



The State of New Hampshire APR 14 '15 11:30 AM
Department of Environmental Services



Thomas S. Burack, Commissioner

March 17, 2015

Her Excellency, Governor Margaret Wood Hassan
and The Honorable Council
State House
Concord, NH 03301

REQUESTED ACTION

Authorize the Department of Environmental Services to enter into an agreement with the University of New Hampshire, (VC #177867-BO46) in the amount of \$20,000 to complete the *Great Bay Nitrogen Nonpoint Study Implementation Phase 1: Sagamore Hampton Golf Club Best Management Practices* project effective upon Governor and Council approval through December 31, 2016. 100% Federal Funds.

Funding is available in the account as follows:

03-44-44-442010-2035-072-500573	<u>FY 2015</u>
Dept. Environmental Services, NPS Restoration Program, Grants-Federal	\$20,000

EXPLANATION

The Department of Environmental Services (DES) issued a Request for Proposals (RFP) for the 2015 Watershed Assistance Grants program. Twenty proposals were received. The proposals were ranked based on the criteria included in the RFP: water quality improvement or protection; cost/benefit ratio; local capacity to complete the project; relative value or significance of the water body; and, general quality and thoroughness of the proposal. Based on results of the selection process and available federal grant funding levels, the eleven highest ranked projects were selected to receive funding. Please see Attachment B for a list of project rankings and review team members.

The Watershed Assistance Grants focus on the reduction of nonpoint source (NPS) pollution. NPS pollution occurs when rainfall, snowmelt, or irrigation water runs over land or through the ground, transporting materials which are then deposited into rivers, lakes, and coastal waters, or introduced into the groundwater. Pollutants can include chemicals, sediments, nutrients, and toxics. These materials can have harmful effects on drinking water supplies, recreation, fisheries, and wildlife. Land development or changes in land use can also cause NPS pollution by disrupting the natural hydrology of a water body, increasing impervious surfaces, and contributing to the loss of aquatic habitat. Watershed Assistance programs address NPS pollution by promoting good land use practices on a watershed scale.

This project will address nonpoint source (NPS) pollution from managed turf by partnering with a golf course, a local school and volunteers to restore riparian buffers. Cornelius Brook, a headwater stream of



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the Winnicut River, flows through the center of the Sagamore-Hampton Golf Club and receives runoff from large expanses of managed turf. Managed turf contributes 31% of the nitrogen load to the Great Bay Estuary. To address the nutrient load to Cornelius Brook, the Winnicut River and ultimately Great Bay, 35,000 square-feet of riparian buffers will be restored, resulting in an annual reduction of 9.6 pounds of total nitrogen, 4.8 pounds of total phosphorus, and 5.6 tons of sediment in the Winnicut subwatershed.

UNH will partner with the Sagamore-Hampton Golf Club to determine the best areas for NPS pollution management. The project will engage students from the North Hampton School and adult volunteers from the Coastal Research Volunteer program in restoration and monitoring activities to increase educational outcomes and cost effectiveness. In addition to achieving measurable load reductions, the project will provide a model of NPS pollution management that can be transferred to other golf courses in the watershed and the state.

The total project costs are budgeted at \$33,616. DES will provide \$20,000 (60%) of the project costs through a federal grant and the University of New Hampshire will provide the remaining costs through cash and in-kind services. A budget breakdown of grant funds is provided in Attachment A. In the event that Federal 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, execution, and content.

We respectfully request your approval.


Thomas S. Burack, 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 **12/31/16**. 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: Great Bay Nitrogen Nonpoint Source Study Implementation Phase 1 - Sagamore-Hampton Golf Club BMPs

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: Eric Williams
Address: NH Dept of Environmental Services
29 Hazen Dr.
Concord, NH 03302
Phone: 603-271-2358

Campus Project Administrator

Name: Karen M. Jensen
Address: University of New Hampshire
Sponsored Programs Administration
51 College Rd. Rm 116
Durham, NH 03824
Phone: 603-862-2172

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: Sally Soule
Address: NH Dept of Environmental Services
222 International Dr. Suite 175
Portsmouth, NH 03801
Phone: 603-559-0032

Campus Project Director

Name: Alyson Eberhardt
Address: University of New Hampshire
NH Sea Grant/UNH Cooperative Ext.
122 Mast Road
Lee, NH 03861
Phone: 603-862-6709

F. Total State funds in the amount of \$20,000 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 40 % 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. C998132415 from U.S. Environmental Protection Agency under CFDA# 66.460. 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] 2/24/15

By An Authorized Official of:
Department of Environmental Services
Name: Thomas S. Burack
Title: Commissioner
Signature and Date: [Signature] 4/7/15

By An Authorized Official of: the New Hampshire Office of the Attorney General
Name: Christopher G. Astin
Title: Assistant Attorney General
Signature and Date: [Signature] 4/9/15

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

Campus Authorized Official [Signature]
Date 2/20/15

EXHIBIT A

- A. Project Title:** Great Bay Nitrogen Nonpoint Source Study Implementation Phase 1 - Sagamore-Hampton Golf Club BMPs
- B. Project Period:** Upon G&C approval through December 31, 2016
- C. Objectives:** NH DES estimates (GBNNPSS 2014) that 31% of the nitrogen load to Great Bay is from nonpoint sources of pollution. Given the large amount of managed turf in the Winnicut watershed relative to the small size of the watershed, addressing nitrogen loading from managed turf is a priority for this system. Buffer restoration is an effective strategy for intercepting surface runoff and subsurface flow in order to filter pollutants such as nutrients and sediment before they enter surface water. By restoring 35,000 square-feet of riparian buffers to Cornelius Brook as it runs through the Sagamore-Hampton golf course, the project will result in an annual reduction of 9.6 pounds of total nitrogen, 4.8 pounds of total phosphorus, and 5.6 tons of sediment in the Winnicut subwatershed (as determined by the EPA Region 5 model).

While the project addresses a small proportion of the overall load reduction goal, it will achieve additional benefits in terms of creating a model and building community capacity for this type of work to continue. The project will engage both school age and adult volunteers in the restoration activities. By working with volunteers we will create a network of informed citizens who are aware of the causes of water quality impairment as well as solutions for preventing and controlling sources of pollution. The project will also create a model for organizations to work with golf courses to better manage nonpoint source pollution on their grounds.

D. Scope of Work:

Objective 1: By Spring 2015, shoreline buffer restoration sites will be identified at Sagamore-Hampton Golf course

Measures of Success: Success will be indicated through completion, and stakeholder approval of, a map that details priority restoration sites and methods.

Deliverable 1: A shoreline buffer restoration plan detailing locations, buffer widths and heights, and approaches to be used (e.g., no mowing, seeding, planting), target plant species and the process by which the plan was created will be provided to DES.

Task 1: Coordinate with DES and the Sagamore-Hampton Golf Club to develop criteria for identifying and selecting restoration sites.

Task 2: Review available data for surrounding land uses to assess the presence and quality of existing buffers.

Task 3: Work with DES to recruit volunteers and train them to survey existing shoreland condition.

Task 4: Work with volunteers to evaluate the extent, condition, and vegetative composition of existing buffers.

Task 5: Compile data from remote and field based assessments (tasks 1-4).

Objective 2: By Fall 2015, 35,000 square feet of riparian buffers will be restored along Cornelius Brook at the Sagamore-Hampton Golf Course

Measures of Success: Success in restoring riparian buffers will be evaluated according to areal extent of restored riparian habitat, number of community members engaged and number of students engaged.

Deliverable 2: A summary describing the areal extent of restored habitat and public involvement is provided to DES.

Task 6: Based on the restoration plan (Objective 1, task 5), purchase native plants and planting supplies (e.g., trowels, shovels, stakes, flagging)

Task 7: Recruit volunteers and train them on the project goals, how to plant the species selected and where the revegetation efforts will take place.

Task 8: Install stakes, flagging and ropes to delineate where restoration efforts will occur.

Task 9: Coordinate volunteers and Sagamore-Hampton Golf Club staff to revegetate shoreland buffers along Cornelius Brook.

Objective 3: By Fall 2015, a maintenance and monitoring plan will be created for the buffer restoration sites along Cornelius Brook to evaluate project success and the need for adaptive measures

Measures of success: A plan to guide maintenance and monitoring activities for the restoration site is provided to the golf course owner.

Deliverable 3: A maintenance and monitoring plan is provided to DES.

Task 10: Identify buffers areas to be subject to no mowing or reduced mowing frequency and ongoing monitoring plots with stakes/flagging. Ensure that golf course maintenance staff is aware of no or low mow areas and monitoring plots through signage and/or maps.

Task 11: Coordinate with DES and the Sagamore-Hampton Golf Club to develop guidelines for ongoing maintenance of restoration sites.

Task 12: Provide information on project goals, function of buffers and maintenance plans to all grounds keeping staff at Sagamore-Hampton Golf Club.

Task 13: Collect water quality samples at four locations before, during and after the buffer restoration activities for the following parameters: total nitrogen, total phosphorus, bacteria, dissolved oxygen, temperature and pH (following a DES Volunteer River Assessment Program Quality Assurance Project Plan).

Task 14: Coordinate volunteers to observe plant growth and survival at monitoring plots. If growth and/or survival are unsatisfactory, coordinate with DES and Sagamore-Hampton Golf Club to evaluate the challenges and develop a new approach.

Task 15: Coordinate with DES to develop a Site Specific Project Plan (SSPP) for modeling load reductions due to buffer enhancement efforts.

Task 16: Submit electronic semi-annual reports documenting all work performed during the project periods as follows:

- Work completed April 1 – September 30, report is due by October 31
- Work completed October 1 – March 30, report is due by April 30

The semi-annual reports must include a Pollutants Controlled Report when structural BMPs have been implemented during the reporting period.

Task 17: Submit a comprehensive final report in both electronic and hard-copy to DES on or before the project completion date. The final report shall include load reduction estimates, photo-documentation of installed system components, and comply with the DES and EPA requirements found in the final report guidance document on the DES Watershed Assistance Section webpage.

D. Deliverables Schedule: Refer to section D above

F. Budget and Invoicing Instructions: Campus will submit invoices to State on regular Campus invoice forms accompanied by the reports for each task completed according to the schedule specified in Section D above. Each invoice will specify the agreed-upon total price for the completed task and shall document cumulative cost sharing through the end of the invoicing period. Indirect costs shall not exceed 10%. No expense detail will be required. State will pay campus within 30 days of receipt and DES approval of each invoice, supporting documentation, and task completion report. Campus will submit its final invoice not later than 30 days after the Project Period end date.

Upon completion and DES approval of Task 1- 5	\$3,350
Upon completion and DES approval of Task 6 - 9	\$9,586
Upon completion and DES approval of Task 10	- 17 \$7,064
Total	\$20,000

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 .

**Attachment A
Budget Estimate**

Budget Item	s319 Grant Funding	Non-Federal Matching Funds
Salaries & Wages	\$11,513.00	\$12,616.00
Indirect costs	\$1,819.00	\$91.00
Supplies/materials	\$5,168.00	\$909.00
Equipment	\$1,500.00	\$0.00
Total Project Cost	\$20,000.00	\$13,616.00

Attachment B: 2015 Watershed Assistance and Restoration Grant Ranking

Organization	Project Name	Reviewer 'A'	Reviewer 'B'	Reviewer 'C'	Reviewer 'D'	Reviewer 'E'	Reviewer 'F'	Average Score	Rank
Town of Exeter	Exeter River Restoration Implementation of the Great Dam Removal Project	130	123	116	134	134	131	128.00	1
Town of Rye	Implementation of Parsons Creek Watershed Restoration Plan - Phase 2	127	130	119	129	120	88	118.83	2
Town of Wolfeboro	Rust Pond Watershed Restoration Plan Implementation Phase 2: Sites 1, 3, and 4 Stormwater BMPs	123	126	99	109	128	121	117.67	3
City of Laconia	Meredith Paugus and Saunders Bay Implementation Project - Phase 1: Wiers Beach	114	123	106	117	125	120	117.50	4
Babooisic Lake Association	Babooisic Lake Watershed Management Plan Implementation Phase 3: Stormwater Improvements at Site #14, Carter Road	121	126	108	117	96	123	115.17	5
UNH	Great Bay Nitrogen NPS Study Implementation Phase 1 Sagamore-Hampton Golf Club BMPs	113	125	110	123	85	110	111.00	6
UNH Stormwater Center	Great Bay Estuary Municipal Bioretention Education, Resource Development and Implementation Phase II	115	108	106	117	133	85	110.67	7
Green Mountain Conservation Group	Ossipee Lake Watershed Management Plan Phase 2: A Watershed Plan for the Ossipee Lake Shoreline and Lovell River Watersheds	112	113	116	103	105	100	108.17	8
Action Wakefield Watersheds Alliance	Provincetown Watershed Management Plan Implementation Phase 1: Addressing High Priority Actions and Building Local Capacity	119	122	119	121	115	107	117.17	9
Cobbetts Pond Improvement Association	Cobbetts Pond Restoration Plan Implementation III - Summer Street Area	102	123	118	112	117	117	114.83	10
New Hampshire Rivers Council	McQuesten Brook Geomorphic and Watershed Restoration Plan Phase 4 Stream Crossing Removal and Replacement and Construction	111	112	112	121	n/a	117	114.60	11
City of Rochester	Stormwater Management and Assessment Opportunities for the Willow Brook Watershed Implementation - Stormwater Improvements for the Western/Adams Neighborhood	96	112	91	112	118	94	103.83	12
Southwest Regional Planning Commission	Lake Warren Watershed Management Plan Development and Implementation Phase 1	88	100	98	90	64	101	90.17	13
Messer Pond Protective Association	Messer Pond Watershed-based Implementation Plan	66	84	91	72	77	69	76.50	14
Town of Northumberland	Northumberland Cemetery Connecticut River Bank Stabilization	77	84	87	63	63	75	74.83	Not selected
Town of Hampton	Nilius Brook and Meadow Pond Restoration Project Phase II - Final Design and Permitting	87	67	80	46	82	54	69.33	Not selected
Entfield Conservation Commission	Crystal Lake Watershed Management Plan Development	24	38	30	51	19	52	35.67	Not selected
Laconia Conservation Commission	Black Brook Water Quality Improvements at Paugus Bay	35	35	48	32	10	38	33.00	Not selected
Geosyntec Consultants Et al	Watershed Integration for the Squamscott-Exeter (WISE) Implementation Phase I: Design, Feasibility and Outreach in the Watershed	112	107	114	109	121	101	110.67	Ineligible for funding under s319
UNH Stormwater Center	Great Bay Waterbody/Watershed Nitrogen NPS Study Implementation Phase 2 UNH BMPs to Reduce Nitrogen	121	112	104	113	131	103	114.00	Withdrawn by applicant

Review Team Members

Name	Qualifications
Steve Landry	16 years experience, Merrimack Watershed Coordinator, aquatic biologist, project management, Merrimack watershed expertise
Jeff Marcoux	11 years experience, Watershed Assistance Specialist, grant and contract expertise
Barbara McMillan	12 years Watershed Assistance Outreach Coordinator, outreach and education expertise.
Sally Soule	13 years experience, Coastal Watershed Coordinator, project management, Coastal watershed expertise
Wendy Waskin	20+ years experience, Watershed Coordinator, budgeting, planning expertise
Eric Williams	23 years experience, Watershed Assistance Section Supervisor, environmental planner, general project management expertise, WAS section and 319 program supervisor.