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The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner

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June 8, 2023

His Excellency, Governor Christopher T. Sununu
and The Honorable Council
State House
Concord, New Hampshire 03301

REQUESTED ACTION

Authorize the Department of Environmental Services (NHDES) to execute a **SOLE SOURCE** amendment to the Agreement (PO #7003219) with GZA GeoEnvironmental, Inc., Norwood, MA (Vendor Code #174515-B001), by increasing the contract by $267,444.87 to $345,790.38 from $78,345.51 for the preparation of design drawings, specifications, and bid documents to pursue a construction contract to rehabilitate the measurement flume at Lakeport Dam in Laconia, and to extend the completion date of the Agreement to June 30, 2025 from June 30, 2023, effective upon Governor & Council approval. The orginal contract was approved by Governor and Council (G&C) on November 10, 2021 (Item #37). 100% American Rescue Plan Act (ARPA) Funds. This is an allowable use of ARP FRF funds under Section 602 (c)(1)(D) to make necessary investments in general government services.

Funds are available in the account as follows:

	FY 2023
03-44-44-440010-2657-102-500731	$267,444.87

Dept. of Environmental Services, ARPA DES Loans, Contracts for Program Services
Activity Code: 00FRF602GS4402B

EXPLANATION

This amendment is considered **SOLE SOURCE** because the increase in the contract is greater than 10% of the Agreement approved by Governor and Council on November 10, 2021. Under the Agreement, GZA GeoEnvironmental, Inc., (GZA) prepared a condition assessment and recommendations for repair, replacement or abandonment for the measuring flume. The measurement flume is located upstream of Lakeport Dam and is likely no longer accurately measuring flow due to severe deterioration. Based on the alternatives assessed and the importance of the measurement of flow in the Winnipesaukee River Basin, NHDES has chosen to rehabilitate the existing flume. NHDES seeks to have design drawings, specifications and bid documents prepared to pursue a construction contract for the rehabilitation of the measurement flume. Because GZA inspected the measurement flume, prepared the condition assessment and, in consultation with NHDES, details for the chosen rehabilitation alternative, the design can be most efficiently and cost-effectively completed by GZA. The price received from GZA to complete the services is in line with what NHDES has historically received from other vendors for similar work. To date, $61,642.46 of the total contract has been spent.

GZA has agreed to perform the work specified in the amendment as detailed in changes to sections 1.7 (Completion Date) and 1.8 (Price Limitation) of the General Provisions and revisions to Exhibit B (Services) and Exhibit C (Contract Price and Method of Payment). This amendment has been approved by the Office of the Attorney General as to form, execution, and content.

We respectfully request your approval.

Robert R. Scott, Commissioner

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AMENDMENT #1
TO
AGREEMENT
BETWEEN THE
NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES
AND
GZA GEOENVIRONMENTAL, INC.

PROFESSIONAL SERVICES – ENGINEERING SERVICES FOR A CONDITION ASSESSMENT OF THE MEASURING FLUME AT LAKEPORT DAM

WHEREAS, the State of New Hampshire Department of Environmental Services ("NHDES") has entered into an Agreement with GZA GeoEnvironmental, Inc. ("GZA") in the amount of $78,345.51 for needed engineering services to conduct a condition assessment of the measurement flume at the Lakeport Dam in Laconia, from November 10, 2021 through June 30, 2023; and

WHEREAS, NHDES has identified, from the condition assessment, the desired alternative to rehabilitate the measurement flume.

WHEREAS, NHDES wishes to proceed to the preparation of design drawings, specifications, and bid documents to pursue a construction contract to rehabilitate the measurement flume.

WHEREAS, NHDES has determined that GZA is best positioned to provide the needed additional engineering design services, and that an amendment to the existing Agreement is the most cost-efficient way to provide the needed services; and

WHEREAS, NHDES wishes to execute an Amendment 1 to the Agreement to provide an additional $267,444.87 for the preparation of design drawings, specifications, and bid documents, and to extend the completion date of the Agreement to June 30, 2025 from June 30, 2023, upon Governor & Council approval; and

WHEREAS, GZA has agreed to extend the current Agreement and to provide the additional services necessary to complete the measurement flume design project.

NOW THEREFORE, amend the original Agreement between NHDES and GZA as approved by Governor and Council on November 10, 2021 as Item #37 in the following manner:

Change section 1.7 (Completion Date) in the General Provisions of the Agreement to read: June 30, 2025.

Change section 1.8 (Price Limitation) in the General Provisions of the Agreement to read: $345,790.38.

Revise Exhibit B (Services), to include pages B-8 through B-18 to detail engineering design services and deliverables, and include Table B-2 to reflect the additional costs for needed additional engineering services and per diem expenses.

Replace Exhibit C (Contract Price And Method Of Payment) cover page to include references to the to the revised Exhibit B (Services) and the addition of Table B-2 to address the work necessary to provide the requested additional engineering services, to change the not to exceed cost to $345,790.38, and to include Table C-2.

All other conditions outlined in the contract shall remain in effect.

Robert R. Scott, Commissioner
Department of Environmental Services

James P. Guarente, P.E., Associate Principal
GZA GeoEnvironmental, Inc.

(K. Allen Brooks)
Assistant Attorney General
Department of Justice
(as to form, execution, and content)

4. Design Project Management Tasks - Project management tasks will include the following:

4.1. Project Coordination/Management

GZA will provide internal and external project management and coordination for the duration of the contract. Project coordination will include coordinating between subcontractors and NHDES. GZA will coordinate, manage, assist and act as the quality assurance and quality control (QA/QC) manager for the inspection services performed by our underwater subcontractor.

4.2. Kick-Off Meeting

GZA will conduct and participate in a video conference call/kick-off meeting via Microsoft Teams, or another acceptable available platform. The purpose of the kickoff meeting will be to review project objectives and milestones, communications, project reporting, security/access requirements, and invoicing procedures.

4.3. Existing Data Review

Through development of the "Condition and Repair Assessment for the Measuring Flume at Lakeport Dam" report, GZA was provided with existing files, and conducted several conference calls, to understand available documents, local geology, recent instrumentation data, and other pertinent information. If additional design information is available, GZA will review the information to inform the rehabilitation design.

4.4. Project Specific Health and Safety Plan

GZA will create a Project Specific Health and Safety Plan (HASP). The GZA HASP will describe the personnel, equipment, anticipated hazards, and procedures that will be utilized by GZA during the field portions of the project. GZA's HASP will include general information about the site, our objectives while in the field, emergency medical facility locations and contact information, a site-specific overview and assessment of potential hazards. The HASP will be submitted to NHDES for review prior to the start of the work.

Prior to performing their inspection, GZA's underwater subcontractor will prepare a dive operation plan and job safety analysis (JSA) which will be submitted for review and approval prior to dive operations.

5. Design Inspection Services

5.1 Underwater Inspection

Limited information exists as to the foundation of the Measuring Flume beneath the wooden floor-timbers. This information is required for the design of the precast concrete paneling, to ensure proper foundation and anchorage. GZA will subcontract an underwater diving team to perform a

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detailed tactile inspection of the floor of the Measuring Flume, to document and assess the foundation of the existing Measuring Flume.

GZA anticipates that the underwater inspection will be completed over a period of two days, and will be performed in the company of a GZA representative and one or more Client personnel. The inspection will be conducted in accordance with the Client's health and safety procedures, the requirements of our own Project Specific Health and Safety Plan, and our subconsultant's Dive Safety and Management Plan (Dive Operations Plan).

Under subcontract with GZA, the subcontractor will provide a three-person team of professional engineer/divers and equipment necessary to perform the underwater inspection. As identified during the December 2021 underwater inspection performed by Collins Engineers, there are many areas of missing floorboards within the Measuring Flume. The diver will be equipped with underwater diamond core drilling equipment and other probing tools, to allow for adequate assessment of underlying conditions and to obtain foundation samples in areas where the floorboards are missing. Additionally, the divers will inspect and probe the channel bottom to evaluate conditions over the entire anticipated limits of work including those areas outside of the flume channel in support of design of sheet piling, masonry wall pier repair, timber cut-off wall repair, embankment improvements, and other areas associated with effecting the design and construction of improvements.

Deliverables: A brief inspection report will be developed following the inspection, to include:

1. A summary of the results of the visual inspection. This portion of the report will reference specific photographs taken during the inspection to document key features and provide historical continuity with previous inspections if/as available. Photographs to document key observed conditions will also be included.
2. Representative photographs of the visual condition below the wooden floorboards.
3. Representative photographs of recovered core samples.
4. Inspection sketches.

Based on past experience at the site, the GZA team understands that the Owner can close the outfall to the Lakeport Dam and reduce the flow to near zero or otherwise reduce flow so that it is safe for a manned-dive inspection of the flume. (i.e. GZA anticipates the inspection to be completed when there is little to no flow). GZA will coordinate with the Owner/Client to confirm that all active intakes, outfalls, and pumps will be locked out and tagged out prior to performing the inspection. Diving operations are expected to be staged from the earthen embankment left of the measuring flume.

GZA will provide general oversite and assistance to the subcontractor(s) during this task. GZA will also review the underwater inspection report from a QA/QC standpoint.

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5.2. Design Boundary and Utility Survey

Building upon the existing conditions survey performed as part of the evaluation phase, GZA will subcontract a Professional Surveyor licensed in New Hampshire to perform a comprehensive boundary and utility survey of the entire project site limits as well as those areas adjacent to the project site that may need to be temporarily accessed to effect construction. These areas generally consist of portions of Belvidere Street and associated properties thereon abutting the east side of the channel, as well as portions of Fore Street and associated properties thereon (including the existing left embankment) abutting the west side of the channel. Information gathered from this research and survey will be necessary with respect to construction planning including, but not limited to site access, construction equipment loading, and staging. The information obtained will be added to the existing conditions plan as appropriate.

5.3. Design Wetland Resource Delineation

GZA will delineate wetlands within the approximately two acre project site in accordance with the U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual, Technical Report Y-87-1, using the Routine Determined Method; in conjunction with the Regional Supplement to the Corps 1987 Wetland Delineation Manual: Northcentral and Northeast Region, Technical Report ERDC/EL TR 09-19; U.S. Army Corps of Engineers 2020 Wetland Plant List, version 3.5, and Field Indicators for Identifying Hydric Soils in New England, Version 4, 2020. Wetlands will be classified in accordance with Classification of Wetlands and Deepwater Habitats of the United States, Federal Geographic Data Committee, 2013. GZA will hang flags in the field to delineate the edge of wetlands at approximately 50 to 100-foot increments and label flags with an alphanumeric sequence. Upon completion of wetland delineation, GZA will provide a wetland delineation sketch to assist in their subsequent incorporation into the updated existing conditions survey to be completed as part of GZA's survey subcontractor's work scope under Task 5.2 (Design Boundary and Utility Survey).

To support wetland permitting, GZA will complete a functions and values assessment of wetlands in accordance with The Highway Methodology Workbook Supplement. Wetland Functions and Values: A Descriptive Approach. Army Corps of Engineers (ACOE), New England Division; 1999 NENEP 360 1 30a to support wetland permitting. The Highway Methodology assesses wetlands within the context of the watershed based on 13 potential functions and values. These functions and values include groundwater recharge/discharge, flood flow alteration, fish and shellfish habitat, sediment/toxicant retention, nutrient removal, production export, wildlife habitat, educational/scientific value, recreation, uniqueness/heritage value, sediment/shoreline stabilization, visual quality/aesthetic value, and endangered species habitat.

Wetlands data, function and value assessment data, and vernal pool data obtained from this task will be incorporated as applicable into the New Hampshire Department of Environmental Services (NHDES) Standard Wetland Permit included in Task 7 (Preparation of Environmental Permitting Applications).

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6. Design Construction Package

GZA will perform the engineering design to modify the Measuring Flume at the Lakeport Dam to address the deficiencies noted during the 2021 on-site inspections, and affect the recommendations made in the 2023 Condition and Repair Assessment report. The primary components of the design include the following items:

- Install a temporary dewatering system consisting of driven sheet piles to allow for the interior of the flume to be dewatered during timber demolition and precast concrete panel erection.
- Install permanent sheet piling on the exterior perimeter of the flume structure, and grout between the sheet piling and the masonry, to improve overall structural stability.
- Install permanent sheet piling to replace the deteriorated timber cutoff at the west (right) upstream end of the Measuring Flume.
- Remove wooden cladding system from inside the flume and replace with a precast concrete panel system.
- Restore the walking surfaces along the top of the flume, and incorporate additional worker safety provisions.
- Provide supplemental rip-rap protection as necessary on the upstream and downstream sides of the left embankment.
- Remove the abandoned steel rail structure upstream of the Left Embankment.
- Remove and replace the Flow Measurement Shed.
- Replace the existing flow measurement instrumentation with a state-of-the-industry system.

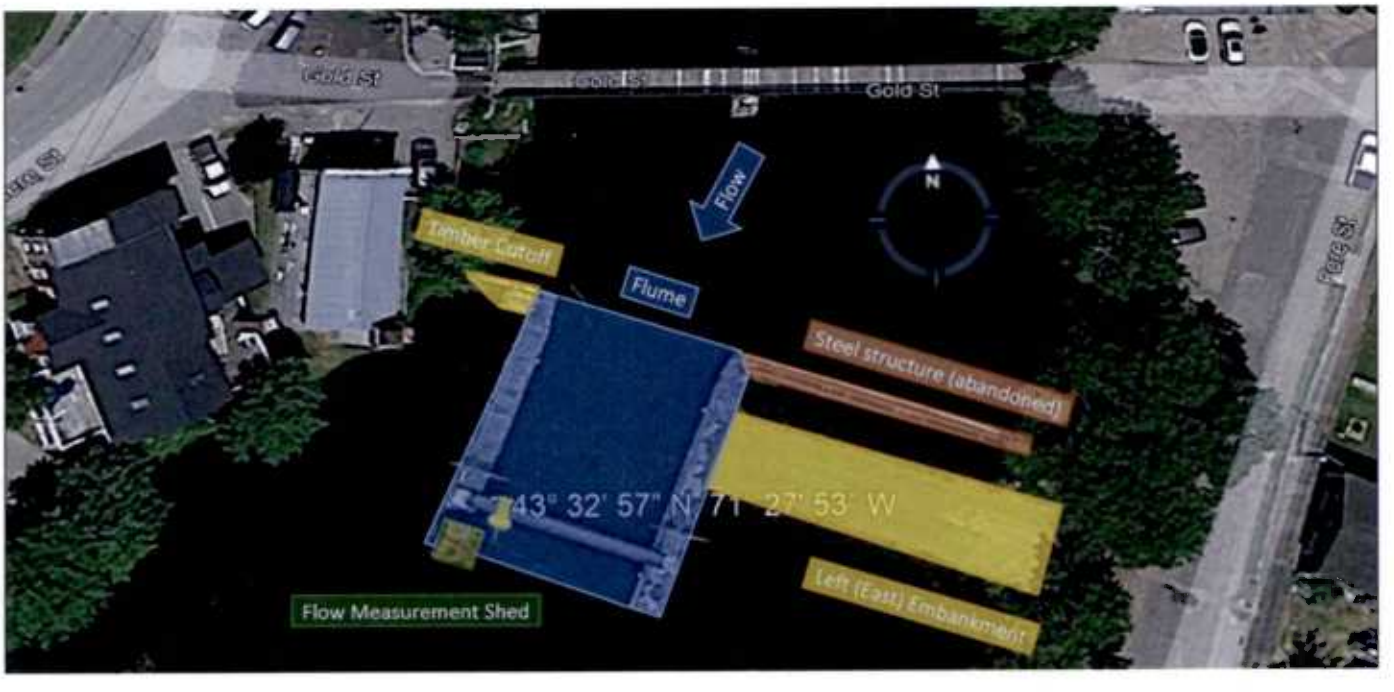

Figure B-1. Project Overview

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6.1. Design Dewatering Plan

A dewatering system will be required, to allow for demolition and construction activities within the Measuring Flume to be completed "in the dry." It is understood that there is a yearly two week period around Columbus Day where the discharge from Lake Winnipesauke is reduced to about 30 to 60 cfs, to allow for the dams and hydropower projects downstream of the Lake to perform routine maintenance and repairs. It is also understood that the flow reduction window can potentially be extended a few weeks, if beneficial for this project, and based on NHDES communication with downstream project owners.

GZA will develop a dewatering plan, to allow for dewatering within the Measuring Flume. The plan will include provision for passing the 30 to 60 cfs required minimum flow, through a combination of passing flow through the existing Timber Cutoff section and across/over the Left Embankment via a temporary by-pass system, as necessary.

Deliverables: A permanent and temporary sheet pile wall system will be developed, and shown in a sheet set as part of the Construction Package. A written narrative will be developed for the dewatering measures installation sequence. Calculations to support the design of the sheet pile wall system and the chosen temporary flow bypass system will also be included in the Construction Package.

6.2. Engineering Design

GZA will develop engineering calculations to support the following permanent design components:

- Precast concrete vertical wall panels.
- Precast concrete horizontal floor panels, including consideration for foundation improvements.
- Cast in place concrete resurfacing.
- Permanent sheetpile segments.
- Grout infill of the annuli between exterior-side masonry walls and permanent sheet pile elements as well as the interior-side masonry walls and pre-cast concrete vertical wall panels.
- Anchorage for new fall protection and worker safety measures.
- New Flow Measurement Shed.
- Additional ancillary design components, as necessary.

The design calculations will be performed in accordance with the latest revision of the applicable regulatory code manuals, such as the American Concrete Institute (ACI), Precast

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Concrete Institute (PCI), New Hampshire Department of Labor and OSHA, etc. The calculations will be reviewed and signed by a Professional Engineer licensed in the State of New Hampshire.

Deliverables: Fully documented calculations, signed by a preparer and approved by a NH PE, will be included as part of the Construction Package.

6.3. Instrumentation Design

GZA will design a flow measurement system, utilizing the specific technology preferred by the NHDES (Acoustic Doppler Current Profiler or Ultrasonic Transit Time). The design will include developing a performance specification for the system to be installed, which will identify up to three instrumentation system providers who are capable of providing the hardware and software necessary to perform the measurement. Additionally, the proposed location(s) of the measurement equipment, simple wiring diagrams to show conduit placement, and routing to the new Flow Measurement shed will be shown on the construction drawings.

During design, GZA will conduct a performance-requirement workshop with the NHDES, to finalize NHDES' requirements for hardware performance (such as measurement accuracy and frequency), and software requirements (including connection to NHDES' existing network).

Deliverables: Instrumentation system performance specification and construction drawings.

6.4. Design Construction Package

To document the design, GZA will develop a Construction Package. The Construction Package will include a brief description of the Project Background and overall Scope of Work. The final engineering calculations, construction drawings, supplemental technical specifications, and required construction Plans will be included as attachments to the report. The construction Plans and Specifications will be suitable for use in obtaining competitive bids from selected contractors for flume rehabilitation and associated modifications.

The table that follows presents GZA's estimation of the items, and quantity of items, which will be included in the Construction Package. The table summarizes the drawings, specifications/plans, and calculations that will be required.

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Element	Estimated Quantity	Notes
Design Narrative	1	-
Attachment: Drawings	19 to 23	-
Cover, Index and Notes	3	In addition to specifications listed below.
Existing Conditions/Site Plan	1	-
Soil Erosion and Sediment Control	1	-
Dewatering and Water Control Plan Drawings	2 to 4	Including delineation between temporary and permanent sheeting as applicable as well as details associated with other dewatering elements as appropriate.
Demolition	2	Including Timber Cutoff wall, timber cladding inside Flume, Flow Measurement Shed and steel rail structure.
Sheet Piles: Plan and Details	2	Including grouting plan between sheet piles and exterior flume walls.
Structural: Precast Concrete	2	-
Structural: New Concrete Walking Surfaces	1	-
Structural: Worker Safety Improvements	1	-
Structural: Flow Measurement Shed	1	-
Instrumentation	1 to 2	Including instrumentation, wiring, and conduit layout with supporting details as applicable
Miscellaneous Details	1 to 2	-
Site Restoration	1	-
Attachment: Supporting Calculations		-
Steel design	1	-
Concrete design	4	-

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In addition to the contract plans, GZA will prepare contract technical specifications and bidding documents, including:

- Front end bid documents: GZA assumes that all front-end documents will be provided to GZA in electronic format by the NHDES.
  - Invitation to Bid.
  - Instructions to Bidders.
  - Special Conditions.
  - Bid Form.
  - Agreement Forms, Performance, and Payment Bond Forms.
  - General Conditions; and
  - Supplementary Conditions.

- Technical Specification Sections, including individual sections as required falling within the following Construction Specification Institute general categories:
  - Division 2 - Site Work (including dewatering)
  - Division 3 - Concrete
  - Division 4 - Masonry
  - Division 5 - Metals
  - Division 6 - Wood
  - Division 7 - Thermal and Moisture Protection
  - Division 8 - Doors and Windows
  - Division 9 - Finishes
  - Division 11 - Equipment (including new flow measuring instrumentation and related communications)
  - Division 13 - Special Construction
  - Division 15 - Mechanical
  - Division 16 - Electrical (including conduit and wiring related to instrumentation)

Deliverables: A draft (in PDF and Word format) of the Construction Package will be prepared and submitted to NHDES for review and comment at the approximate 50% design development stage. Following NHDES' initial review, GZA will facilitate a virtual workshop to discuss NHDES' comments and confirm NHDES' preference for critical design elements. GZA will incorporate NHDES' comments and advance the design to 90% development. Upon receiving NHDES' comments, GZA will update the Construction Package and issue to you in (100%) final format. The final report and drawings will be stamped and sealed by a New Hampshire Professional Engineer. AutoCAD files of all final drawings will also be transmitted for NHDES' files.

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6.5. Opinion of Probable Construction Cost

To provide a budgetary estimate for NHDES's internal project capital planning efforts, GZA will develop an opinion of probable construction cost estimate for the proposed project modifications, based upon GZA's experience with similar construction projects, review of available public literature, and input provided from GZA's consultation with contractors experienced in construction of this type. A brief explanation of the assumptions made for the cost estimates will be provided, along with tabulated line items, as applicable.

7. Preparation of Environmental Permitting Applications

GZA will prepare permit applications and required accompanying documents on behalf of the Client for required construction permits. The 50% plans prepared at the earlier stages of Task 6 (Design Construction Package) will be used for the permit applications.

GZA anticipates the following permits and permit-related activities will be required for the project:

- GZA will prepare a NHDES Standard Dredge and Fill Wetlands Permit Application that includes: a project narrative, Wetland Permit Application Form, alternatives analysis as required by Env-Wt 524.02, a United States Geologic Survey Site locus map, tax maps, permitting plans, abutters list, and impact photographs. As part of this effort, GZA will work with the team to quantify and classify the level of natural resource impact (wetland, exemplary natural community, and protected species habitat). As part of the Wetlands Permit, GZA will prepare a narrative that addresses the need for the proposed impact and the steps that have been taken to avoid and minimize impacts in accordance with NHDES Administrative Rule Env-Wt 313.03;
- As required by Env-Wt 306.06, GZA will prepare an abutter list and abutter notifications;
- GZA will prepare a City of Laconia Conditional Use/Special Use Permit to the City of Laconia, if required by the municipality for wetland and buffer impacts. The permit submittal will include an application form, letter narrative, photo log, U.S.G.S. locus map, aerial map, and 50% design plans;
- GZA assumes up to two meetings with the City of Laconia Conservation Commission and Planning Board to discuss the project and the NHDES Standard Dredge and Fill Wetlands Permit Application and Conditional Use/Special Permit. GZA assumes meetings will be held in person;
- GZA will prepare for a pre-application meeting with NHDES to review the proposed project and compensatory mitigation if required per Env-Wt 311.02. Pre-application meeting materials will include maps showing wetland resources, wildlife action plan tier habitats, photographs, NHDHR review, and brief narrative of the proposed project and proposal for mitigation. For the purposes of this proposal, GZA has assumed up to three, 2-hour interagency meetings to discuss the proposed project.
- Projects determined by the USACE to be approved under the State Programmatic General Permit (SPGP) will qualify to be covered by Water Quality Certificate No. 2022-404P-001 (PGP 401 WQC) issued by the NHDES Watershed Management Bureau for all projects approved under the State Programmatic General Permit (SPGP). Most applicants do not need to do anything more with regard to obtaining 401 Water Quality Certification approval. However, GZA will include

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information that is typically of interest to the NHDES Watershed Management Bureau during the pre-application meeting and prepare a narrative report that addresses the need for the proposed impact and the steps that have been taken to avoid and minimize impacts in accordance with NHDES Administrative Rule Env-Wt 313.03;

- GZA will complete the USACE Appendix B Checklist, which requires a review of several environmental factors, including impaired streams, floodplain identification, wildlife habitat identified in the New Hampshire Wildlife Action Plan, and others that may be affected by the proposed project. GIS data will be incorporated into mapping for use in field investigation, permitting, and construction phases of the project as needed;
- GZA will prepare a Request For Project Review to submit to the New Hampshire Department of Historic Resources (NHDHR) as required for wetland permits to determine if archeological/cultural studies are required;
- GZA will request a memo from the New Hampshire Natural Heritage Bureau (NHB) to determine the potential presence of rare species. As required pursuant to Fis 1004.03, if rare vertebrate species records are reported on the NHB memo, GZA will provide the following via email to the NH Department of Fish and Game:
    - A copy of the department of natural and cultural resources NHB DataCheck tool results letter;
    - Applicant's and GZA's name, mailing address, and contact information;
    - Written description of the proposed project with Site information of existing conditions;
    - A copy of the Wildlife Assessment Report prepared in Task 5 (Design Inspection Services);
    - GIS shapefile of the defined project boundary;
    - A list of the state and federal permits that have been applied for and/or have been approved;
    - Habitat features supporting or that could support threatened and endangered species that have been identified;
    - Description of conservation measures proposed by the applicant to avoid, minimize, or mitigate potential harm to threatened and endangered species and habitat;
    - Locus map;
    - Aerial photographic map;
    - Site photographs of existing conditions; and
    - Project permitting plans showing impact areas.

GZA will facilitate review with NHFG to review best management practices and project design. For the purposes of this proposal, GZA has assumed up to two, two-hour virtual meetings with NHFG.

GZA has made the following assumptions:

- An Alteration of Terrain permitting is not required;

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- GZA has not included local or state application fees or wetland mitigation fees in this proposal, as impact calculations are not yet available. The application fee is based on the square footage of impact. In lieu fee, if pursued for mitigation, is based on total proposed impact and land value in the underlying municipality. It is anticipated that GZA will provide natural resources impact calculations to the project team. GZA can provide an estimate in-lieu fee once impacts are known;
- The proposed project will permanently impact less than three acres of wetland and qualify for review under the SPGP, which will require the preparation of a Standard Dredge and Fill Permit Application; and
- GZA has not included cost to prepare Phase IA, Phase IB, or Phase II Archeological Studies, which may be required pending review by NHDHR.

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TABLE B-2

MAN-HOURS AND RATES SUMMARIZED BY LABOR CATEGORY

Agreement for Engineering Technical Services Design of Rehabilitation for the Measuring Flume at Lakeport Dam

				TASK 1: PROJECT MANAGEMENT SERVICES								TASK 2: INSPECTION SERVICES						TASK 3: CONSTRUCTION DESIGN										TASK 4: PERMITTING			
				TASK 1.1		TASK 1.2		TASK 1.3		TASK 1.4		TASK 2.1		TASK 2.2		TASK 2.3		TASK 3.1		TASK 3.2		TASK 3.3		TASK 3.4		TASK 3.5		Task 4			
				Project Coordination/ Management		Kick-Off Meeting		Existing Data Review		Project Specific Health and Safety Plan		Underwater Inspection		Boundary and Utility Survey		Wetland Resource Delineation		Dewatering Plan		Enigneering Design		Instrumentation Design		Construction Package		Opinion of Probable Cost		Prepare Environmental Permitting Applications		Man-hours	Fee
LABOR	**Units**		**Unit Rate**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**					**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**		
GZA Labor Categories																															
Engineering Principal	hr.	$67.90	**$209.13**	40	**$8,365.28**	4	**$836.53**	2	**$418.26**	1	**$209.13**	4	**$836.53**	2	**$418.26**	3	**$627.40**	16	**$3,348.11**	4	**$836.53**	2	**$418.26**	24	**$5,019.17**	3	**$627.40**	15	**$3,138.98**	120	**$25,095.84**
Senior Technical Specialist	hr.	$60.00	**$184.80**		**$0.00**		**$0.00**		**$0.00**		**$0.00**		**$0.00**		**$0.00**	3	**$554.40**	24	**$4,435.20**	24	**$4,435.20**	8	**$1,478.40**	40	**$7,392.00**	4	**$739.20**	40	**$7,392.00**	143	**$26,426.40**
Project Manager	hr.	$47.00	**$144.76**	80	**$11,580.80**	4	**$579.04**	24	**$3,474.24**	3	**$434.28**	8	**$1,158.08**	4	**$579.04**	18	**$2,605.68**	32	**$4,632.32**	24	**$3,474.24**	8	**$1,158.08**	100	**$14,476.00**	4	**$579.04**	80	**$11,580.80**	389	**$56,311.64**
Project Engineer	hr.	$35.50	**$109.34**	12	**$1,312.08**	2	**$218.68**	24	**$2,624.16**		**$0.00**	16	**$1,749.44**	8	**$874.72**	10	**$1,093.40**	40	**$4,373.60**	80	**$8,747.20**	40	**$4,373.60**	400	**$43,736.00**	24	**$2,624.16**	80	**$8,747.20**	736	**$80,474.24**
Dam Engineering CAD Draftsman	hr.	$30.00	**$92.40**		**$0.00**		**$0.00**		**$0.00**		**$0.00**		**$0.00**		**$0.00**		**$0.00**	40	**$3,696.00**		**$0.00**	24	**$2,217.60**	340	**$31,416.00**		**$0.00**		**$0.00**	404	**$37,329.60**
Administrative Assistant	hr.	$27.50	**$84.70**	8	**$677.60**		**$0.00**	2	**$169.40**	3	**$254.10**		**$0.00**		**$0.00**		**$0.00**		**$0.00**		**$0.00**		**$0.00**	8	**$677.60**		**$0.00**	10	**$847.00**	31	**$2,625.70**
Word Processing	hr.	$19.00	**$58.52**		**$0.00**		**$0.00**		**$0.00**		**$0.00**		**$0.00**		**$0.00**		**$0.00**		**$0.00**		**$0.00**		**$0.00**		**$0.00**		**$0.00**	10	**$585.20**	10	**$585.20**
LABOR PRICE TOTAL				**140**	**$21,935.76**	**10**	**$1,634.25**	**52**	**$6,666.06**	**7**	**$897.51**	**28**	**$3,744.05**		**$1,872.02**		**$4,880.88**	**152**	**$20,483.23**	**132**	**$17,493.17**	**82**	**$9,646.94**	**912**	**$102,716.77**	**36**	**$4,569.80**		**$32,289.18**	**1823**	**$228,848.62**
REIMBURSABLE EXPENSES	**Units**		**Unit Rate**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**		**Fee**		**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**		
Mileage	mi.		0.655		$0.00		$0.00		$0.00		$0.00	400	$262.00	200	$131.00	100	$65.50		$0.00		$0.00		$0.00		$0.00		$0.00	300	$196.50	1000	**$655.00**
Field Equipment & Materials	l.s.		$1.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	250	$250.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	250	**$250.00**
CAD Computer Charge	hr.		$12.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	0	**$0.00**
Reproduction	l.s.		$1.00	50	$50.00	50	$50.00	50	$50.00	50	$50.00	50	$50.00		$0.00		$0.00	50	$50.00	50	$50.00	50	$50.00	150	$150.00	50	$50.00	400	$400.00	1000	**$1,000.00**
Cadd Bond Paper	sq. ft.		$0.15		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	0	**$0.00**
RE Per Diem Expenses	day		$146.00		$0.00		$0.00		$0.00		$0.00	0.5	$73.00	0	$36.50	1	$73.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	1	**$182.50**
SUBCONTRACTOR COSTS	**Units**		**Unit Rate**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**		**Fee**		**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**	**Qty.**	**Fee**		
Underwater firm TBD	l.s.		$1.00		$0.00		$0.00		$0.00		$0.00	18000	$18,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	18000	**$18,000.00**
Licensed Surveyor	l.s.		$1.00		$0.00		$0.00		$0.00		$0.00		$0.00	15000	$15,000.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	15000	**$15,000.00**
Not used	l.s.		$1.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	0	**$0.00**
					$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	0	**$0.00**
					$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	0	**$0.00**
					$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00	0	**$0.00**
10% Mark-Up on Qualified Expenses			10%		$5.00		$5.00		$5.00		$5.00		$1,838.50		$1,516.75		$38.85		$5.00		$5.00		$5.00		$15.00		$5.00		$59.65	0	**$3,508.75**
EXPENSES TOTAL					$50.00		$50.00		$50.00		$50.00		$18,385.00		$15,167.50		$388.50		$50.00		$50.00		$50.00		$150.00		$50.00		$596.50		**$35,087.50**
EXPENSES TOTAL (with mark-up)					$55.00		$55.00		$55.00		$55.00		$20,223.50		$16,684.25		$427.35		$55.00		$55.00		$55.00		$165.00		$55.00		$656.15		$38,596.25
TOTAL					**$21,990.76**		**$1,689.25**		**$6,741.06**		**$952.51**		**$23,967.55**		**$18,556.27**		**$5,308.23**		**$20,538.23**		**$17,548.17**		**$9,700.94**		**$102,881.77**		**$4,624.80**		**$32,945.33**		**$267,444.87**

Project Management Services	**$31,373.58**
Inspection Services	**$47,832.08**
Construction Design	**$155,293.91**
Permitting	**$32,945.33**

Contractor initials JPS

Date 5-31-23

EXHIBIT C
CONTRACT PRICE AND METHOD OF PAYMENT

All services shall be performed to the satisfaction of NHDES before payment is made. All payments shall be made upon receipt and approval of stated outputs and upon receipt of an associated invoice. The billing is to be done on a monthly basis as a percentage completion of tasks as per the work program detailed in Exhibit B as revised. Tables B-1 and B-2 in Exhibit B provide a detailed breakdown of costs for the project.

A detailed itemization of the cost by task and personnel category is contained in the attached Tables C-1 and C-2. Billing will be based on a time and materials basis. Hourly labor rates (i.e., fully loaded) are based on direct labor rates with an effective multiplier (DS + OH + fee) of 3.08.

The total cost of the contract shall not to exceed $345,790.38. NHDES agrees to pay the invoices as submitted by the Contractor. Invoices are subject to the approval of the Contract Officer before payment is processed.

Contractor Initials JPJ

Date 5-31-2023

TABLE C-2

Unit rate is established at individual hourly rate multiplied by a factor of 1.75 to account for overhead and fridge benefits plus and additional 12% profit multiplier.

LABOR	Units		Unit Rate	Man Hours	Fee
GZA Labor Categories					
Dam Engineering Principal	hr.	$67.90	$209.13	120	$25,095.84
Senior Technical Specialist	hr.	$60.00	$184.80	143	$26,426.40
Project Manager	hr.	$47.00	$144.76	389	$56,311.64
Project Engineer	hr.	$35.50	$109.34	736	$80,474.24
Dam Engineering CAD Draftsman	hr.	$30.00	$92.40	404	$37,329.60
Administrative Assistant	hr.	$27.50	$84.70	31	$2,625.70
Word Processing	hr.	$19.00	$58.52	10	$585.20
				Total Labor	**$228,848.62**

REIMBURSABLE EXPENSES	Units	Unit Rate		
Mileage	mi.	$0.66	1,000	$655.00
Field Equipment & Materials	l.s.	$1.00	250	$250.00
CAD Computer Charge	hr.	$12.00	0	$0.00
Reproduction	l.s.	$1.00	1,000	$1,000.00
Cadd Bond Paper	sq. ft.	$0.15	0	$0.00
RE Per Diem Expenses	day	$146.00	1	$182.50
			Total Reimbursible Expenses	$2,087.50

SUBCONTRACTOR COSTS			
Underwater firm TBD	l.s.		$18,000.00
Licensed Surveyor	l.s.		$15,000.00
Not used	l.s.		$0.00
		Total SubContractor Costs	$33,000.00
10% Mark-Up on Qualified Expenses		10%	$3,508.75
		PROJECT TOTAL	**$267,444.87**

Contractor Initials JDM

Date 5-31-2023

State of New Hampshire
Department of State

CERTIFICATE

I, David M. Scanlan, Secretary of State of the State of New Hampshire, do hereby certify that GZA GEOENVIRONMENTAL, INC. is a Massachusetts Profit Corporation registered to transact business in New Hampshire on October 28, 1981. I further certify that all fees and documents required by the Secretary of State's office have been received and is in good standing as far as this office is concerned.

Business ID: **9876**

Certificate Number: **0006237349**

IN TESTIMONY WHEREOF,
I hereto set my hand and cause to be affixed
the Seal of the State of New Hampshire,
this 25th day of May A.D. 2023.

David M. Scanlan
Secretary of State

GZA GeoEnvironmental, Inc.

SECRETARY'S CERTIFICATE

I, Anders B. Bjarngard, Secretary of GZA GeoEnvironmental, Inc. (the "Company"), herby certify

that James P. Guarente is an Associate Principal and Vice President of the Company and, pursuant to a vote adopted by the unanimous written consent of the Board of Directors of the Company on August 10, 2022, he is authorized to execute and deliver contracts, bonds, and other documents related to the performance of professional services for the Rehabilitation Design for the Measuring Flume at the Lakeport Dam Project for the New Hampshire Department of Environmental Services in the name and on behalf of the Company, and to affix the Corporate Seal thereto, if and as required.

I further certify that the aforesaid unanimous written consent and the authority vested thereby have not been amended or revoked and are still in full force and effect.

WITNESS my hand and seal of the Corporation this 31st day of May 2023.

Anders B. Bjarngard 5/31/2023

Anders B. Bjarngard, Secretary

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 5/26/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Risk Strategies Company
160 Federal St. 4th Floor
Boston, MA 02110

CONTACT NAME:
PHONE (A/C, No, Ext): 617-330-5700 FAX (A/C, No): 617-439-3752
E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A: Great Divide Insurance Company	25224
INSURER B: The First Liberty Insurance Corp	33588
INSURER C:	
INSURER D: Liberty Mutual Fire Insurance Company	23035
INSURER E: Commerce and Industry Insurance Company	19410
INSURER F:	

INSURED
GZA GeoEnvironmental, Inc.
249 Vanderbilt Avenue (Corporate)
Norwood MA 02062

COVERAGES **CERTIFICATE NUMBER:** 74580268 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	✓ COMMERCIAL GENERAL LIABILITY			GLP2007957-20	2/28/2023	2/28/2024	EACH OCCURRENCE	$2,000,000
	☐ CLAIMS-MADE ✓ OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$500,000
	✓ $25K Ded per Occ-BI/PD						MED EXP (Any one person)	$10,000
							PERSONAL & ADV INJURY	$2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$2,000,000
	✓ POLICY ☐ PRO-JECT ☐ LOC						PRODUCTS - COMP/OP AGG	$2,000,000
	OTHER:							$
B	AUTOMOBILE LIABILITY			AS6-Z11-261208-013	2/28/2023	2/28/2024	COMBINED SINGLE LIMIT (Ea accident)	$1,000,000
	✓ ANY AUTO						BODILY INJURY (Per person)	$
	✓ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	✓ HIRED AUTOS ONLY ✓ NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
	✓ $1,000 Comp Ded $1000 Coll Ded							$
	☐ UMBRELLA LIAB ☐ OCCUR						EACH OCCURRENCE	$
	☐ EXCESS LIAB ☐ CLAIMS-MADE						AGGREGATE	$
	☐ DED ☐ RETENTION $							$
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			WC2-Z11-261208-043	2/28/2023	2/28/2024	✓ PER STATUTE ☐ OTH-ER	
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: N	N/A					E.L. EACH ACCIDENT	$1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$1,000,000
							E.L. DISEASE - POLICY LIMIT	$1,000,000
E	Contractor's Pollution Liability			CPO 11710520 ($200 SIR)	2/28/2023	2/28/2024	Each Claim	$1,000,000
							Aggregate	$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Re: Job #01.0175420.00 - Design for the Measuring Flume at the Lakeport Dam, Engineering design for measuring flume at Lakeport Dam, Laconia, NH.

CERTIFICATE HOLDER

01.0175420.00

NH Department of Environmental Services
Attn: Dam Services
29 Hazen Drive
Concord NH 03302

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

RSC Insurance Brokerage

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K. Firemere

The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner

October 15, 2021

His Excellency, Governor Christopher T. Sununu
and The Honorable Council
State House
Concord, NH 03301

APPROVED G & C
DATE 10 November 2021
ITEM # 37

REQUESTED ACTION

Authorize the Department of Environmental Services (NHDES) to enter into an Agreement with GZA GeoEnvironmental, Inc., Norwood, MA (Vendor Code #174515-B001), in an amount not to exceed $78,345.51 to provide engineering services for a condition assessment of the measuring flume at the Lakeport Dam in Laconia, NH, effective upon Governor and Council approval through June 30, 2023. 100% Capital (General) Funds.

Funding is available in the account listed below.

	FY 2022
03-44-44-440030-12670000-034-500161	$78,345.51

Dept. Environmental Services, 19-146:1:VI-A Dam Repair & Reconstruction, Capital Projects

EXPLANATION

NHDES operates and maintains a measuring flume just upstream from the Lakeport Dam to monitor flows being released from the dam. The condition of the measuring flume has deteriorated over time, and the resultant variation in the geometry of the flume has compromised the ability to accurately measure the flow from the dam. Flows from the Lakeport Dam impact water levels throughout the Winnipesaukee River Basin, including Winnipesaukee, Opechee, Winnisquam and Silver Lakes; and the flow from the dam needs to be measured accurately to ensure that it meets the requirements of water users with deeded water rights downstream. The measurement flume needs to be fully evaluated and, based on the results of the evaluation, either repaired, replaced or abandoned in favor of alternative methods of accurately measuring the flow from the dam.

NHDES issued a Request For Proposals (RFP) on April 23, 2021 from qualified engineers to provide a condition assessment and recommendations for repair, replacement or abandonment for the measuring flume. NHDES posted the RFP on the Department of Administrative Services and the NHDES websites.

NHDES received proposals from the following interested parties:

- Stephens Associates Consulting Engineers – Brentwood, NH
- Civilworks New England – Dover, NH
- Dubois & King, Inc. – Gilford, NH
- Gomez and Sullivan Engineers, Henniker, NH
- GZA GeoEnvironmental, Inc. – Norwood, MA
- Schnabel Engineering – Clifton Park, NY
- SLR International Corporation – Bedford, NH

The procurement process for this Agreement, further detailed in Attachment A, was conducted in accordance with NH RSA 21-I:22. NHDES established an internal selection committee to review and rank the responses. The responses were ranked with respect to the following criteria:

- professional experience, including specific projects, with the engineering assessment of dams and marine structures of similar size and located in similar aquatic environments,
- professional experience with design, water control, and construction of dams and marine structures,
- professional experience with the assessment, specification and installation of electronic equipment for measuring water and flow parameters in riverine or marine environments,
- quality and content of proposed scope of services, and
- the timeline for completion based on the number of weeks following approval of an Agreement with NHDES.

The selection committee was unanimous in its selection of GZA GeoEnvironmental as the most qualified for providing engineering services for a condition assessment and recommendations for repair or replacement of the measuring flume at the Lakeport Dam. NHDES has negotiated terms and conditions for the services to be provided, billing rates and conditions, and a not-to-exceed cost for this Agreement with GZA GeoEnvironmental.

The total charges to this contract shall not exceed $78,345.51. The agreement has been approved by the Office of the Attorney General as to form, execution, and content.

We respectfully request your approval.

Robert R. Scott, Commissioner

Notice: This agreement and all of its attachments shall become public upon submission to Governor and Executive Council for approval. Any information that is private, confidential or proprietary must be clearly identified to the agency and agreed to in writing prior to signing the contract.

AGREEMENT

The State of New Hampshire and the Contractor hereby mutually agree as follows:

GENERAL PROVISIONS

1. IDENTIFICATION.

1.1 State Agency Name NH Department of Environmental Services		1.2 State Agency Address PO Box 95 – 29 Hazen Drive, Concord, NH 03302-0095	
1.3 Contractor Name GZA GeoEnvironmental, Inc.		1.4 Contractor Address 249 Vanderbilt Avenue, Norwood, MA 02062	
1.5 Contractor Phone Number (781) 278-3818	1.6 Account Number 03-44-442030-1267-034-500161	1.7 Completion Date June 30, 2023	1.8 Price Limitation $78,345.51
1.9 Contracting Officer for State Agency James W. Gallagher, Jr., P.E.		1.10 State Agency Telephone Number (603) 271-1961	
1.11 Contractor Signature James P. Guarente Date: 10-6-2021		1.12 Name and Title of Contractor Signatory James P. Guarente, P.E. – Associate Principal	
1.13 State Agency Signature Robert R. Scott Date: 10-15-21		1.14 Name and Title of State Agency Signatory Robert R. Scott, Commissioner	
1.15 Approval by the N.H. Department of Administration, Division of Personnel *(if applicable)* By: Director, On:			
1.16 Approval by the Attorney General (Form, Substance and Execution) *(if applicable)* By: On: 10/26/2021			
1.17 Approval by the Governor and Executive Council *(if applicable)* G&C Item number: G&C Meeting Date:			

Contractor Initials JPG
Date 10-6-2021

2. SERVICES TO BE PERFORMED. The State of New Hampshire, acting through the agency identified in block 1.1 ("State"), engages contractor identified in block 1.3 ("Contractor") to perform, and the Contractor shall perform, the work or sale of goods, or both, identified and more particularly described in the attached EXHIBIT B which is incorporated herein by reference ("Services").

3. EFFECTIVE DATE/COMPLETION OF SERVICES.

3.1 Notwithstanding any provision of this Agreement to the contrary, and subject to the approval of the Governor and Executive Council of the State of New Hampshire, if applicable, this Agreement, and all obligations of the parties hereunder, shall become effective on the date the Governor and Executive Council approve this Agreement as indicated in block 1.17, unless no such approval is required, in which case the Agreement shall become effective on the date the Agreement is signed by the State Agency as shown in block 1.13 ("Effective Date").

3.2 If the Contractor commences the Services prior to the Effective Date, all Services performed by the Contractor prior to the Effective Date shall be performed at the sole risk of the Contractor, and in the event that this Agreement does not become effective, the State shall have no liability to the Contractor, including without limitation, any obligation to pay the Contractor for any costs incurred or Services performed. Contractor must complete all Services by the Completion Date specified in block 1.7.

4. CONDITIONAL NATURE OF AGREEMENT.

Notwithstanding any provision of this Agreement to the contrary, all obligations of the State hereunder, including, without limitation, the continuance of payments hereunder, are contingent upon the availability and continued appropriation of funds affected by any state or federal legislative or executive action that reduces, eliminates or otherwise modifies the appropriation or availability of funding for this Agreement and the Scope for Services provided in EXHIBIT B, in whole or in part. In no event shall the State be liable for any payments hereunder in excess of such available appropriated funds. In the event of a reduction or termination of appropriated funds, the State shall have the right to withhold payment until such funds become available, if ever, and shall have the right to reduce or terminate the Services under this Agreement immediately upon giving the Contractor notice of such reduction or termination. The State shall not be required to transfer funds from any other account or source to the Account identified in block 1.6 in the event funds in that Account are reduced or unavailable.

5. CONTRACT PRICE/PRICE LIMITATION/ PAYMENT.

5.1 The contract price, method of payment, and terms of payment are identified and more particularly described in EXHIBIT C which is incorporated herein by reference.

5.2 The payment by the State of the contract price shall be the only and the complete reimbursement to the Contractor for all expenses, of whatever nature incurred by the Contractor in the performance hereof, and shall be the only and the complete compensation to the Contractor for the Services. The State shall have no liability to the Contractor other than the contract price.

5.3 The State reserves the right to offset from any amounts otherwise payable to the Contractor under this Agreement those liquidated amounts required or permitted by N.H. RSA 80:7 through RSA 80:7-c or any other provision of law.

5.4 Notwithstanding any provision in this Agreement to the contrary, and notwithstanding unexpected circumstances, in no event shall the total of all payments authorized, or actually made hereunder, exceed the Price Limitation set forth in block 1.8.

6. COMPLIANCE BY CONTRACTOR WITH LAWS AND REGULATIONS/ EQUAL EMPLOYMENT OPPORTUNITY.

6.1 In connection with the performance of the Services, the Contractor shall comply with all applicable statutes, laws, regulations, and orders of federal, state, county or municipal authorities which impose any obligation or duty upon the Contractor, including, but not limited to, civil rights and equal employment opportunity laws. In addition, if this Agreement is funded in any part by monies of the United States, the Contractor shall comply with all federal executive orders, rules, regulations and statutes, and with any rules, regulations and guidelines as the State or the United States issue to implement these regulations. The Contractor shall also comply with all applicable intellectual property laws.

6.2 During the term of this Agreement, the Contractor shall not discriminate against employees or applicants for employment because of race, color, religion, creed, age, sex, handicap, sexual orientation, or national origin and will take affirmative action to prevent such discrimination.

6.3. The Contractor agrees to permit the State or United States access to any of the Contractor's books, records and accounts for the purpose of ascertaining compliance with all rules, regulations and orders, and the covenants, terms and conditions of this Agreement.

7. PERSONNEL.

7.1 The Contractor shall at its own expense provide all personnel necessary to perform the Services. The Contractor warrants that all personnel engaged in the Services shall be qualified to perform the Services, and shall be properly licensed and otherwise authorized to do so under all applicable laws.

7.2 Unless otherwise authorized in writing, during the term of this Agreement, and for a period of six (6) months after the Completion Date in block 1.7, the Contractor shall not hire, and shall not permit any subcontractor or other person, firm or corporation with whom it is engaged in a combined effort to perform the Services to hire, any person who is a State employee or official, who is materially involved in the procurement, administration or performance of this Agreement. This provision shall survive termination of this Agreement.

7.3 The Contracting Officer specified in block 1.9, or his or her successor, shall be the State's representative. In the event of any dispute concerning the interpretation of this Agreement, the Contracting Officer's decision shall be final for the State.

Contractor Initials GRJ
Date 10-6-2021

8. EVENT OF DEFAULT/REMEDIES.

8.1 Any one or more of the following acts or omissions of the Contractor shall constitute an event of default hereunder ("Event of Default"):

8.1.1 failure to perform the Services satisfactorily or on schedule;

8.1.2 failure to submit any report required hereunder; and/or

8.1.3 failure to perform any other covenant, term or condition of this Agreement.

8.2 Upon the occurrence of any Event of Default, the State may take any one, or more, or all, of the following actions:

8.2.1 give the Contractor a written notice specifying the Event of Default and requiring it to be remedied within, in the absence of a greater or lesser specification of time, thirty (30) days from the date of the notice; and if the Event of Default is not timely cured, terminate this Agreement, effective two (2) days after giving the Contractor notice of termination;

8.2.2 give the Contractor a written notice specifying the Event of Default and suspending all payments to be made under this Agreement and ordering that the portion of the contract price which would otherwise accrue to the Contractor during the period from the date of such notice until such time as the State determines that the Contractor has cured the Event of Default shall never be paid to the Contractor;

8.2.3 give the Contractor a written notice specifying the Event of Default and set off against any other obligations the State may owe to the Contractor any damages the State suffers by reason of any Event of Default; and/or

8.2.4 give the Contractor a written notice specifying the Event of Default, treat the Agreement as breached, terminate the Agreement and pursue any of its remedies at law or in equity, or both.

8.3. No failure by the State to enforce any provisions hereof after any Event of Default shall be deemed a waiver of its rights with regard to that Event of Default, or any subsequent Event of Default. No express failure to enforce any Event of Default shall be deemed a waiver of the right of the State to enforce each and all of the provisions hereof upon any further or other Event of Default on the part of the Contractor.

9. TERMINATION.

9.1 Notwithstanding paragraph 8, the State may, at its sole discretion, terminate the Agreement for any reason, in whole or in part, by thirty (30) days written notice to the Contractor that the State is exercising its option to terminate the Agreement.

9.2 In the event of an early termination of this Agreement for any reason other than the completion of the Services, the Contractor shall, at the State's discretion, deliver to the Contracting Officer, not later than fifteen (15) days after the date of termination, a report ("Termination Report") describing in detail all Services performed, and the contract price earned, to and including the date of termination. The form, subject matter, content, and number of copies of the Termination Report shall be identical to those of any Final Report described in the attached EXHIBIT B. In addition, at the State's discretion, the Contractor shall, within 15 days of notice of early termination, develop and submit to the State a Transition Plan for services under the Agreement.

10. DATA/ACCESS/CONFIDENTIALITY/ PRESERVATION.

10.1 As used in this Agreement, the word "data" shall mean all information and things developed or obtained during the performance of, or acquired or developed by reason of, this Agreement, including, but not limited to, all studies, reports, files, formulae, surveys, maps, charts, sound recordings, video recordings, pictorial reproductions, drawings, analyses, graphic representations, computer programs, computer printouts, notes, letters, memoranda, papers, and documents, all whether finished or unfinished.

10.2 All data and any property which has been received from the State or purchased with funds provided for that purpose under this Agreement, shall be the property of the State, and shall be returned to the State upon demand or upon termination of this Agreement for any reason.

10.3 Confidentiality of data shall be governed by N.H. RSA chapter 91-A or other existing law. Disclosure of data requires prior written approval of the State.

11. CONTRACTOR'S RELATION TO THE STATE. In the performance of this Agreement the Contractor is in all respects an independent contractor, and is neither an agent nor an employee of the State. Neither the Contractor nor any of its officers, employees, agents or members shall have authority to bind the State or receive any benefits, workers' compensation or other emoluments provided by the State to its employees.

12. ASSIGNMENT/DELEGATION/SUBCONTRACTS.

12.1 The Contractor shall not assign, or otherwise transfer any interest in this Agreement without the prior written notice, which shall be provided to the State at least fifteen (15) days prior to the assignment, and a written consent of the State. For purposes of this paragraph, a Change of Control shall constitute assignment. "Change of Control" means (a) merger, consolidation, or a transaction or series of related transactions in which a third party, together with its affiliates, becomes the direct or indirect owner of fifty percent (50%) or more of the voting shares or similar equity interests, or combined voting power of the Contractor, or (b) the sale of all or substantially all of the assets of the Contractor.

12.2 None of the Services shall be subcontracted by the Contractor without prior written notice and consent of the State. The State is entitled to copies of all subcontracts and assignment agreements and shall not be bound by any provisions contained in a subcontract or an assignment agreement to which it is not a party.

13. INDEMNIFICATION. Unless otherwise exempted by law, the Contractor shall indemnify and hold harmless the State, its officers and employees, from and against any and all claims, liabilities and costs for any personal injury or property damages, patent or copyright infringement, or other claims asserted against the State, its officers or employees, which arise out of (or which may be claimed to arise out of) the acts or omission of the

Contractor Initials JRJ

Date 10-6-2021

Contractor, or subcontractors, including but not limited to the negligence, reckless or intentional conduct. The State shall not be liable for any costs incurred by the Contractor arising under this paragraph 13. Notwithstanding the foregoing, nothing herein contained shall be deemed to constitute a waiver of the sovereign immunity of the State, which immunity is hereby reserved to the State. This covenant in paragraph 13 shall survive the termination of this Agreement.

14. INSURANCE.

14.1 The Contractor shall, at its sole expense, obtain and continuously maintain in force, and shall require any subcontractor or assignee to obtain and maintain in force, the following insurance:

14.1.1 commercial general liability insurance against all claims of bodily injury, death or property damage, in amounts of not less than $1,000,000 per occurrence and $2,000,000 aggregate or excess; and

14.1.2 special cause of loss coverage form covering all property subject to subparagraph 10.2 herein, in an amount not less than 80% of the whole replacement value of the property.

14.2 The policies described in subparagraph 14.1 herein shall be on policy forms and endorsements approved for use in the State of New Hampshire by the N.H. Department of Insurance, and issued by insurers licensed in the State of New Hampshire.

14.3 The Contractor shall furnish to the Contracting Officer identified in block 1.9, or his or her successor, a certificate(s) of insurance for all insurance required under this Agreement. Contractor shall also furnish to the Contracting Officer identified in block 1.9, or his or her successor, certificate(s) of insurance for all renewal(s) of insurance required under this Agreement no later than ten (10) days prior to the expiration date of each insurance policy. The certificate(s) of insurance and any renewals thereof shall be attached and are incorporated herein by reference.

15. WORKERS' COMPENSATION.

15.1 By signing this agreement, the Contractor agrees, certifies and warrants that the Contractor is in compliance with or exempt from, the requirements of N.H. RSA chapter 281-A *("Workers' Compensation")*.

15.2 To the extent the Contractor is subject to the requirements of N.H. RSA chapter 281-A, Contractor shall maintain, and require any subcontractor or assignee to secure and maintain, payment of Workers' Compensation in connection with activities which the person proposes to undertake pursuant to this Agreement. The Contractor shall furnish the Contracting Officer identified in block 1.9, or his or her successor, proof of Workers' Compensation in the manner described in N.H. RSA chapter 281-A and any applicable renewal(s) thereof, which shall be attached and are incorporated herein by reference. The State shall not be responsible for payment of any Workers' Compensation premiums or for any other claim or benefit for Contractor, or any subcontractor or employee of Contractor, which might arise under applicable State of New Hampshire Workers' Compensation laws in connection with the performance of the Services under this Agreement.

16. NOTICE. Any notice by a party hereto to the other party shall be deemed to have been duly delivered or given at the time of mailing by certified mail, postage prepaid, in a United States Post Office addressed to the parties at the addresses given in blocks 1.2 and 1.4, herein.

17. AMENDMENT. This Agreement may be amended, waived or discharged only by an instrument in writing signed by the parties hereto and only after approval of such amendment, waiver or discharge by the Governor and Executive Council of the State of New Hampshire unless no such approval is required under the circumstances pursuant to State law, rule or policy.

18. CHOICE OF LAW AND FORUM. This Agreement shall be governed, interpreted and construed in accordance with the laws of the State of New Hampshire, and is binding upon and inures to the benefit of the parties and their respective successors and assigns. The wording used in this Agreement is the wording chosen by the parties to express their mutual intent, and no rule of construction shall be applied against or in favor of any party. Any actions arising out of this Agreement shall be brought and maintained in New Hampshire Superior Court which shall have exclusive jurisdiction thereof.

19. CONFLICTING TERMS. In the event of a conflict between the terms of this P-37 form (as modified in EXHIBIT A) and/or attachments and amendment thereof, the terms of the P-37 (as modified in EXHIBIT A) shall control.

20. THIRD PARTIES. The parties hereto do not intend to benefit any third parties and this Agreement shall not be construed to confer any such benefit.

21. HEADINGS. The headings throughout the Agreement are for reference purposes only, and the words contained therein shall in no way be held to explain, modify, amplify or aid in the interpretation, construction or meaning of the provisions of this Agreement.

22. SPECIAL PROVISIONS. Additional or modifying provisions set forth in the attached EXHIBIT A are incorporated herein by reference.

23. SEVERABILITY. In the event any of the provisions of this Agreement are held by a court of competent jurisdiction to be contrary to any state or federal law, the remaining provisions of this Agreement will remain in full force and effect.

24. ENTIRE AGREEMENT. This Agreement, which may be executed in a number of counterparts, each of which shall be deemed an original, constitutes the entire agreement and understanding between the parties, and supersedes all prior agreements and understandings with respect to the subject matter hereof.

Contractor Initials JPS
Date 10-6-2021

EXHIBIT A
SPECIAL PROVISIONS

There are no Special Provisions.

Contractor Initials JPS
Date 10-6-2021

EXHIBIT B
SERVICES

Under this Agreement, the Contractor (GZA GeoEnvironmental, Inc., hereinafter referred to as GZA) is to provide inspection and engineering services including a conditions assessment of the existing flume and associated flume elements. The primary deliverable under this Contract consists of a report summarizing the inspection data, and associated discussion of possible repair/replacement options and methods to address the problems identified as the best options for repair or replacement required for each element. The work includes inspection services and report preparation as specified below:

1. Project Management/Pre-inspection Services Tasks – Project management and pre-inspection services tasks shall include the following:

   1.1. Project Coordination/Management

   GZA will provide internal and external project management and coordination. Project coordination will include coordination between subcontractors and NHDES. GZA will coordinate, manage, assist, and act as the quality assurance and quality control (QA/QC) manager for the inspection services performed by its team of subcontractors. GZA will subcontract Collins Engineers, Inc. (Collins) for the underwater inspection services, Accusonic, a Brand of ADS, LLC. (Accusonic) for the equipment inspection services, and Civil Design Consultants, Inc. for the site survey services.

   1.2. Project Kick-off Meeting

   GZA will conduct and participate in a video conference call kick-off meeting using a platform such as Zoom, Microsoft Teams, or another acceptable available platform. The purpose of the kickoff meeting will be to review project objectives and milestones, communications, project reporting, security/access requirements, and invoicing procedures.

   1.3. Existing Data Review

   GZA will coordinate with NHDES, local authorities, and the Department of Transportation to review existing files and gather an understanding of available documents, local geology, recent instrumentation data, and other pertinent information prior to performing the visual inspections. These will be reviewed prior to the inspections in order to document the status of previously identified deficiencies more efficiently and/or recommendations made in any previous inspection reports, as well as to identify conditions that may affect safety.

   1.4. Project Specific Health and Safety Plan

   GZA will create a Project Specific Health and Safety Plan (HASP). The GZA HASP will describe the personnel, equipment, anticipated hazards, and procedures that will be utilized by GZA during the field portions of the project. GZA's HASP will include general information about the site, our objectives while in the field, emergency medical facility locations and contact information, a site-specific overview and assessment of potential hazards. The HASP will be submitted to NHDES for review prior to the start of the work.

   Prior to performing their inspection, Collins will prepare a dive operation plan and job safety analysis (JSA), which will be submitted for review and approval prior to dive operations. Accusonic and Civil Design Consultants will prepare and follow their own HASPs.

Contractor Initials GPS
Date 10-6-2021

2. Inspection Services

GZA will coordinate, manage, assist, and act as the quality assurance and quality control (QA/QC) manager for the underwater inspection performed by Collins Engineers under subcontract with GZA. Accusonic will also be under subcontract with GZA and will inspect/assess the existing electronic instrumentation and hardware. The inspections will include the on-site visual inspection of the measuring flume which includes an underwater inspection of the submerged elements, photographic and video documentation, and technical descriptions of the condition of all measuring flume elements.

The visual inspections will be performed in the company of NHDES personnel. The inspection of the structure will be conducted in accordance with the requirements of the Project Specific Health and Safety Plan and the Dive Safety and Management Plan (Dive Operations Plan).

Task 1 is subdivided into three subtasks, Task 1A: Underwater Inspection, Task 1B: Equipment Inspection, Task 1C: Site Survey, and Task 1D: GZA Site Observations and Above Water Inspection.

2.1. Underwater Inspection

Under subcontract with GZA, Collins will provide a three-person team of professional engineer/divers and equipment necessary to perform a routine level underwater inspection of the earthen embankment, masonry structures, timber facing, and PVC conduits that house the flow meter and transducers on the measuring flume. A visual and tactile inspection will be conducted along the accessible portions of the masonry structures and wood cladding between the left and right flume abutments. The inspection will be extended to the channel banks so as to include the wood-cladding perpendicular to the flow and the earth embankment portion. The overall condition and discrete locations of significant defects will be identified and qualified. Collins will provide measurements of the flume structure and will observe the overall condition of the timber lined floor of the flume noting any significant deterioration and silt/debris accumulation. Collins will complete a visual condition evaluation of the instrumentation, considering overall condition and assessment of its connections. A visual inspection of the earthen embankment will also be completed. The intent of the visual and tactile inspection is to assess the general condition of the structure, assign a condition assessment rating in accordance with ASCE MOP 130 – Waterfront Facilities Inspection and Assessment, provide recommendations for future repairs and maintenance, and develop an engineer's opinion of probable repair cost. During the inspection, Collins will document existing conditions with photographs and audio/video.

The inspection report will include:

1. A summary of the results of the visual inspection. This portion of the report will reference specific photographs taken during the inspection to document key features and provide historical continuity with previous inspections if available. Photographs to document key observed conditions will also be included.
2. A summary of the results of the available instrument condition (underwater portions).
3. Conclusions and recommendations for any short-term or long-term maintenance/remedial activities or investigations, including a recommended timetable for completion.

Contractor Initials JPJ
Date 10-6-2021

An anticipated table of contents for the Underwater Inspection Report has been provided below:

1. GENERAL DESCRIPTION OF STRUCTURE
2. METHOD OF INSPECTION
3. INSPECTION FINDINGS
   a. Overall
   b. Flume Structure
   c. Masonry Walls
   d. Embankment
   e. Instrumentation
4. EVALUATION AND RECOMMENDATIONS

We note that based on information obtained from NHDES during our May 11, 2021 site visit, GZA and our Subcontractors understand that the Owner can close the outfall to the Lakeport Dam and reduce the flow to near zero or otherwise reduce flow so that it is safe for a dive inspection of the flume ad flume area. (i.e. we anticipate the inspection to be completed when there is little to no flow). Collins and GZA will coordinate with the Owner/Client to confirm that all active intakes, outfalls, and pumps will be locked out and tagged out prior to performing the inspection. All diving operations will be completed using surface supplied air diving equipment in accordance with OSHA 29 CFR 1910 Subpart T, Commercial Diving Operations and will be staged from the earthen embankment of the measuring flume.

GZA will provide general oversite and assistance to Collins during this task. GZA will also review the underwater inspection report from a QA/QC standpoint. The inspection report will be included as an attachment to the technical report.

2.2. Equipment Inspection

Accusonic will be retained by GZA to perform an assessment of the existing Accusonic Model 7510 Flowmeter. The assessment will include a review of Accusonic's files for information pertaining to the original installation. Accusonic will also provide an on-site field service technician to test and attempt to repair technical issues that may be observed while on-site for the assessment. The field service technician will specifically perform an inspection on the following:

Flowmeter console:

1. Check input supply voltage to the meter and ensure the front panel display is operational.
2. Check filter jumpers to ensure they are in the correct position.
3. Check all ribbon cable connectors, ensure they are still fully engaged and inspect if there is any damage.
4. Inspect transducer cables to ensure that they are still terminated and labeled. Megger (test for resistance) all cables and record data.
5. Check level input signal(s) and their configurations.
6. Check operation of handheld device.
7. Examine and record all path data: Gain (dB), detection method, V-sound, Gain %, signal/noise ratio, 1st negative values and peak to peak values.
8. Download configuration file from flowmeter.

Contractor Initials GFS
Date 10-6-2021

With NHDES assistance, Accusonic will download the file and review as a quality assurance check of the existing system. A copy of the configuration file will be included in the report.

The Accusonic technician will also check the following on the transducers:

1. Remove each assembly pole (4 total) from mounting rack/support to visually inspect.
2. Check transducer faces (8 transducers total) and remove any debris/build-up.
3. Check mounting assemblies for damage.
4. Check alignment and re-align transducers if possible.
5. Inspect cables and/or cable housing for damage.

Accusonic will summarize their inspection notes and recommendations into a letter report to GZA, which will be included as an attachment to GZA final technical report.

2.3. Site Survey

A topographic and bathymetric survey will be performed by Civil Design Consultants (CDC) under subcontract with GZA.

GZA and CDC will review the survey limits with NHDES with consideration to operational and safety requirements. The survey will be performed using: 1) UAS (drone) technology, 2) eco-sounding from an unmanned boat, and 3) conventional land surveying techniques.

The aerial drone portion of the survey will be performed using an Autel EVO 2 Pro (or equivalent) equipped with 360-degree obstacle avoidance and a 20-MP RGB camera. The camera will collect a high resolution, geo-referenced image. For underwater portions (bathymetry), a 200 BL Single Beam echosounder (or equivalent) will be used. Prior to conducting this portion of the survey, a flight plan will be prepared to ensure drone operations will take place at a safe distance from vehicular and pedestrian traffic.

Once the survey data is gathered, the aerial imagery will be processed using a Pix4D software which will create a three-dimensional, colorized, densified, georeferenced point cloud and high resolution orthophoto. The corrected point files from both the aerial and bathymetric portions of the survey will be combined to create a three-dimensional draft existing conditions plan. A field crew will return to the project site to set control points throughout the area of interest. Each control point will be located with a Leica GPS RTK unit. The field crew will also perform a field check of the draft existing conditions plan, locate all site features obscured from the aerial or bathymetric survey, and check critical elevations and locations through conventional survey techniques. This information will be reviewed and stamped by a Professional Land Surveyor licensed in the State of New Hampshire.

2.4. GZA Site Observations and Above Water Inspection

GZA will provide a three-person team and the necessary equipment to perform a routine level inspection of the above water flume structures that were previously listed in Task 2.1. Two members of the team will use a boat to assess the structures on the water. The third member of the team will assess the structures from land and provide support for subcontractors as needed. The overall condition and discrete locations of significant defects will be identified and qualified. During the inspection, GZA will document existing conditions with photographs and audio/video (as applicable).

Contractor Initials JCJ
Date 10-6-2021

GZA will provide a summary of the results of the visual inspection in the Task 3 Technical Report. The summary will reference specific photographs taken during the inspection to document key features and observed conditions.

3. Technical Report

GZA will prepare a Technical Report for the flume structure as described herein. At a minimum, the Technical Report will include:

- A summary of available existing records and files, from NHDES and others, for the gauging station, measuring bridge, access walkway, and general site layout.
- Engineering evaluation, including budgetary cost estimates, for at least three options for providing the means to monitor flows just upstream of the dam. One of the options will be the repair/reconstruction of the existing measuring flume, and another option will be removal of the flume.
- Alternative options will include a technical discussion of the final disposition of the existing measuring flume structure(s).
- Technical discussion of the means and methods for water control and conducting the repairs.

GZA will gather, review, and organize the deliverables from the three subconsultants into a summary to be included in the Technical Report. The inspection report will include a summary of the work, findings, observations, photos, and sketches showing approximate defect locations. Accusonic will provide a summary report that will be summarized in the technical report and included as an attachment. CDC's site survey will be in electronic AutoCAD format as well as a PDF stamped by a licensed surveyor registered in New Hampshire.

The above-mentioned items will be incorporated into the Technical Report to be prepared by GZA. An anticipated table of contents has been provided below.

Anticipated Table of Contents:

1. EXECUTIVE SUMMARY
2. PREFACE
3. PROJECT INFORMATION
    a. General
    b. Authority
    c. Purpose of Work
    d. Definitions
    e. Description of Project
    f. General
    g. Location
    h. Owner/Operator
    i. Purpose of Structure
    j. Description of the Structure and Appurtenances
    k. Pertinent Data
4. ENGINEERING DATA
    a. General
    b. Drainage Area

Contractor Initials JPJ
Date 10-6-2021

c. Reservoir Information
d. Discharges at the Site
e. General Elevations (feet)
f. Flume Structure
g. Design and Construction Records

5. INSPECTION
   a. Inspection Report Summary
   b. Topographic Survey
   c. Bathymetric Survey
   d. Wetland and Resource Area Discussion
6. OPERATIONAL PROCEDURES
   a. Maintenance Procedures
7. ASSESSMENTS, RECOMMENDATIONS, AND REMEDIAL MEASURES
   a. Flume Assessments
   b. Routine Activities
   c. Additional Studies and Analyses
   d. Required Maintenance and Repairs
   e. Remedial Measures
   f. Alternatives Analysis
   g. Flume Removal
   h. Impractical Alternatives
   i. Opinion of Probable Construction Costs
   j. Tables
   k. Figures
   l. Appendices

One draft copy of the report will be submitted electronically to NHDES for review and comment. Upon receiving comments, the final report will be prepared and sealed by a New Hampshire Professional Engineer. The final report will be submitted electronically in PDF format.

Contractor Initials JFJ
Date 10-6-2021

LABOR	Units	[redacted]	TASK 2.4 Site Observations and Water Inspection Qty.	Fee	TASK 3.1 Technical Report Qty.	Fee	Man-hours	Fee
GZA Labor Categories								
Engineering Principal	hr.	$64.94	2	$400.03	8	$1,600.12	31	$8,200.47
Senior Technical Specialist	hr.	$59.00	4	$726.88	8	$1,453.76	12	$2,180.64
Project Manager	hr.	$45.00	20	$2,772.00	55	$7,623.00	116	$16,077.60
Project Engineer	hr.	$34.00	40	$4,188.80	60	$6,283.20	132	$13,823.04
Dam Engineering CAD Draftsman	hr.	$29.00		$0.00	40	$3,572.80	40	$3,572.80
Administrative Assistant	hr.	$26.50		$0.00	2	$163.24	8	$652.96
LABOR PRICE TOTAL			66	$8,087.71	173	$20,696.12	339	$42,507.51

REIMBURSABLE EXPENSES	Units	[redacted]	Qty.	Fee	Qty.	Fee		
Mileage	mi.		00	$275.00		$0.00	500	$275.00
Field Equipment & Materials	l.s.		00	$500.00		$0.00	500	$500.00
CAD Computer Charge	hr.			$0.00		$0.00	0	$0.00
Reproduction	l.s.		50	$50.00	50	$50.00	300	$300.00
Cadd Bond Paper	sq. ft.			$0.00		$0.00	0	$0.00
RE Per Diem Expenses	day			$0.00		$0.00	0	$0.00
SUBCONTRACTOR COSTS	**Units**	[redacted]	**Qty.**	**Fee**	**Qty.**	**Fee**		
Collins Engineering, Inc.	l.s.			$0.00		$0.00	12,500	$12,500.00
Accousonic	l.s.			$0.00		$0.00	6,205	$6,205.00
Civil Design Consultants, Inc.	l.s.			$0.00		$0.00	12,800	$12,800.00
				$0.00		$0.00		
				$0.00		$0.00		
				$0.00		$0.00		
10% Mark-Up on Qualified Expenses				$82.50		$5.00		$3,258.00
EXPENSES TOTAL				$825.00		$50.00		$32,580.00
EXPENSES TOTAL (with mark-up)				$907.50		$55.00		$35,838.00
TOTAL				$8,995.21		$20,751.12		$78,345.51

Project Management Services	$12,589.22
Inspection Services	$25,005.17
Technical Report	$20,751.12

Contractor Initials JPS

Date 10-6-2021

TABLE C-1

Unit rate is established at individual hourly rate multiplied by a factor of 1.75 to account for overhead and fridge benefits plus and additional 12% profit multiplier.

LABOR	Units		Unit Rate	Man Hours	Fee
GZA Labor Categories					
Dam Engineering Principal	hr.	$64.94	$200.02	31	$6,200.47
Senior Technical Specialist	hr.	$59.00	$181.72	12	$2,180.64
Project Manager	hr.	$45.00	$138.60	116	$16,077.60
Project Engineer	hr.	$34.00	$104.72	132	$13,823.04
Dam Engineering CAD Draftsman	hr.	$29.00	$89.32	40	$3,572.80
Administrative Assistant	hr.	$26.50	$81.62	8	$652.96
				Total Labor	**$42,507.51**

REIMBURSABLE EXPENSES	Units	Unit Rate		
Mileage	mi.	$0.55	500	$275.00
Field Equipment & Materials	l.s.	$1.00	500	$500.00
CAD Computer Charge	hr.	$12.00	0	$0.00
Reproduction	l.s.	$1.00	300	$300.00
Cadd Bond Paper	sq. ft.	$0.15	0	$0.00
RE Per Diem Expenses	day	$146.00	0	$0.00
		Total Reimbursible Expenses		$1,075.00

SUBCONTRACTOR COSTS			
Collins Engineering, Inc.	l.s.		$12,500.00
Accousonic	l.s.		$6,205.00
Civil Design Consultants, Inc.	l.s.		$12,800.00
		Total SubContractor Costs	$31,505.00
10% Mark-Up on Qualified Expenses		10%	$3,258.00
		PROJECT TOTAL	**$78,345.51**

Contractor Initials GA
Date 10-6-2021

EXHIBIT C
CONTRACT PRICE AND METHOD OF PAYMENT

All services shall be performed to the satisfaction of DES before payment is made. All payments shall be made upon receipt and approval of stated outputs and upon receipt of an associated invoice. The billing is to be done on a monthly basis as a percentage completion of tasks as per the work program detailed in Exhibit B. Table B-1 in Exhibit B provides a detailed breakdown of costs for the project.

A detailed itemization of the cost by task and personnel category is contained in the attached Table C-1. Billing will be based on a time and materials basis. Hourly labor rates (i.e. fully loaded) are based on direct labor rates with an effective multiplier (DS + OH + fee) of 3.08.

The total cost of the contract shall not to exceed $78,345.51. DES agrees to pay the invoices as submitted by the Contractor. Invoices are subject to the approval of the Contract Officer before payment is processed.

Contractor Initials JRJ
Date 10-6-2021

State of New Hampshire

Department of State

CERTIFICATE

I, William M. Gardner, Secretary of State of the State of New Hampshire, do hereby certify that GZA GEOENVIRONMENTAL, INC. is a Massachusetts Profit Corporation registered to transact business in New Hampshire on October 28, 1981. I further certify that all fees and documents required by the Secretary of State's office have been received and is in good standing as far as this office is concerned.

Business ID: **9876**

Certificate Number: **0005367127**

IN TESTIMONY WHEREOF,
I hereto set my hand and cause to be affixed
the Seal of the State of New Hampshire,
this 13th day of May A.D. 2021.

William M. Gardner
Secretary of State

GZA GeoEnvironmental, Inc.

SECRETARY'S CERTIFICATE

I, Bradford W. Roberts, Secretary of GZA GeoEnvironmental, Inc. (the "Company"), herby certify

that James P. Guarente is an Associate Principal and Vice President of the Company and, pursuant to a vote adopted by the unanimous written consent of the Board of Directors of the Company on July 14, 2021 , he is authorized to execute and deliver contracts, bonds, and other documents related to the performance of professional services for the Engineering Technical Services for Condition and Repair Technical Report for the Measuring Flume at the Lakeport Dam Project for the New Hampshire Department of Environmental Services in the name and on behalf of the Company, and to affix the Corporate Seal thereto, if and as required.

I further certify that the aforesaid unanimous written consent and the authority vested thereby

have not been amended or revoked and are still in full force and effect.

WITNESS my hand and seal of the Corporation this 5th day of October 2021.

(S

Bradford W. Roberts, Secretary

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 10/5/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Risk Strategies Company
160 Federal St. 4th Floor
Boston, MA 02110

CONTACT NAME:
PHONE (A/C, No, Ext): 617-330-5700 FAX (A/C, No): 617-439-3752
E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A: Great Divide Insurance Company/ Nautilus Ins Group	25224
INSURER B: The First Liberty Insurance Corp	33588
INSURER C:	
INSURER D: Commerce & Industry Insurance Company	19410
INSURER E: Liberty Mutual Fire Insurance Company	23035
INSURER F:	

INSURED
GZA GeoEnvironmental, Inc.
249 Vanderbilt Avenue (Corporate)
Norwood MA 02062

COVERAGES CERTIFICATE NUMBER: 64404869 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	✓ COMMERCIAL GENERAL LIABILITY			GLP2007957-18	2/28/2021	2/28/2022	EACH OCCURRENCE	$ 1,000,000
	~~CLAIMS-MADE ✓ OCCUR~~						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 500,000
	✓ Deductible - $25,000						MED EXP (Any one person)	$ 10,000
	per occurence BI/PD						PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	✓ POLICY ☐ PRO-JECT ☐ LOC						PRODUCTS - COMP/OP AGG	$ 2,000,000
	OTHER:							$
B	AUTOMOBILE LIABILITY			AS6-Z11-261208-011	2/28/2021	2/28/2022	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	☐ ANY AUTO						BODILY INJURY (Per person)	$
	✓ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	✓ HIRED AUTOS ONLY ✓ NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
	☐ UMBRELLA LIAB ☐ OCCUR						EACH OCCURRENCE	$
	☐ EXCESS LIAB ☐ CLAIMS-MADE						AGGREGATE	$
	☐ DED ☐ RETENTION $							$
E	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			WC2-Z11-261208-041	2/28/2021	2/28/2022	✓ PER STATUTE ☐ OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: N	N/A					E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
D	Contractors Pollution Liability			CPO 11710520	2/28/2021	2/28/2022	Each Claim/ $1,000,000 Aggregate $1,000,000	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Re: Job #03.P000069.21, Engineering Technical Services fo Condition and Repair Technical Report for the Measuring Flume at the Lakeport Dam, Engineering Services, Laconia, NH.

CERTIFICATE HOLDER

03.P000069.21

NH Department of Environmental Services
Attn: James Gallagher
29 Hazen Drive
Concord NH 03302

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

RSC Insurance Brokerage

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Attachment A
Procurement Process

The procurement process for this contract was conducted as follows:

The New Hampshire Department of Environmental Services (NHDES) operates and maintains a measuring flume just upstream from the Lakeport Dam to monitor flows being released from the dam. NHDES issued a Request For Proposals (RFP) on April 23, 2021 from qualified engineers to provide a condition assessment and recommendations for repair, replacement or abandonment in a technical report for the measuring flume. NHDES posted the RFP on the Department of Administrative Services and the NHDES websites. Attendance at an on-site meeting was a prerequisite for submitting a proposal, and NHDES held the meeting on May 11, 2021.

NHDES received proposals from the following interested parties:

- Stephens Associates Consulting Engineers – Brentwood, NH
- Civilworks New England – Dover, NH
- Dubois & King, Inc. – Gilford, NH
- Gomez and Sullivan Engineers, Henniker, NH
- GZA GeoEnvironmental, Inc. – Norwood, MA
- Schnabel Engineering – Clifton Park, NY
- SLR International Corporation – Bedford, NH

The procurement process for this Agreement, was conducted in accordance with NH RSA 21-I:22. NHDES established an internal selection committee to review and rank the responses to the RFP. The committee consisted of James W. Gallagher, Jr., P.E., the Chief Engineer for the Dam Bureau with more than 45 years of experience with dam design, contracting, construction and safety; Daniel Mattaini, P.E., Administrator of the Operations & Maintenance Section of the Dam Bureau who has over 30 years of experience as an engineer for hydrologic and dam related projects for the U.S. Geological Survey and the Dam Bureau; and Kent R. Finemore, P.E., Assistant Chief Engineer of the Dam Bureau, who has over 25 years of experience as an engineer for civil design and construction.

Members of the selection committee reviewed the proposals, and ranked the seven firms. Rankings were based on:

- Professional experience, including specific projects, with the engineering assessment of dams and marine structures of similar size and located in similar aquatic environments
- Professional experience with design, water control, and construction of dams and marine structures
- Professional experience with the assessment, specification and installation of electronic equipment for measuring water and flow parameters in riverine or marine environments
- Quality and content of proposed scope of services
- Timeline for completion based on the number of weeks following approval of an Agreement with NHDES

The firm ranked first by the majority of the members of the Selection Committee would be the selected firm with whom NHDES would negotiate a final scope of work and price.

A scoring summary is provided in Table AT-1. As shown in the summary, all three members of the Selection Committee chose GZA GeoEnvironmental, Inc., as the most qualified and they were selected. Following the selection, NHDES commenced negotiations with GZA GeoEnvironmental, Inc., to establish a fee schedule for the Statement of Work as approved by NHDES. The negotiated fees are fair and reasonable for the approved Statement of Work.

Table AT-1
Firm Rankings

Consultant Firm	Reviewer 1	Reviewer 2	Reviewer 3	Final Rank
Stephens Associates Consulting Engineers	4	5	4	6
Civilworks New England	2	4	4	4
Dubois & King, Inc.	3	2	2	2
~~Gomez and Sullivan Engineers~~	4	3	5	5
GZA GeoEnvironmental, Inc.	1	1	1	1
Schnabel Engineering	5	4	5	7
SLR International Corporation	3	3	3	3