

Tabb Lakes HOA
Information on Dredging the North End of Lake 1 and Lake 2
(As of Aug 2021)

Information below is a synopsis of the process undertaken by the Tabb Lakes Board of Directors (BOD) and Committee members to plan for future dredging projects. It also includes the current status of dredging the north end of Lake 1 as of Aug 2021. All costs were round to more easily compare dollars.

During the June 2019 board meeting, board members agreed to obtain estimates to dredge two sections of our lakes. The first estimate was the north end of Lake 1 by the outflow pipes and emergency spillway. The second area was Lake 2, which is a much larger and more difficult project. Two vendors provided estimates based on a scope of work provided by the HOA and meetings with the vendors on site. Vendors were Lake Services Inc. and Acelutions Inc.

The first initial cost estimates obtained in 2019/2020 are listed below. Note that the Lake 1 costs were revised later due to complications with access to the area.

Lake Services Inc: Lake 1: \$111,000 Lake 2: \$612,000 (Lake Services Inc. estimate based on cost per cu yds of spoils plus mob/de-mob costs. Estimated ~1000 cu yds for lake 1 site and ~13,000 cu yds for Lake 2)

Acelutions Inc: Lake 1: \$85,000 Lake 2: \$710,000 (based on same cu yds of spoils)

After reviewing these initial costs, the board concentrated on dredging the north end of Lake 1 due to the buildup of debris at the area around the outflow of the lakes. Our previous bathymetric studies (2000, 2004, and 2015) and continued visual observations showed that buildup in that area would eventually interfere with the proper drainage of stormwater out of both Lakes 1 and 2.

Due to complications with access to the end of Lake 1, a revised estimate was obtained from both vendors in 2020/2021. The original estimates assumed vehicle access from a road access from Rt. 17. That road crossed private property that is not within the HOA. Unfortunately, the owner stopped allowing York County Public Service teams to access our lake area through his property. This complicated the dredging process as dredging equipment had to now enter the lake at the Bridgewood Dr. end of Lake 1. In addition, the spoils would have to be moved by barge down the entire length of Lake 1 to be removed at the Bridgewood Dr end. To provide some scope to the effort, we estimated the spoils to be around 1,000 cu yds. That is equivalent to ~84 dump truck loads. Our earlier dredging project in Lake 1 back in July, 2018 about half that amount.

We met with both vendors to review the limitations in access and how to approach this problem. The vendors provided the following revised estimates based on access from the south end of Lake 1.

Lake Services Inc: \$129,000

Acelutions Inc: \$125,000

Each vendor had a different approach. Lake Services Inc would use a mechanical dredging process. All dredging equipment would enter and be removed from the south end of lake 1 at the Bridgewood Dr.

location Spoils would have to be transported by barge down the entire length of Lake 1 and offloaded by backhoe into dump trucks by Bridgewood Dr. Acelutions Inc. had a different approach. They recommend using a hydraulic dredging process. In addition, they were able to coordinate the use of private property near the outflow dredging area to de-water the spoils and remove them at a later date. This method meant that the spoils would not have to be transported by barge and removed at the Bridgewood end. Equipment would still have to be launched/retrieved from that end but with significantly less damage to the surrounding area.

On July 2021, the Board approved using Acelutions Inc. as the vendor to conduct the dredging of the north end of Lake 1.

Impacts:

1. Dredging equipment (barges and boats) will access Lake 1 via Bridgewood Dr. That will require the use of cranes and/or a large forklift at the beginning and end of the project. Bridgewood Dr. may be closed to traffic during that access time.
2. Equipment will be moved by barge the length of Lake 1. Aerators in the area to be dredged will be moved by the contractor. The fountain in Lake 1 will remain on.
3. The actual hydraulic dredging is estimated to take a week although that could change. Dredging machine will operate for several hours each day as it moves back and forth in the area. It can be noisy near the equipment. The entire project (pre-mob to post mob) is estimated at 2-3 weeks.
4. **Water levels in both lakes will drop during the process.** Hydraulic dredging sucks up both spoils and water which is then moved by pipe to be deposited in another location (see attachment). **This will have an impact to all lake owners.** Based on usage factors and lake capacity, we estimate that the lakes will drop 12 to 24 inches from the process. The lakes will refill only after the next several rainstorms.
5. Acelutions will place steel stakes in the lake along the edge of the following properties; 106 Shallow Lagoon, 105 Shallow Lagoon, 103 Shallow Lagoon, and 302 Tabb Lakes Dr. They will not be on private property. The cables will be attached to trees on the west side HOA property. The stakes will be used to attach cables used to control the movement of the dredging barge. (See attached diagram)
6. Area is to be dredged to a depth of 6 feet (original design). The slope of dredging next to land is a max of 1:3. For every 3 feet out, the depth increases 1 ft.
7. The board is considering removing the trees in the HOA property around the outflow pipes and emergency spillway to help limit future amounts of debris going into the lake in that area.

Attachments are provided that show the revised costs estimate by both vendors, and two slides that show the Acelutions hydraulic method concept to dredging the north end of Lake 1. The initial 2019 statement of work submitted by the HOA to the vendors is not included in this document. That document can be found separately on the HOA website under documents/lake information library along with the different bathymetric studies done 2000, 2004, and 2015.

Lake Services Inc.

PO Box 57 Jersey, Virginia 22481
540-658-0101

October 12, 2020

Lou Lafrenaye
Tabb Lakes HOA
205 Monty Manor
Yorktown, VA. 23693

PRELIMINARY BUDGET ESTIMATE TABB LAKES DREDGE PROJECT – SMALL SIDE

Lake Services Inc. will provide the manpower, materials and equipment to mechanically dredge the designated area of Tabb Lakes and dispose of the material at an approved disposal location. Lake Services Inc. will give notices and comply with all laws, ordinances, rules, regulations and orders of any public or private entity bearing on the performance of the Work performed by Lake Services Inc.

MOBILIZATION:

- Deliver dredging equipment to work site area.
 1. Excavator (2)
 2. Rig-barge (1)
 3. Material Barge (2)
 4. Backhoe/Broom (1)
 5. Push Boat (1)
- Deliver materials to work site area.
 1. Forestry Mats (12)
 2. Crane Mats (6)
 3. 12" drainage pipe (2)
 4. #3 Stone – 20 tons
- Install construction entrance and set up transfer site area

MOBILIZATION PRICE: \$43,485.00

DREDGE OPERATION, HAULING and DISPOSAL:

- Mechanically dredge sediment material to designated depth provided by others.
- Sediment material will be placed into mud barges.
- Barges will be shuttled to transfer site area to be unloaded.
- Unloaded sediment material will be placed into sealed gate dump trucks, material will be safely hauled to an approve disposal site.

DREDGING OPERATION, HAULING and DISPOSAL PRICE: \$50,440.00

***PRICE BASED ON 1,000.0 CUBIC YARDS**

DEMOBILIZATION:

- Remove dredging equipment from work site.
- Remove site materials.
- Remove construction entrance.
- Grade transfer site area, install topsoil as needed to level low and uneven areas.
- Seed and fertilize transfer site area, cover area with straw matting to stabilize area.
- Final site inspection.

DEMOBILIZATION PRICE: \$34,715.00

TOTAL PROJECT PRICE: \$128,640.00



Client:	Tabb Lakes HOA	Date:	4/25/21
Project Site:	Tabb Lakes	Estimator:	100
Address:	Lake 1	Email:	Dan@needace.com
City, State:	Yorktown, VA	Estimate ID:	TABBLAKES-8191-MRN2

We would like to thank you for the opportunity to submit a proposal on your current project. If awarded the job, we guarantee a professional, expedient service with great attention to detail and cleanliness.

As a benefit to our Clients, all pertinent information is uploaded into a data file management system that is readily available upon request. This includes daily pictures and notes of work performed as well as well any contracts or documents so all materially interested parties can easily stay apprised of the progression. Once again, we appreciate your consideration and look forward to working with you in the near future.

SCOPE OF WORK

LAKE 1

- Complete Joint Permit Application as required
- Remove underbrush from the dewater area as necessary
- Install gravel and walking mats for access to the dewatering site with heavy equipment and dump trucks
- Set erosion and sediment controls
- Set temporary traffic control measures and ground protection
- Mobilize a 6" hydraulic dredge and associated equipment
- Launch the dredge with a telehandler
- Set temporary trolley cables
- Connect all discharge hoses from the dredge to the dewatering bags
- Perform mechanical dredging in the specified area on the north end of the lake to reach the desired depth of 6' while maintaining a maximum 1:3 slope from the embankments toward the center of the lake
- Perform a post dredge bathymetry to verify the desired depths have been reached
- Remove all the equipment from the lake
- Once the spoils have dewatered for up to 1 month with agitation during that period, the spoils are to be hauled off and disposed of in an approved facility
- Perform final cleaning and dispose of all debris generated from the proposed scope of work

** Approximately 1,000 CY of spoils are to be removed based on the bathymetry mapping provided.

**Acelution cannot be held responsible for compression of the asphalt due to trucks and or heavy equipment being loaded and offloaded but a price to repair any deficiencies at cost will be provided upon completion of the entire project.



LINE ITEM SCHEDULE

<u>Description</u>	<u>Unit</u>	<u>Quantity</u>	<u>Total</u>
Labor	Ea	1	
Material / Equipment	Ea	1	
Debris	Ea	1	
Grand Total			<u>\$125,000</u>

Authorized Signatory: _____

Estimate ID: TABBLAKES-8191-MRN2

The opinions represented in this proposal apply to the conditions existing at the time of our site visit and those reasonably foreseeable. Additionally, this assessment was limited with respect to the specific parameters indicated and should be used as a guide for evaluation. The client recognizes and agrees that investigative methodologies have inherent limitations and cannot guarantee that a condition affecting the recommendations herein will not be discovered within the future performance of these services. Any modification of the contract ("Change Orders") which changes the Contract price, the materials, the work to be performed, and/or the estimated completion date must be in writing and signed by both the Client and Acelution, Inc. (hereinafter Acelution). Acelution may require payment in full for a change order prior to commencing work and/ or any work completed, mobilization costs and/ or associated fees if there is a disruption in the schedule due to circumstances not caused by Acelution. In the event that unforeseen complications arise, the Managing Agent will be notified immediately and a resolution will be sought with all parties before proceeding and agreed to in way of a written Change Order. Acelution is not responsible for delays due to events beyond its control, such as weather delays, labor strikes, power failures, equipment failures, shortage of materials, etc. Delays in the work due to such unforeseen events shall not constitute abandonment of the job on the part of Acelution and the Client shall give Acelution reasonable extensions of time to complete the work. The Client agrees to provide Acelution with access to the property so that Acelution may accomplish its construction schedule. If access is not provided, or access is interrupted during the job through no fault of Acelution then Acelution will be entitled to a reasonable extension of the completion date. Acelution can only warranty the scope of work agreed to in this proposal and/ or signed changed order. Acelution cannot guarantee the performance of any original building components to remain that are integrated with the installation, repair or replacement to take place. Acelution will comply with all government rules and regulations, if any, that apply to the work. Acelution will apply for all building permits and inspections required by the City or County in which the Property is located. Client is responsible for any other consents such as Owner Associations, Architectural Review, etc. The person and/or entities bound hereby have insurance naming Acelution as an additional insured. If the actions and/or omissions of Acelution relating to the scope of work results in a claim by any third party, then the Owner hereby agrees to defend and save Acelution harmless, except in instances of intentional acts by Acelution and/ or its agents or employees. Acelution will promptly report any knowledge of a claim. Provided the Client pays the full contract price in a timely manner, Acelution warrants to the Client for one year from the date it last performs that all work has been performed in a workmanlike manner. Acelution's warranty does not include any defects in equipment, appliances, and/or materials (if a manufacturer's warranty appears to be available, Acelution will assist in making a claim), such as kitchen or bathroom appliances, HVAC equipment, other appliances or machinery, and building materials installed in the Property as part of the Contract. Acelution is not responsible for damage to any concealed utilities sublevel or within interstitial spaces that were not installed correctly (i.e. improperly installed HVAC line sets, electrical service, plumbing pipes, etc.). If any damages occur to a utility during the process with no negligence on the part of Acelution or their Subcontractor, Acelution will assist in the repair process but the Client agrees to pay all associated costs in the same timeframe as agreed to for the original scope of work. If the services of an attorney are used by Acelution in connection with this Contract, Client shall pay reasonable attorney's fees if Client loses. If Acelution is awarded money, an additional sum equal to 33-1/3% of the original amount due shall be added for attorney's fees. If a payment is more than 15 days overdue, a 10% late fee shall be due in addition to the original amount due. After 30 days, the sum due shall accrue interest at the rate of 1% per month, compounded monthly. Client represents to Acelution that they are the Property Owner or representative vested with the powers to commit the Property Owner/ Organization to a binding agreement and has the legal authority to enter into this contract. If the Client is a corporation, limited liability company, partnership, or some other legal entity, the person signing this contract represents that she/he has the authority to sign such contracts. Client is hereby notified of the existence of the Virginia Contractor Transaction Recovery Fund (the "Fund"). The Fund provides relief to eligible consumers who have incurred losses through the improper and dishonest conduct of a licensed contractor. More information on the Fund or filing a claim can be obtained by visiting <http://www.dpor.virginia.gov/Boards/ContractorsRecoveryFund/> or by contacting the Board for claim information at the following address:

Recovery Fund Office | DPOR
 9960 Mayland Drive, Suite 400
 Richmond, VA 23233
 (804) 367-1559
 Email: RecoveryFund@dpor.virginia.gov

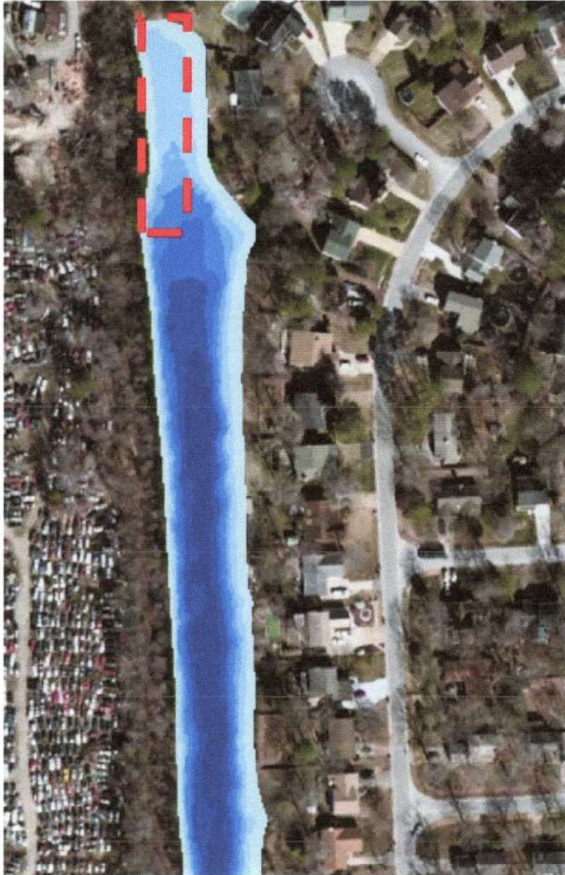


Acelution, Inc

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Acelution Inc. Hydraulic Dredging Concepts



- Spoils removed from Rt. 134. (~84 dump truck loads) after dewatering.
- Use of one barge on lake and de-watering site on Dick Ash property.
- Hydraulic barge launched from Bridge Wood Dr.
- Spoils collected in bags. Takes one month to de - water.
- Wire cables spread across lake to control movement of barge (at least two points but could be more). Cables attached to trees on HOA property and steel post set in lake along private property.
- Dredging pump uses ~1,500 gal per min.

