

August 28, 2021

Friends of Cottage Lake – State of the Lake

Friends of Cottage Lake is a 501(c)3 charity and all donations are tax deductible. We are raising money to help fund several projects to improve the health of the lake.

A Little History:

Friends of Cottage Lake has been active for many years working to improve the Lake and the community which surrounds it. In the mid-2000's, we removed massive patches of lily pads (fragrant water lilies) that were choking out lake access at the north and south ends of the lake and since then have been working to control invasive milfoil. We educate newcomers on purple loosestrife removal and the importance of septic maintenance, and we work with King County to mitigate the effects of beaver dams. Over time we have formed friendships, united in concern for what is best for the Lake. We don't always agree on the best answer, but the organization gives us a forum for discussion and progress.



Algae Blooms:

One of the long term challenges for Cottage Lake is excess phosphorus – we worked with King County and the Washington State Department of Ecology to explore the sources of phosphorus and try to reduce them (see the [final report from 2011](#)). Although significant work was done, excess phosphorus continues to be a problem and the main cause of our algae blooms.

As part of our volunteer lake monitoring in partnership with King County, we collect algae samples when large blooms are seen on the lake. For the past five years, toxic algae was detected in the samples at the end of the summer and the lake was closed to recreation. Toxic algae is very dangerous to pets (especially dogs that might drink the water) and can also be harmful to people. Algae (even when not toxic) also makes the lake less appealing for recreation and fishing.

For the past 5 years, the lake has been closed to swimming and other recreational activity at the end of the summer due to toxic algae. This year was one of the earliest closings with the lake exceeding limits for toxic algae (Microcystin) on August 23rd. See the [Washington State Toxic Algae](#) site for more information.

Friends of Cottage Lake has continued researching solutions to our lake's problems. Reducing phosphorus entering the lake is one of the keys – encouraging residents in the watershed to use phosphorus free fertilizer (or not fertilize at all), pick up pet waste, and other behavior changes can help (see page 10 of our [Welcome to the Lake](#) booklet for more suggestions).

We are also researching water treatments to remove phosphorus from the water and other treatments that might reduce [harmful blue-green algae blooms](#). So far, treatments are very expensive or unproven, but we are still hopeful we will be able to do something in the future. The most common lake treatment is Alum (aluminum sulfate) which binds with the phosphorus and also forms a "cap" over the lake bottom to reduce additional phosphorus from leaching back up into the water. Alum has been used successfully at [Green Lake in Seattle](#), although they have had to re-treat the lake approximately every 12 years (approx. cost \$300,000/treatment).

There is a possibility we could do a partial Alum treatment to remove phosphorus from the water column (without the cap over the lake bottom) – this might give short term relief for algae issues at a lower cost (~\$20,000-30,000), but there is very little research on the long term impact and benefit.

[Friends of Cottage Lake](#) will continue to work with King County and the Department of Ecology to find a solution (and hopefully some funding) to our phosphorus and algae problems.

Why can't we commit to action on phosphorus next year?

- we are unlikely to be able to raise enough funds for a full alum treatment even with several more years of fundraising (estimated cost \$200,000 to \$300,000). Our best fundraising years have brought in approx. \$12,000, so we would have to fundraise at that level for 17 years straight. Green Lake has to re-treat every 12 years, so this doesn't seem like a sustainable plan.
- partial treatments need more research, although if we can overcome the other hurdles below, there is support to try a partial treatment as the problem needs solving
- a partial treatment will take most of our current money from previous fundraising - estimate \$20,000-\$30,000 – this may also not be sustainable as we don't know how often we'd have to re-treat
- the option of a partial treatment was just proposed by the contractor so it will take some time to get everything required lined up:
 - new permit - contractor is looking into this, but no details yet on timeline or additional requirements
 - additional testing - it is very likely we need additional testing (core samples from the lake bottom, phosphorus levels on the incoming streams) for the permit
 - getting the boat and equipment into the lake will be a challenge and we'll probably need support from King County Parks
- Other options (treating the inlet streams, etc.) should also be researched before we commit to an expensive treatment

Milfoil Update:

We last treated the lake for Eurasian milfoil in June of 2018 – we saw some milfoil return in 2019 and more in 2020, but it has not yet grown back to pre-treatment levels.

We've been tracking new treatments for milfoil – one newer chemical, [ProcellaCor](#), has been approved for use in Washington State and has been successfully used on several larger lakes. The biggest challenge with previous treatments (using 2,4-D) was the irrigation restrictions, but there was also some community concern about the herbicide. The new herbicide is used at a much lower concentration, applied directly to the target weeds, and has only a very short restriction on irrigation (less than one week). The cost is expected to be similar (~\$8000), but there will be additional costs to survey the lake before treatment.

Please report large milfoil infestations when you see them in the lake and provide feedback on future treatment plans. We will have to treat again to deal with this invasive weed before it gets back to the level of infestation we saw before treatments in 2017 and 2018. You can read about our problems with invasive weeds in the [Integrated Aquatic Vegetation Management Plan](#). Invasive fragrant water lilies are also slowly coming back, so we will need to treat them again in the future.

Finances:

Friends of Cottage Lake relies on your donations to pay for treatments - remember, all donations are tax deductible.

Last year, we continued collecting donations and Friends of Cottage Lake ended the year with approx. \$30,000 in the bank. We paid for our noxious weed permit renewal (so we can pursue future treatments), but otherwise have not had any expenses yet this year.

Treatment Plans:

Next year, we'd like to treat the lake for milfoil and explore treatments for phosphorus reduction. If you are interested in volunteering to help with logistics, research, or have feedback on our plans for the lake, please reach out.

Public outreach and website:

Friends of Cottage Lake uses email, Facebook, and our public website to keep people updated on lake projects, issues, and other relevant information. Please let me know if you would like to be added or removed from our email list – here are the other relevant links:

Website: www.friendsofcottagelake.org

Facebook public site: www.facebook.com/FOCL.Woodinville

Facebook private group: www.facebook.com/groups/friendsofcottagelake

Thanks in advance for your support,

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Mailing address for donations and membership dues (\$20):

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Friends of Cottage Lake

2021 Membership and Donation Form

- Yes, I would like to be a member (2021 annual dues) \$ 20.00**
- Yes, I would like to make a donation to support FOCL programs (water lily and milfoil eradication, phosphorus reduction, water quality monitoring, shoreline restoration, \$_____ etc.) in the amount of:**

Total enclosed: \$_____

Please mail this form along with your check made payable to Friends of Cottage Lake
Your membership dues & donations are tax deductible

Please provide contact information if you would like to be added to our email and mailing lists to be notified of upcoming meetings, issues, etc.

Member Name: _____

Email Address: _____

Mailing Address:

You can also join our group on Facebook:

<https://www.facebook.com/FOCL.Woodinville> or watch our website for the

latest news: <http://www.friendsofcottagelake.org>