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January 21, 2022

Jeremy Hall  
East Hampton Parks and Recreation  
1 Community Drive  
East Hampton, CT 06424

Subject: East Hampton Dredging Cost Proposal

Dear Mr. Hall,

Thank you for the opportunity to offer our services to you and the town of East Hampton. During our meeting last week we viewed 4 different locations for which I have broken down separate pricing. For the purposes of this proposal I will refer to them as the Community Drive Pond, 11 Hawthorne, Happiest Paddler, and Christopher Pond.

The Community Drive Pond has clearly filled in quite a bit with both sediment and Phragmites growth. Dredging this pond would have a major benefit if water storage can be added to help with heavy rainfall and runoff and to mitigate what gets carried downstream. This proposal is based on some preliminary assumptions and would require some deeper examination to refine the exact numbers. We recommend dredging this pond hydraulically which would require two phases. The first would be the removal of the phragmite growth utilizing a Truxor amphibious tool carrier which will allow us to dig out the phragmites and transport them to shore for removal from the site. The second phase would be to dredge out the sediment from the pond hydraulically. The method for dredging relies on a barge with a 6' auger head and a 6" pump which will pump the sediment to a dewatering tube, located roughly in the area shown on the image below in red. The dewatering tubes retain the sediment and allow the water to drain and return back to the pond. After dredging is complete the material is left to dry for several months and ultimately the dewatering tube is cut open and the material removed. Our scope would

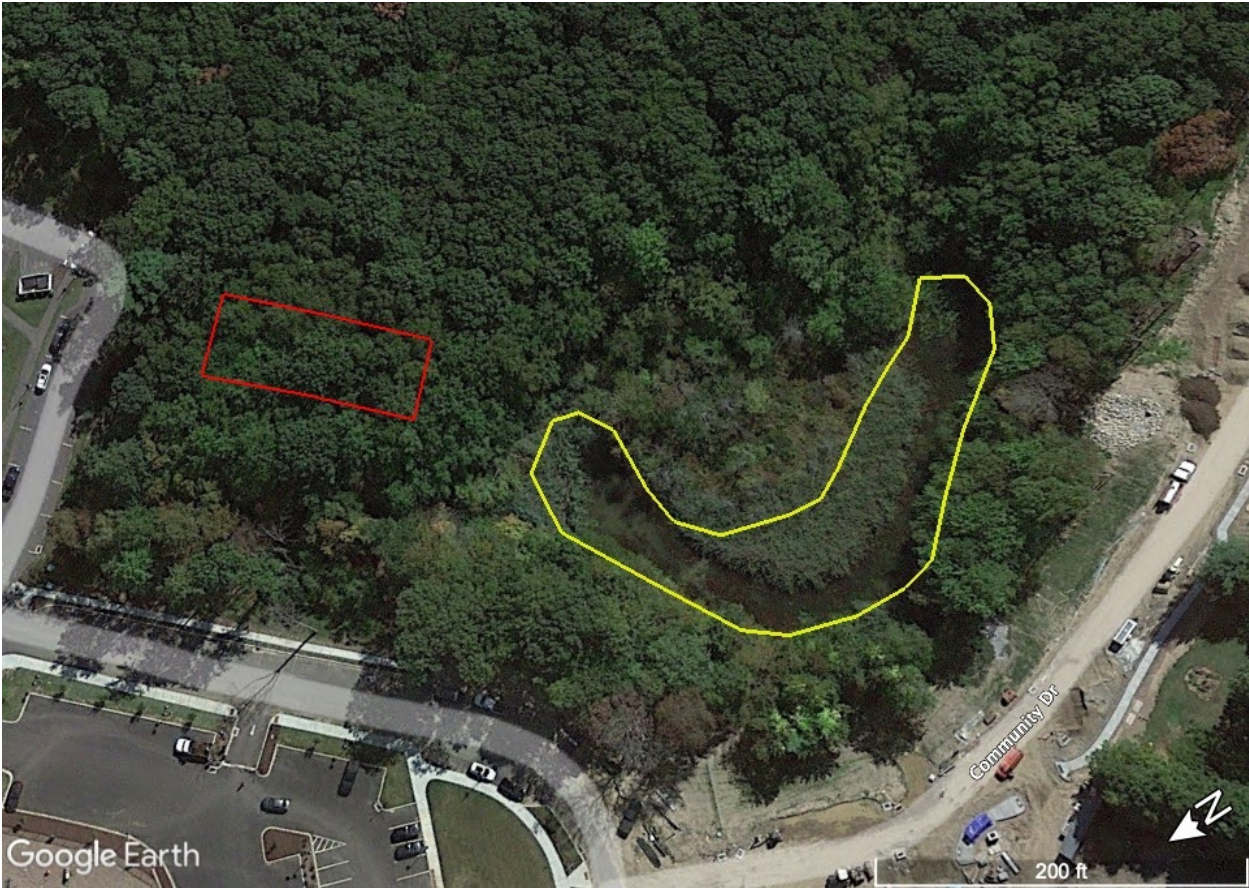
include dredging and filling the dewatering tube but would not include handling the material after it has dried. The scope for dredging the pond hydraulically can be based on either a set sediment volume to be removed or the limits of how deep dredging can take place based on the original hard bottom depth of the pond. Sediment depth maps will be required to refine the possible scope options.

I have worked up two cost estimates for dredging the pond based on how much sediment we can remove. The pond, measured in the image below, is approximately 20,000 square feet delineated on the image below in yellow. If we remove an average of 1.5' of sediment from the entire area the total volume of sediment to be dredged will be 1,111 cubic yards wet. You can expect a reduction of material volume of 30%-50% after it has dried. The cost to dredge 1,111 cubic yards will be approximately \$43,388.89 which includes all labor, materials, phragmite removal, and equipment costs. We would require an area be cleared sufficient for the dewatering tubes, access to launch the dredge into the pond, and disposal of the dredged sediment and removed phragmite plant material. The second cost option would be for the same project and requirements but dredging an average of 2.5' of sediment from the entire 20,000 square foot area. The cost for this will be \$60,648.15.

### **Truxor to be used for Phragmite Removal**



**Dredge Limits and Tube location**



**Dredge Equipment**



## Dewatering Tubes

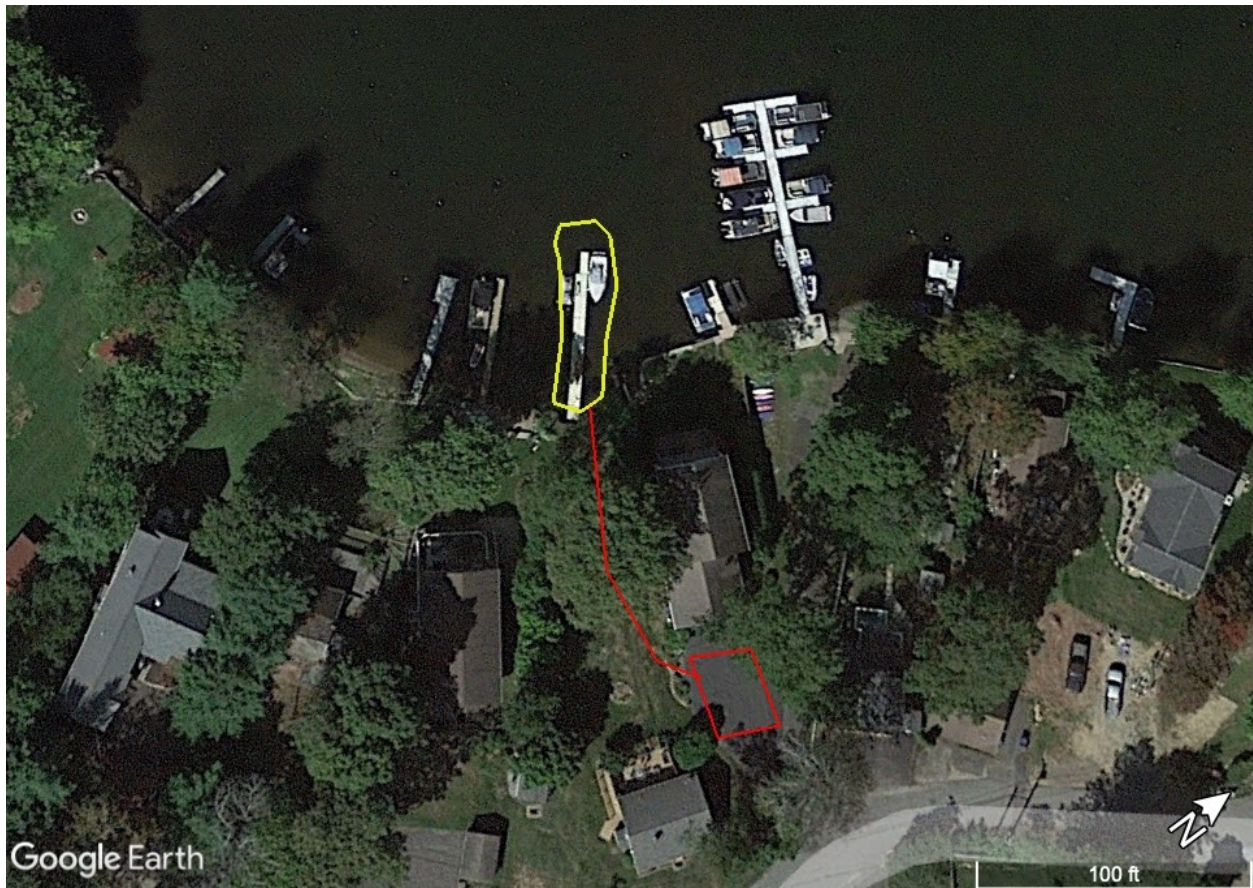


The second location at 11 Hawthorne has a significant amount of material that has been deposited in Lake Pocotopaug. There are two options to address this sediment build up. The first would be to hydraulically dredge the material and pump it into a dewatering tube located on the driveway. The water would then have to discharge and be guided back to the lake either by gravity or a secondary pump. For this dredging we would utilize a trailer mounted pump with a suction hose that would be manipulated by hand to vacuum out the material around the dock and outflow pipe. If we remove an average of 1.5' of sediment from the area shown on the image below in yellow, the total volume of material to be dredged will be approximately 126 cubic yards. We would dredge the material into the tube which then would be required to sit for at least 6 weeks before it could be removed. A separate contractor would be needed to handle disposal of the material. The cost to dredge 126 cubic yards would be \$10,406.76.

The second option for clearing out some of the sediment would be to use the Truxor amphibious tool carrier which also has a backhoe attachment. This equipment is designed for driving in water and could be used to dig out the sediment directly and load it into a dump truck parked adjacent to the shoreline. I think this method would be best suited during the times when

the lake is lowered. The cost for the Truxor and operators will be \$2,500.00. I think this work could be completed in 3 days maximum for a total cost of \$7,500.00.

I think that using the suction method will be more precise and provide more refined results around tight spaces between rocks and under the dock. However the added cost, discharge water management, and dealing with the dredged spoils after completion lead me to recommend trying the work with the Truxor option.





The third location discussed was the inlet next to the property known as Happiest Paddler. Here a lot of sediment has been deposited and filled in the channel which enters the lake. The best method for this area would be to utilize the trailer mounted pump and suction hose to dredge the material hydraulically into a dewatering tube located in the parking lot. It would likely be helpful to use the Truxor as a support piece of equipment to loosen some of the material to be pumped. The area shown on the image below outlined in yellow is approximately 4000 square feet. If we dredged out an average of 2 feet of sediment the total volume of material would be approximately 300 cubic yards wet. The total cost for this project including the equipment, labor, and materials would be \$15,922.22. This would not include disposal of the material after it has dewatered.



All three of these options would likely need some refining in the planning process. We would be willing to offer a 5% discount on the total cost if the town commits to undertaking all three projects. Permits would need to be handled by the town but we would provide supporting documents and project narratives that would be required.

The fourth location that we discussed is Christopher Pond. This has an area of approximately 52,000 square feet. The difficulty with hydraulically dredging this particular location is that there is no space for the dewatering tubes to be staged. One option to consider long term as you look at this pond would be the utilization of active dewatering technology through equipment that employs several steps of sieves and screens to separate the sediment from the water. The slurry is pumped into the machine and damp material is dropped out while the water discharges back to the pond. This equipment would only require the space equivalent of a large conex container. The drawback is the equipment is expensive to both purchase and rent. If this project is important to the town we can explore this possibility in more detail. If we were to dredge 2 feet of sediment from the entire 52,000 square ft pond, the total volume of wet material would be 3,852 cubic yards. The cost range for this project, without consideration for

material disposal, would be \$150,000-\$180,000 using the active dewatering method. If the town is interested in pursuing this project we can refine the costs for renting the required equipment and perform some sediment depth mapping to determine an actual scope.

Thank you again for the opportunity to offer our services to you and the town of East Hampton. Please feel free to contact me directly at 203-885-2318 if you have any questions about the proposed methods or would like to see cost analysis based on adjusted scopes to any of these projects.

Sincerely,

Matthew Vogt  
Owner/President