



The State of New Hampshire
Department of Environmental Services



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Robert R. Scott, Commissioner

November 29, 2021

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

REQUESTED ACTION

Authorize the 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 \$35,447 to complete the Nutrient Loading Indicator study for the 2022 State of Our Estuaries Report, effective upon Governor and Council approval through December 31, 2022. 100% CWSRF Management Fees.

Funding is available in the following account.

	<u>FY 2022</u>
03-44-44-441018-4788-102-500731	\$35,447
Dept of Environmental Services, CWSRF Management Fees, Contracts for Program Services	

EXPLANATION

NHDES requests approval to enter into a **SOLE SOURCE** Cooperative Project Agreement with the University of New Hampshire (UNH). UNH was selected for this project because it has unique expertise in conducting research in the State's estuaries, and conducted the same analysis for the 2017 State of Our Estuaries Report. The selection of the UNH team provided a unified approach to measuring and reporting on the nutrient reduction which will benefit the communities that surround the estuary.

Every five years, the Piscataqua Region Estuaries Partnership (PREP) produces a State of Our Estuaries Report (SOER) that examines environmental and social indicators of estuarine health, such as bacteria levels, nutrient concentrations, toxic contaminant levels, abundance of shellfish, and land use in the coastal watershed. By examining long-term data sets compiled from a variety of organizations, including NHDES and UNH, the report provides an accurate understanding of environmental trends for the Great Bay and Hampton-Seabrook estuaries so that PREP may make informed land use and resource management decisions.

The UNH nutrient load indicator study is directly related to the permitting of municipal wastewater treatment plants (WWTPs) that discharge to the Great Bay Estuary and tributary rivers. The recent

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Nitrogen General Permit is, to a great extent, predicated on the results of previous nutrient load indicators study. This proposed study will update previous analyses and will set the stage for the next round of permitting in four years. It is critical that this data be accurate and timely so that the communities around Great Bay understand the types of nutrient reductions that are necessary and to plan for them. The linkage back to the science is important as the implementation of the community nutrient reduction plans are funded through the Clean Water State Revolving Fund. Finally, the indicators project is a critical component of the SOER and contributes to the overall understanding of the status and trends of water quality and habitats in the estuaries. NHDES proposes to provide funds to this project because the data are critical for managing the state's estuaries and aiding communities in meeting regulatory requirements.

In the event that other 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, content, and execution.

We respectfully request your approval of this item.



Robert R. Scott, Commissioner

COOPERATIVE PROJECT AGREEMENT

between the

STATE OF NEW HAMPSHIRE, **NH 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, **NH 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: **Nutrient Loading Indicator for the 2022 State of Our Estuaries Report**

- 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: Steve Couture
 Address: NH Dept. of Environmental Services
 29 Hazen Drive, PO Box 95
 Concord, NH 03302-0095
 Phone: 603-559-0027

Campus Project Administrator

Name: Kimberly Becker
 Address: University of New Hampshire
 Sponsored Programs Administration
 51 College Road
 Durham, NH 03824-2620
 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: Ted Diers
 Address: NH Dept. of Environmental Services
 29 Hazen Drive, PO Box 95
 Concord, NH 03302-0095
 Phone: 603-271-3289

Campus Project Director

Name: William McDowell
 Address: University of New Hampshire
 Natural Resources and the Environment
 56 College Road
 Durham, NH 03824
 Phone: 603-862-2249

F. Total State funds in the amount of \$35,447 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. _____ 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, **NH 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: 2021.11.03 17:00:46 -04'00'

By An Authorized Official of:

Name: Robert R. Scott
Title: Commissioner
Signature and Date: Robert R. Scott

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

Name: Joshua Harrison
Title: Assistant Attorney General
Signature and Date: Joshua Harrison 12/7/2021

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

Name: _____
Title: _____
Signature and Date: _____

EXHIBIT A

- A. **Project Title:** Nutrient Loading Indicator for the 2022 State of Our Estuaries Report
- B. **Project Period:** October 1, 2021 to December 31, 2022
- C. **Objectives:** Refer to Scope of Work
- D. **Scope of Work:** Report annual total nitrogen (TN) and dissolved inorganic nitrogen (DIN) non-point source loads to Great Bay Estuary upstream of Dover Point.

UNH will perform the following tasks to support the State of Our Estuaries (SOE) 2022 report:

1. DETERMINE ANNUAL TN AND DIN LOADS FROM THE EIGHT MAJOR TRIBUTARIES TO GREAT BAY ESTUARY.

UNH will obtain discharge data from USGS gauging stations and compile existing water quality data from eight tributary stations (2017-2020). Annual TN and DIN nutrient loads from the major tributaries to the Great Bay Estuary will be determined using loadest (as done in previous SOE reports).

2. DETERMINE DELIVERED POINT SOURCE LOAD FROM WWTFs AND DETERMINE POINT AND NON-POINT TN AND DIN LOADS FROM THE TIDAL TRIBUTARIES

Use delivery factors from the 2017 PREP State of Our Estuaries report to determine the annual point source TN and DIN load delivered to the Great Bay Estuary from WWTFs that discharge upstream to freshwater tributaries. Determine the delivered point source load and non-point source load from the major tidal tributaries on an annual and monthly basis.

3. DETERMINE NON-POINT SOURCE TN AND DIN LOAD FROM SMALL TRIBUTARIES DOWNSTREAM OF HEAD OF TIDE STATIONS

Update land cover land use data for major tributary watersheds and the land area downstream of the head of tide stations. Determine predictive relationships between watershed land use and non-point TN and DIN loads. Predict non-point TN and DIN load from the land area downstream of the head of tide stations. Predictive models will be built for the entire 2017-2020 time period and each individual year.

4. DETERMINE GROUNDWATER DELIVERY OF TN AND DIN TO GREAT BAY ESTUARY

Use existing data from the PREP State of Our Estuaries 2017 report, Ballestero et al. 2004 and/or the NH DES 2014 "Great Bay Nitrogen Non-Point Source Study". Assume groundwater input is 100% DIN and constant throughout the study period.

If time permits, use land use change over time to prorate groundwater input from Ballestero et al. 2004 to the 2017-2020 period.

5. DEVELOP FIGURES AND REVIEW TEXT FOR THE 2022 STATE OF OUR ESTUARIES REPORT

Develop draft figures, tables and review text for the 2022 State of Our Estuaries report and the Data Report.

Up to \$29,539 in direct costs (3.05 months of time including salary and fringe)

E. Deliverables Schedule:

UNH shall submit an electronic version of the following by May 31, 2022:

- An excel spreadsheet showing non-point nitrogen loads to Great Bay Estuary on an annual basis from 2017-2020
- An excel spreadsheet showing the point source delivered nitrogen loads to Great Bay Estuary on an annual basis from 2017-2020.

Funding Credit. An appropriate funding credit shall appear on all materials intended for public distribution.

F. Budget and Invoicing Instructions: Campus will submit invoices to 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 (if required)	Total
1. Salaries & Wages	\$ 21,467	\$ -	\$ 21,467
2. Employee Fringe Benefits	\$ 8,072	\$ -	\$ 8,072
3. Travel	\$ -	\$ -	\$ -
4. Supplies and Services	\$ -	\$ -	\$ -
5. Equipment	\$ -	\$ -	\$ -
6. Facilities & Admin Costs	\$ 5,908	\$ -	\$ 5,908
Subtotals	\$ 35,447	\$ -	\$ 35,447
Total Project Costs	\$ 35,447		

Budget Narrative: Personnel charges are for staff time which include assembling and analyzing data and submitting final reports.