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# Proposal to Town of Highland Lake for Dredging Services

***Submitted to:***

Town of Highland Lake, Alabama

***Submitted by:***

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## A. Introduction

Tetra Tech (Tt) completed a Bathymetric Survey of Highland Lake in 2014 to determine lake depths. The Bathymetric Survey Report (May 2014) includes figures depicting lake depths across the entire lake, as well as detailed figures of Brasher Creek and Sand Creek Bays, which were dredged in or about 2000. These areas are shown in Figure 1 below. Based on the 2014 survey results, it was determined that these same areas should be dredged again to maintain desirable depths for boat access. In 2015 Tetra Tech completed a dredging feasibility study for these areas. This study evaluated various dredging and disposal methods, and provided cost estimates for several dredging plans. The recommended plan, identified as M-1 in the feasibility study, consists of dredging approximately 12,400 cubic yards (CY) of sediment from Brasher Creek Bay and Sand Creek Bay using mechanical dredging equipment and transporting the dredged material with a barge to deep water disposal sites near each of the dredging areas. The estimated design and construction cost of this plan is \$344,000.

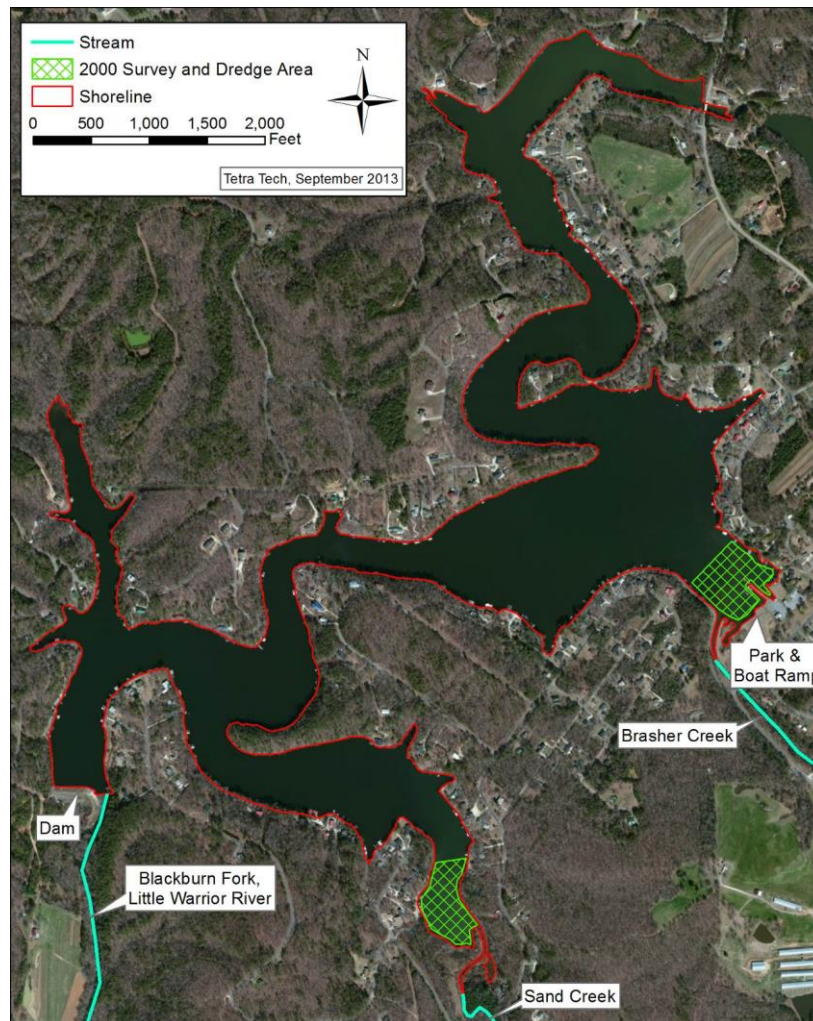


Figure 1. Highland Lake – Proposed Dredge Areas

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## **B. Scope of Work**

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It is prepared to assist the Town of Highland Lake in their permitting and construction management efforts for dredging Highland Lake. Proposed tasks include permitting, final design and specifications, support for the bidding process with potential dredging companies, and construction oversight of the dredging operation.

An estimate of project costs and schedule are proposed based on the current understanding and best estimates of level of effort required to perform the tasks.

### **Task 1. Permitting**

It will prepare permit applications and coordinate with regulatory agencies, including the U.S. Army Corps of Engineers (USACE) and the Alabama Department of Environmental Management (ADEM) to obtain the necessary permits and approvals for the dredging operation. The project will likely require an Individual Permit (IP) from the U.S. Army Corps of Engineers (USACE), coverage under General NPDES Permit No. ALR100000 (issued by ADEM), and water quality certification (issued by ADEM). Permit fees are not included in the cost estimate for this task, and will be paid directly to the permitting agencies by the Town of Highland Lake.

#### **Deliverable for Task 1:**

1. Permit applications to ADEM, USACE, and other regulatory agencies if needed
2. Issued permits and approvals

**Approximate duration for Task 1:** Fourteen months from notice to proceed

### **Task 2. Final Design and Specifications**

Tetra Tech will prepare the design and specifications for the dredging and disposal operations. The initial design drawings will be prepared in AutoCAD 3D for use in the permit application package. This will allow the direct production of the construction drawing package once we have indications from the agencies that the permits will be approved.

#### **Deliverable for Task 2:**

1. Design drawings for the permit application
2. Construction drawing package and technical specifications for construction

**Approximate duration for Task 2:** The preparation of the permit drawings will begin after the regulatory agency pre-application meeting and will be completed prior to the submittal of the permit applications. Preparation of the construction drawings and technical specifications will occur during the last 2 months of the Task 1 permitting work

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### Task 3. Support with Bidding Process

Tt will support the Town of Highland Lake in the bidding process with potential dredging companies by qualifying, addressing proper insurance requirements, and evaluating the dredging practices of contractors bidding on the dredging.

#### **Deliverables for Task 3 include:**

1. Draft Bid Package for review by Town of Highland Lake
2. Up to ten (10) copies of printed final bid packages
3. Attendance at Pre-Bid meeting
4. Addendums (as needed)
5. Notice of Intent (NOI) to Award
6. Notice of Award

**Approximate duration for Task 3:** Three months

### Task 4. Construction Management

Tt will oversee dredge operations to ensure that dredging and disposal activities are performed in accordance with the dredge plan. Tt will coordinate with the dredging contractor and the Town of Highland Lake on a regular basis throughout the dredging operation to ensure that the operation proceeds smoothly and that any issues that arise are dealt with promptly and appropriately. Tt will conduct up to six site visits, including a kick-off meeting, a project close-out meeting, and four progress site visits at key times in the project schedule. The progress site visits will likely occur at the following times: following installation of erosion and sediment control, twice during the course of dredging, and upon completion of dredging. The Town of Highland Lake will oversee day-to-day dredging operations. Tt will review pay requests, issue change / field orders as required, and prepare project close-out documents.

#### **Deliverables for Task 4 include:**

1. Attendance at, and preparation of meeting minutes for, on-site pre-construction kick-off meeting and a project close out meeting at completion of construction.
2. Four additional progress site visits to oversee construction progress during the approximately nine-month dredging operation.
3. Pay requests, change orders, and project close-out documents.

**Approximate duration for Task 4:** Nine months from Notice of Award to Dredging Contractor

### Task 5. Additional Site Visits

In order to keep costs low, Tt cost estimates are based on the minimum number of site visits needed to complete the tasks. If additional site visits are needed because of unforeseen issues (i.e. the need for additional oversight during the dredging operation), site visits can be made as needed at an additional set cost per visit.

## C. Project Costs

Project costs are based on current understanding and best estimates of level of effort required to perform the basic services and may be subject to change upon agreement between the Town of Highland Lake and Tetra Tech. The table below provides costs for each of the lump sum Tasks 1, 2, 3, and 4. Task 5 will be billed as Time and Materials as needed.

Task	Cost
Task 1: Permitting	\$9,000
Task 2: Final Design and Specifications	\$10,000
Task 3: Support with Bidding Process	\$5,000
Task 4: Construction Management	\$19,800
<b>Subtotal Tasks 1-4:</b>	<b>\$43,800</b>
Task 5: Additional Site Visits as Needed	Time and Materials (T&M) \$1,200/visit



**D. Project Schedule**

The proposed schedule is based on current understanding and best estimates of time required to perform the basic services and may be subject to change upon agreement between the Town of Highland Lake and Tetra Tech.

**Proposed Schedule**

Task	Task Description	Month (from notice to proceed)																										
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
1	Permitting	x	x	x	x	x	x	x	x	x	x	x	x	x														
2	Final Design and Specifications	x	x											x	x													
3	Support with Bidding Process															x	x	x										
4	Construction Management																			x	x	x	x	x	x	x	x	x
5	Additional Site Visits	As Needed																										

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## E. Assumptions and Considerations

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The project cost and schedule quoted in this proposal are based on the following assumptions and considerations.

- Task 1: Permit fees are not included in the cost estimate, and will be paid directly to the permitting agencies by the Town of Highland Lake. Fees are expected to include a fee in the amount of \$1,155 for coverage under the Construction General Permit (NPDES Permit No. ALR100000) and a water quality permit fee that will depend on the project acreage, but will not exceed \$3,530.
- Task 1: Preparation of the Construction Best Management Practices Plan (CBMPP), a requirement of the General NPDES permit, is not included in this scope, and will be the responsibility of the dredging contractor.
- Task 1: Any additional monitoring or surveys or that are required as part of permit conditions, including water quality monitoring, sediment analysis, or biological surveys, are not included in the cost estimate. If required, these tasks can be performed under a separate Time and Materials contract.
- Task 3: The Town of Highland Lake will provide template bid documents that include bid requirements and legal requirements.
- Task 4: The Town of Highland Lake will oversee day-to-day dredging operations such that it will be sufficient for Tetra Tech to make no more than 6 site visits (including a kick off meeting, progress meetings, and a close out meeting) and spend an average of two hours per week providing construction management services for Task 4 during the approximately nine-month long construction period.