



The State of New Hampshire  
**Department of Environmental Services**

Robert R. Scott, Commissioner



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October 23, 2025

DEC 03 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** grant agreement with University of New Hampshire, Sponsored Program Administration (VC# 315187-B083), Durham, NH, in the amount of \$321,405 to finalize a stream crossing prioritization model and planning tool, effective upon Governor & Council approval through December 31, 2027. 100% Federal Funds.

Funding is available in the following account.

03-44-44-442010-1209-072-500575

FY 2026

\$321,405

Dept. of Environmental Services, Coastal Resilience, Grants-Federal

**EXPLANATION**

NHDES requests approval of a **SOLE SOURCE** grant agreement with the University of New Hampshire Technology Transfer Center (UNH T2) and the UNH College of Engineering and Physical Sciences (UNH CEE) to finalize a stream crossing prioritization model and tool, develop a top priority culvert list, and conduct data gap analysis, and UNH T2 will lead database management and facilitate training development. This agreement is **SOLE SOURCE** because UNH was a partner on the “Building Capacity for Efficient and Effective Stream Crossing Replacement in NH’s Coastal Watersheds” grant, also known as the Crossing Capacity Pilot Project, that was awarded to NHDES by the National Fish and Wildlife Foundation and NHDES is required to adhere to the proposal.

The Crossing Capacity Pilot Project Area is within the New Hampshire portions of the HUC 8 Merrimack River and Piscataqua-Salmon Falls Watersheds. As detailed in the Merrimack and Coastal Watershed Conservation Plans, these fast-growing watersheds contain critical terrestrial and aquatic habitats and contribute to the larger Gulf of Maine ecosystem. These watersheds are also at extreme risk of catastrophic flooding, with the trend of increased overall precipitation causing culvert failure and flooding at crossings, simultaneously degrading habitat.

Beginning in 2022, NHDES initiated a pilot stream crossing prioritization methodology in partnership with UNH CEE with funding allocated by the American Rescue Plan Act (ARPA). This work used a stakeholder-led process to develop a multi-criteria decision support model within the Merrimack and Salmon-Falls River watersheds that prioritizes stream crossing management at a watershed scale via co-optimizing multiple parameters such as road safety, ecosystem restoration, flood resiliency, aquatic organism passage, and project cost. UNH will help to continue this work by finalizing and

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operationalizing the Stream Crossing Prioritization Model and working with a TBD consultant to develop trainings on its usage and implementation.

Total project costs are budgeted at \$321,405. A budget breakdown is provided in Cooperative Project Agreement Exhibit A. In the event that federal funds become no longer available, general funds will not be requested to support this program.

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

We respectfully request your approval.

A handwritten signature in black ink, appearing to read "Robert R. Scott", is written over a solid horizontal line.

Robert R. Scott, Commissioner

**COOPERATIVE PROJECT AGREEMENT**

between the

STATE OF NEW HAMPSHIRE, **Department of Environmental Services**

and the

**University of New Hampshire** of the UNIVERSITY SYSTEM OF NEW HAMPSHIRE

- A. This Cooperative Project Agreement (hereinafter "Project Agreement") is entered into by the State of New Hampshire, **Department of Environmental Services**, (hereinafter "State"), and the University System of New Hampshire, acting through **University of New Hampshire**, (hereinafter "Campus"), for the purpose of undertaking a project of mutual interest. This Cooperative Project shall be carried out under the terms and conditions of the Master Agreement for Cooperative Projects between the State of New Hampshire and the University System of New Hampshire dated November 13, 2002, except as may be modified herein.
- B. This Project Agreement and all obligations of the parties hereunder shall become effective on the date the Governor and Executive Council of the State of New Hampshire approve this Project Agreement ("Effective date") and shall end on **12/31/27**. If the provision of services by Campus precedes the Effective date, all services performed by Campus shall be performed at the sole risk of Campus and in the event that this Project Agreement does not become effective, State shall be under no obligation to pay Campus for costs incurred or services performed; however, if this Project Agreement becomes effective, all costs incurred prior to the Effective date that would otherwise be allowable shall be paid under the terms of this Project Agreement.
- C. The work to be performed under the terms of this Project Agreement is described in the proposal identified below and attached to this document as Exhibit A, the content of which is incorporated herein as a part of this Project Agreement.

**Project Title:** Building Capacity for Efficient, Effective, and Equitable Stream Crossing Replacement in NH's Coastal Watersheds

- D. The Following Individuals are designated as Project Administrators. These Project Administrators shall be responsible for the business aspects of this Project Agreement and all invoices, payments, project amendments and related correspondence shall be directed to the individuals so designated.

**State Project Administrator**

Name: Steven Couture  
 Address: Watershed Management Bureau  
 NH Dept. of Environmental Services  
 222 International Drive, Suite 175  
 Portsmouth, NH 03801  
 Phone: (603) 559-0027

**Campus Project Administrator**

Name: Gretchen Swain  
 Address: University of New Hampshire  
 Sponsored Programs Administration  
 51 College Rd  
 Durham, NH 03824  
 Phone: (603) 862-4865

- E. The Following Individuals are designated as Project Directors. These Project Directors shall be responsible for the technical leadership and conduct of the project. All progress reports, completion reports and related correspondence shall be directed to the individuals so designated.

**State Project Director**

Name: Pauline Perkins  
 Address: Watershed Management Bureau  
 NH Dept. of Environmental Services  
 222 International Drive, Suite 175  
 Portsmouth, NH 03801  
 Phone: (603) 559-0021

**Campus Project Director**

Name: Weiwei Mo  
 Address: University of New Hampshire  
 33 Academic Way  
 Durham, NH 03824  
 Phone: (603) 862-2808

F. Total State funds in the amount of **\$321,405** have been allotted and are available for payment of allowable costs incurred under this Project Agreement. State will not reimburse Campus for costs exceeding the amount specified in this paragraph.

Check if applicable

Campus will cost-share \_\_\_\_\_ % of total costs during the term of this Project Agreement.

Federal funds paid to Campus under this Project Agreement are from Grant/Contract/Cooperative Agreement No. **SLFRP0145** from the **National Fish and Wildlife Foundation National Coastal Resilience Fund** under CFDA# **21.027**. Federal regulations required to be passed through to Campus as part of this Project Agreement, and in accordance with the Master Agreement for Cooperative Projects between the State of New Hampshire and the University System of New Hampshire dated November 13, 2002, are attached to this document as Exhibit B, the content of which is incorporated herein as a part of this Project Agreement.

G. Check if applicable

Article(s) \_\_\_\_\_ of the Master Agreement for Cooperative Projects between the State of New Hampshire and the University System of New Hampshire dated November 13, 2002 is/are hereby amended to read:

H.  State has chosen **not to take** possession of equipment purchased under this Project Agreement.

State has chosen **to take** possession of equipment purchased under this Project Agreement and will issue instructions for the disposition of such equipment within 90 days of the Project Agreement's end-date. Any expenses incurred by Campus in carrying out State's requested disposition will be fully reimbursed by State.

This Project Agreement and the Master Agreement constitute the entire agreement between State and Campus regarding this Cooperative Project, and supersede and replace any previously existing arrangements, oral or written; all changes herein must be made by written amendment and executed for the parties by their authorized officials.

IN WITNESS WHEREOF, the University System of New Hampshire, acting through the **University of New Hampshire** and the State of New Hampshire, **Department of Environmental Services** have executed this Project Agreement.

**By An Authorized Official of:  
University of New Hampshire**

Name: Dianne Hall

Title: Manager, Pre-Award Compliance

Signature and Date: Dianne Hall Digitally signed by Dianne Hall  
Date: 2025.05.20 13:13:12 -0400'

**By An Authorized Official of:**

**Department of Environmental Services**

Name: Robert R. Scott

Title: Commissioner

Signature and Date: [Signature] 10/30/25

**By An Authorized Official of: the New  
Hampshire Office of the Attorney General**

Name: Melissa Feles

Title: Assistant Attorney General

Signature and Date: [Signature] 11/5/25

**By An Authorized Official of: the New  
Hampshire Governor & Executive Council**

Name:

Title:

Signature and Date:

## EXHIBIT A

**A. Project Title:** Building Capacity for Efficient and Effective Stream Crossing Replacement in NH's Coastal Watersheds

**B. Project Period:** Upon Governor & Council Approval through December 31, 2027

**C. Objectives:** Of the over 4,200 stream crossings in the Merrimack River watershed, at least 23% are geomorphically incompatible, 62% have no or reduced fish passage, 26% are vulnerable or overtopping during a 10-year storm event, and 35% are in fair or poor structural condition. New Hampshire lacks a dedicated grant funding source for stream crossing replacement, despite successful implementation at neighboring states such as Massachusetts' Culvert Replacement Municipal Assistance Grant Program or Vermont's Better Roads Program. This often leads to municipalities, with highly varying levels of staffing and resources, having to pursue multiple funding sources over many years to replace a single culvert. Targeting the stream crossing replacements that have the greatest ecological and societal benefits is critical to support effective implementation projects.

Beginning in 2022, NHDES initiated a pilot stream crossing prioritization methodology in partnership with the University of New Hampshire (UNH) with funding allocated by the American Rescue Plan Act (ARPA). This work used a stakeholder-led process to develop a multi-criteria decision support model within the Merrimack and Salmon-Falls River watersheds that prioritizes stream crossing management at a watershed scale via co-optimizing multiple parameters such as road safety, ecosystem restoration, resiliency, aquatic organism passage, and project cost.

UNH will be hired (\$321,405) to continue this prioritization effort under two separate, but connected scopes of work:

1. The UNH College of Engineering and Physical Sciences (UNH CEE) will support a NHDES consultant to finalize a stream crossing prioritization model and tool, develop a top priority culvert list, and conduct data gap analysis, described in Tasks 1-4.
2. UNH's Technology Transfer Center (UNH T2) will lead database management and facilitate training development and delivery with the NHDES consultant, described in Task 5-6 below.

UNH was previously contracted using ARPA funds to conduct work that has directly led to this proposal, they are uniquely qualified. Cost based on preliminary quote.

**D. Scope of Work:** Campus shall perform the following activities under this Project Agreement:

### **Task 1: Model finalization & scoring/ranking evaluation**

*Description of work:* Continuing two years of preliminary development via NHDES' ARPA funding, UNH CEE will finalize a spreadsheet model with supporting Python code script which prioritizes crossing management at a watershed-scale considering multiple parameters such as community resiliency, wildlife conservation and restoration, public safety, environmental quality, and project cost. The finalized model will be presented and shared to the New Hampshire Stream Crossing Initiative's Implementation Committee (which includes TNC, NHSCI members, RPCs, and non-profit partners) and an iterative approach will be taken to incorporate stakeholder feedback, documented in a Feedback Matrix and Action Plan. The model results will be evaluated with the traditional scoring and ranking prioritization methodology to inform finalized results, which will be summarized in a Prioritization Model Evaluation Technical Memo. This task will be completed in conjunction with a professional consultant team hired by NHDES for this project.

*Estimated timeframe:* Upon Governor & Council approval – April 2026

*Deliverables:*

- Final spreadsheet model with supporting Python code script

- NHSCI Implementation Committee presentation & meeting minutes
- Feedback Matrix and Action Plan

## **Task 2: Summary of nationwide stream crossing prioritization and replacement best practices**

*Description of work:* Building off the literature review conducted by UNH CEE during the ARPA-funded phase of this work, the NHDES consultant (with UNH CEE support) will produce a Best Practices Summary document, which will synthesize (1) how NH communities currently manage crossings, (2) how other areas in the US manage crossings, (3) lessons learned from NH and US crossing management, and (4) recommendations for managing crossings in NH moving forward.

*Estimated timeframe:* Upon Governor & Council approval – January 2026

*Deliverables:*

- Support the drafting and finalization of a Stream Crossing Prioritization Best Practices Summary led by a NHDES consultant
- Support the development of a Summary PowerPoint Presentation led by a NHDES consultant

## **Task 3 Top priority stream crossing list**

*Description of work:* A list of top priority crossings will be developed by the NDHES consultant with support from UNH CEE based on the outcomes of Task 1 to inform future engagement and outreach activities.

*Estimated timeframe:* March – April 2026

*Deliverables:*

- List of Top Priority Stream Crossings (tabular and spatial formats)

## **Task 4 Prioritization planning tools**

*Description of work:* Development of a suite of crossing replacement prioritization planning tools, led by the NHDES consultant with support from UNH CEE and input from UNH T2, will be directed by a Tool Development Work Plan. These tools will allow practitioners to connect regional priorities and multi-criteria prioritized project modelling outputs to funding sources. They will allow assessment of crossing prioritization at multiple scales, from specific sub-watersheds to specific municipalities. The NHDES consultant team and UNH will develop the tools with input from existing crossing asset database managers such as the NHDES Wetlands Permitting Tool, Certified Culvert Maintainer (CCM) database, New Hampshire Statewide Asset Data Exchange System (SADES), etc. to incorporate lessons learned from existing resources, ensure coordination, and reduce overlap. Additionally, a user workshop with stakeholders will inform tool design, culminating in a Workshop Summary with design recommendations.

*Estimated timeframe:* Upon Governor & Council approval – May 2027

*Deliverables:*

- Support the development of the Tool Development Work Plan
- Support the user workshop w/summary and design recommendations
- Support the development of the interactive prioritization tool that incorporates modelling results, particularly the interoperability with SADES

## **Task 5 Training program**

*Description of work:* UNH's Technology Transfer Center, NHDES, and TNC will develop and deliver training materials to educate practitioners and decision makers on how to utilize the prioritization planning tools in concert with other available crossing resources and existing

municipal planning processes such as the NHSCI protocol, CCM Program, Hazard Mitigation Planning, Capital Improvement Program planning, etc. to help ensure effective use of limited resources. The team will work collaboratively to develop a crossing prioritization planning tool guidance document as well as an associated training presentation that can be delivered virtually or in person to the public, private, nonprofit, and academic sectors free of charge (four 1-2 hour live trainings hosted by UNH T2 and on-demand content will also be provided). The crossing prioritization training resources will focus on how to use the new prioritization planning tools while simultaneously educating the users on the need for and benefits of these tools. Planning ahead and marrying traditional asset management techniques with resiliency tools such as the prioritization planning tool is pivotal to focus sufficient funding on multi-benefit infrastructure projects that will function for their entire lifespan. This training will help to bridge the gap between the transportation and environmental sectors, educating users on the benefits of looking beyond the culvert (in the case of the highway superintendent) or beyond the fish counts (in the case of the fisheries biologist) to incorporate nature-based solutions into highway safety projects with methodologies such as bank stabilization, floodplain restoration, etc.

The first training will be dedicated to the RPC Crossing Navigators as a ‘train the trainer’ program so that they can then incorporate the Crossing Prioritization Planning Tools into their educational and technical assistance work with local communities through this broader NFWF project. The remaining trainings will be offered to NHDOT staff, local Town staff, and other local community organizations such as Conservation Commissions, environmental nonprofits, etc. through the UNH T2 and NHSCI networks.

*Estimated timeframe:* November 2026 – December 2027

*Deliverables:*

- UNH T2 will host four 1-2 hour live training sessions and disseminate on-demand recorded training content
- Support the development of a planning tool guidance document
- Support the development of training presentation and associated materials

## **Task 6 Database integration & management**

*Description of work:* Based on the results of the prioritization tool, public data display tools will be made available by UNH T2 through NH’s geospatial clearinghouse, the New Hampshire Geographically Referenced Analysis and Information Transfer System (NH GRANIT). Public live views of the SADES crossing data will be made available for viewing and data download via NH GRANIT. Additionally, integration with NHDES Wetlands permitting and CCM database will be explored in order to determine if there are efficient ways to link these other data sources to the SADES crossing database, resulting in a Database Action Plan that includes data management and integration objectives. Any identified data gaps identified during Tasks 1-4 will be pursued by UNH CEE via a prioritized Data Gap list and Action Plan.

*Estimated timeframe:* Upon Governor & Council approval – December 2027

*Deliverables:*

- Link NH GRANIT with Stream Crossing prioritization data as well as selected results from the stream crossing prioritization tool developed in Task 4
- Explore the integration of the stream crossing prioritization tool developed in Task 4 and NHDES’ Aquatic Restoration Mapper with NHDES Wetlands permitting and CCM database
- Draft & final Database Action Plan that includes data management and integration objectives
- Prioritized Data Gap List and Action Plan

- At least three data gaps addressed

**E. Deliverables Schedule:** Reports: Campus Project Director shall provide approximately four (4) semi-annual progress reports every January-June and July-December that occurs in the project period, beginning with contract approval by Governor & Council, and one (1) final report that summarizes all the project activities. The final report will summarize activities throughout the entire project period. The final report will be due within 90 days of the project end date on December 31, 2027.

**F. Budget and Invoicing Instructions:** Campus will submit invoices to the State on regular Campus invoice forms no more frequently than monthly and no less frequently than quarterly. Invoices will be based on actual project expenses incurred during the invoicing period, and shall show current and cumulative expenses by major cost categories as shown below. State will pay Campus within 30 days of receipt of each invoice. Campus will submit its final invoice not later than 60 days after the Project Period end date.

Budget Items	State Funding	Cost Sharing	Total
1. Salaries & Wages	\$169,729	N/A	\$169,729
2. Fringe Benefits	\$21,490	N/A	\$21,490
3. Travel	\$5,500	N/A	\$5,500
4. Supplies & Services	\$17,838	N/A	\$17,838
5. Facilities and Administrative	\$106,848	N/A	\$106,848
<b>Total Project Costs:</b>	<b>\$321,405</b>	N/A	<b>\$321,405</b>

**Other:** Any outward facing products, publications, presentations, handouts etc. that are created with funding from NHCP’s NFWF grant shall comply with NFWF and NHDES publication requirements, as follows:

1. Provide funding credit to the National Fish and Wildlife Foundation, New Hampshire Department of Environmental Services, and the NH Coastal Program.
2. The NFWF Subrecipient agrees to permit NFWF to post a link on any or all NFWF websites to any websites created by the NFWF subrecipient in connection with the project.
3. Payments made to the NFWF Subrecipient under this Agreement do not by direct reference or implication convey NFWF’s endorsement nor the endorsement by any other entity that provides funds to the NFWF Subrecipient through this Agreement, including the U.S. Government, as applicable, for the Project. All information submitted for publication or other public releases of information regarding this Agreement shall carry the following disclaimer, which NFWF may revise at any time at its sole discretion:

For Projects funded in whole or part with federal funds: “The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions or policies of the U.S. Government or the National Fish and Wildlife Foundation and its funding sources. Mention of trade names or commercial products does not constitute their endorsement by the U.S. Government, or the National Fish and Wildlife Foundation or its funding sources.”

4. All final work products must meet the applicable Americans with Disabilities Act (ADA) Title II Regulations to the extent practicable and shall be guided by best practices outlined in the Revised Section 508 Standards of the Rehabilitation Act and the Web Content Accessibility Guidelines

(WCAG). At minimum, final work products shall include sans-serif fonts, underlined and descriptive text links, color best practices, captions for audio and video content, headers in tables, images with alt text, gender-neutral text, and consideration of the Plain Writing Act. Examples of final work products and outreach materials include, but are not limited to, project reports, press releases, newsletter articles, websites, videos and signage.

## EXHIBIT B

This Project Agreement is funded under a Grant/Contract/Cooperative Agreement to State from the Federal sponsor specified in Project Agreement article F. All applicable requirements, regulations, provisions, terms and conditions of this Federal Grant/Contract/Cooperative Agreement are hereby adopted in full force and effect to the relationship between State and Campus, except that wherever such requirements, regulations, provisions and terms and conditions differ for INSTITUTIONS OF HIGHER EDUCATION, the appropriate requirements should be substituted (e.g., OMB Circulars A-21 and A-110, rather than OMB Circulars A-87 and A-102). References to Contractor or Recipient in the Federal language will be taken to mean Campus; references to the Government or Federal Awarding Agency will be taken to mean Government/Federal Awarding Agency or State or both, as appropriate.

Special Federal provisions are listed here:  None or **Uniform Guidance issued by the Office of Management and Budget (OMB) in lieu of Circulars listed in paragraph above. .**