



The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner



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July 12, 2023

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 \$6,587 to perform laboratory analysis of seawater samples to identify and quantify harmful algae cells using a FlowCam and light microscopy, effective upon Governor and Council approval through March 31, 2024. 100% General Funds.

Funding is available in the following account:

	<u>FY 2024</u>
03-44-44-442010-15230000-102-500731	\$6,587
Dept. Environmental Services, Shellfish Protection Program, Contracts for Program Services	

EXPLANATION

NHDES requests approval to enter into a **SOLE SOURCE** Cooperative Project Agreement (CPA) with the University of New Hampshire, Department of Biological Sciences (UNH), to assist with seawater sample analysis between July 1, 2023, and March 31, 2024. UNH was selected because the laboratory of Dr. Elizabeth Harvey has 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 recently purchased a FlowCam and is continuing 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 (NSSP). NHDES will work with Dr. Harvey's laboratory to compare results from the FlowCam with traditional light microscope analysis to understand the variability of the FlowCam estimates under different types of algal bloom conditions. Working with Dr. Harvey's laboratory is beneficial to NHDES because it is located near the coast for ease of sample transfers; has the laboratory staff capable of responding to the routine and intensive event-based sampling that NHDES wishes to pursue; and, Dr. Harvey has the expertise to advise NHDES staff on how to integrate the new NHDES FlowCam into department analysis procedures.

The FlowCam has shown promise for supplementing traditional light microscope identifications of marine algae made by NHDES staff and 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 these periods of intense monitoring, the availability of staff and volunteers trained in light microscope identifications can be the primary limitation to the number of samples that can be analyzed.

This agreement provides funding to UNH to conduct FlowCam analyses of up to 100 seawater samples collected by NHDES Shellfish Program staff and volunteers, to fund a UNH laboratory technician to learn and implement NHDES field data collection and light microscope protocols, to compare light microscope results to FlowCam results, and to provide consultation services to NHDES staff learning the FlowCam analysis procedures and methodologies for post-processing the FlowCam data. The comparisons between the light microscope results and FlowCam results will allow NHDES to understand the degree to which the FlowCam data correlate to the light microscope results, which will enable NHDES to identify the monitoring conditions and situations in which use of a FlowCam is or is not appropriate for meeting the NSSP requirements.

Total project costs are budgeted at \$6,587. 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.



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 **3/31/24**. 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: 2023-24 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: 603-862-1942

- 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 \$6,587 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

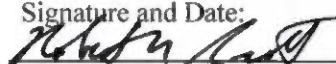
Article(s) _____ of the Master Agreement for Cooperative Projects between the State of New Hampshire and the University System of New Hampshire dated November 13, 2002 is/are hereby amended to read:


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, **DES** 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: 2023.06.28 16:42:00
+04'00'

By An Authorized Official of:
Department of Environmental Services
Name: Robert R. Scott
Title: Commissioner
Signature and Date:  7/17/23

By An Authorized Official of: the New Hampshire Office of the Attorney General
Name: 
Title: AA6
Signature and Date: 8-7-23

By An Authorized Official of: the New Hampshire Governor & Executive Council
Name: _____
Title: _____
Signature and Date: _____

EXHIBIT A

- A. Project Title:** 2023-24 NHDES FlowCam and Harmful Algal Bloom Analytical Services
- B. Project Period:** July 1, 2023 through March 31, 2024
- 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. Dr. Elizabeth Harvey will also provide up to 16 hours of consultation time to assist NHDES staff in their work to integrate the NHDES FlowCam into NHDES Shellfish Program sampling routines. Additionally, the Harvey lab will provide a dedicated lab technician who will 1) participate in NHDES training in agency HAB protocols for sample collection and microscope analysis, 2) will routinely analyze NHDES samples under the light microscope, and 3) will compare light microscope results from 2), as well as with other samples enumerated at NHDES, with analogous FlowCam samples in the Harvey Lab.
- 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 by 9/30/23, 12/31/23, and 6/31/24. 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	\$ 4,725	\$ 0	\$ 4,725
2. Employee Fringe Benefits	\$ 83	\$ 0	\$ 83
3. Travel	\$ 0	\$ 0	\$ 0
4. Supplies and Services	\$ 0	\$ 0	\$ 0
5. Equipment	\$ 0	\$ 0	\$ 0
6. Facilities & Admin Costs	\$ 1,779	\$ 0	\$ 1,779
Subtotals	\$ 6,587	\$ 0	\$ 6,587
In Kind Contribution		\$ 0	\$ 0
Total Project Costs:			\$ 6,587