



The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

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Robert R. Scott, Commissioner

May 23, 2018

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

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REQUESTED ACTION

Authorize the Department of Environmental Services (DES) to enter into a **sole source** agreement with the University of New Hampshire (VC #177867-B046), Durham, NH, in the amount of \$87,333 to support the Piscataqua Region Monitoring Collaborative project, effective upon Governor and Council approval through December 31, 2019. 17% Federal Funds, 57% Clean Water State Revolving Funds, and 26% General Funds.

Funding is available in the accounts as follows:

	<u>FY 18</u>	<u>FY 19</u>
03-44-44-442010-3642-072-500573	\$2,877	\$12,123
Dept. Environmental Services, Coastal Zone Management, Grants-Federal		
03-44-44-441018-4788-102-500731	\$47,123	\$2,877
Dept. Environmental Services, CWSRF Loan Management, Contracts for Program Services		
03-44-44-442010-1523-102-500731	\$0	\$22,333
Dept. Environmental Services, Shellfish Protection Program, Contract for Program Services		

EXPLANATION

The Department of Environmental Services (NHDES) requests approval to enter into a **sole source** Cooperative Project Agreement with the Piscataqua Region Estuaries Partnership (PREP) program at University of New Hampshire. PREP was selected for this project because it has unique expertise in conducting research in the State's estuaries and it has secured additional funds needed to complete the project. PREP is a program at the University of New Hampshire involving federal, state, and local government, non-governmental organizations, businesses, and the public to improve the environmental quality of the State's estuaries. Each year, PREP monitors conditions in the estuaries to track trends in water quality, habitats, and land use.

The Piscataqua Region Monitoring Collaborative (PRMC) is a project that will allow communities, agencies, and organizations to combine their resources for the collaborative monitoring of New Hampshire's estuaries. The PREP program at University of New Hampshire will implement the project on behalf of NHDES, the Great Bay National Estuarine Research Reserve, NH Fish and Game Department and other contributing agencies, organizations, and municipalities. All of these organizations have a common interest in understanding the health of the estuaries. These shared questions are best answered with a shared monitoring program.

Due to the continued success of this program since 2014, NHDES would like to continue the support of the collaborative monitoring effort in 2018. In 2018, the monitoring priorities for the Piscataqua Region Monitoring Collaborative are nitrogen trends and eelgrass condition. These studies will help to understand the status and

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trends of water quality and habitats in the estuaries. NHDES is contributing funds to this project because the data are critical for managing the State's estuaries.

The agreement has been approved as to form, substance, and execution by the Office of the Attorney General. In the event that the Federal funds become no longer available, general funds will not be requested to support this program.

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 **12/31/19**. 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: **Submerged Aquatic Vegetation Mapping, Water Quality and Macroalga Monitoring.**

- 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: Ted Diers
 Address: Department of Environmental Services
 PO Box 95
 Concord, NH 03301
 Phone: 603-271-3289

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: Matt Wood
 Address: Department of Environmental Services
 PO Box 95
 Concord, NH 03301
 Phone: 603-271-8868

Campus Project Director

Name: Rachel Rouillard
 Address: University of New Hampshire
 Nesmith Hall
 131 Main St.
 Durham, NH 03824
 Phone:

F. Total State funds in the amount of **\$87,333** 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. **8G99127310** from **EPA** under CFDA# **66.605**. 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.

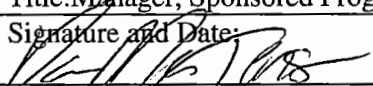
G. Check if applicable

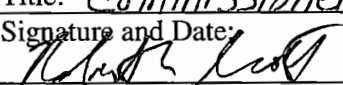
Article(s) _____ of the Master Agreement for Cooperative Projects between the State of New Hampshire and the University System of New Hampshire dated November 13, 2002 is/are hereby amended to read:

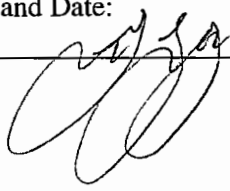
H. State has chosen **not to take** possession of equipment purchased under this Project Agreement.
 State has chosen **to take** possession of equipment purchased under this Project Agreement and will issue instructions for the disposition of such equipment within 90 days of the Project Agreement's 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: Manager, Sponsored Programs Administration
Signature and Date:  5/22/18

By An Authorized Official of:
Department of Environmental Services
Name: Robert R. Scott
Title: Commissioner
Signature and Date:  5/29/18

By An Authorized Official of: the New Hampshire Office of the Attorney General
Name: Robert A. Gordon Landrigan
Title: Commissioner Attorney
Signature and Date:  5/31/18

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

EXHIBIT A

- A. Project Title:** Great Bay Estuary Submerged Aquatic Vegetation Mapping, Monitoring Macroalgae in the Great Bay Estuary & Water Quality Monitoring in the Great Bay and Hampton-Seabrook Estuaries.
- B. Project Period:** Upon G&C approval - December 31, 2019
- C. Objectives:** Campus will
- 1) Collect Aerial Imagery of the Great Bay Estuary.
 - 2) Photointerpretation of aerial imagery for Submerged Aquatic Vegetation (SAV) habitat mapping in the Great Bay estuary.
 - 3) Process and analyze datasonde data and water quality grab samples collected throughout the Great Bay and Hampton-Seabrook estuaries.
 - 4) Collect and analyze macroalgae for percent cover and biomass at intertidal and subtidal sites throughout the Great Bay Estuary.
- D. Scope of Work:** Campus will:
- SAV Mapping (Objectives 1& 2)
- 1) Produce an EPA approved Quality Assurance Project Plan (QAPP) for the 2018 SAV mapping.
 - 2) Collect vertical, 4-band (red, green, blue, and near infrared), aerial imagery of the Great Bay Estuary in 2018 of sufficient resolution to support production of digital orthorectified images to a ground pixel resolution of 0.30 meters (1 foot).
 - 3) Conduct and complete field surveys (ground verification) of SAV habitat in the Great Bay Estuary within 60 days of the aerial imagery acquisition. Surveys will be conducted to gain an understanding of the actual field conditions at discrete locations so that aerial imagery can be reliably interpreted.
 - 4) Use aerial imagery collected under Task 1 and ground verification data collected under Task 2 to delineate SAV habitat in the Great Bay Estuary.
 - 5) Prepare a final report documenting the methods used to map (photointerpret) the SAV beds within the Great Bay Estuary and the results of the mapping as they pertain to the Great Bay Estuary Assessment Zones. The report should include documentation on the results of quality assurance checks on the SAV habitat mapping to ensure they met data quality objectives for the EPA approved Quality Assurance Project Plan.
- Datasonde and Water Quality Data (Objective 3)
- 6) Deploy 8 YSI EXO2 datasondes in early summer through December 2018, as conditions allow. Sampling stations under this agreement will include GRBUPR, GRBOR, GRBULB, GRBLR, GRBGB, GRBGBE, and GRBSQ within the Great Bay Estuary; and HHRH in the Hampton-Seabrook estuary.
 - 7) Collect and analyze CDOM and chlorophyll-a water samples at a subset of the stations with fDOM and total algae probes deployed with the datasondes, at monthly intervals. Water samples for chlorophyll-a will be collected at GRBUPR, GRBULB, and HHRH. Water samples for CDOM will be collected at GRBUPR. Samples will be collected at the same depth as the datasondes and during a time when the datasonde is actively recording (i.e. on one of the 15 min intervals).
 - 8) Collect and analyze grab samples at 9 stations in early summer through December 2018, as conditions allow. Sampling stations will include GRBUPR, GRBOR, GRBAP, GRBLR, GRBGB, GRBGBE, GRBSQ, and GRBCL within the Great Bay Estuary; and HHRH in the Hampton-Seabrook estuary.

- 9) Format and perform QA/QC procedures on the datasets to facilitate their upload to NHDES' Environmental Monitoring Database (EMD).
- 10) Produce QA/QC memo(s) documenting the results of quality assurance checks on the datasondes and water quality data. The memos shall also include a statistical comparison of the fDOM and total chlorophyll datasonde data against the laboratory analyses of the CDOM and chlorophyll-a water samples, when applicable.

Macroalgae Monitoring (Objective 4)

- 11) Produce an EPA approved Quality Assurance Project Plan (QAPP) for the 2018 intertidal and subtidal macroalgae monitoring.
- 12) Re-establish and monitor fixed intertidal transects that were previously sampled as part of the long-term effort to monitor changes in the abundance of macroalgae in the Great Bay Estuary.
- 13) Establish and monitor fixed subtidal transects for inclusion into the long-term effort to monitor changes in the abundance of macroalgae in the Great Bay Estuary.
- 14) Prepare a final report documenting the methods used to monitor macroalgae within the Great Bay Estuary and the results of that monitoring.

E. Deliverables Schedule: Campus shall submit:

- 1) QAPP submitted to EPA for approval for the 2018 SAV mapping. The final QAPP is due to the State by August 1, 2018.
- 2) Digital 0.30 meter orthorectified images of the Great Bay estuary. The final images are due to the State by December 30, 2018.
- 3) ArcGIS files of the SAV habitat mapping in the Great Bay estuary. The final ArcGIS files are due to the State by April 1, 2019.
- 4) A final report documenting the methods used to map (photointerpret) the SAV beds within the Great Bay Estuary and the results of the mapping as they pertain to the Great Bay Estuary Assessment Zones, available online:
http://www.granit.unh.edu/data/search?dset=greatbayestuaryassessmentzones_current. The report will include documentation on the results of quality assurance checks on the SAV habitat mapping to ensure they met data quality objectives for the EPA approved QAPP, available online:
<http://scholars.unh.edu/prep/>. The final report is due to the State by April 1, 2019.
- 5) QA/QC memos documenting the results of quality assurance checks on the datasondes and water quality data to ensure they met data quality objectives of EPA approved QAPP, available online:
<http://scholars.unh.edu/prep/>. The final memos are due to the State by July 15, 2019.
- 6) Finalized (QA/QC'd) datasets, formatted for upload to NHDES' EMD for the dataloggers and grab samples collected throughout the Great Bay and Hampton-Seabrook estuaries. The final datasets are due to the State by July 15, 2019.
- 7) An EPA approved QAPP for the 2018 macroalgae monitoring. The final QAPP is due to the State by June 15, 2018.
- 8) A final report documenting the methods used to monitor the macroalgae within the Great Bay Estuary and the results of that monitoring. The final report is due to the State by August 1, 2019.

F. Budget and Invoicing Instructions: Using standard Campus invoices, Campus will submit invoices to State in accordance with the following schedule based upon satisfactory completion of specific tasks, and receipt of deliverables as described in Section E. Deliverable Schedule, above. Upon satisfactory completion of specific tasks, State will pay Campus within 30 days of receipt of each invoice.

- 1) Upon completion and NHDES approval of Deliverable 1.....\$60,000
- 2) Upon completion and NHDES approval of Deliverable 2.....\$10,000

- 3) Upon completion and NHDES approval of Deliverable 3.....\$5,000
- 4) Upon completion and NHDES approval of Deliverable 4.....\$5,000
- 5) Upon completion and NHDES approval of Deliverable 5.....\$2,000
- 6) Upon completion and NHDES approval of Deliverable 6.....\$3,000
- 7) Upon completion and NHDES approval of Deliverable 7.....\$1,000
- 8) Upon completion and NHDES approval of Deliverable 8.....\$1,333

G. Funding Credit: An appropriate funding credit and PREP logo shall appear on all materials intended for public distribution. In addition, all final work products and outreach materials associated with the work for the items above shall include the NOAA, NHCP and NHDES logos. All work products and outreach materials shall state that "This project was funded, in part, by NOAA's Office for Coastal Management under the Coastal Zone Management Act in conjunction with the NH Department of Environmental Services Coastal Program." Examples of final work products and outreach materials include, but are not limited to, final reports, press releases, maps, newsletter articles, website pages, 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. .**

Attachment A
Budget Estimate

Budget Items	State Funding	Cost Sharing	Total
1. Salaries & Wages	\$48,597	\$0	\$48,597
2. Employee Fringe Benefits	\$17,468	\$0	\$17,468
3. Travel	\$0	\$0	\$0
4. Supplies and Services	\$6,710	\$0	\$6,710
5. Equipment	\$0	\$0	\$0
6. Facilities & Admin Costs	\$14,558	\$0	\$14,558
Subtotals:	\$87,333	\$0	\$87,333
Total Project Costs:	\$87,333	\$0	\$87,333