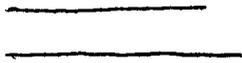


# Lake and Pond Solutions LLC

## NORTHERN WI OFFICE:



Squires Grove Management Association  
Attn: Jerry Mayhew  
733 N. VanBuren St. Ste 770  
Milwaukee, WI 53202

September 17, 2008

Dear Mr. Mayhew and Members of the Board,

## SOUTHERN WI OFFICE:

\*\*\* We Have Moved \*\*\*  
W4950 County Highway A  
Elkhorn, WI 53121  
866-525-3489

Thank you for your interest in Lake and Pond Solutions LLC. We are a total lake and pond management company, dealing in hundreds of products for aquatic use. Our degreed biologists are licensed, certified and fully insured herbicide applicators with years of treatment experience.

### Pond Characteristics

[www.lakeandpondsolutions.com](http://www.lakeandpondsolutions.com)

Ave Width	102'
Length	975'
Area	2.28 acres
Depth	6' – 8' max down pond center
Aeration	7 diffusers, 2 compressor locations
Bottom composition	soft sediment
% Organic Matter	5.1%*
Plant / Algae	<i>Chara, filamentous algae – no weed growth</i>

\*% Organic Matter – a measurement of organic (carbon-based) material contained within the bottom substrate. At 5.1%, this pond does not have an excessive amount of organic matter and would be considered mostly mineral in nature.

### Dissolved Oxygen (DO) / Temperature Profile

<u>Depth (Ft)</u>	<u>DO ppm</u>	<u>Temp (F)</u>
1	7.74	68.9
2	7.41	69.08
3	7.47	69.08
4	7.31	69.08
5	6.21	69.08
6	7.08	69.08
7	Max depth at sample area	

*Providing Environmentally Sound Aquatic Management Solutions*

### Aeration

The oxygen / temperature profile shows your aeration system is working properly. The pond is mixing adequately throughout its depth. The two rotary vane compressors should be serviced at least annually, twice a year (spring and mid-summer) is even better. During service, filters and “O” rings are changed and cabinet cooling fans inspected for proper function. We charge \$24.85 per compressor for the required filters and “O” rings and the service (labor) is included in our basic service fee to the property of \$76.00.

### Vegetation

The only vegetation seen was algae species – *Chara* and filamentous algae. *Chara* (pron. Kara) looks like a vascular plant, but is actually an alga. This species is helpful to the pond system as it regularly filters the water, stripping nutrients from the water column and increasing clarity.

We suspect a recent herbicide / algaecide application (8-28-08) was successful in eliminating all other growth. The products indicated on the treatment signs, Hydrothol 191, Reward and Cutrine Ultra would certainly account for the lack of growth during our inspection of 9-8-08. Quantities used were not known.

### Recommended Shoreline Vegetation / Plantings

The following aquatic plants are commonly used for shoreline stabilization and for nutrient uptake:

Blue Iris	Bulrush	Arrowhead
Sweet Flag	Burreed	Pickerel Weed

These plants and others can be purchased and planted for you through Tallgrass Restoration, Inc. (877) 699-8300 or (608) 531-1768. [www.tallgrassrestoration.com](http://www.tallgrassrestoration.com)

I have read through the proposal provided by Buckley and found their suggestions to be right on target. Removal and treatment of the invasive species around the pond would be a good start toward the beautification of the pond. We also spoke about the un-mowed buffer strip surrounding the pond and the benefits of maintaining such a “wild” area. Geese are often deterred by the tall grasses and these sections also work much like a snow fence, minimizing the effects of any overland flow.

Tallgrass Restoration would be able to assist your association in the replanting of these areas and could talk more intelligently about the terrestrial varieties needed.

### Muskrats

Muskrat damage was evident around the shoreline and we recommend removing these unwanted pests. We have one contact for this kind of work – Jeff Zainer (262) 844-5104.

## Long Term Planning

In general, the pond looked good during our visit. We are aware that the post-treatment conditions may not reflect the typical amount of growth you experienced this season, however, the *chara* growth was encouraging and it is our recommendation to make sure all future applications are aimed at preserving this form of alga.

- 1) Dredging – Additional depth almost always improves water quality in ponds. Firstly, sunlight is minimized to sediments and therefore aquatic growth is reduced or eliminated. Secondly, the additional volume depth creates allows a pond to assume more outside influences without adversely affecting the water quality. Finally, although the percent organic matter levels were low, the removal of these sediments will help reduce unwanted growth. If your association pursues a dredging project, we recommend a finished depth of 12’.
- 2) Phosphorus and nitrogen reduction. The aeration system is working properly and will help account for these nutrients; however you may want to consider a nutrient-reduction program early next season. Such a program would consist of an early season phosphorus test and if levels are above 0.03 ppm total phosphorus, we would continue with an aluminum sulfate application for phosphorus tie-up. An alum application would run \$1,745.79. Phosphorus tests are laboratory run and cost \$44.95 plus shipping, our \$76.00 basic service fee applies to all trips to the property. We would perform an initial test and if an alum treatment is appropriate, a post-treatment test would be taken to evaluate efficacy.

We also have a product called N-Lock that is applied to the water and around the immediate shoreline of the pond. N-Lock is a proprietary blend of minerals, chosen for their ability to absorb nitrogen compounds. An application would consist of 2,250 #'s at a cost of \$2,294.55 plus \$570.00 application.

Finally, our Floc Logs are another way of reducing phosphorus and increasing water clarity. Floc Logs are made of a polymer that binds with suspended particles and phosphorus. They would be installed, suspended above your existing diffusers. We recommend three in total, choosing the two end diffusers and one in the center of the pond. Floc Logs - \$149.95 each and installation of \$100.00 for all three.

- 3) Maintain dye content. Dye is an extremely effective way of reducing sunlight penetration and should be added right at ice out and maintained throughout the season. One quart of our Neptune dye sells for \$49.95 and treats an acre of water 4’ deep. Your initial spring dose would consist of 2 quarts.
- 4) Consider a scheduled visit program. We can tailor a plan to fit your budget and needs. A typical site visit program would consist of visits every two weeks throughout the summer months, May – September. With an aeration system, we recommend an additional early season visit to start the compressors, perform compressor maintenance and add dye.

A scheduled plan 11 visits total, compressor maintenance (filter and “O” ring changes), spring dye application and bi-weekly visits through September \$1,260.60  
All other product and labor is additional and billed per occurrence. We can operate within a predetermined budget during the season.

All-Inclusive, 11 visit scheduled plan \$5,514.60  
To include initial spring visit for dye addition and compressor maintenance (filter and “O” ring changes), 10 – bi-weekly visits, May through September, all needed treatments for weed and algae control, all dye for season. Further compressor / aeration maintenance is additional.

On-Call - \$76.00 basic service fee plus treatment or maintenance costs. Typically we are able to respond within three days of notice, weather permitting.

Typical shoreline algae treatment for Squires Grove pond – 20’ out from shore...

Product \$217.75 + Labor \$210.00 + Basic service fee \$76.00 = \$503.75

Typical herbicide treatment for weed growth

Product \$405.80 + Labor \$210.00 + Basic service fee \$76.00 = \$615.80

#### BASIC LABOR RATES

We charge \$100.00 per crew leader/technician and \$50.00 per hour for summer internship labor. Hourly rates are billed to the closest ¼-hour for all basic labor performed. The first 15 minutes on site is included in our basic service fee. Basic labor includes maintenance / troubleshooting for mechanical systems (aeration, fountains, metering systems...) and all labor not associated with herbicide applications.

#### BASIC SLIDING SCALE OF APPLICATION / LABOR FOR BOAT TREATMENTS

Up to and including the first acre of treatment	\$210.00
Second acre	\$190.00

\*Prices may be subject to change in 2009.

5) Permitting – All ponds in the state of Wisconsin must be permitted prior to application. We will complete the required DNR permit application for you, charging the permit fee and an additional \$50.00 permit filing fee.

#### 6) LPS PRESENTATIONS

Association meetings / presentations are available for \$426.00. During this presentation, LPS will provide product literature and a true power point presentation, tailored to the problems directly affecting your property.

In closing, the pond appeared to be in good shape. The *chara* growth is encouraging and the existing pond depth will help retard unwanted growth. We strongly recommend performing initial total phosphorus tests and nitrogen tests in the early part of 2009. Nitrogen testing would run approximately \$150.00 and would provide a valuable baseline for future recommendations. Once these tests are performed, we could work together to formulate a reasonable management strategy.

A good start on the 2009 season would be an early spring dye application, compressor maintenance, phosphorus and nitrogen sampling. Such a visit would run \$420.55 plus shipping for samples.

We look forward to meeting with you in 2009. Please feel free to call or e-mail anytime with questions or concerns.

Sincerely,



Roy Carlson

[roy@lakeandpondsolutions.com](mailto:roy@lakeandpondsolutions.com)

(262) 742-2600