: 524 cu. yds
Good Feelings Created: Immeasurable!

A special thank you to the SOLitude family, our clients and vendor partners and social media fans for supporting The SOLution and our ongoing initiatives to help create a better world. Join us in being "part of The SOLution" in 2016!

To learn more visit: www.solitudelakemanagement.com/solution

The SOLution creating a better world

New SOL

Parker Hurst
Wildlife and Fisheries Biologist

Q Where did you grow up and how did you get to where you are today?
A I grew up in Knoxville, Tennessee just a few miles from the headwaters of the Tennessee River. I received a degree in Wildlife and Fisheries Science from the University of Tennessee. While at the UT, I worked as a fisheries research technician, and I also volunteered with the U.S. Fish and Wildlife Service participating in lake sturgeon research. The experience I gained at work and school eventually led me to SOLitude where I now have the opportunity to take water quality and fisheries management practices to customers throughout the southeast, particularly in Tennessee.

Q What were you the most proud of throughout your schooling?
A I am most proud of the work I was able to do with lake sturgeon. The research I participated in will eventually bring breeding populations of lake sturgeon back into the Tennessee River system.

Q What excites you most about your work?
A The most exciting thing about my work is having the opportunity to help reinvent the way trophy fisheries are managed. The fisheries team at SOLitude is focused on new and innovative processes, and I have already seen the fish we are capable of growing in a relatively short amount of time. I honestly cannot wait to get started creating trophy fisheries for the great folks in Tennessee.

Q Where can we find you when you're not working?
A When not working, I enjoy attending church with my family, watching the University of Tennessee football games, fishing, hunting, and golfing. I also enjoy volunteering with kids whether helping out in Sunday School, a kid's community fishing tournament, or my fiancée's elementary school classroom.

New SOL

Cody Griffey
Environmental Biologist

Q Where did you grow up and how did you get to where you are today?
A I was born and raised in rural Smithfield, VA, the ham capital of the world. I graduated from Christopher Newport University (CNU) in Newport News, VA and through a lot of hard work and commitment, obtained a degree in Environmental Biology. I assisted with multiple graduate research projects related to the growth and development of fish before starting my professional career with SOLitude in August of 2015.

Q What were you the most proud of throughout your schooling?
A I am most proud of being able to successfully complete 17 credit hours each semester for two consecutive years, while working over 30 hours each week. On top of that, I was able to run the CNU fishing team and compete at a national level in college fishing.

Q What are your overall responsibilities and how do you bring value through your current role at SOLitude?
A My current responsibilities include assisting in the maintenance of our clients' lakes, ponds, and stormwater BMPs, as well as, the fountains and aeration systems in these various waterbodies. I am currently undergoing an extensive training program through SOLitude that will soon allow me to take on my own client base.

Q Where can we find you when you're not working?
A When I am not working, I am likely to still be found on the water. I love skim boarding and I am also a tournament bass angler. While in college, I made it to multiple national championships and obtained many sponsorships. One day, I hope to become a professional fisherman and compete in the most prestigious tournament in the world, the Bassmaster Classic.

Volunteer of the Quarter:

Congratulations to Volunteer of the Third Quarter, Aaron Cushing!

Aaron and his wife, Lisa, volunteer regularly with the Rivanna Conservation Society (RCS), helping to safeguard the ecological, recreational and cultural resources of the Rivanna River in Charlottesville, VA. Aaron organizes and leads various groups of students for RCS's cleanup efforts and helps with various fundraising events. He always participates in organized team volunteering events such as Clean the Bay Day and Dog Days of Summer, which raises much-needed funds for a local animal shelter. Aaron's latest SOLution initiative is helping his church maintain and improve their rain garden. Aaron recorded over 60 individual hours and 30 family hours of volunteer time in 2015. ■

Congratulations to Volunteer of the Fourth Quarter, J. Wesley Allen!

Wes is committed to quarterly team volunteering events at the Food Bank of Delaware. He continues to participate in environmentally-focused volunteering events to improve the waterways and shorelines in his home state of Delaware and has motivated the team to join him on several occasions. From preparing the DuPont Nature Center for its spring opening, to cleaning the Brandywine River, to planting Cape American Beach grass at Delaware Seashore state park, to removing invasive Wineberry weeds, no job is too big or small for the Trash Troll! Wes recorded 47 individual hours of volunteer time at 16 events throughout 2015. ■

Protecting Your Shorelines Through Bank Stabilization

By **John M. Phelps, III, Environmental Scientist**

Water is the most powerful force on earth. Year after year, wet weather events cause property loss and result in significant remediation costs.

Calm-water banks and shorelines around lakes, ponds and stormwater basins erode at a gentler rate than coastlines and river banks because the water has a lower velocity. Common causes of calm-water bank and shoreline erosion include rainwater sheets flowing over unprotected areas, high-traffic spaces where people and animals are accessing the water and small-wave action caused from wind.

Proper bank stabilization is one of the easiest methods to protect calm-water shorelines. There are many shoreline stabilization methods, like the use of rock, synthetic materials, vegetation, or a combination of the above, with varying results and costs.

Rock effectively dissipates the velocity of moving water and is ideal for foot traffic. Stone, rock and rip rap come in various sizes. Choosing the correct type of rock and size is as important as the correct technique for placing the rock. Larger stone is more expensive, so protecting a long stretch of shoreline could go way over budget. Small stone can migrate and cause future problems if placed in areas of high flow.

Alternatively, there are several types of synthetic stabilization materials available. Bulkheads and walls create a rigid shoreline. Geotextile fabrics, filter soxx and poly-mesh products have an advantage in areas of steep slopes, but come at a cost. Bio logs or coir logs, long tubes typically filled with coconut fibers, can be used along a shoreline. Inserting herbaceous perennials and grasses into the logs provides a secure growing medium as the plants become established.

Plants are a natural and beautiful way to protect and stabilize calm-water banks. Perennial species and grasses can be planted along the shoreline to create a terrestrial buffer. The plant roots will grow throughout the soil, naturally stabilizing the terrestrial ground. Hydrophilic species planted in the water along the banks will create an aquatic buffer and greatly reduce the effect of wave action.

Proactively installing rocks, manmade materials and plants around the perimeter of a lake, pond or stormwater basin will stabilize the banks. Regardless of the methods chosen, proactive stabilization is almost always less expensive than a reactive remedy. When left unchecked, water will always find the path of least resistance. Put a rock, a soxx or a plant in its way. ■

What Are You Putting In My Pond?

By **Michael Lennon, Biologist**

Aquatic herbicides and algaecides, as their names suggest, are used to manage plants and algae in aquatic ecosystems. They are an important tool for water resource management, and often offer the most efficient and cost effective solution for managing undesirable plant and/or algae growth in a waterbody.

Despite widespread use, aquatic herbicides and algaecides are highly regulated. All U.S. EPA approved aquatic-use pesticides are subject to extensive testing to evaluate their effectiveness on target and non-target organisms, persistence in the environment, and threats to public health. To achieve EPA registration, aquatic herbicides must meet rigid environmental and toxicology criteria. Required testing for aquatic pesticide registration is considerably more rigorous than their terrestrial counterparts, requiring evaluation of roughly 150 unique tests. Due to strict testing requirements, registration generally takes years of research before a new chemical compound can be approved by the EPA. Currently, there are only 14 EPA approved active ingredients that can be used in aquatic herbicides and algaecides. Various formulations and concentrations of these 14 ingredients constitute all approved aquatic herbicides and algaecides available for use in the US.

If you have unwanted vegetation in your lake or pond, it is likely that at some point you will consider using an herbicide to help manage the undesirable growth. The decision to use one herbicide formulation over another is influenced by a variety of factors including: target vegetation to be controlled, size and configuration of treatment area, water flow, potential non-target impacts, water uses and cost. Active ingredients and formulations are not equal and improper application can lead to undesirable results, so you should always consult with a professional lake and pond manager to ensure that your management goals are reached.

Similar to aquatic herbicides, there are a variety of available aquatic algaecide formulations that can be used to control nuisance microscopic and macroscopic algae in your lake or pond. Although algaecides are formulated from two primary active ingredients, copper and hydrogen peroxide, different formulations and concentrations can be used to address specific problems within each unique waterbody.

Both herbicides and algaecides are designed to target chemical pathways specific to vegetation and algae and therefore do not typically risk non-target impacts to fish, birds, invertebrates or other aquatic fauna. Advanced formulations also allow for species selectivity, where necessary, helping to establish and maintain more desirable plant growth in your pond. Contact your local lake and pond management professional to see what can be done to help improve conditions in your waterbody. ■

Before and After Showcase

Successful Aquatic Weed and Algae Treatments

Eight water quality management professionals from SOLitude Lake Management won "Seeing is Believing" awards from SePRO Corporation, a developer and manufacturer of high quality, environmentally responsible solutions for aquatic plant management. These awards recognize the highest standard of excellence in water quality treatment for lakes, ponds, and stormwater basins that have demonstrated the effectiveness of SePRO products in improving these aquatic ecosystems. **Below are a few of our team's successes in 2015:**

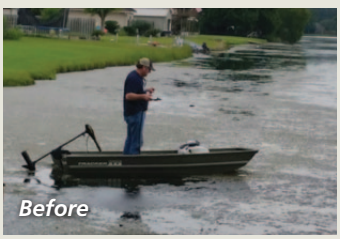
(L to R: Kyle Finerfrock, Environmental Scientist, Hunter Poland, Environmental Scientist, David Riedl, Environmental Scientist, Derek Johnson, Certified Lake Manager and Fisheries & Wildlife Scientist, Aaron Cushing, Fisheries & Wildlife Biologist and Environmental Scientist, Shannon Junior, Aquatic Ecologist, Brent Weber, Environmental Scientist, Kris New (not pictured), Aquatic Specialist)

Location: Crozet, VA
Surface Area: 104 acres
Primary Target: Cyanobacteria
Restored By: Shannon Junior, Aquatic Ecologist

Location: Scottsburg, VA
Surface Area: 2.5 acres
Primary Target: Duckweed
Restored By: Aaron Cushing, Fisheries & Wildlife Biologist and Environmental Scientist

Location: Alexandria, VA
Surface Area: 1.5 acres
Primary Target: Hydrilla
Restored By: Shannon Junior, Aquatic Ecologist

Location: Newport News, VA
Surface Area: 0.33 acres
Primary Target: Euglena and Planktonic Algae
Restored By: Derek Johnson, Certified Lake Manager



Location: New Iberia, LA
Surface Area: 10 acres
Primary Target: Filamentous Algae
Restored By: Kris New, Aquatic Specialist

Check Us Out…

SOLitude Lake Management will be participating in the following events over the coming months. We encourage you to come see us! If you need information on attending any of these events, please call our office at 888-480-LAKE.

January 7 - 8
Society of Lake Management Professionals (SLMP) Annual Summit
Bonita Springs, FL

January 12 - 14
Northeast Aquatic Plant Management Society Annual Conference
Saratoga Springs, NY

Tennessee Turfgrass Association's 50th Anniversary Conference
Murfreesboro, TN

January 25 - 28
Mid-Atlantic Turfgrass Expo (M.A.T.E)
Fredericksburg, VA

February 24 - 25
Pennsylvania Lake Management Society Conference
State College, PA

March 2 - 4
NJ Mosquito Control Association Annual Meeting
Atlantic City, NJ

March 12
Washington Metro Chapter of Community Associations Institute's Annual Conference & Expo
Washington, DC

March 12
Southeastern VA Chapter of Community Associations Institute's Annual Community Associations Day
Virginia Beach, VA

March 13 - 15
The Virginia Water Conference (Virginia Lakes and Watershed Association)
Richmond, VA

March 19
Connecticut Chapter of Community Associations Institute's Annual Conference & Expo
Plantsville, CT

March 29
Central Virginia Chapter of Community Associations Institute's Tradeshow and Education Expo
Richmond, VA

April 7 - 8
North Carolina Chapter of Community Associations Institute Annual Conference and Expo
Greensboro, NC

SOLITUDE LAKE MANAGEMENT

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- Algae & Aquatic Weed Control
- Fisheries Management
- Water Quality Testing
- Bathymetric Studies
- Biological Augmentation
- Mechanical Harvesting
- Ultrasonic Algae Control

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Ponder These Thoughts

SOLitude Lake Management wants to be certain that your lake or pond is prepared for 2016. With this in mind, we recommend that you consider the following during the winter months:

- Review your lake/pond budget and Replacement Reserve funds to ensure that funds are available for bathymetry to determine if and when you will have a need for hydro-raking or dredging.
- Evaluate your waterbody to determine if you need to add aeration to meet your management goals and objectives for 2016, and don't forget to schedule annual maintenance and service for your existing fountains and aeration systems this winter.
- Think ahead to spring and pesky mosquitoes. Keep them at bay by setting up an Integrated Pest Management plan to include surveillance, source reduction, larviciding, minnow stocking, monitoring and more.
- Consider installing a SonicSolutions algae control device prior to spring to help prevent the onset of algae blooms as the weather warms.
- If you have not been maintaining the vegetative buffer along the shoreline and the sloped areas adjacent to your lake or pond, schedule thinning of the vegetation in these areas.
- Failure of your stormwater pond is never an option. A structural inspection can ensure your pond is functioning properly.
- Start working on your 2016 fisheries goals! Have a Fisheries Biologist devise a custom Fisheries Management Plan that works within your budget.
- Consult with a Fisheries Biologist to set the ground work for an annual youth fishing tournament or environmental education day.
- Most importantly, implement a sustainable annual maintenance program for your lake or pond.