Echo Lake Dredge Progress Report

Summary by Doug Grimmett, Echo Lake Community Club President

This is the mid-point of the Echo Lake Dredge project. We have spent \$268,160.56 of our \$400,000 goal. I'm happy to report that we've made excellent progress and have met and exceeded our goals. Work stopped in November 2022 and will resume when we raise more funds:

- We've eliminated the growing islands on the south side.
- You can now navigate from one end of the lake to the other, and up to both inlet creeks.
- Areas that were out of reach and untouched in past dredges have now been opened.

Challenges:

- Removal of fallen trees in the lake is not part of the dredging arrangement.
- There are some tree trunks buried in the sediment and close to the surface that can't be removed with hydraulic dredging.
- Removing unexpected debris like chairs, tires, and construction materials slows progress.
- Sediment bag removal options are being explored.

The Greatest Challenge: Dredging is a constant part of maintaining Echo Lake. Since 1960, when Echo Lake was deeded to The Echo Lake Community Club, the dredging process has become much more expensive and complicated. Echo Lake is no longer buffered by upstream lakes so we get all the silt, runoff, and junk from upstream. Protecting the area's watershed is a community concern and the effort shouldn't be entirely on our shoulders. In 2019 Dekalb county planned to do remedial work across Briarcliff and add a dam upstream, which would help control the silt flow. These plans have been delayed. We are starting an initiative to connect with environmental agencies at every level and have met with our new district 2 commissioner, Michelle Long Spears, on February 8th. She is working on getting the Simmons Lake dam project moving again.



Summary by Michael Kuhar, co-chair Echo Lake Dredge Committee

1. The silting in problem had reached a critical stage.

a. The surface mud was enlarging and extending to the point where the entire lake could be declared a wetland. This would hamper what we could do with the lake.

b. Property values were close to being affected.

c. The problem was a topic of conversation in the larger neighborhood which did not help.

2. Dekalb county insists that the maintenance of the lake rests with the community (We hope to modify this view).

3. In the past, dredging reduced the problem and every reasonable expectation was that dredging would reduce it again. The dredge in 1996 was helpful (with additional smaller dredges) for around 20 years in that no mud was on the surface.

4. Accordingly, the ELHA Board of Directors and the neighborhood voted to go ahead with the dredging. The contractor was chosen as the one with reasonable costs.

5. The SOUL committee was formed to raise funds and it did so.

6. We dredged out an amazing amount of silt as detailed in the report by Doug Grimmett. We ran out of money and had to stop when we did.

7. It seems that the rate of silting has accelerated and the lake near Briarcliff is silting in again. Based on previous experience, this was not expected and could not be foreseen. This problem is being addressed by the Board.

8. In addition to dredging, we accomplished a lot. Community awareness of the problem has been raised. The need for and cost of continued maintenance of the lake is clearer to everyone. We are seeking help from the county; we have demonstrated that the lake community is committed to a healthy lake and deserves help.





October 2, 2014

February 24, 2023

Status of Three Overlapping County Projects at Briarlake and Briarcliff

Email from Michelle Long Spears, Commissioner, District 2, DeKalb County: There are three upcoming projects in the Briarcliff/Briarlake area: sewer line replacement (Watershed), Briarlake Road turn lane at Briarcliff Road (Transportation), and the drainage project (Roads and Drainage). The sewer project needs to happen first, and my understanding is that it is scheduled for this summer to minimize impacts to school traffic. The turn lane project is ready to bid and should be able to start in the fall after the sewer project is completed. I'm not sure of the status of the drainage project other than one of our land agents has started the process of acquiring the property needed for it. Ideally, the turn lane project should be completed before the drainage project starts to avoid having overlapping contractors. Land acquisition phase can take time and I know that this may be delayed due to COVID, but I think we are back on track. We will keep you posted. Let me know if I can do anything else in the meantime.

What this means is we are going to get a lot of silting in the next 2 years from these 3 projects. We want the county to help us offset the impact of construction on Echo Lake. These projects will considerably lessen sediment and roadway flooding in the long run.



Flooding at Briarlake and Briarcliff December 24, 2015



October 21, 2020

Lake depth contours show large areas growing at or above water level. Color contours are based on the bathymetric survey before dredging began.



November 3, 2022

Islands are almost entirely eliminated. Fallen trees are blocking a small area on the South side. The now-dredged area contained the majority of sediment needing removal to achieve an average depth of 2 feet over the 4.6 acre area of the Eastern half of Echo Lake. A foot of sediment has accumulated in the South inlet since November.

Contractor Report

John Crabb, Estate Management Services, Inc.

Note: industry standard for measuring progress with a dredge is by determining the volume of water in the dredge area before and after, and the volume of dredged material.

On 10/21/2020 we conducted a bathymetry survey of Echo Lake. At the time of the survey the intended dredge site measured 9.245 acre-feet of water. An acre-foot is one acre of area one foot deep. Dredge area measures 4.567 acres but there was a 0.168-acre area that had no standing water and could not be surveyed. It is reasonable to assume that additional sedimentation had occurred between 10/21/2020 and our start in July 2022.

On 11/02/2022 we surveyed to determine our current progress. **The 4.567 acre area now measures 14.343 acre feet which, in a variance of 5.098 acre-feet, equals 8224.76 cubic yards of sediment removed**. The 0.168-acre area that could not be previously surveyed now measures 0.455-acre feet. This 0.455-acre feet was previously 0, so this area added 731 cubic yards of sediment removal. Early in the process, Echo Lake experienced a severe storm that washed one of our boats over the outfall dam. This storm filled back in our area previously dredged. We re-dredged the wash that approximately measured 600 cubic yards of new sediment. Since the survey on 11/02/22 we completed another section of above-water area that would represent about 200 cubic yards of sediment based on approximate bag size (new bag). The total to-date of sediment removed is +/- 9755.76 cubic yards, which leaves us with 4,000 cubic yards of sediment for completion.

The areas that we have cut represented the bulk of where hard-packed sediment was located. The untouched portion of the 4.567 dredge area is where we are moving to next. The uncut section consists of high-organic material, and is easier to cut/dredge, so this portion will appear to be completed faster than you are used to. We expect to continue to fill this new bag and will require one more bag for completion.



Dredge Finances

Funds available:	\$12,927.56
Funds spent to date:	<u>268,160.56</u>
Funds raised to date:	281,088.12

On Lake: 28 of 34 Paid 12 paid in full (min \$12,000) 9 paid 2 installments (\$8,000) 7 paid one/partial (\$2,000 - \$5,000)

Off Lake: 25 of 75 Paid 9 paid in full (min \$1,500) 3 paid 2 Installments (\$1,000) 13 paid one/partial (\$200 - \$700)

Donations from outside the HOA: \$8,079

Funds Expended	\$268,160.56
Dredging	261,561.00
Engineering	6,000.00
Permits	600.00

Next Steps

The orginal campaign goal of collecting \$400,000 over 3 years has been exceeded for the first two years!

We collected two thirds of our campaign goal just last year allowing us to dredge 9000 cubic yards of material, focusing on areas not touched in 27 years.

We need to get the approved Dewberry option 3 proposal back on track. We have met our most urgent goals of eliminating the above-water island and improving navigation on Echo Lake.

To protect the lake, we will have to continue dredging. We are also exploring options to stabilize the pennensula. The three construction projects will give us leverage to receive mitagation from the county.



Echo Lake Deed 1960

Only TEN DOLLARS for a 16 acre lake! The catch: you have to constantly take care of it!

