



The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner

January 27, 2025



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Her Excellency, Governor Kelly A. Ayotte
 and The Honorable Council
 State House
 Concord, NH 03301

REQUESTED ACTION

Authorize the New Hampshire Department of Environmental Services (NHDES) to amend a **SOLE SOURCE** Cooperative Project Agreement with the University of New Hampshire, Sponsored Program Administration (VC #315187-B083) (PO #1098112), Durham, New Hampshire, to perform laboratory analysis of seawater samples to identify and quantify harmful algae cells, by 1) extending the project completion date to June 30, 2027 from March 31, 2025, and 2) increasing the amount by \$92,601 to \$135,353 from \$42,752, effective upon Governor & Council. The original agreement was approved by Governor & Council on February 21, 2024, Item #94. 100% General Funds.

Funding is available in the following account, with the ability to adjust encumbrances between State Fiscal Years through the Budget Office, if needed and justified. Funding for FY26 and FY 2027 are contingent upon availability and continued appropriation of funds.

	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>
03-44-44-442010-15230000-102-500731	\$8,791	\$41,143	\$42,667
Dept. Environmental Services, Shellfish Protection Program, Contracts for Program Services			

EXPLANATION

NHDES requests approval to amend a **SOLE SOURCE** Cooperative Project Agreement with the University of New Hampshire, Department of Biological Sciences (UNH). NHDES recently purchased a FlowCam, a benchtop instrument that allows for rapid identification of marine harmful algae cells in seawater using high-speed digital photography and image-recognition software and continues to evaluate the utility of this instrument and its applicability to the marine algae monitoring programs run by the NHDES Shellfish Program, as required by state law and by the National Shellfish Sanitation Program. This is a **SOLE SOURCE** agreement because the laboratory of Dr. Elizabeth Harvey at UNH operates the same type of FlowCam. The instrument has shown promise for supplementing light microscope identifications made by NHDES staff or volunteers, particularly during periods of intensive algae blooms when a much larger volume of samples needs to be examined to safely keep commercial and recreational shellfish harvest areas open. During such periods, the availability of staff and volunteers trained in light microscope identifications can limit the number of samples that can be analyzed. This is the only such lab in the vicinity that could be used to augment NHDES resources in this manner. A time extension is requested because this collaboration with UNH has proven to be valuable to the NHDES Shellfish Program, and the extension will allow for continued work through the end of the fiscal year.

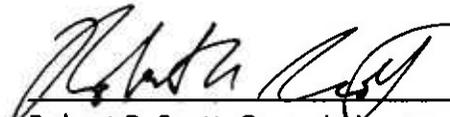
Dr. Harvey is committed to working with NHDES, has a staff member trained in the use of the FlowCam, and can provide the staff who are already familiar with the department's methods for seawater sample collection and examination using the light microscope. Partnering with Dr. Harvey's laboratory will provide NHDES staff with backup support to process the increased number of samples that are needed during algae bloom events. Being able to process these samples in a timely manner benefits the NH commercial shellfish aquaculture industry by avoiding unnecessary harvest closures.

This amendment provides funds for UNH to provide a laboratory technician two days per week for the term of the agreement, to perform field sample collection, light microscope identification, and FlowCam analyses at the NHDES Pease field office, and to provide consultation services to NHDES staff learning the FlowCam analysis routines and methodologies for post-processing the FlowCam data. The comparisons between microscope results and FlowCam results will allow NHDES to understand the degree to which the FlowCam data match light microscope results and will enable NHDES to identify the monitoring conditions and situations in which use of a FlowCam is/is not appropriate for meeting National Shellfish Sanitation Program requirements.

To date, \$13,554.21 of the original agreement amount of \$42,752 has been spent. No match is associated with this agreement. NHDES will provide 100% of the project costs. A budget breakdown is included in the Cooperative Project Agreement Amendment 1.

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

We respectfully request your approval.



Robert R. Scott, Commissioner

**AMENDMENT #1 to
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

The Cooperative Project Agreement, approved by the State of New Hampshire Governor and Executive Council on **February 21, 2024**, Item # **94**, for the Project titled "**2024-25 NHDES FlowCam and Harmful Algal Bloom Analytical Services**," Campus Project Director, **Elizabeth Harvey**, is and all subsequent properly approved amendments are hereby modified by mutual consent of both parties for the reason(s) described below:

Purpose of Amendment (Choose all applicable items):

- Extend the Project Agreement and Project Period end date.
- Provide additional funding from the State for expansion of the Scope of Work under the Cooperative Project Agreement.
- Other:

Therefore, the Cooperative Project Agreement is and/or its subsequent properly approved amendments are amended as follows (Complete only the applicable items):

- Article A. is revised to replace the State Department name of _____ with _____ and/or USNH campus from _____ to _____.
- Article B. is revised to replace the Project End Date of **3/31/2025** with the revised Project End Date of **6/30/2027**, and Exhibit A, article B is revised to replace the Project Period of **February 21, 2024 – March 31, 2025** with **February 21, 2024 – June 30, 2027**.
- Article C. is amended to add Exhibit A by including the proposal titled, " _____," dated _____.
- Article D. is amended to change the State Project Administrator to _____ and/or the Campus Project Administrator to _____.
- Article E. is amended to change the State Project Director to _____ and/or the Campus Project Director to _____.
- Article F. is amended to increase funds in the amount of **\$92,601** and will read:

Total State funds in the amount of **\$135,353** have been allotted and are available for payment of allowable costs incurred under this Project Agreement. State will not reimburse Campus for cost exceeding the amount specified in this paragraph.

- Article F. is amended to change the cost share requirement and will read:
Campus will cost-share _____ % of total costs during the amended term of this Project Agreement.
- Article F. is amended to change the source of Federal funds paid to Campus and will read:
- Article G. is exercised to amend 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, as follows:

Article is amended in its entirety to read as follows:

Article is amended in its entirety to read as follows:

- Article H. is amended such that:

- 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.

- Exhibit A is amended as attached and noted with italics not bold (addition) and strikethrough (deletion).
- Exhibit B is amended as attached.

All other terms and conditions of the Cooperative Project Agreement remain unchanged.

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

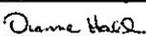
This Amendment and all obligations of the parties hereunder shall become effective on the date the Governor and Executive Council of the State of New Hampshire or other authorized officials approve this Amendment to the Cooperative Project Agreement.

IN WITNESS WHEREOF, the following parties agree to this **Amendment #1** to the Cooperative Project Agreement.

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

Name: Dianne Hall

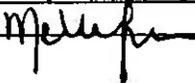
Title: Manager, Pre-Award Compliance

Signature and Date:  2/19/25 Digitally signed by Dianne Hall
Date: 2025.01.27 09:31:17 -0500

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

Name: Melissa Fales

Title: Assistant Attorney General

Signature and Date:  2/19/25

**By An Authorized Official of:
Department of Environmental Services**

Name: Robert R. Scott

Title: Commissioner

Signature and Date:  2/10/25

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

Name: _____

Title: _____

Signature and Date: _____

EXHIBIT A

A. Project Title: 2024-257 NHDES Harmful Algal Bloom Analytical Services

B. Project Period: March 1, 2024 through ~~March 31, 2025~~ June 30, 2027

C. Objectives: The objectives of this project are to analyze seawater samples and generate estimates of cell abundance of selected harmful algal bloom species on a weekly basis using light microscopy and the NHDES FlowCam benchtop instrument, to evaluate the variability of the FlowCam estimates under different types of algal bloom conditions, to develop FlowCam image libraries on the NHDES FlowCam, and to develop customized FlowCam protocols for the target taxa of interest to the NHDES Shellfish Program. The results of the FlowCam estimates will be compared to results of cell abundances estimated by light microscopy (performed by NHDES staff and/or volunteers).

D. Scope of Work: Dr. Elizabeth Harvey will provide services of her laboratory technician Sara Smith for two days per week, generally Mondays and Tuesdays. The laboratory technician will perform FlowCam analyses on 1 -3 seawater samples each week, using the FlowCam located at the NHDES Pease field office. FlowCam analyses will comprise of running the samples through the instrument, maintaining digital logs of sample runs and reporting cell abundances of harmful taxa observed to NHDES. The lab technician will also analyze 2-5 seawater samples each week using light microscopy at the NHDES Pease field office, following DES Standard Operating Procedures, and will provide cell abundance of harmful taxa observed in hard copy to the DES Shellfish Program Specialist. The lab technician will also register for the Karen A. Steidinger Marine Harmful Algae Taxonomy Training Course that is held in August at the National Center for Marine Algae and Microbiota.

E. Deliverables Schedule: Reports. Campus Project Director shall provide electronic results (updated Microsoft Excel spreadsheet for FlowCam work) on a weekly basis to the State Project Director, as well as hard copy microscopy counts on a weekly basis to the State Project Director.

F. Budget and Invoicing Instructions: Using standard Campus invoices Campus shall submit requests for payment/invoice by ~~6/30/24, 9/30/24, 12/31/24, and 3/31/25~~ 3/31, 6/30, 9/30, and 12/31 of each year during the invoicing period. Invoices will be based on actual project expenses incurred during the invoicing period, and shall show current and cumulative expenses by major cost categories. State shall issue payment to Campus within 30 days of receipt. The final billing must be received by the State no more than 30 days after the completion date.

Budget Items	Original Funding	Amendment Total	New Total
1. Salaries & Wages	\$20,800	\$ 49,158	\$ 69,958
2. Fringe Benefits	\$6,906	\$ 18,434	\$25,340
3. Travel	\$3,500	-	\$3,500
4. Supplies and Services	-	-	-
5. Other	-	-	-
6. Facilities and Admin.	\$11,546	\$ 25,009	\$36,555
Subtotals	\$42,752	\$92,601	\$135,353

Total Project Costs: \$135,353



The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner

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January 25, 2024

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

REQUESTED ACTION

Authorize the New Hampshire Department of Environmental Services (NHDES) to enter into a **SOLE SOURCE** agreement with the University of New Hampshire, Sponsored Program Administration (VC #315187-B083), Durham, New Hampshire, in the amount of \$42,752 to perform laboratory analysis of seawater samples to identify and quantify harmful algae cells, effective upon Governor and Council approval through March 31, 2025. 100% General Funds.

Funding is available in the following account:

	<u>FY 2024</u>
03-44-44-442010-15230000-102-500731	\$42,752
Dept. Environmental Services, Shellfish Protection Program, Contracts for Program Services	

EXPLANATION

NHDES requests approval to enter into a **SOLE SOURCE** Cooperative Project Agreement with the University of New Hampshire, Department of Biological Sciences (UNH). NHDES recently purchased a FlowCam, a benchtop instrument that allows for rapid identification of marine harmful algae cells in seawater using high-speed digital photography and image-recognition software and continues to evaluate the utility of this instrument and its applicability to the marine algae monitoring programs run by the NHDES Shellfish Program, as required by state law and by the National Shellfish Sanitation Program. This is a **SOLE SOURCE** agreement because the laboratory of Dr. Elizabeth Harvey at UNH operates the same type of FlowCam. The instrument has shown promise for supplementing light microscope identifications made by NHDES staff or volunteers, particularly during periods of intensive algae blooms when a much larger volume of samples needs to be examined to safely keep commercial and recreational shellfish harvest areas open. During such periods, the availability of staff and volunteers trained in light microscope identifications can limit the number of samples that can be analyzed. This is the only such lab in the vicinity that could be used to augment NHDES resources in this manner.

Dr. Harvey is interested in working with NHDES, has a staff member trained in the use of the FlowCam, and can provide the staff who are already familiar with the department's methods for seawater sample collection and examination using the light microscope. Partnering with Dr. Harvey's laboratory will provide NHDES staff with needed backup to process the increased number of samples that are needed

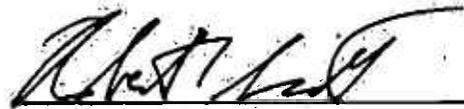
during algae bloom events. Being able to process these samples in a timely manner benefits the NH commercial shellfish aquaculture industry by avoiding unnecessary harvest closures.

This agreement provides funds for UNH to provide a laboratory technician two days per week for the term of the agreement, to perform field sample collection, light microscope identification, and FlowCam analyses at the NHDES Pease field office, and to provide consultation services to NHDES staff learning the FlowCam analysis routines and methodologies for post-processing the FlowCam data. The comparisons between microscope results and FlowCam results will allow NHDES to understand the degree to which the FlowCam data match light microscope results and will enable NHDES to identify the monitoring conditions and situations in which use of a FlowCam is/is not appropriate for meeting National Shellfish Sanitation Program requirements.

Total project costs are budgeted at \$42,752.

This 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", written over a 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 **3/31/25**. 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: 2024-25 NHDES FlowCam and Harmful Algal Bloom Analytical Services

- 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: Chris Nash
Address: NHDES
 222 International Drive, Suite 175
 Portsmouth, NH 03801
Phone: 603-559-1509

Campus Project Administrator

Name: Dianne Hall
Address: University of New Hampshire
 Sponsored Programs Administration
 51 College Rd. Rm 116
 Durham, NH 03824
Phone: 603-862-0529

- 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: Chris Nash
Address: NHDES
 222 International Drive, Suite 175
 Portsmouth, NH 03801
Phone: 603-559-1509

Campus Project Director

Name: Elizabeth Harvey
Address: Department of Biological Sciences
 College Road
 Durham, NH 03824
Phone: 603-862-3418

F. Total State funds in the amount of \$42,752 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 0 % 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. _____ from _____ under CFDA# _____. 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, _____ have executed this Project Agreement.

By An Authorized Official of:

University of New Hampshire

Name: Karen M. Jensen

Title: Director, Pre-Award Compliance

Signature and Date: Karen Jensen Digitally signed by Karen Jensen
Date: 2024.01.11 14:02:48
+08'00'

By An Authorized Official of:

Department of Environmental Services

Name: Robert R. Scott

Title: Commissioner

Signature and Date: [Signature] 1/26/24

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

Name: Melissa Fales

Title: Assistant Attorney General

Signature and Date: [Signature] 2/12/24

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

Name: _____

Title: _____

Signature and Date: _____

EXHIBIT A

- A. Project Title:** 2024-25 NHDES Harmful Algal Bloom Analytical Services
- B. Project Period:** March 1, 2024 through March 31, 2025
- C. Objectives:** : The objectives of this project are to analyze seawater samples and generate estimates of cell abundance of selected harmful algal bloom species on a weekly basis using light microscopy and the NHDES FlowCam benchtop instrument, to evaluate the variability of the FlowCam estimates under different types of algal bloom conditions; to develop FlowCam image libraries on the NHDES FlowCam, and to develop customized FlowCam protocols for the target taxa of interest to the NHDES Shellfish Program. The results of the FlowCam estimates will be compared to results of cell abundances estimated by light microscopy (performed by NHDES staff and/or volunteers).
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- E. Deliverables Schedule:** Reports. Campus Project Director shall provide electronic results (updated Microsoft Excel spreadsheet for FlowCam work) on a weekly basis to the State Project Director, as well as hard copy microscopy counts on a weekly basis to the State Project Director.
- F. Budget and Invoicing Instructions:** Using standard Campus invoices Campus shall submit requests for payment/invoice by 6/30/24, 9/30/24, 12/31/24, and 3/31/25. Invoices will be based on actual project expenses incurred during the invoicing period, and shall show current and cumulative expenses by major cost categories. State shall issue payment to Campus within 30 days of receipt. The final billing must be received by the State no more than 30 days after the completion date.

Budget Items	State Funding	Cost Sharing	Total
1. Salaries & Wages	\$ 20,800	\$ 0	\$20,800
2. Employee Fringe Benefits	\$ 6,906	\$ 0	\$ 6,906
3. Travel	\$ 3,500	\$ 0	\$ 3,500
4. Supplies and Services	\$ 0	\$ 0	\$ 0
5. Equipment	\$ 0	\$ 0	\$ 0
6. Facilities & Admin Costs	\$11,546	\$ 0	\$11,546
Subtotals	\$42,752	\$ 0	\$42,752
In Kind Contribution		\$ 0	\$ 0
Total Project Costs:			\$42,752

