

**SHORELINE EROSION CONTROL SURVEY**  
**Contoocook River, Piscataquog River and Choate Brook**  
**Hopkinton-Everett Lakes Dam Project**  
**Performance Work Statement**  
**August 2018**

**A. General**

1. **Scope** – Furnish all equipment, materials, labor, and transportation necessary to complete a detailed shoreline erosion control survey along the Contoocook, Piscataquog and Choate waterways for the Hopkinton-Everett Lakes located in Henniker, Hopkinton, Dunbarton and Weare, NH. The work includes performing field work, analyzing shorelines, collecting measurements, and analysis of findings for site specific management goal and objects (based on the severity, environmental impact and likely possibility of future degradation of erosion sites in the absence of corrective measures), and a final report.

Some of the benefits the government wishes to realize from this project include, but are not limited to, the following:

- Analysis of existing erosion sites for severity, environmental impact and likelihood for future degradation.
  - Allow for better planning and long term management.
  - To document invasive plant species communities along the shorelines.
  - To incorporate effective management planning into future Budget and Restoration Plans.
2. **Locations** – Project work areas are located in portions of Henniker, Hopkinton, Dunbarton, and Weare, NH.
  3. **Site Visit** – Contact the Technical Point of Contact to arrange a site visit at the Project Office at 2097 Maple Street, Hopkinton, NH 03229. The Technical Point of Contact for the project is Joshua Levesque (978-318-8304, or [Joshua.S.Levesque@usace.army.mil](mailto:Joshua.S.Levesque@usace.army.mil)).
  4. **Schedule** – Work shall be scheduled, to include times and locations on the project, and preapproved by the Technical Point of Contact. Final analysis and report shall be submitted no later than **December 31, 2018**.
    - **Estimated Work Timelines\***

a. Research and Field Work	45 Days
b. Comprehensive [DRAFT] Report Completed	21 Days
c. Government Review of Draft Report w/ follow-up	21 Days
d. Comprehensive [FINAL] Report Completed	21 Days
  5. **Pre-Work Conference** – Prior to the start of any work, the Technical Point of Contact will schedule and conduct a “Pre-Work Conference”. The Contractor’s Project Manager and Quality Control Personnel will attend this meeting. This conference will be held at the time and location agreeable to the government and contractor. No work may be performed under this contract prior to this conference. The purpose of the conference is to enable the Technical Point of Contact to outline the procedures that will be followed by the Government in its administration of the contract, and to discuss the performance that will be expected from the Contractor. This conference will allow the Contractor an opportunity to ask questions about the Government’s administration and inspection of contract work or obtain other pertinent information that might be required. At the Pre-Work conference the contractor shall provide the name of the project superintendent with a telephone number for project coordination.

\*Estimated Days are approximate only

The following is a general list of items for discussion during this Pre-Work Conference:

- i. Authority of the Technical Point of Contact.
  - ii. Contractor's Safety Program (including sub-contractors).
  - iii. Modified Activity Hazard Analysis  
(Submitted & accepted prior to start of work on site)
  - iv. Contractor's Equipment
  - v. Correspondence, Communication and Administrative Procedures.
  - vi. Invoice and payment.
6. **Permits** – The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses, permits, and letters of certification. The Contractor shall comply with any applicable Federal, State, County, and Municipal laws, codes, and regulations in connection with the performance of the work specified under this contract.
7. **Security** – The contractor will comply with all established security policies on government property. Due to periods of heightened security that may affect the access to the areas covered under this contract, the Government reserves the right to close any property or portion of property and reschedule and/or cancel any subsequent service. The Contractor shall be given at least 24 hour notice of any such closure.
8. **Contractor Conduct** – Alcohol and firearms are prohibited on project grounds. Contractor and employees must comply with CFR 36 Rules and Regulations.
9. **Payment** – After final inspection and acceptance by the Government, the Contractor must submit an invoice to the Technical Point of Contact. The invoice shall include the invoice date, contract number, dates of service, description of work, quantities, and total amount due per line item.

All invoices may be mailed to  
U.S. Army Corps of Engineers

Hopkinton Everett Lakes  
2097 Maple Street  
Hopkinton, NH 03229 Or Emailed to [Joshua.S.Levesque@usace.army.mil](mailto:Joshua.S.Levesque@usace.army.mil)

## **B. Technical Requirements:**

### **General Requirement:**

1. **Summary** – Furnish all equipment, materials, labor, and transportation necessary to complete a detailed shoreline erosion control survey along both stream banks of the Contoocook River (approximately 6.5 miles) located in the towns of Henniker and Hopkinton, NH, Piscataquog River (approximately 2 miles) located in Weare, NH, and Choate Brook (approximately 3.5 miles) located in Dunbarton, NH as part of the Hopkinton-Everett Lakes Project. The work includes performing field work, analyzing shorelines, collecting measurements, and analysis of findings for site specific management goal and objects (based on the severity, environmental impact and likely possibility of future degradation of erosion sites in the absence of corrective measures), and a final report.
2. **Existing Conditions** – Hopkinton-Everett Lakes is a 53 year old flood reduction management project for the Merrimack River Basin (completed in 1962). Hopkinton-Everett Lakes is a dual project; Hopkinton Dam is located on the Contoocook River, a tributary to the Merrimack River Basin and one-half mile upstream of the village of West Hopkinton. Everett Dam is on the Piscataquog River, 1.3 miles southwest of the village of East Weare. The reservoirs lie within the towns of Henniker, Hopkinton and Dunbarton in Merrimack County and Weare in Hillsborough County, New Hampshire.

Water from the Contoocook River is discharged to the north through the Hopkinton Dam. During floods, flows are reversed and water flows through Elm Brook Park, Hopkinton Lake, Drew Lake to Choate Brook and into the Corps' Everett Lake Flood Control Project in Weare.

There are numerous car-top put-ins and five boat launches throughout the project (see Informational Maps 1 & 2).

3. **Safety Requirements** - All work shall be conducted in accordance with the U.S. Army Corps of Engineers Safety and Health requirements Manual (EM 385-1-1, most recent edition), and all applicable federal, state, and local safety and health requirements. A copy of EM 385-1-1 can be accessed electronically at Headquarters USACE website under publications using the following link:

[http://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/EM\\_385-1-1.pdf](http://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/EM_385-1-1.pdf)

4. **Modified Activity Hazard Analysis**

- a. A Modified AHA shall be submitted and must cover all the major phases of work. A major phase of work is defined as an operation involving a type of work presenting hazards not experienced in previous operations or where a new subcontractor or work crew is to perform the work. The analysis shall define all activities to be performed, identify the sequence of work, the specific hazards anticipated, and the control measures to be implemented to eliminate or reduce each hazard to an acceptable level. Work shall not proceed on a phase of work until the AHAs have been accepted by the GDA. A preparatory meeting shall be conducted by the prime contractor to discuss the Modified AHA's contents with all effected onsite employees. The Modified AHA shall be continuously reviewed and revised to address changing site conditions as appropriate. The AHA's shall interface with the Contractor's overall safety and health program.
- b. Emergency Reponses Procedures shall be documented in the Modified AHA and will include a map with directions to the nearest hospital, emergency contact numbers, and onsite First Aid/CPR responders.



Modified AHA  
2016.pdf



AHATemplate-Fillable  
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## 5. Required Personnel, Experience & Education

- a. Contract personnel are required to have a bachelor's degree from an accredited university in a Natural Resource/Biology related field, be a licensed Forester and possess at least 5 years of experience with field work.
- b. Contract personnel must have at least 2 years of experience with GIS and be capable of producing high quality professional maps and deliverables.
- c. This contract requires field work in remote wooded locations, foot travel over un-even terrain, exposure to insects, poison ivy and possible inclement weather.
- d. The Contractor shall designate one employee as the site's Competent Person (CP) who is responsible for ensuring a safe environment for all employees. The CP shall be present at the project site and report to the contractor's upper management. The CP is required to have related service experience.

## 6. Accident Reporting

- a. All accidents and near misses shall be investigated by the Contractor. All work-related recordable injuries, illnesses and property damage accidents (excluding on-the-road vehicle accidents), in which the property damage exceeds \$5,000.00, shall be verbally reported to the GDA within 4 hours of the incident. Serious accidents as described in EM 385-1-1 Section 01.D shall be immediately reported to the GDA. ENG Form 3394 shall be completed and submitted to the GDA within five working days of the incident.



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999-fillable.pdf

- b. The Contractor shall complete the attached "USACE Contractor Monthly Summary Record of Injuries/Illness and Work Hour Exposure" (for prime and its subcontractors) and forward the completed form to the GDA no later than close of business on the 5<sup>th</sup> calendar day of the following month. The method of transmission by the prime contractor to the GDA shall be electronically.



Contractor Monthly  
Record of Accidents

7. **Clean Up and Waste Disposal** – The contractor shall keep the work area free from accumulation of waste materials. Any and all disturbed areas resulting from contractor activities shall be restored by the contractor to the satisfaction of the Technical Point of Contact.
8. **Environmental Protection** – Containers for excess and/ or waste materials, rubbish, etc. shall be provided by the contractor at the site, and the site will be inspected/ cleaned on a daily basis. Water, air and land resources shall not be adversely impacted during the course of the work. Contractor will take necessary steps to ensure all federal, state, and local environmental regulatory requirements are met.
9. **Government Resources** – The contractor may use the existing restroom facilities on government property. The government will supply any electricity and water necessary for the

project work from points of existing outlets. The contractor shall carefully conserve the use of electricity and water provided. The contractor shall supply their own means of communication (telephone).

10. **Omissions** – This contract may not cover all specified activities, steps, and procedures required to supply the contract product. In case of omission, the normal industry, state, or federal standards, practices, specifications, and/or guides shall prevail. In no instance shall an omission be reason to produce less than an acceptable product.
11. **Quality Assurance** – The contractor is responsible for the quality control of the contract work. The contractor shall establish and maintain a quality control system to assure compliance with the contract requirements. The government has the right to inspect and test all items called for by the contract, to the extent practicable at all times and at all places during the term of the contract.
12. **Receiving and Storing Materials** – The Government will provide a storage area and parking for contractor personnel. The contractor is responsible for protecting any stored material until it is placed in service. The contractor is responsible for receiving and unloading of delivered goods. Government employees will not receive material for supplies for the contractor and will not be responsible for damage to the contractor's equipment or materials.
13. **Requests for information** – Requests concerning the work of this project should be directed to the Technical Point of Contact, Joshua Levesque at 978-318-8304 or [Joshua.S.Levesque@usace.army.mil](mailto:Joshua.S.Levesque@usace.army.mil).
14. **Submittals** – Although the Government technically reviews submissions required by this scope of work, it is emphasized that the Contractor's work must be prosecuted using proper internal controls and review procedures. The documents identified below must be prepared in accordance with the applicable standards, submitted for review and accepted by the Government, prior to the commencement of any field activities.
  - a. Modified Activity Hazard Analysis – Prior to the Start of Field Work
  - b. Monthly status reports
  - c. Digital Data: Aerial Photos/GIS Map Data and shapefiles (compatible with ESRI product ArcMap 10.x) Include PDF's, GIS Files and Final Maps (with points) (At completion of contract)
  - d. Any Plant Inventory Data and Field Forms (including Invasive Plants observed)
  - e. Photo Documentation for each site (2 site images minimum)
  - f. Final Report – Include all findings, notes, maps and management recommendations (2 hard copies and 1 digital copy)
  - g. Documentation of any conservation concern listed species noted while performing field surveys
  - h. Documentation of any invasive species/communities that are present.
  - i. Formal out briefing on contract and final report.

NOTE: All data, materials, submittals and maps gathered and/or developed in the performance of this contract shall be the property of the Government.

15. **References & Standards** – All work shall be in conformance with:
  - a. Blackwater Dam Streambank Erosion Survey (2012)

## 16. Government Resources –

- a. Natural Features Survey; NH Natural Heritage Inventory (2000)
- b. Forest Cover Type Maps
- c. Administrative Compartments and Project Boundary
- d. Various GIS maps showing Boundary, Roads, Trails, contours, hydrology, car-top put-ins, boat ramps, and Gates\*

\*Gate Keys will be provided

### Service Requirements:

#### i. Forest Resource and Management Plan

##### a. Objectives & Deliverables:

- i. Perform field surveys as necessary to locate, document and map erosion areas.
- ii. 2 Photos of each site shall be taken to aid in identification and management.
- iii. Create maps in GIS and complete data attribute tables.
- iv. Identify and documentation of any invasive species noted while performing surveys.
- v. Identify and documentation of any rare plant species/communities that are present.
- vi. Develop management goals and objectives using the guidance provided in the 'Reference & Standards' section;
- vii. Create a Final Report – Include all findings, maps, photographs and management recommendations.

##### b. Service Areas (located within the Hopkinton-Everett Lakes Project);

- i. Contoocook River (approximately 6.5 miles) located in the towns of Henniker and Hopkinton, NH
- ii. Piscataguog River (approximately 2 miles) located in Weare, NH
- iii. Choate Brook (approximately 3.5 miles) located in Dunbarton, NH

##### c. Methods:

- i. The contractor shall locate and document erosion sites equal to or greater than 200 square feet. Erosion sites smaller than 200 sq. ft. should be included in the survey if the site poses a threat of further deterioration in the near future. The location of sites will be documented on base maps in GIS using the New Hampshire State Plane 1983 Coordinate System. The GPS waypoint locations will need to be corrected off of the aerial photography and within GIS for further accuracy. Erosion sites will be numbered on the GIS base maps and within the associated Attribute Table. The length, width and height of each erosion site will be measured in feet, along with change in elevation. Areas of affect must be measured to the nearest 10 sq. ft.
  - a. For erosion sites information collected and recorded in the GIS attribute table will at least include the following as applicable:
    - Site number
    - Date of Survey
    - GPS Coordinates
    - Brief Description of the Suspected Cause of Erosion & Possible Restoration measures
    - Soil Type
    - Length, Width, Height of Site
    - Square Footage of Erosion
    - Notation of which Stream Bank (East, West, North, South)
  - b. For Invasive Species information collected and recorded in GIS attribute table will at least include the following as applicable:
    - Site Number

- Date of Survey
  - GPS Coordinates
  - Common & Scientific Names of Invasive Species
  - Infestation Patch size (e.g. 2.1 acres)
  - Infestation Density Category as defined below
- ii. Soil description can reference the latest Natural Resources Conservation Service (NRCS) State County Soil Survey. No soil data collection is necessary.
  - iii. Each erosion site will also be photo logged with at least two photos taken from different vantage points.
  - iv. All erosion sites meeting the minimum criteria for consideration will be included that are within 150 feet from the top of stream bank will be included in the survey. All erosion sites greater than 400 square feet and visible from top of stream bank will be included regardless of the distance from the top of the stream bank. Also any erosion from roads, trails or stream crossing such as wash outs, culvert erosion or failure of road banks visible from the top of stream bank will be included regardless of the size of the erosion.
  - v. Invasive species will be documented using common and scientific names. Invasive species inclusion in the survey is based on visibility or effective detection distance from the stream bank. Any invasive infestation found within one hundred and fifty feet from the top of the bank must be documented entirely even if the area of affect extends beyond the one hundred and fifty foot buffer. All patch sizes shall be measured to the nearest tenth of an acres.
  - vi. The contractor will also estimate the invasive species Density Category by visually estimating the percentage of ground obscured by the vegetation of the invasive species in the patch (as viewed from above). The density categories to be used are as follows:
    - 1 = Trace (less than 1 percent)
    - 2 = Low (1 to 5 percent)
    - 3 = Moderate (6 to 25 percent)
    - 4 = High (26 to 50 percent)
    - 5 = Severe (51 to 100 percent)

**NOTE:** Field personnel will be aware of current hunting seasons and dress appropriately in safety orange, if working during respective state hunting seasons. Please note that the projects may be subject to periodic flooding as well as heightened security measures, which may require work to be re-scheduled on a periodic basis.







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**Informational Map 2**

