The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner

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September 5, 2025

Her Excellency, Governor Kelly A. Ayotte
and the Honorable Council
State House
Concord, New Hampshire 03301

REQUESTED ACTION

Authorize the Department of Environmental Services (NHDES) to enter into a **SOLE SOURCE** contract with Michael J. Quinn, Rye, NH, (VC # 555173-B001), in the amount of $33,100 to perform 1:24,000-scale bedrock geologic mapping of the southern half of the Derry quadrangle, effective upon Governor and Council approval through December 31, 2026. 100% Federal Funds.

Funding is available in the following account:

	FY2026
03-44-44-441018-5564-102-500731	$33,100

Dept. Environmental Services, DWSRF BIL Administration, Contracts for Program Services

EXPLANATION

This agreement is **SOLE SOURCE** because Michael Quinn is a geologist who has the specialized skillset and capabilities to perform bedrock geologic mapping in New England. NHDES and the State of New Hampshire are in need of specific expertise that is capable of performing bedrock geologic mapping in interior southern New Hampshire in order to adequately determine the lithology and structures of bedrock at the 1:24,000-scale to support groundwater quality concerns in this region of the state. NHDES uses bedrock geologic map information to address issues related to per- and polyfluoroalkyl substances (PFAS) in groundwater. Field-based mapping of the lithology and structural geology constrains potential fracture-controlled pathways for fluids in the bedrock aquifers in this region. This information is, and will be, used to inform long-term management strategies. Public confidence in the data and geologic map quality is crucial, because the final output products will directly assist the long-term management of groundwater in this region.

NHDES has historically utilized a suite of individual geologists to conduct 1:24,000-scale surficial and bedrock geologic mapping in New Hampshire. Geologists who possess such specific expertise are limited and the members of this existing pool who have historically provided these services are aging out of their roles. In June and October of 2024, respectively, NHDES issued both a Request for Information (RFI) and a Request for Qualifications (RFQ) to solicit entities and organizations interested in performing quadrangle-based bedrock geologic mapping, which were advertised in-state, regionally, and nationally. NHDES did not receive any interested responses. Thus, in order to complete bedrock mapping in interior southern New Hampshire, a project team approach has had to be assembled, which includes geologic mappers from the existing limited decreasing pool, the engagement of the USGS, and introduction to other mapping geologists via the existing pool of mappers. Dr. Quinn is such an individual, and has previous experience in the performance of bedrock geologic mapping. Through attendance at the New Hampshire Geological Survey's (NHGS) collaborative field reviews for bedrock mapping projects in the state, the State Geologist and NHGS staff members evaluated Dr. Quinn's capabilities, and have concluded that he is well qualified to conduct the mapping in this region of the state. Dr. Quinn will work under the direction of the

State Geologist, who will review and approve all work before making a payment recommendation to the Department.

A study commissioned by the American Geosciences Institute to evaluate the costs and benefits of geologic mapping in the United States from 1994 to 2019, and published in 2025, found that the average cost of production of a detailed 1:24,000-scale to 1:100,000-scale geologic map ranges from approximately $42,000 to $123,000, and these values were verified by actual costs reported by the USGS. Thus, the value that New Hampshire has placed on funding production of a full 1:24,000-scale quadrangle remains at the low end of this national range and is consistent with the low end of standard market rates for geoscientists in the United States, relative to the caliber and technical expertise of the individuals who are required to accurately conduct geologic mapping. Rates are based on mappers' classification as Geoscientists, according to the Occupational Information Network (O*NET).

In addition, contract mappers assume all costs for transportation (to and from field sites), meals, lodging and any required ArcGIS licenses as part of this contract price. Additionally, the geologic mappers who NHDES secures to conduct mapping are genuinely dedicated to the field of geology and the practice of geologic mapping in New Hampshire. Each mapper who is under contract contributes additional time and effort to produce maps of high quality that exceeds the 600 hours (300 for a half quadrangle) that NHDES currently funds them for.

Additional funds included in the contract beyond the base cost of $24,900 for the half quadrangle are to support any necessary analyses of rock samples to refine determination of the bedrock map units, as needed, given that the bedrock of southern New Hampshire represents some of the most complex in the northeastern United States.

This contract funds the field-based bedrock mapping of the southern half of the 1:24,000-scale Derry quadrangle and attendant geochronologic and petrographic analyses to refine the character of the rock types for bedrock map unit delineation. Dr. Quinn will collect data on the locations, types and measured orientations of features observed in outcrop to support the identification of the fractures in the bedrock.

The agreement has been approved by the Office of the Attorney General as to form, execution, and content.

We respectfully request your approval of this item.

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 New Hampshire Department of Environmental Services		1.2 State Agency Address 29 Hazen Drive, P.O. Box 95 Concord, NH 03302-0095	
1.3 Contractor Name Michael J. Quinn		1.4 Contractor Address 139 Cable Road Rye, NH 03870	
1.5 Contractor Phone Number (603) 205-3724	1.6 Account Unit and Class 03-44-44-441018-5564-102	1.7 Completion Date 12/31/2026	1.8 Price Limitation $33,100
1.9 Contracting Officer for State Agency Shane Csiki, State Geologist and Director		1.10 State Agency Telephone Number (603) 271-1975	
1.11 Contractor Signature Michael Quinn Date: 08/25/2025		1.12 Name and Title of Contractor Signatory Michael J. Quinn, Geologist	
1.13 State Agency Signature Date: 9/8/25		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: Keely Lovato Keely Lovato On: 9/18/25			
1.17 Approval by the Governor and Executive Council *(if applicable)* G&C Item number: G&C Meeting Date:			

Contractor Initials MJQ
Date 8/25/25

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, 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.

3.3 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. 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 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, 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 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. 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.

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 The State's liability under this Agreement shall be limited to monetary damages not to exceed the total fees paid. The Contractor agrees that it has an adequate remedy at law for any breach of this Agreement by the State and hereby waives any right to specific performance or other equitable remedies against the State.

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 and the Governor's order on Respect and Civility in the Workplace, Executive order 2020-01. 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 age, sex, sexual orientation, race, color, marital status, physical or mental disability, religious creed, national origin, gender identity, or gender expression, and will take affirmative action to prevent such discrimination, unless exempt by state or federal law. The Contractor shall ensure any subcontractors comply with these nondiscrimination requirements.

6.3 No payments or transfers of value by Contractor or its representatives in connection with this Agreement have or shall be made which have the purpose or effect of public or commercial bribery, or acceptance of or acquiescence in extortion, kickbacks, or other unlawful or improper means of obtaining business.

6.4. 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 this Agreement and all rules, regulations and orders pertaining to 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 The Contracting Officer specified in block 1.9, or any successor, shall be the State's point of contact pertaining to this Agreement.

Contractor Initials MSQ
Date 8/25/25

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) calendar days from the date of the notice; and if the Event of Default is not timely cured, terminate this Agreement, effective two (2) calendar 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.

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) calendar 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) calendar 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. In addition, at the State's discretion, the Contractor shall, within fifteen (15) calendar days of notice of early termination, develop and submit to the State a transition plan for Services under the Agreement.

10. PROPERTY OWNERSHIP/DISCLOSURE.

10.1 As used in this Agreement, the word "Property" shall mean all data, 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 Disclosure of data, information and other records shall be governed by N.H. RSA chapter 91-A and/or other applicable law. Disclosure 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 Contractor shall provide the State written notice at least fifteen (15) calendar days before any proposed assignment, delegation, or other transfer of any interest in this Agreement. No such assignment, delegation, or other transfer shall be effective without the written consent of the State.

12.2 For purposes of paragraph 12, 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.

12.3 None of the Services shall be subcontracted by the Contractor without prior written notice and consent of the State.

12.4 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. The Contractor shall indemnify, defend, and hold harmless the State, its officers, and employees from and against all actions, claims, damages, demands, judgments, fines, liabilities, losses, and other expenses, including, without limitation, reasonable attorneys' fees, arising out of or relating to this Agreement directly or indirectly arising from death, personal injury, property damage, intellectual property infringement, or other claims asserted against the State, its officers, or employees caused by the acts or omissions of negligence, reckless or willful misconduct, or fraud by the Contractor, its employees, agents, or subcontractors. 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 State's sovereign immunity, which immunity is hereby reserved to the State. This covenant in paragraph 13 shall survive the termination of this Agreement.

Contractor Initials MJQ

Date 8/25/25

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 any successor, a certificate(s) of insurance for all insurance required under this Agreement. At the request of the Contracting Officer, or any successor, the Contractor shall provide certificate(s) of insurance for all renewal(s) of insurance required under this Agreement. 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 any 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. WAIVER OF BREACH. A State's failure to enforce its rights with respect to any single or continuing breach of this Agreement shall not act as a waiver of the right of the State to later enforce any such rights or to enforce any other or any subsequent breach.

17. 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.

18. 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.

19. CHOICE OF LAW AND FORUM.

19.1 This Agreement shall be governed, interpreted and construed in accordance with the laws of the State of New Hampshire except where the Federal supremacy clause requires otherwise. 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.

19.2 Any actions arising out of this Agreement, including the breach or alleged breach thereof, may not be submitted to binding arbitration, but must, instead, be brought and maintained in the Merrimack County Superior Court of New Hampshire which shall have exclusive jurisdiction thereof.

20. CONFLICTING TERMS. In the event of a conflict between the terms of this P-37 form (as modified in EXHIBIT A) and any other portion of this Agreement including any attachments thereto, the terms of the P-37 (as modified in EXHIBIT A) shall control.

21. THIRD PARTIES. This Agreement is being entered into for the sole benefit of the parties hereto, and nothing herein, express or implied, is intended to or will confer any legal or equitable right, benefit, or remedy of any nature upon any other person.

22. 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.

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

24. FURTHER ASSURANCES. The Contractor, along with its agents and affiliates, shall, at its own cost and expense, execute any additional documents and take such further actions as may be reasonably required to carry out the provisions of this Agreement and give effect to the transactions contemplated hereby.

25. 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.

26. 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 MIQ
Date 8/25/25

EXHIBIT A
SPECIAL TERMS AND CONDITIONS

Michael J. Quinn, PhD

Federal Funds paid under this agreement are from a Grant to the State of New Hampshire from the U.S. Environmental Protection Agency, Drinking Water State Revolving Fund Set-Asides under CFDA #66.468. All applicable requirements, regulations, provisions, terms and conditions of this Federal Grant are hereby adopted in full force and effect to the relationship between this Department and the grantee.

Changes to the Scope of Work or reallocation of grant funds require NHDES approval in advance.

Work must be completed by the completion date listed on the grant agreement (Section 1.7).

Paragraph 14 of the General Provisions of the standard state agreement is expressly waived. This provision is being waived because this is an individual and carrying this general liability insurance would be cost prohibitive.

All communications regarding any issue, including administrative and technical that pertains to this contract shall be between the Contractor and the State Geologist, who serves as the State Contracting Officer for the contract. The Contractor may freely communicate with any staff member of the New Hampshire Geological Survey (NHGS) with regard to the technical components of the scope of work undertaken through this contract, provided that the State Geologist is included on all written communications, including e-mail. In communication with one or more members of NHGS staff, the Contractor may communicate using either one of two methods:

(1) Send an e-mail directly to the NHGS staff member, with the NHGS Geologic Mapping shared e-mail address cc'd
(2) Send an e-mail to the NHGS Geologic Mapping shared e-mail address directly, while identifying the staff member who your e-mail is addressed to in the communications

All questions regarding contract administrative concerns, including scope of work modifications, activities, deliverables, timeline, or that relate to questions or the seeking of exceptions to standard map formats shall be addressed to the State Geologist directly via e-mail to the NHGS Geologic Mapping shared e-mail address.

Additional or modifying provisions to the enumerated headings in the form P-37 are provided below.

Contractor Initials MJQ
Date 8/25/25

EXHIBIT B
SCOPE OF WORK

The Contractor will perform the following tasks:

I. **Field Data Collection in the Derry Quadrangle (South Half)**

A. Conduct field data collection in the south half of the Derry Quadrangle sufficient to allow correct, interpreted delineation of bedrock geologic map units in the area, in electronic point and line format

B. Collect data on the mineralogy, texture, lithology, contacts between lithologic units, faults, joints, and other discontinuities with attention to such structures that may be water-bearing, bedding, foliations, and fold hinges at all bedrock outcrops and exposures that may be practicably accessed

C. Obtain and record the location, orientation, and type of planar features in bedrock outcrops during field mapping and provide to NHGS as the data is collected

D. Collect high-quality photographs of major geologic features, which shall be provided to NHGS as raw digital image files, separate from inclusion in a Word or PDF document

E. NHGS will contribute a staff member to assist the Contractor with field work

1. As it relates to logistical assistance in conducting mapping at bedrock outcrops on limited access divided highways
2. Additional field assistance as may be determined to be needed by mutual agreement between the State Geologist and the Contractor
3. Joint field activities will be arranged on dates and at times, and in a form, mutually agreeable to the State Geologist and the Contractor

F. The Contractor will need to obtain permission from landowners before entering private property. Such permission may be obtained in writing or verbally by speaking with landowners prior to property access.

1. Provide NHGS with a copy of all logs indicating dates and times of contact with landowners
2. NHGS can provide assistance in identifying properties that may be good points for field access, and contacting landowners if necessary, based upon mutual agreement between the Contractor and the State Geologist
3. NHGS will provide documentation in the form of a letter from the State Geologist explaining the purpose of the mapping and reason for requesting access to private property

II. **Laboratory Analyses, Thin Sections, and Petrography**

A. Funds are included in this contract to refine mineralogic, geochemical, and the chronologic nature of units under study. Sample selection will be the responsibility of the Contractor, while the number and nature of the analyses performed will be by agreement with NHGS and via collaboration with adjacent mappers, and that does not exceed the sample number and dollar value allotted and stipulated in Section II(B) and in Exhibit C.

B. Potential laboratory analyses—as deemed appropriate to answer specific geological questions, may include quantities up to, but that do not exceed the quantities specified as follows:

a. Thin section preparation –20 samples
b. Whole-rock geochemistry –15 samples
c. Whole-rock mineralogical scans –10 samples
d. Igneous rock age dating (U-Pb zircon) – 1 sample

Contractor Initials MJQ
Date 8/25/25

e. Detrital zircon analyses –2 samples

C. The Contractor will perform the petrographic analyses of thin section samples across the map area to provide detailed data on mineral composition and content of rock samples, as deemed appropriate to answer specific questions on unit petrogenesis. NHGS will coordinate access to a petrographic microscope to facilitate completion of this work.

D. The Contractor shall provide to NHGS the data output and relevant interpretations from any of the above-mentioned laboratory analyses. Original copies of laboratory reports and digital files shall constitute part of the submitted deliverables upon completion of the contract.

III. Collaborative Peer Review Conferences

A. Contractor shall be available for a one-day long field conference for the south half of the Derry Quadrangle. Scheduling of the one-day field review conference will be the responsibility of the State Geologist and will be attended by NHGS staff and geologic community peers.

B. Contractor shall participate as a reviewer on a one-day long field conference for any other quadrangle that is being mapped concurrently in the southern New Hampshire unified bedrock mapping project area that are undertaken while this contract is in force. The Contractor shall then participate in the Microsoft Teams-based reviews of the maps in the southern New Hampshire unified bedrock mapping project area that are undertaken while this contract is in force.

C. Contractor shall participate in a Microsoft Teams-based review of the produced map and will work to incorporate comments received from this review into a revised final map product, utilizing NHGS' collaborative peer review process for geologic maps that has been developed, and attended by geologic community peers.

1. Teams review meeting will be scheduled and coordinated by the State Geologist, and be held no later than September 15, 2026
2. Map edits that arise from the collaborative peer review process will be finalized and submitted directly to the State Geologist no later than October 15, 2026
3. State Geologist will perform final map review and provide any remaining comments to the Contractor to address prior to the contract completion date of December 31, 2026

IV. Compilation and Production of Geologic Map for Derry Quadrangle (South Half)

Use the data collected and processed from the south half of the Derry Quadrangle to produce a 1:24,000-scale geologic map of the map area that incorporates the following elements:

A. NHGS shall provide a staff geologist to provide technical assistance in the final map cartography and digitization of the final bedrock geologic map required under this Scope of Work, and to assist in ensuring that the final map GIS files are in the USGS Geologic Map Schema (GeMS) format

B. Map formatted utilizing a template that has been created by NHGS for bedrock geologic maps, with content equivalent to that of the most recent USGS 7.5-minute series topographic map for the quadrangle area, and which represents this content without distortions in scale

C. Delineation of all bedrock units following the patterns, symbols and cartography of the United States Geological Survey

D. Symbols shall conform to the most current Federal Geographic Data Committee digital cartographic standards

Contractor Initials MTQ
Date 8/25/25

E. Incorporation of existing geologic information, and subsurface information provided by NHGS, to support geological interpretations and map products
F. All mapped units in the south half of the Derry quadrangle are reconciled with the mapped bedrock geology of the adjacent Manchester South, Nashua North, Windham and Sandown quadrangles
G. A Description of Map Units, containing the information needed to identify and distinguish each map unit, including how it can be recognized, whether it changes through the area, written in telegraphic style rather than complete sentences, and which does not include significant amounts of geologic interpretation
H. Geographic names noted in any Description of Map Units description needs to be appear on the map or in an index map
I. A minimum one-page Companion Document, using a template provided to the Contractor by NHGS, which provides a narrative description of the bedrock geology of the quadrangle including interpretations regarding map unit deposition as well as the timing and style of deformation
J. Scale and contour interval
K. North arrow and magnetic declination
L. Title, provided both at the top of the map, in bold title caps, with no year, and in the map credits box with publication date year
M. Authorship and publisher
N. Quadrangle index map with the central quadrangle boundary highlighted in red, with quadrangle map names in title caps
O. Quadrangle location map which will consist of an outline of the State of New Hampshire, with the quadrangle location noted by a solid black symbol for the map
P. Field data or field data stations
Q. Explanation of map symbols
R. Unit symbols on map
S. Acknowledgement statement, with text provided to the Contractor by the State Geologist
T. Minimum of one geologic cross-section depicting the rocks at the surface and interpretive projections of map units above and below ground will be placed on the map document, with colorization, labeling and symbology to match the geologic map, and with the line of the cross-section shown on the map frame
U. Contractor shall submit the final open-file version of the map, in PDF electronic format, to the State Geologist by August 31, 2026.

V. Information Necessary to Support Geologic Mapping Schema (GeMS) Geologic Map Compliance

To ensure the seamless transition to GeMS by NHGS staff, the Contractor must conduct their mapping and submittal of data to NHGS in a manner that achieves the following:

A. Map both unit polygons representing map unit polygons representing map units and coincident polylines representing contacts
B. Per map unit, submit an identify confidence level that conveys confidence in the map unit's identity
C. Submit three confidence levels for each geologic contact: location confidence (in meters), existence confidence, and identity confidence

Contractor Initials MEQ
Date 8/25/25

SCHEDULE

Contract completion date is Dec 31, 2026, as listed on the contract agreement (Section 1.7).

Task	**Task Timeline**
Task 1 – Field data collection in the Derry Quadrangle (south half)	Initiate task upon Governor and Executive Council approval through July 15, 2026.
Task 2 – One-day field-based collaborative peer review of the Derry Quadrangle (south half)	On or before July 31, 2026
Task 3 – Compilation and production of 1:24,000-scale bedrock geologic map for Derry quadrangle (south half), with interpretive compilations of any laboratory analytical results for all analyzed samples.	By August 31, 2026
Task 4 – Teams-based review meeting	On or before September 15, 2026
Task 5 – Final edits to map post- Teams-based review meeting	On or before October 15, 2026
Task 6 – Final map submitted to the State Geologist	By December 31, 2026

Contractor Initials MJQ
Date 8/25/25

EXHIBIT C
METHOD OF PAYMENT

All services shall be performed to the satisfaction of the Department before payment is made. Payments shall be made by the Department within 30 days of invoice receipt and approval. The value of this contract shall not exceed $33,100.

The Contractor will submit invoices to the Department on a regular basis throughout the duration of the contract. Invoicing schedule shall proceed per completion of milestones as follows:

1.	Upon approval of the contract by Governor and Executive Council	$3,735
2.	Upon completion of Task 1	$3,735
3.	Upon completion of Task 2	$3,735
4.	Upon completion of Task 3	$7,470
5.	Upon completion of Task 4	$1,245
6.	Upon completion of Task 5	$3,735
7.	Upon completion of Task 6	$1,245

When the Contractor submits the invoice for the completion of Task 3, the Contractor shall include a separate line that shows the total number of analyses analyzed as stipulated in Exhibit B, II(B). The maximum amount paid per sample for each analysis type is as follows, with the quantity of analyses allowed not to exceed, for each analysis type, the maximum quantity specified in Exhibit B, II(B):

Thin section preparation	$30
Whole-rock geochemistry	$100
Whole-rock mineralogical scans	$50
Igneous rock age dating (U-Pb zircon)	$1,000
Detrital zircon	$2,300

Changes to the Scope of Work require NHDES approval in advance. All work must be completed and invoices must be submitted to NHDES by the completion of date of December 31, 2026, as listed on Section 1.7 of the agreement.

Invoices shall be approved by the State Geologist before payment is processed.

Contractor Initials MTQ
Date 8/25/25