

# Help Save Echo Lake

by Doug Grimmett, President ELHA, and Michael Kuhar, Chair, Save Our Lake Committee



Echo lake is silting in because that is what man-made lakes do. It is part of a natural progression. But the silting in Echo Lake is at a critical point because of years of deferred dredging plus the 4 lakes that used to buffer our lake are all gone except half of Doreen lake.

A significant land area of Echo Lake is now above water. Also, half the lake is less than 2 feet deep and the top third of the lake is less than 1 foot deep.

Effective action is possible but we have to take action now. Many other homeowner groups in our area have taken up the dredging needed to maintain their property values. Silver Lake is a poster child for success (<https://silverlakeassoc.org/activities/>); It has been dredged and is being maintained. Flair lake, which is close to ours, will be dredged; the homeowners have already given tens of thousands of dollars for the job.

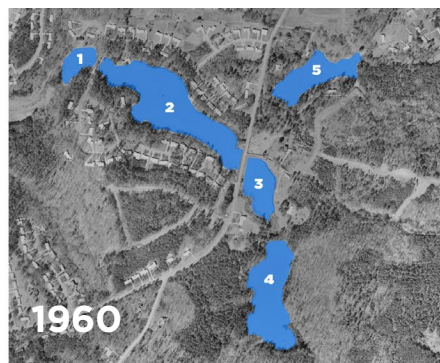
Silting is natural, but it is not beneficial, and it has a real cost to us. Dredging and restoring has been a recognized necessity and successful strategy for many communities. We, like so many others, can do this. A healthy lake will add to our property values; but a sick lake will detract from property values. We are on the verge of having a very sick lake.

## How Did We Get Here?

Echo Lake was built in 1938 by the Soil Conservation Service, now called the Natural Resources Conservation Service (part of the USDA). Congress passed a law establishing the SCS in 1935 stating “the wastage of soil and moisture resources on farm, grazing, and forest lands is a menace to the national welfare.” It was a massive national effort with most of the work done by the Civilian Conservation Corps (CCC), the Civil Works Administration (CWA), and the Works Progress Administration (WPA).

Five lakes were built with earthen dams to control flooding and prevent soil erosion in the North Fork Peachtree Creek Tributary. At the time, this was a rural area of forests and farms. The five lakes were (1) Little Echo Lake, (2) Echo Lake, (3) Greely Lake, (4) Simmons Lake, and (5) Doreen Lake. Today there’s only Echo Lake and part of Doreen Lake remaining.

**Since the breach of the Simmons Lake Dam in 1969, all the soil erosion the series of lakes were designed to contain, now accumulates in Echo Lake.**



## Some Relief Is On The Way

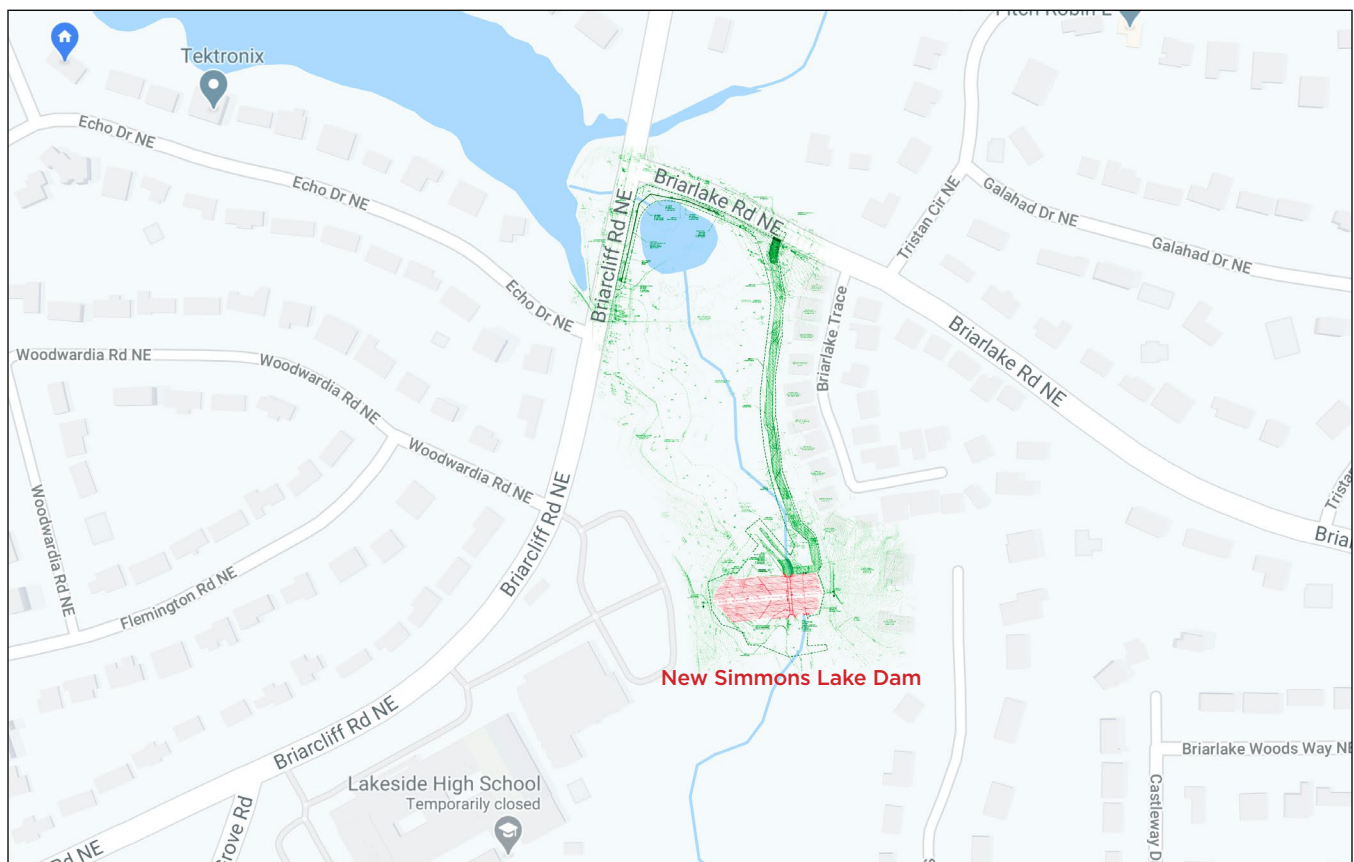
*The Briarcliff Road Drainage Improvement Project will lessen silting in Echo Lake but it won't take care of the silting that's already in the lake.*

Dekalb County announced plans for preventing flooding at the intersection of Briarlake and Briarcliff Roads at a public meeting on January 29th, 2019. This was a follow-up to a public meeting in July 2017 where three proposals were introduced. The final plan is the only proposal that mitigated flooding and silting-in of Echo Lake. Thank you to all our neighbors who wrote the county commissioners in support of the winning proposal.

The project replaces the Simmons Lake dam behind Lakeside High School with a porous construction. Simmons Lake will only appear during heavy rain. Most of the water in the south creek will be retained upstream, slowing the flow by 6 hours. Currently, all the water goes directly into Echo Lake bringing all the silt and runoff with it.

This is great news for Echo Lake. It is a significant, new improvement. Silting will be greatly reduced, the Briarlake-Briarcliff intersection won't be flooding, and we won't see the lake rising into our yards during heavy rain. This also shrinks the floodplain map which is used to determine flood insurance rates.

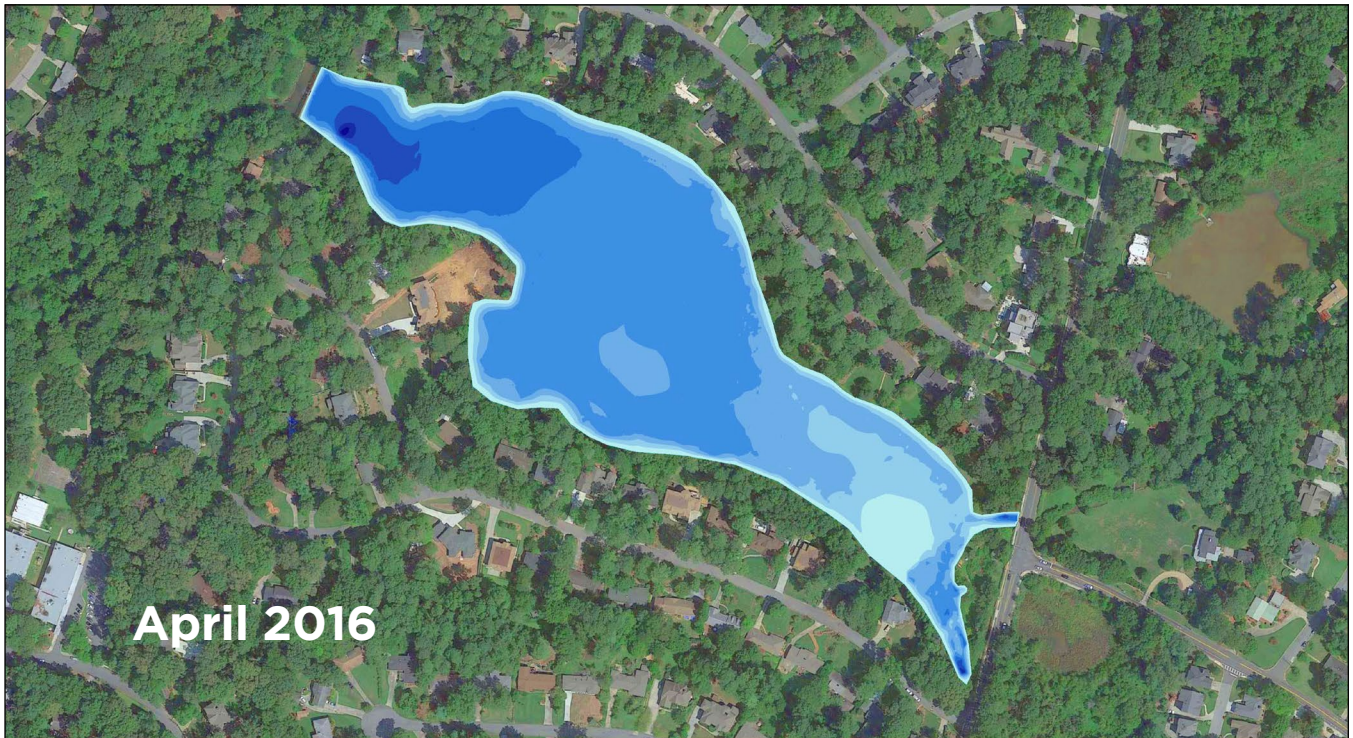
After the new Simmons Lake dam is finished, dredging will be much easier to maintain at less cost and effort than before. We can establish a comprehensive dredging plan that includes the whole lake.





## Recent Depth Surveys Show Increasing Siltation

Depth surveys of Echo Lake were conducted in April 2016 and October 2020. The last dredge was in 2017 and covered the area circled in red below. Removing silt 40 feet out from the peninsula helped but not nearly enough. The amount of silt and the turbulence of the flow overwhelmed our silt traps. You can see from these two surveys, only 4.5 years apart, how silt is building up at a rapid pace.





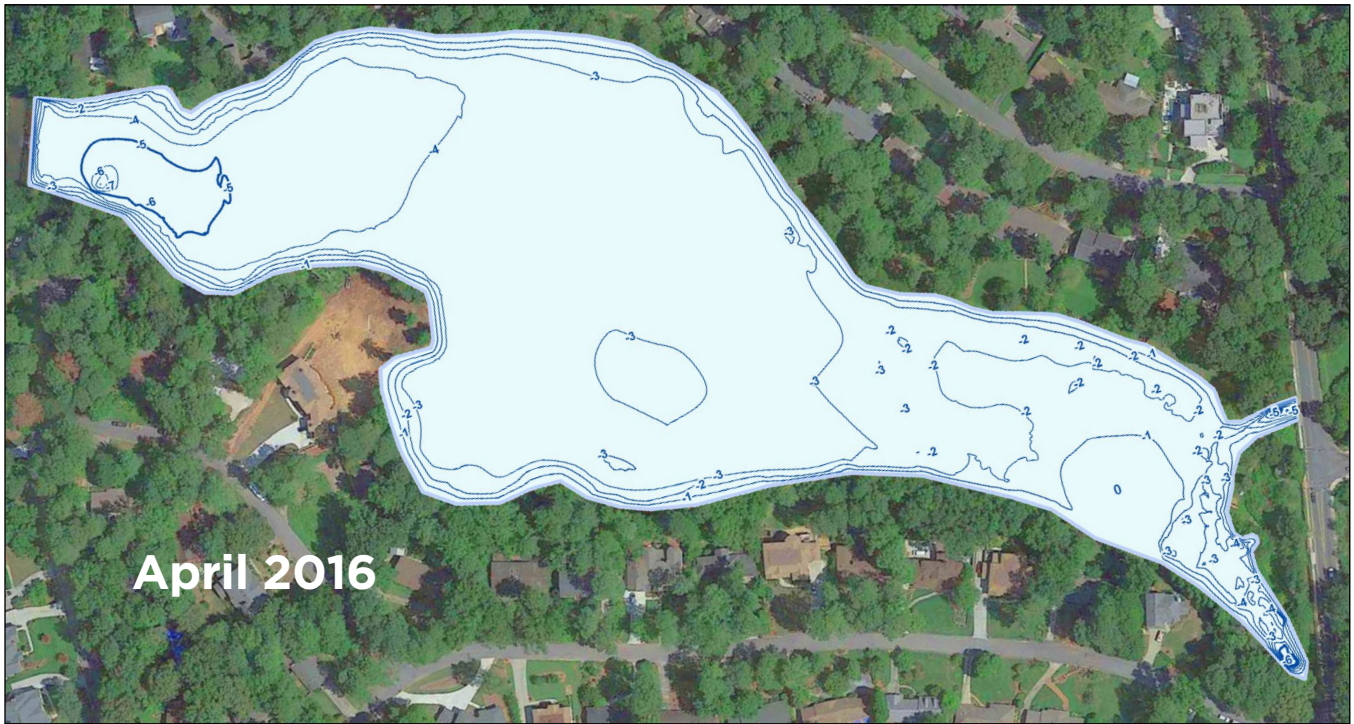
### Dredging History

- 1969** Last big dredge, covered upper half lake
- 1976** dredge 300-400 ft from Briarcliff. 3,000 CY
- 1996** new dam built, some dredging at top of lake
- 2014** dredge 40 ft from peninsula at south inlet
- 2017** dredge 40 ft from peninsula at south inlet

### Echo Lake Data

Echo Lake is 14 acres. In 1960 it was 20 acres.  
Echo Lake has lost 40% capacity since 1960  
Dredging a cubic yard of sediment: \$20 to \$25  
Dredging to 3 ft depth of entire lake \$850,000  
Requires removal of 35,278 CY of sediment

### Depth Values in Feet







Pictures of Echo Lake taken in 2014 when the lake was lowered (not drained) for the dredge that year. Even 7 years ago, it was becoming apparent that our lake was too shallow.



View from the new dam with the lake drained in 1997. The entire area shown in this picture has never been dredged. Sediment has increased over two feet since this picture was taken.



## Minimum Cost of Dredge: \$400K

*Dredge \$350K + Silt removal \$50k*

This would increase depth of the most distressed areas to 2 feet. 14,736 cubic yards of silt will be removed. Dredging can take up to 3 years without extra set-up costs. This could be worse. We are lucky in that we have access to the lake at Briarcliff Road. We have experience in dredging, and we have a large enough community to do the job provided everyone helps.

### Echo Lake Dredging Special Dues per Lot

**On-Lake: \$4000/year for 3 years**

**Off-Lake: \$500/year for 3 years**

This is in addition to regular annual dues.

We established a bank account just for dredge funds, separate from general maintenance. Please make checks out to **Echo Lake Community Club**, which is the legal name of our HOA. Paying full amount first year would be greatly appreciated!

*This is not the optimum solution. That would require dredging 3 feet of sediment from the entire lake, requiring removal of 35,278 cubic yards, and would cost \$850,000.*

*This will be addressed in future campaigns.*

## Process

The current plan is that dredging will be done hydraulically from a small pontoon boat with the sludge pumped through large hoses into porous fabric bags. The third of the lake closest to Briarcliff Road will be the focus since it's most critical. About 2 feet of silt will be removed (14,736 cubic yards). This will cover the worst affected area. The dredging can take anywhere from 1-3 years as we raise funds, and because we plan to do it hydraulically, the lake will not need to be drained or lowered.



This is a similar pontoon craft to what will be used to hydraulically dredge sediment from Echo Lake.



Sediment is pumped into large porous bags at high pressure. Compaction is 6 to 1 making hauling away take fewer trips.

## Why Dredge Echo Lake?

**It adds 25 to 120% to our property value.** We want our property values to be maintained. In general, close to lake and lake front properties are limited in availability. Lake front is best, but lake-view adds value also. As a healthy lake will add to our property values; a sick lake will detract from property values. We are on the verge of having a very sick lake.

<https://www.homelight.com/blog/how-much-value-does-a-lakefront-add-to-a-property>

<https://www.russellandsonlakemartin.com/blog/property-values-continue-upward-trend> \

<https://homeguides.sfgate.com/waterfront-property-cost-more-34701.html>

### **Our lake environment must be kept healthy.**

Entry for boating and fishing on our lake has already been affected by the silting. Grasses and invasive plants thrive in shallow (minus 3 ft) lake water. Shallow water temperatures become intolerable for aquatic life in Summer.

<https://rkld.org/wp-content/uploads/2016/02/The-Impact-of-Changing-Lake-Levels-on-Property-Values-A-Hedonic-Model-of-Lake-Thurmond-The-Review-of-Regional-Studies-2015.pdf>

[https://19january2017snapshot.epa.gov/lakes/healthy-lakes-and-higher-property-values-factsheet\\_.html](https://19january2017snapshot.epa.gov/lakes/healthy-lakes-and-higher-property-values-factsheet_.html)

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.473.5771&rep=rep1&type=pdf>

<https://integrisok.com/resources/on-your-health/2018/august/the-surprising-health-risks-of-oklahoma-lakes>



**Our reputation will affect property values.** We must demonstrate to the larger community that ELHA will properly maintain the lake. It's a major community amenity!

Right now, the serious silting problems are obvious to all who drive by on Briarcliff Road. It looks bad. The lake is central to our community; its name is given to roads and the community association. Maintaining pride in our community requires us to maintain a healthy lake.

## 2021 Save Our Lake Campaign Leadership

**Soul (Save OUR Lake) Committee:** Mike Kuhar (co-chair). Doug Grimmatt, Charlie Coulter, Robert Dodson, John Michael Doyle, John Holbrook, Dave Noble, Andrew Soulimiotis.

**ELHA Board:** Doug Grimmatt, President; Todd Williams, Vice President (Circlewood Rd); John Holbrook, Vice President (Echo Dr); Leslie Gartner, Treasurer; Robert Dodson, Secretary.