



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



**Robert R. Scott, Commissioner**

August 7, 2017

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 (VC #177867-B046), Durham, NH, in the amount of \$70,000 to support the *Piscataqua Region Monitoring Collaborative* project, effective upon Governor and Council approval through December 31, 2018. 21% Federal Funds, 79% Clean Water State Revolving Fund.

Funding is available in the accounts as follows:

	<u>FY 2018</u>
03-44-44-442010-3642-102-500731	\$15,000
Dept. Environmental Services, Coastal Zone Management, Contracts for Program Services	
03-44-44-441018-4788-102-500731	\$55,000
Dept. Environmental Services, CWSRF Loan Management, Contracts for Program Services	

**EXPLANATION**

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. Due to the success of this program in 2014, 2015 and 2016, NHDES would like continue the support of the collaborative monitoring effort in 2017.

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. PREP will implement the project on behalf of DES, 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. In 2017, the monitoring priorities for the Piscataqua Region Monitoring Collaborative are nitrogen trends and eelgrass condition. These studies will help to understand the status and 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.



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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 **12/31/18**. 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: PREP Great Bay Estuary Submerged Aquatic Vegetation Mapping and Water Quality Monitoring in Great Bay, Piscataqua River and Hampton-Seabrook Estuary**

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: Coastal Program  
Dept. of Environmental Services  
222 International Drive, Ste. 175  
Portsmouth, NH 03801  
Phone: 603-559-0027

**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: Watershed Management Bureau  
Dept. of Environmental Services  
29 Hazen Drive  
Concord NH 03301  
Phone: 603-271-8868

**Campus Project Director**

Name: Rachel Rouillard  
Address: Marine Programs  
Nesmith Hall  
Durham, NH 03824  
Phone: 603-862-3948

F. Total State funds in the amount of \$70,000 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. **NA17NOS4190040** from **NOAA** under CFDA# **11.419**. 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: [Signature] 8/2/17

**By An Authorized Official of:**  
**Department of Environmental Services**  
Name: Robert R. Scott  
Title: Commissioner  
Signature and Date: [Signature] 8/25/17

**By An Authorized Official of:** the New Hampshire Office of the Attorney General  
Name: Gordon P. Landry  
Title: Attorney  
Signature and Date: [Signature] 8/28/17

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

## EXHIBIT A

- A. **Project Title:** PREP Great Bay Estuary Submerged Aquatic Vegetation Mapping and Water Quality Monitoring in Great Bay, Piscataqua River and Hampton-Seabrook Estuary
- B. **Project Period:** Upon signature - Dec. 31, 2018
- C. **Objectives:** see attached
- D. **Scope of Work:** see attached
- E. **Deliverables Schedule:** see attached
- F. **Budget and Invoicing Instructions:** see attached

Exhibit A

- A. **Project Title:** PREP Great Bay Estuary Submerged Aquatic Vegetation Mapping and Water Quality Monitoring in Great Bay, Piscataqua River and Hampton-Seabrook Estuary
- B. **Project Period:** Upon G&C Approval - December 31, 2018
- C. **Objective:** 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 samples collected in 2016 and 2017 throughout the Great Bay and Hampton-Seabrook estuaries.
  - 4) Produce guidance document(s) on the methods needed to format datasonde and water quality data for upload to NHDES' EMD and to ensure that data quality objectives are met.
- D. **Scope of work:** Campus will:
- 1) Collect vertical, 4-band (red, green, blue, and near infrared), aerial imagery of the Great Bay Estuary in 2017 of sufficient resolution to support production of digital orthorectified images to a ground pixel resolution of 0.30 meters (1 foot).
  - 2) 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.
  - 3) Use aerial imagery collected under Task 1 and ground verification data collected under Task 2 to delineate SAV habitat in the Great Bay Estuary.
  - 4) Prepare a QA/QC memo documenting 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.
  - 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.
  - 6) Deploy five YSI EXO2 datasondes in early summer through December 2017, as conditions allow. Locations will include the western lobe of Great Bay, Lower Little Bay, Lower Piscataqua River, Upper Piscataqua River and Hampton-Seabrook estuary. Parameters measured will include depth, temperature, specific conductance, salinity, dissolved oxygen, turbidity and pH. When sensors are available fDOM and total chlorophyll will also be collected.
  - 7) Collect and analyze cDOM and chlorophyll-a water samples at datasonde locations, approximately monthly. 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) Format and perform QA/QC procedures on the 2016 datasets in addition to the datasets collected under Tasks 6 and 7 to facilitate their upload to NHDES' EMD.
  - 9) Produce QA/QC memos documenting the results of quality assurance checks on the 2016 and 2017 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.

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- 10) Produce guidance document(s) on the methods needed to format datasonde and water quality data for upload to NHDES' EMD and to ensure that data quality objectives are met.

**E. Deliverable Schedule:** Campus shall submit:

- 1) Digital 0.30 meter orthorectified images of the Great Bay estuary. The final images are due to the State by 06/30/2018.
- 2) ArcGIS files of the SAV habitat mapping in the Great Bay estuary. The final ArcGIS files are due to the State by 06/30/2018.
- 3) A QA/QC memo documenting the results of quality assurance checks on the SAV habitat mapping to ensure they met data quality objectives for the approved Quality Assurance Project Plan, available online: <http://scholars.unh.edu/prep/>. The final memo is due to the State by 06/30/2018.
- 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](http://www.granit.unh.edu/data/search?dset=greatbayestuaryassessmentzones_current). The final report is due to the State by 06/30/2018.
- 5) A finalized (QA/QC'd) dataset, formatted for upload to NHDES' EMD for the datalogger in the western lobe of Great Bay. The final dataset is due to the State by May 31, 2018.
- 6) A finalized (QA/QC'd) dataset, formatted for upload to NHDES' EMD for the datalogger in Lower Little Bay. The final dataset is due to the State by May 31, 2018.
- 7) A finalized (QA/QC'd) dataset, formatted for upload to NHDES' EMD for the datalogger in the Lower Piscataqua River. The final dataset is due to the State by May 31, 2018.
- 8) A finalized (QA/QC'd) dataset, formatted for upload to NHDES' EMD for the datalogger in the Upper Piscataqua River. The final dataset is due to the State by May 31, 2018.
- 9) A finalized (QA/QC'd) dataset, formatted for upload to NHDES' EMD for the datalogger in Hampton-Seabrook Harbor. The final dataset is due to the State by May 31, 2018.
- 10) A finalized (QA/QC'd) dataset, formatted for upload to NHDES' EMD for the cDOM and chlorophyll-a analytical samples collected in Great Bay, Lower Little Bay, Lower Piscataqua River, Upper Piscataqua River and Hampton-Seabrook Harbor. The final dataset is due to the State by May 31, 2018.
- 11) A QA/QC memo documenting the results of quality assurance checks on the 2017 datasondes and water quality data to ensure they met data quality objectives of NOAA's National Estuarine Research Reserve System (NERRS), System-wide Monitoring Program, available online: <http://cdmo.baruch.sc.edu/>. The final memo is due to the State by May 31, 2018.
- 12) A finalized (QA/QC'd) dataset, formatted for upload to NHDES' EMD for the datalogger deployed at station GRBGB in 2016. The final dataset is due to the State by October 31, 2017.
- 13) A finalized (QA/QC'd) dataset, formatted for upload to NHDES' EMD for the datalogger deployed at station GRBLR in 2016. The final dataset is due to the State by October 31, 2017.
- 14) A finalized (QA/QC'd) dataset, formatted for upload to NHDES' EMD for the datalogger deployed at station GRBSQ in 2016. The final dataset is due to the State by October 31, 2017.
- 15) A finalized (QA/QC'd) dataset, formatted for upload to NHDES' EMD for the datalogger deployed at station GRBOR in 2016. The final dataset is due to the State by October 31, 2017.

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- 16) A finalized (QA/QC'd) dataset, formatted for upload to NHDES' EMD for the datalogger deployed at station GRBSF in 2016. The final dataset is due to the State by October 31, 2017.
- 17) A finalized (QA/QC'd) dataset, formatted for upload to NHDES' EMD for the datalogger deployed at station GRBCML in 2016. The final dataset is due to the State by October 31, 2017.
- 18) A finalized (QA/QC'd) dataset, formatted for upload to NHDES' EMD for the water quality data collected throughout the Great Bay Estuary in 2016. The final dataset is due to the State by October 31, 2017.
- 19) A QA/QC memo documenting the results of quality assurance checks on the 2016 datasondes and water quality data to ensure they met data quality objectives of NOAA's National Estuarine Research Reserve System (NERRS), System-wide Monitoring Program, available online: <http://cdmo.baruch.sc.edu/>. The final memo is due to the State by October 31, 2017.
- 20) A guidance document(s) on the methods needed to format datasonde and water quality data for upload to NHDES' EMD and to ensure that data quality objectives are met. The final document(s) is due to the State by December 31, 2017.

**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 Governor and Council approval.....\$26,000
- 2) Upon completion and NHDES approval of Deliverable 1.....\$9,000
- 3) Upon completion and NHDES approval of Deliverable 2.....\$9,000
- 4) Upon completion and NHDES approval of Deliverable 3.....\$3,000
- 5) Upon completion and NHDES approval of Deliverable 4.....\$3,000
- 6) Upon deployment of the five YSI EXO2 datasondes in early summer throughout the Great Bay estuary and Hampton-Seabrook estuary.....\$10,000
- 7) Upon completion and NHDES approval of Deliverables 5 through 11.....\$5,000
- 8) Upon completion and NHDES approval of Deliverable 12 through 19.....\$4,000
- 9) Upon completion and NHDES approval of Deliverable 20.....\$1,000

Budget Items	State Funding	Cost Sharing	Total
1. Salaries & Wages	\$9,000	\$0	\$9,000
2. Employee Fringe Benefits	\$3,771	\$0	\$3,771
3. Travel	\$0	\$0	\$0
4. Supplies and Services	\$45,562	\$0	\$45,562
5. Equipment	\$0	\$0	\$0
6. Facilities & Admin Costs	\$11,667	\$0	\$11,667
Subtotals:	\$70,000	\$0	70,000
Total Project Costs:	\$70,000	\$0	70,000

**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

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products and outreach materials include, but are not limited to, final reports, press releases, maps, newsletter articles, website pages, and signage.

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## 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. .**