



The State of New Hampshire MAY 17 '23 AM 10:05 RC  
**Department of Environmental Services**



**Robert R. Scott, Commissioner**

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May 2, 2023

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

**REQUESTED ACTION**

Authorize the New Hampshire Department of Environmental Services (NHDES) to enter into a **SOLE SOURCE** contract with HYSR (VC# 277908-B001), Dartmouth, MA, in the amount of \$12,000 to apply the QPPQ Transform Method to extend daily stream flow records on the Pemigewasset and Merrimack Rivers, effective upon Governor and Council approval through September 30, 2023. 100% Federal Funds.

Funds are available in the following account:

	<u>FY 2023</u>
03-44-44-440010-7601-102-500731	\$12,000
Department of Environmental Services, PPG Carryover, Contracts for Program Services	

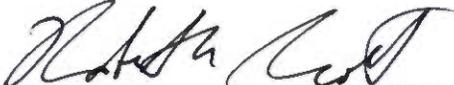
**EXPLANATION**

NHDES requests approval of this **SOLE SOURCE** contract with HYSR to apply the QPPQ Transform Method on the Pemigewasset and Merrimack Rivers. This contract is **SOLE SOURCE** because Dr. Neil Fennessey (dba HYSR), as the developer of the QPPQ Transform Method, is the only contractor outside of the United States Geological Survey (USGS) regularly using this method for calculating stream flows datasets at ungaged locations. In addition to being the preeminent national expert on this subject, Dr. Fennessey has developed similar datasets for other rivers in the state, so he is keenly familiar the hydrology. Under this contract, HYSR will apply the QPPQ Transform Method to calculate daily stream flow to fill record gaps for two USGS gages so NHDES can create protected instream flow criteria.

HYSR updated the 1994 QPPQ Transform Method as part of previous contracts with the State. This contract applies the updated QPPQ Transform Method to calculate the daily stream flow records at the two USGS stream flow gages measuring flow on the Pemigewasset River in Woodstock and Merrimack River in Franklin. Stream flow records are critical data for the calculation of protected instream flows. The Pemigewasset River is next on the priority list for developing instream flow protections.

This contract has been approved by the Office of the Attorney General as to form, substance and execution.

We respectfully request your approval.

  
Robert R. Scott, Commissioner

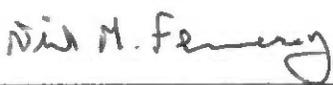
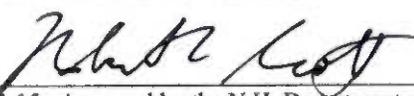
**Notice:** This agreement and all of its attachments shall become public upon submission to Governor and Executive Council for approval. Any information that is private, confidential or proprietary must be clearly identified to the agency and agreed to in writing prior to signing the contract.

**AGREEMENT**

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

**GENERAL PROVISIONS**

**1. IDENTIFICATION.**

1.1 State Agency Name New Hampshire Department of Environmental Services		1.2 State Agency Address 29 Hazen Drive, PO Box 95 Concord, NH 03302-0095	
1.3 Contractor Name Neil Fennessey dba HYSR		1.4 Contractor Address 49 School Street South Dartmouth, MA 02748	
1.5 Contractor Phone Number 508-996-4505	1.6 Account Unit and Class 03-44-44-440010-7601-102	1.7 Completion Date September 30, 2023	1.8 Price Limitation \$12,000
1.9 Contracting Officer for State Agency Wayne Ives		1.10 State Agency Telephone Number 603-271-3548	
1.11 Contractor Signature  Date: 4/13/23		1.12 Name and Title of Contractor Signatory Neil M. Fennessey, Ph.D, Owner	
1.13 State Agency Signature  Date: 5/4/23		1.14 Name and Title of State Agency Signatory Robert R. Scott, Commissioner NHDES	
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: 5/15/2023			
1.17 Approval by the Governor and Executive Council (if applicable)  G&C Item number: _____ G&C Meeting Date: _____			

**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 80:7c 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.

## 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 91A 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, 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.

**Exhibit A**  
**Special Provisions**

**14. INSURANCE.**

Paragraph 14 of the General Provisions of the standard state agreement is expressly waived. This provision is being waived because the Contractor is an individual and carrying this general liability insurance would be cost prohibitive. The work being conducted is desktop computer work that should not expose the state to any liability.

**1. Exhibit B**  
**Scope of Services**

HYSR will perform the following tasks as described in the proposal titled “Extending the Daily Streamflow Period-of-Record at a USGS Gage Site on the Pemigewasset River and the USGS Gage Site on the Merrimack River” submitted by Dr. Neil Fennessey, sole proprietor of HYSR, dated April 2023.

**Project goal:**

To apply the QPPQ Transform Method (QPPQ) in order to extend the stream flow data records at two USGS stream gage sites located on the Pemigewasset and Merrimack Rivers and to demonstrate that the flow records calculated are suitable for conducting instream flow protection assessments.

**Scope of Work:**

This project applies the 2018-version of the QPPQ Transform Method developed by Dr. Neil Fennessey to extend the stream flow records at two USGS gages on the Pemigewasset and Merrimack Rivers. Daily stream flows will be calculated for gaps in the record occurring between 1960 and 2022. HYSR will evaluate the calculated values by comparing them with concurrent values of observed values.

HYSR will submit a written draft report containing and describing the calculated flow records and the evaluation of the calculated and observed values. HYSR will submit a final report after review by NHDES and revision.

**Project Tasks:**

HYSR will perform the following tasks, summarized below, consistent with the proposal titled “Extending the Daily Streamflow Period-of-Record at a USGS Gage Site on the Pemigewasset River and the USGS Gage Site on the Merrimack River” dated April 2023.

**Task a:** Use the daily period-of-record flows and the QPPQ Transform to extend the observed daily flows at the Pemigewasset River at Woodstock, NH USGS gage site.

**Task b:** Use the daily period-of-record flows and the QPPQ Transform to extend the observed daily flows at the Merrimack River at Franklin Junction, NH USGS gage site.

**Task c:** For the Pemigewasset River at Woodstock, NH and the Merrimack River at Franklin Junction, NH USGS gage sites use concurrent values of observed flows and of QPPQ Transform daily flows, to construct July 15-September 30 “*Rearing & Growth*” flow duration curves (FDCs).

**Task d:** For the Pemigewasset River at Woodstock, NH and the Merrimack River at Franklin Junction, NH USGS gage sites use concurrent values of observed flows and of QPPQ Transform daily flows to compare the number of negative run-length events that occurred during the July 15-September 30 “*Rearing & Growth*” bioperiod  $Q_{85}$  and  $Q_{95}$  as test thresholds.

**Task e:** For the Pemigewasset River at Woodstock, NH and the Merrimack River at Franklin Junction, NH USGS gage sites use values of concurrent observed flows and of QPPQ Transform daily flows to construct negative run-length frequency histograms for the July 15-September 30 “*Rearing & Growth*” bioperiod  $Q_{85}$  and  $Q_{95}$  as test thresholds.

**Task f:** Submit the draft Final Report and Final Report to NHDES.

**Deliverables:**

HYSR will provide the following deliverables, summarized below, consistent with the proposal provided to NHDES dated April 2023.

1. A daily stream flow record for the USGS gage site Pemigewasset River at Woodstock, NH (0107500) extended from October 1, 1960 to September 30, 2022 using the QPPQ Transform Method.

2. A daily stream flow record for the USGS gage site Pemigewasset River at Woodstock, NH (0108500) extended from October 1, 1960 to September 30, 2022 using the QPPQ Transform Method.
3. At each of the two USGS gage sites, flow duration curve graphs comparing the concurrent values of observed data with the QPPQ data.
4. At each of the two USGS gage sites, graphs of the number of negative run-length events at the  $Q_{85}$  and  $Q_{95}$  thresholds that occurred during the July 15-September 30 bioperiod comparing the concurrent values of observed data with the QPPQ data.
5. At each of the two USGS gage sites, frequency histograms of the negative run-length events at the  $Q_{85}$  and  $Q_{95}$  thresholds that occurred during the July 15-September 30 bioperiod comparing the concurrent values of observed data with the QPPQ data.
6. A draft report documenting and explaining the processes and results of Tasks a. through e.
7. A final report incorporating revisions of the draft report.

**Exhibit C**

**Method of Payment and Contract Price**

The total contract price shall be \$12,000. This amount will be charged for completing the tasks in Table 5-1 of the HYSR proposal. The payments will be billed in two parts: 1) after the two, time-series files of daily stream flows are turned over to NHDES; and 2) after the Final Report is approved by NHDES. The State shall pay to the Contractor the project costs in accordance with the following requirements:

No tasks shall be eligible for payment until after the task has been completed. All services shall be performed to the satisfaction of NHDES before payment will be made. All payments shall be made upon receipt and approval of a statement of the tasks completed and upon receipt of an associated invoice. Payments shall be made in accordance with the following schedule based upon completion of specific tasks described in Exhibit A. The total reimbursement shall not exceed the contract award of \$12,000.

Upon completion and NHDES approval of Tasks a. through e.	\$ 8,500
Upon completion and NHDES approval of Task f.	<u>\$ 3,500</u>
<b>Total</b>	<b>\$ 12,000</b>



SOLE PROPRIETOR CERTIFICATE OF AUTHORITY

I, Neil M. Fennessey hereby certify that I am the sole proprietor of HYSR (name of business), which is a trade name registered with the New Hampshire Secretary of State under RSA 349. I certify that I am the sole owner of my business and of the trade name. I hereby further certify and acknowledge that the State of New Hampshire will rely on this certification as evidence that I have full authority to bind my business and that no corporate resolution, shareholder vote, or other document or action is necessary to grant me such authority.

Signed: Neil M. Fennessey

Date: 4/13/23

State of Massachusetts, County of Plymouth

On this the 13 day of April 2023 before me Nicole Mello, the undersigned officer, personally appeared Neil M Fennessey, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument and acknowledged that he/she executed the same for the purposes therein contained. In witness whereof, I hereunto set my hand and official seal.



**NICOLE MELLO**  
Notary Public  
COMMONWEALTH OF MASSACHUSETTS  
My Commission Expires  
MARCH 30, 2029