



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

Robert R. Scott, Commissioner

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April 11, 2022

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, NH, in the amount of \$1,500 to perform laboratory analysis of seawater samples to identify and quantify harmful algae cells using a FlowCam, effective upon Governor and Council approval through December 31, 2022. 100% General Funds.

Funding is available in the following account:

|                                     |                |
|-------------------------------------|----------------|
|                                     | <u>FY 2022</u> |
| 03-44-44-442010-15230000-102-500731 | \$1,500        |

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 was selected because the laboratory of Dr. Elizabeth Harvey and UNH own a FlowCam, a benchtop instrument that allows for rapid identification of marine harmful algal cells in seawater using high-speed digital photography and image-recognition software. NHDES would like 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. The instrument may hold promise for supplementing light microscope identifications made by NHDES staff and volunteers, particularly during periods of intensive algae blooms when a much larger volume of samples need to be examined in order 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. Dr. Harvey is interested in working with NHDES, has a FlowCam available for use, is located near the coast for ease of sample transfers, and has lab staffing capable of responding to the routine and event-based sampling that NHDES wishes to pursue.

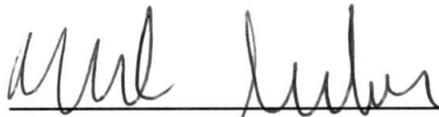
This agreement provides funds for University of New Hampshire, Department of Biological Sciences, to conduct FlowCam analyses of up to 100 weekly seawater samples collected by NHDES Shellfish Program staff and volunteers. NHDES Shellfish Program staff will analyze the same seawater samples with

traditional light microscope identification methods, and will compare the microscope results to the FlowCam results. These comparisons 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 \$1,500. Despite being under the \$10,000 threshold, this agreement requires G&C approval because UNH has received more than \$10,000 total for other projects to date.

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

We respectfully request your approval.

for   
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 **12/31/22**. 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: **2022 NHDES Harmful Algal Bloom FlowCam 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

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Phone: 603-559-1509

**Campus Project Administrator**

Name: Kimberly Becker  
 Address: University of New Hampshire  
Sponsored Programs Administration  
51 College Rd. Rm 116  
Durham, NH 03824

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Phone: 603-358-2443

- 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

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Phone: 603-559-1509

**Campus Project Director**

Name: Elizabeth Harvey  
 Address: Department of Biological Sciences  
College Road  
Durham, NH 03824

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Phone: 603-862-3418

F. Total State funds in the amount of **\$1,500.00** 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, **Department of Environmental Services** 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: 2022.03.24 16:34:49 -04'00'

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

Name: Robert R. Scott  
Title: Commissioner  
Signature and Date: [Signature] 4/12/22

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

Name: Joshua Harrison  
Title: Asst Atty General  
Signature and Date: [Signature]  
4/26/2022

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

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Signature and Date: \_\_\_\_\_

**EXHIBIT A**

- A. Project Title:** 2022 NHDES Harmful Algal Bloom FlowCam Analytical Services
- B. Project Period:** April 1, 2022 through December 31, 2022
- C. Objectives:** The objectives of this project are to analyze seawater samples and generate estimates of cell abundance of selected harmful algal bloom species using a FlowCam benchtop instrument, and to evaluate the variability of the FlowCam estimates under different types of algal bloom conditions. 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 perform FlowCam analyses on up to 100 seawater samples, which will be collected by NHDES staff and/or volunteers. Dr. Harvey's lab will retrieve the samples from NHDES, will perform the FlowCam analyses, and will report the results weekly in digital format using a spreadsheet template to be provided by NHDES. Three types of samples will be provided to Dr. Harvey: 1. ROUTINE TESTING: Weekly 2-liter whole seawater samples collected from the NHDES Shellfish Program site at the UNH Pier in New Castle, NH (April 2022 through December 2022); 2. BLOOM EVENT RESPONSE TESTING: during a HAB bloom, additional 2-liter whole seawater samples from sites other than the UNH Pier site will be provided for FlowCam testing; 3. TISSUE TESTING THRESHOLD EVALUATION: additional 2-liter samples will be provided from multiple sites whenever microscope cell abundances are near the thresholds used by NHDES to trigger shellfish tissue tests. Those thresholds are 7.5 cells per liter for Alexandrium, 2,000 cells per liter for large cell (>3micron width) Pseudo-nitzschia, 15,000 cells per liter for small cell (<3micron width) Pseudo-nitzschia, and 15,000 cells per liter for total Dinopysis.
- E. Deliverables Schedule:** Reports. Campus Project Director shall provide electronic results (updated Microsoft Excel spreadsheet) 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 quarterly, by 6/30/22, 9/30/22 and 12/31/22. 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         | \$ 987        | \$ 0         | \$ 987  |
| 2. Employee Fringe Benefits | \$ 0          | \$ 0         | \$ 0    |
| 3. Travel                   | \$ 0          | \$ 0         | \$ 0    |
| 4. Supplies and Services    | \$ 0          | \$ 0         | \$ 0    |
| 5. Equipment                | \$ 0          | \$ 0         | \$ 0    |
| 6. Facilities & Admin Costs | \$ 513        | \$ 0         | \$ 513  |
| Subtotals                   | \$ 1,500      | \$ 0         | \$1,500 |
| In Kind Contribution        |               | \$ 0         | \$ 0    |
| Total Project Costs:        |               |              | \$1,500 |