The State of New Hampshire
# Department of Environmental Services

**Robert R. Scott, Commissioner**

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September 15, 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** agreement with the U.S. Geological Survey (USGS), Reston, VA, (VC # 175772-R002), in the amount of $116,575 to perform 1:24,000-scale bedrock geologic mapping in the South Merrimack quadrangle, effective upon Governor and Council approval through September 30, 2026. 100% Federal Funds.

Funding is available in the following account:

| | FY2026 |
|---|---|
| 03-44-44-441018-5564-102-500731 | $116,575 |
| Dept. Environmental Services, DWSRF BIL Administration, Contracts for Program Services | |

## EXPLANATION

This agreement is **SOLE SOURCE** because USGS is a national leader in the performance of bedrock geologic mapping, particularly in areas of complexly deformed rocks. NHDES and the State of New Hampshire are in need of specific expertise that is capable of performing high quality mapping of the complexly deformed bedrock 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. USGS possesses regional bedrock geologic mapping expertise that is well respected in New England for scientific integrity.

This Technical Assistance Agreement funds field-based bedrock mapping of the 1:24,000-scale South Merrimack quadrangle and related geochronologic and petrographic analyses to refine bedrock map unit delineation. USGS will gather data on the locations, types, and orientations of features observed in outcrop to aid in identifying bedrock fractures. USGS is providing $45,000 in matching funds toward this project.

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

www.des.nh.gov
29 Hazen Drive • PO Box 95 • Concord, NH 03302-0095
(603) 271-3503 • Fax: 271-2867 TDD Access: Relay NH 1-800-735-2964

# TECHNICAL ASSISTANCE AGREEMENT

This Technical Assistance Agreement is entered into by and between U.S. Geological Survey, a Bureau of the Department of the Interior, through the offices of its Florence Bascom Geoscience Center, Reston, Virginia, hereinafter referred to as the "USGS" and the New Hampshire Department of Environmental Services, Concord, New Hampshire, hereinafter referred to as "Collaborator" or "NHGS". USGS and Collaborator are sometimes herein referred to as a "Party" and collectively as the "Parties."

Whereas, the USGS is authorized to perform technical assistance with other Federal agencies, units of State or local government, industrial organizations, private corporations, public and private foundations, and nonprofit organizations (including universities) under the Stevenson-Wydler Act (15 U.S.C. § 3710a(b)(3)(A), as amended);

Whereas, the USGS has a mission to deliver geologic maps and data necessary to understand, monitor, and detect changes that affect the Nation's natural and agricultural resources, the economy, public safety, and security. The mission requires understanding the framework processes that influence the characteristics of fractured igneous and metamorphic rock and has need for data from detailed surface geologic mapping. New maps provide evidence of the properties of fractured rock aquifers at depth and both support this mission and address the USGS' need for new geologic maps at 1:24,000-scale to address public health and safety issues related to per- and polyfluoroalkyl substances (PFAS) in groundwater;

Whereas, Collaborator has need to conduct geologic mapping by field-based studies of lithology and structural geology in interior southern New Hampshire to constrain potential fracture-controlled pathways for fluids in the bedrock aquifer of the State, and has need of USGS expertise in geologic mapping and structural geology of complexly deformed rocks. This expertise will enable the Collaborator to conduct and filter high-resolution, remotely sensed, fracture trace analysis for assessment of groundwater flow;

Whereas, the project entitled "Bedrock geologic mapping of interior southern New Hampshire" is intended by the Parties to be mutually beneficial and to benefit the people of the United States;

Now, therefore, the Parties hereto agree as follows:

**1. Statement of Work.**
See attached Statement of Work (SOW) (Attachment A), incorporated by reference herein.

**2. Principal Investigator.**
The USGS principal investigator (PI) for this Project is Gregory J. Walsh, gwalsh@usgs.gov, (802) 522-9043, and 12201 Sunrise Valley Drive, MS926A, Reston, VA 20170. The PI for the Collaborator is Shane J. Csiki, Shane.J.Csiki@des.nh.gov, (603) 271-1975, and 29 Hazen Drive,

P.O. Box 95, Concord, NH 03302-0095. In the event that a PI is unable to continue in this project, the sponsoring agency will make every effort to substitute a replacement acceptable to the other Party.

**3. Title to Equipment.**
There will be no joint property purchased as a result of the work outlined in the SOW. Each Party will provide its own equipment necessary to support its participation in the technical evaluation.

**4. Term.**
The technical assistance contemplated by this Agreement will commence on the effective date of this Agreement. The effective date of this Agreement shall be the later date of (1) 10/1/2025 or (2) the date of the last signature by the Parties. The expiration date of this Agreement shall be 9/30/2026, or one year from the effective date of the Agreement. The Agreement may be extended by mutual written agreement of the Parties.

**5. Funding.**

**(a)** The Collaborator will provide an estimated $116,575 in funds to the project. The Collaborator is providing in-kind services doing remote sensing of lineaments and related field work to provide context for interpretation of the geologic map data.

**(b)** The USGS requires an advance of $0.

**(c)** This agreement has been negotiated to be paid based on expenses incurred. The USGS will submit invoices to the Collaborator's administrative contact, identified in Section 9.d., on a monthly basis. Invoices not paid within 60 days from date of bill for Local and State Government customers will bear Interest, and other fees required by Federal Law, at the annual rate pursuant the Debt Collection Act of 1982, (codified at 31 U.S.C. § 3717) established by the U.S. Treasury.

**(d)** The USGS is providing in-kind services valued at $45,000 to the collaboration.

**6. Termination.**
This Agreement may be terminated by either Party on 30 days written notice to the other. In the event of an early termination, the USGS shall be reimbursed for any completed work or work in progress on the Effective Date of Termination (i.e., when the Agreement actually terminates following the receipt of written notice from the other Party). Any unspent advanced funds will be returned to Collaborator. The USGS shall also supply a copy of the evaluations completed as of the Effective Date of Termination in the event of an early termination of the project.

**7. Publications/Reports.**

**(a)** Each Party is free to publish the non-proprietary or non-confidential information and data developed in the performance of this agreement. Before a Party submits the information and data for publication or otherwise intends to publicly release or disclose scientific information

and data that are jointly developed, the Party shall have a review period of 30 business days to ensure that the draft publication or presentation does not contain Confidential or Proprietary Business Information. Upon expiration of the review period with no comments received from the other Party, the first Party will proceed with submission of the publication and presentation. The review period is provided as a courtesy to review the publications or presentations to ensure confidential or proprietary information is not disclosed and ensure that there is not inadvertent release of such information that could be used for a patent or invention application. All comments provided within the review period will be forwarded to the contacts identified in Section 9. The Parties acknowledge that scientific information and data developed as a result of the SOW are subject to applicable USGS Fundamental Science Practices (FSP) review, approval, and release requirements, which are available in Survey Manual Chapter (SM) 502.4, Fundamental Science Practices: Review, Approval, and Release of Information Products. The USGS is required to provide timely public access to the results of this scientific information and data unless it contains sensitive, protected information. Data and associated metadata will be open format and publicly accessible. The data and metadata will also be open access and machine readable in accordance with USGS FSP requirements available in SM 502.7, Fundamental Science Practices: Metadata for USGS Scientific Information Products Including Data and SM 502.8, Fundamental Science Practices: Review and Approval of Scientific Data for Release.

The USGS will furnish to the Collaborator materials under the SOW as part of a Courtesy Review, to ensure the Collaborator is afforded an opportunity for a courtesy review of information products. The timing of the Courtesy Review provided by USGS and as specified in the Statement of Work may occur prior to peer review, simultaneously with peer review, or immediately after peer review reconciliation, but in all cases this review occurs before Bureau approval. In being afforded a courtesy review, the parties are bound by the Bureau's policy to uphold the confidentiality of the science that is being reviewed and to not disclose or divulge any results or conclusions or make any public statements regarding the science before it is published and released. These reviews must be carefully considered to avoid bias that may represent a real or potential conflict of interest as described in section 4.I. Reviews will include two scientific peer reviews, data reviews, a policy review, a conflict-of-interest review, and an impartiality and nonadvocacy review. Manuscripts of information products distributed for courtesy review must carry a disclaimer statement (refer to Guidance on Disclaimer Statements Allowed in USGS Science Information Products).

**(b)** Under the authority of 15 U.S.C. § 3710a (c)(7)(B), as amended, the Parties will have the opportunity, as part of the technical assistance, to identify protected research and development information, which is defined as information generated by the research which would have been proprietary information had it been obtained from a non-Federal entity. Each Party may designate as protected research and development information, any information generated by its own employees, and with the Agreement of the other Party, mark any information produced by the other Party's employees. Such protected research and development information shall be exempt from disclosure under 5 U.S.C. § 552(b)(4). After the protected research and development information period has expired, the USGS may publish the results of the research as part of open literature (journal and proceeding articles) or as USGS open file reports.

**(c)** Generated information and results which have been created and marked as protected research and development information may be protected from release or disclosure for a period of two (2) years, unless an earlier date is agreed upon by the Parties.

**8. Proprietary Information/Intellectual Property/Background Intellectual Property.**
No intellectual property is expected as a result of the research/technical effort.

**9. Notices.**
Any notice required to be given or which shall be given under this Agreement shall be in writing and delivered by first-class mail to the Parties as follows:

**(a) USGS Administrative Contact Information:**

| |
|---|
| J. Megan Stull |
| 12201 Sunrise Valley Drive<br>Reston, VA 20192 MS926A |
| jstull@usgs.gov |
| 703-648-7698 |

**(b) USGS Technical Contact Information:**

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|---|
| Gregory J. Walsh |
| 12201 Sunrise Valley Drive<br>Reston, VA 20192 MS926A |
| gwalsh@usgs.gov |
| 802-522-9043 |
| https://www.usgs.gov/centers/florence-bascom-geoscience-center |

**(c) USGS Financial Contact Information:**

| |
|---|
| J. Megan Stull |
| 12201 Sunrise Valley Drive<br>Reston, VA 20192 MS926A |
| jstull@usgs.gov |
| 703-648-7698 |
| USGS UEI: NJQMLNG5L8A5 |
| USGS Tax ID: 53-0196958 |

**(d) Collaborator Administrative Contact Information:**

| |
|---|
| Shane Csiki |
| 29 Hazen Drive, Concord, NH 03302-0095 |
| Shane.J.Csiki@des.nh.gov |
| (603) 271-1975 |

**(e) Collaborator Technical Contact Information:**

| Shane Csiki |
|---|
| 29 Hazen Drive, P.O. Box 95 Concord, NH 03302-0095 |
| Shane.J.Csiki@des.nh.gov |
| (603) 271-1975 |
| https://www.des.nh.gov/land/geology |

**(f) Collaborator Financial Contact Information:**

| Kimberly Boone |
|---|
| 29 Hazen Drive, P.O.Box 95, Concord, NH 03302-0095 |
| Kimberly.A.Boone@des.nh.gov |
| (603) 271-3288 |
| Tax ID Number: 026000618 |

**10. Independent Entity.**
For purposes of this Agreement and all research and services to be provided hereunder, each Party shall be, and shall be deemed to be, an independent Party and not an agent or employee of the other Party. Each Party shall have exclusive control over its employees in the performance of the work. While in field locations, a Party's employees shall adhere to the safety and technical requirements imposed by the Party controlling the work site.

Neither Party shall have authority to make any statements, representations, or commitments of any kind, or take any action, which shall be binding on the other Party, except as may be explicitly provided for herein or authorized in writing. Neither Party may use the name of the other in advertising or other forms of publicity without the written permission of the other.

**11. Governing Law/Liability.**
**(a)** This Agreement is subject to interpretation under applicable State and Federal laws. Where there is inconsistency between the laws, Federal law is controlling. Each Party agrees to be responsible for the activities, including the negligence, of their employees. The USGS responsibility for the payment of claims for loss of property, personal injury, or death caused by the negligence or wrongful act or omission of a USGS employee, while acting within the scope of their employment, is limited to provisions of the Federal Tort Claims Act, 28 U.S.C. §§ 2671-80.

**(b)** The USGS and the Collaborator make no express or implied warranty as to the conditions of the research, merchantability or fitness for a particular purpose of the research, data, or resulting product incorporating data developed and exchanged under the SOW. These provisions shall survive the termination of the Agreement.

**(c)** The USGS shall not indemnify Collaborator or any third party against any liabilities, costs, attorney's fees, expenses, damages and losses (including any direct, indirect or consequential losses, loss of profit, loss of reputation and all interest, penalties, and legal costs and all other professional costs and expenses suffered or incurred by Collaborator or any third party arising from the work conducted under this technical assistance agreement.

**12. Force Majeure.**
Neither Party shall be liable for any unforeseeable event beyond its control, not caused by the fault or negligence of such Party, which causes such Party to be unable to perform its obligations under this Agreement, and which it is unable to overcome by the exercise of due diligence including, but not limited to, flood, drought, earthquake, storm, fire, pestilence, lightning, and other natural catastrophes; epidemic, war, riot, civil disturbance, or disobedience; strikes, labor disputes, or failure, threat of failure, or sabotage; or any order or injunction made by a court or public agency. In the event of the occurrence of such a force majeure event, the Party unable to perform shall promptly notify the other Party. It shall further use its best efforts to resume performance as quickly as possible and shall suspend performance only for such period of time as is necessary as a result of the force majeure event.

**13. Entire Agreement.**
This Agreement contains all of the terms of the Parties and supersedes all prior Agreements and understandings related thereto. This Agreement can be changed or amended only by a written instrument signed by the Parties. Due to the specialized nature of the work, this Agreement is non-assignable by both Parties.

**14. Disputes.**
The signatories to this Agreement shall expend their best efforts to amicably resolve any dispute that may arise under this Agreement. Any dispute that the signatories are unable to resolve shall be submitted to the Director of the USGS or their designee and the Commissioner of the Collaborator or their designee for resolution. If no resolution is reached, the Parties agree that the courts of the United States shall have jurisdiction over any claims arising out of work under this agreement.

**15. Miscellaneous Provisions.**
***(a) Anti-Deficiency Act.*** Pursuant to the Anti-Deficiency Act, 31 U.S.C. §§ 1341 (a)(1)(A) and (B) and 31 U.S.C. § 1517(a), nothing herein contained shall be construed as binding the USGS to expend in any one fiscal year any sum in excess of its appropriations or funding in excess or what it has received for the collaborative work outlined in the SOW or involving the Federal government in any obligation to pay money before funds have been appropriated for that purpose unless otherwise allowed by law.

***(b) Import/Export.*** The use and dissemination of Information and materials exchanged under this Agreement will be in accordance with all U.S. laws and regulations, including those pertaining to national security and export control. Nothing in this Agreement shall be construed as a license to export Information or to permit any disclosure in violation of law, regulation, or Department of Interior policy. The exporting Collaborator is responsible for obtaining any export licenses that may be required by U.S. Federal law.

***(c) Third Parties.*** The Parties acknowledge and agree to allow disclosure of Proprietary Information or Background Intellectual Property to third parties (such as, students, contractors, subcontractors and or consultants) or external collaborators for the purposes of carrying out this Agreement. If a Party engages a new third party to perform any portion of the SOW after the Effective Date of this Agreement, such Party will notify the other Party and provide information

about the third-Party involvement within 7 days of engagement. No contractors shall be listed as ineligible in the System for Award Management (sam.gov), unless waived by the Department of the Interior. However, these participants are not Parties to the Agreement. The Parties agree that they will comply with and advise any third parties they have engaged to conduct the Agreement activities to comply with, all applicable Executive Orders, statutes, and regulations. The Parties agree that they will ensure that third party participants are under written obligation not to disclose Proprietary Information or Background Intellectual Property, except as required by law or court order, before the third parties have access to any Proprietary Information or Background Intellectual Property. No foreign personnel shall be engaged by the Collaborator as a contractor, consultant, grantee or third-party collaborator for the performance of any work under this TAA without first identifying the individual, their country of origin, and the work to be performed to USGS so that USGS may determine whether the agency requires advanced approval by an authorized agency official before working with the foreign contractor, consultant, grantee or third-party collaborator, and whether any data, technology or products shared with or used by a foreign contractor, consultant, grantee or third-party collaborator as part of the technical assistance under this agreement are in accordance with all U.S. laws and regulations, including national security export controls and U.S. Department of State regulations and policies.

**(d)** The Exhibits, Forms, or Special Terms requested by the Collaborator are accepted to the extent that such terms do not conflict with applicable Federal laws and regulations.

**16. Survivability.**
The following provisions shall survive the termination of this Agreement: 7. Publications/Reports, 8. Proprietary Information/Intellectual Property/Background Intellectual Property and 14. Disputes.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be executed on the last date listed below.

U.S. GEOLOGICAL SURVEY

By: CHRISTOPHER BERNHARDT Digitally signed by CHRISTOPHER BERNHARDT Date: 2025.09.09 09:27:31 -04'00'

Christopher E. Bernhardt

Center Director,
Florence Bascom Geoscience Center

Date: _____

COLLABORATOR

By: _____

Robert R. Scott

Commissioner,
New Hampshire Department of Environmental Services

Date: 9/11/2025

NEW HAMPSHIRE OFFICE OF THE ATTORNEY GENERAL

By: Keely Lovato

Authorized Official

Name: Keely Lovato

Title: Attorney, Environmental Protection Bureau

Date: 9/18/2025

## Attachment A: Statement of Work

### I. Background

According to the 2009 Reauthorization of the National Geologic Mapping Act, geologic maps are the primary data base for virtually all applied and basic earth-science investigations. Geologic map information is required for the sustainable and balanced development of natural resources of all types, including energy, minerals, land, water, and biological resources. A comprehensive nationwide program of geologic mapping of surficial and bedrock deposits is required in order to systematically build the Nation's geologic-map data base at a pace that responds to increasing demand. Parts of southern New Hampshire lack bedrock geologic maps considered suitable for modern earth-science investigations. Qualified experts capable of making detailed bedrock geologic maps are both increasingly in demand and difficult to hire.

### II. Purpose

The purpose of this work is for the USGS to conduct detailed 1:24,000-scale bedrock geologic mapping in interior southern New Hampshire, to provide structural geology data to constrain the application of remotely sensed lineament data, to understand the framework processes that influence the characteristics of fractured igneous and metamorphic rock, and to provide expert advice and reviews to the Collaborator on aspects of the regional bedrock geology.

### III. Objectives or Specific Aims

This Agreement develops a collaboration between both parties providing technical and scientific expertise to accomplish a mutual objective. The Collaborator will provide a 1:24,000-scale topographic base map of the South Merrimack 7.5-minute quadrangle including the following four items 1-4 as geographic information system (GIS) layers: 1) percent slope lidar-derived digital elevation model, 2) hypsography, 3) culture, and 4) hydrography suitable for geologic map publication according to NHGS and USGS guidelines. The Collaborator will complete independent fracture trace analysis of remotely sensed lineaments to be compared with the orientations of features observed in outcrop by USGS. USGS shall provide to the Collaborator the locations, types, and measured orientations of features observed in outcrop through a data release at the conclusion of field work.

The USGS will complete a preliminary bedrock geologic map as a USGS open file report consisting of the following: a) 1:24,000-scale bedrock geologic map covering the topographic base map supplied by NHGS (items 1-4 above), b) correlation of map units (CMU), c) description of map units (DMU), d) explanation of map symbols (EMS), e) abstract, f) one cross-section, and g) a geologic map schema database in GeMS format. In addition, the USGS will conduct structural, geochronologic and petrographic analyses suitable for synthesis of complexly deformed rocks. Geochronology will include up to 5 samples for U-Pb zircon ages of igneous, metamorphic, and/or detrital ages. Petrographic analyses will include at least 20 standard thin sections.

The USGS will advise and review geologic mapping in other project quadrangles. The reviews will include time to provide a second review of the final Manchester South product, if needed, as well as review time for the Nashua North, Manchester North, Goffstown, Derry and Milford quadrangles, assuming that those quadrangles will be completed by other mappers during the next two years. Future USGS geologic mapping beyond the South Merrimack quadrangle may be contracted contingent upon results of initial work.

## IV. Term and Proposed Project Schedule/Milestones

The Agreement will last for a period of one year. Field work will begin promptly in the fall of 2026, and continue as long as weather permits, recommencing in the spring of 2026. Field work will be completed in the spring and summer of 2026. Field reviews will take place in summer of 2026, and map compilation will follow. Data will be provided to the Collaborator as a Courtesy Review by September 30, 2026. The map will be submitted for USGS peer review within one year from the start date of the agreement.

## V. Collaborator's Role and Expertise

The Collaborator, New Hampshire Geological Survey (NHGS), serves its mission to provide the public with accurate and useful information about the land, mineral and water resources in the state while also mapping the state, maintaining a water well database, assessing hazards and preserving New Hampshire's rich history of mining, geologic mapping and research, and landscape change.

The Collaborator maintains a staff of geoscientists, hydrogeologists, GIS analysts, and program managers with the skills and expertise necessary to serve New Hampshire's mission.

### Specific Collaborator Tasks

- Collaborator will supply to the USGS items 1-4 in part III above.
- Collaborator will complete fracture trace analysis of the project area.
- Collaborator will coordinate geologic mapping in adjacent quadrangles.

## VI. USGS' Role and Expertise

The USGS Florence Bascom Geoscience Center (FBGC) is at the leading edge of scientific research addressing critical societal issues and providing unbiased data and information to decision makers and the public. The center manages multiple geologic mapping projects in the eastern United States and maintains a staff of experts in mapping, stratigraphy, tectonics, structural geology, petrology, geochemistry, mineral resources, and geochronology.

The USGS PI, Gregory Walsh, has expertise in geologic mapping, structural geology, geochronology, tectonics, digital cartography, and GIS. Walsh specializes in the mapping, structure, and tectonics of complexly deformed rocks, the integration of geologic data with hydrogeologic and mineral resource assessment studies, and the use of GIS as a mapping and analysis tool.

**Specific USGS Tasks**

- The USGS will complete a bedrock geologic map of the South Merrimack quadrangle as a USGS Open File Report.
- The USGS will complete a USGS data release of structural features measured at outcrops.
- The USGS will complete associated geochronology and petrography as part of a USGS data release.
- The USGS will advise and review geologic mapping in other project quadrangles.

## VII. Joint Tasks and Activities (optional section)

## VIII. Anticipated Outcomes/Expected Results (Outcomes and Results)

The Agreement will lead to the publication of a bedrock geologic map of the 7.5-minute South Merrimack, NH quadrangle. The results, analyzed in consultation with the Collaborator, will identify potential fracture-controlled pathways for fluids in the bedrock aquifer of the state, and intend to benefit public health and safety.