

2004 Support for Shellfish Program and Estuarine Education



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Introduction

Working within the University of New Hampshire (UNH) Cooperative Extension/Sea Grant Program, the Great Bay Coast Watch (GBCW) is New Hampshire's most wide ranging program for direct citizen involvement in monitoring estuarine and coastal systems. GBCW has a fifteen year history of educating citizens about the Great Bay Estuary, New Hampshire Seacoast, and Gulf of Maine watershed through active participation in monitoring and an accompanying education program. Based in Durham, NH, GBCW coordinates over 100 volunteers drawn from 19 New Hampshire and Southern Maine communities. In 1990, volunteers began monitoring eight sites on a monthly basis April through October. Today, this effort has grown to include 21 sites that are sampled monthly for water quality around the Great Bay estuary, and six coastal sites that are monitored weekly for harmful algae blooms. Volunteers include adults, students, and home schooled families.

Executive Summary

Since many of the GBCW sampling sites are in busy public locations, volunteers had been approached and questioned about not only their monitoring activities but also the connections between boating activity and local water quality. Volunteers sampling near shellfish beds were frequently asked to comment on the obviously depleted shellfish resources and the proposed dredging of the Seabrook / Hampton Harbor. To address these concerns, GBCW applied in 2003 to the New Hampshire Estuarine Program (NHEP) for funding to support an estuarine education series and additionally, funding to allow volunteers to continue working in support of the NH DES Shellfish Program. The approved project was titled *2004 Support for Shellfish Program and Estuarine Education*.

Goals and Objectives:

1. Project Coordination: GBCW will coordinate planned meetings, supervise all personnel, provide reports, and match documentation.
2. Sample collection and transportation activities for Star Island: 2 volunteers to collect and transport to Concord, 11 different occasions.
3. Miscellaneous field assistance: 42 hours of general field assistance identified by the DES Shellfish manager, this may include...
4. Transportation assistance: Transport and deliver samples to Concord on up to 15 occasions
5. Estuarine Education Seminars: Organize and conduct two public estuarine education seminars one on the proposed "Marine No Discharge" area designation for NH waters and the second on "New Hampshire Shellfish Resources." Attendees are required to provide their name, organizational affiliation, and evaluation form.
6. Produce a newsletter, evaluation form, and handouts for each seminar.

Activities:

Shellfish Support

During the grant period, GBCW volunteers completed eight trips out to Star Island using Isles of Shoals Steamship Company (IOSSC) transportation to collect shellfish meat samples. Changes in IOSSC policies as a result of the new Homeland Security regulations required DES to purchase tickets for the volunteers instead of traveling free as in previous years. Therefore, because of limited funds, not all the possible eleven planned trips out to Star Island could be completed.

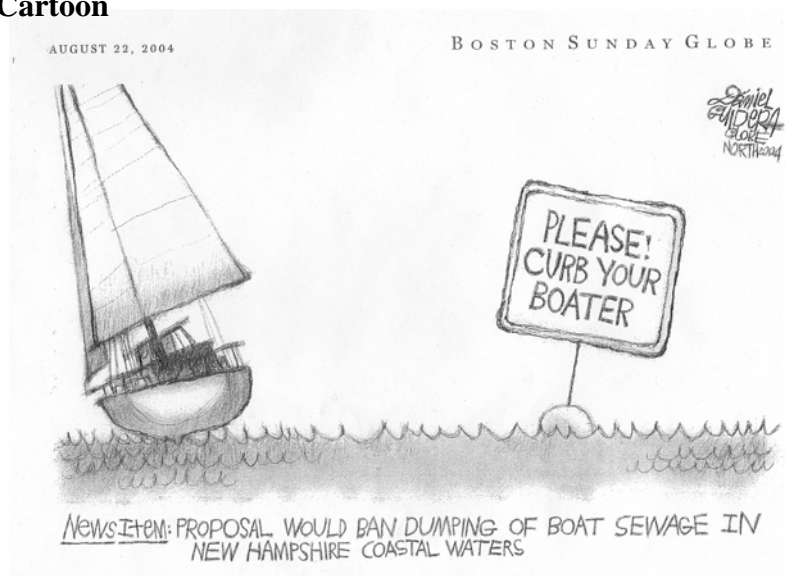
Volunteers assisted shellfish program managers in collecting shellfish meat samples for testing on two additional occasions and made twenty two trips to the NH Department of Health Laboratory in Concord to deliver water and shellfish meat samples for testing. This work resulted in a total volunteer effort of 125.5 hours and 1632 miles driven in support of NHDES Shellfish Program activities.

Estuarine Education Series

The Estuarine Education series planned and conducted by GBCW, was designed to address concerns raised by GBCW volunteers and the public during interactions at monitoring stations and conversations in their communities

The *Marine No-Discharge Public Forum* was held as the initiating activity for National Marina Day in space donated by the Wentworth Marina, New Castle, NH from 6-8:00pm on August 12, 2004.

Figure 1 Boston Globe Editorial Cartoon



The State of New Hampshire has regulated boat sewage for over forty years. Concerns about potential health risks and water quality degradation caused by boats discharging untreated sewage into state waters prompted the NH legislature to enact a law to require treatment devices on marine toilets. While these devices reduce fecal bacteria levels, they do not remove nutrients and organic material which can degrade water quality over time. Since 1967, New Hampshire fresh waters have been federally designated no-discharge zones. A no-discharge zone is an area where no boat waste can be discharged at all. It is currently legal to discharge treated sewage into coastal waters if they are not in a federally designated no-discharge zone.

The NH Department of Environmental Services (NHDES) is applying to the Environmental Protection Agency (EPA) to designate all NH coastal waters as no-discharge zones to protect sensitive shellfish beds and keep the state's coastal beaches free of harmful bacteria. The Marine No-Discharge Public Forum was designed to provide information to the boating public and a venue for agency representatives to seek input from interested organizations and individuals.

The Marine No-Discharge public forum was held in August as part of the National Marina Day celebration which was being held by the Wentworth Marina. The donation of dockside meeting space at the Wentworth Marina allowed direct access to boat owners, and allowed GBCW to benefit from being included in the Wentworth advance advertising. During the month of July 100 color posters advertising the forum were distributed around the southern Maine and NH coastal area. Notice of the upcoming forum was included on the NH Fish & Game, the NH Estuary Program and the Wentworth Marina websites.

Speakers who were contacted by GBCW and presented at the event included Ann Rodney, Office of Ecosystem Protection, US Environmental Protection Agency, who described to participants the relationship between the Clean Water Act and the proposed NH Marine No – Discharge area designation. Jody Conner, Director of Limnology, New Hampshire Department of Environmental Services who explained the NH proposal, the rationale behind it and how it would affect boaters in NH coastal waters. Alicia Carlson, Clean Vessel Act Program Coordinator, NHDES, clarified how the pump out program currently works and the process the state was using to conclude the application process. Finally, Steve Root NHDES Pump out boat operator answered questions about the pump out process and gave a demonstration using a participant's boat.

Also attending and available to answer questions were representatives from the NH Marine Patrol and the US Coast Guard, agencies who would be responsible for enforcement if the proposal is implemented.

The forum generated a large amount of press coverage both before and after the event. Three articles about the no-discharge issue and upcoming forum appeared in the Boston Globe the week proceeding, followed by an editorial cartoon in the Sunday edition of August 22. The Seacoast newspapers published three separate articles after the event and two editorials.



**Figure 2 Jody Connor
NHDES explains the No
Discharge proposal**

Marine No- Discharge Agenda

Thurs, August 12, 2004, 6:00-8:00 p.m.
Wentworth Marina, New Castle, NH

Welcome – Introductions

- Ann Rodney, EPA and the history of the Clean Water Act
- Jody Connor NHDES – The NH Proposal – Why do we need it and how will it affect NH boaters
- Alicia Carlson- The NH Pump Out Program
- Steve Root DES Pump out boat – How do you find it; use it, and what happens to your “deposit”?
- Boat waste tank pump out demonstration

The following survey was distributed to those attending and completed copies sent to representatives of the presenting agencies.

Marine No Discharge Area Forum Evaluation

Please take a few minutes to complete this survey. The results will help us understand how best to educate the boating community about the benefits of using marine pump-out facilities

1. Do you own or have regular use of a boat? (Please Circle) Yes No

2. Is it usually kept in the water? Yes No

3. How frequently do you use your boat? (Check all that apply)

- Seasonally
- Year around
- Several times a week
- Weekends only
- Live aboard

4. What type of Marine Sanitation Device (MSD) do you have on your boat?

- Type I MSD** breaks up the sewage, disinfects it with chemicals, then discharges the treated sewage overboard. It is legal in most instances to discharge wastes from a Type I MSD directly overboard. You must add the appropriate chemicals for treatment.
- Type II MSD** is similar to a Type I MSD, but treats the sewage to a higher degree through maceration, biological decomposition and chemical additives. Type II MSDs are typically found on larger boats.
- Type III MSD** is essentially a holding tank where untreated sewage is stored until it can be properly disposed of at a pump out station. Some Type III MSDs have a "Y" valve installed so that you can dump directly overboard when you are operating outside the three-mile limit.

5. How frequently do you use pump out boats or facilities? (Please Circle)

Never Weekly Monthly End of season

6. Would being in a *No Discharge Area* change the way you dispose of boat sewage?

YES NO

7. Was this forum helpful in increasing your understanding about the reasons for the *No Discharge Area* proposal?

YES

NO

8. Do you think the NH coast should be designated a *No Discharge Area*?

Yes

No

If No, Why not?

Appropriate hand outs about boat pump out locations and use were provided and distributed by participating agencies.

Figure 3 Pump out boat demonstration



The Status of New Hampshire Shellfish Resource

The second event, was a seminar titled *The Status of New Hampshire Shellfish Resources* was held on Thursday evening September 16, 2004 from 6-9:00pm at the Ashworth Hotel, Hampton Beach, N.H. Support for the meeting facility rental was received from NH Sea Grant. At the event, Paul Geoghegan, principal scientist from Normandeau Associates presented a historical overview of the Hampton / Seabrook Harbor clam populations which have declined over the past several years prompting restrictions on harvesting. In addition, two representatives from the NH Department of Environmental Services spoke: Phil Trowbridge discussed the ongoing Hampton Harbor clam mortality studies being conducted by Brian Beal of the University of Maine and Chris Nash NH Shellfish Program Director explained the reasons behind the frequent shellfish bed closures.

Agenda

A Report on the Status of New Hampshire Shellfish Resources

Thursday, September 16, 2004 6:00 – 8:00 pm
Ashworth Hotel, Hampton Beach, NH

- 6:00-6:05 pm Candace Dolan GBCW, Welcoming Remarks
- 6:05 – 6:30 pm Paul Geoghegan, Principal Scientist, Normandeau Associates. *Soft Shell Monitoring in Hampton Harbor*
- 6:30 - 6:55 pm Chris Nash, NH Department of Environmental Services Shellfish Program Manager. *Shellfish Harvesting Opportunities in Coastal New Hampshire*
- 7:00 -7:20 pm Phil Trowbridge, Coastal Scientist, NH Estuaries Program, and NH Coastal Program. *Juvenile Clam Mortality Studies in Hampton Harbor.*
- 7:20-8:00 pm Panel Discussion
- Chris Nash NHDES*
Paul Geoghegan, Normandeau Assoc.
Phil Trowbridge NHEP, NHCP
Bruce Smith, NHF&G
Frank Richardson, DES/Wetlands

The presentations were followed by a panel discussion moderated by GBCW volunteer Wally Fries. Questions from the audience were highlighted a number of related issues including the planned dredging of Seabrook and Hampton Harbors and the probable impact on the shellfish resource. Other panel members included in the discussion were Brian Smith, biologist, NH Fish & Game, and Frank Richardson NH Department of Environmental Services Wetland Specialist.

Relevant handouts were provided by the NHDES Shellfish Program, Normandeau Associates, and New Hampshire Coastal Program.

Prior to the seminar, notices advertising the seminar appeared in the Boston Globe and Seacoast newspapers. Posters were distributed at venues around the seacoast. A mailing list of people who had purchased shellfish licenses during 2003 was obtained from NH Fish & Game and two hundred and fifty invitations were mailed to those living within a fifty mile radius. An invitation was added to letters that were being sent out to oyster license holders by researchers at Jackson Estuarine Laboratory. E-mail invitations were

sent to over 300 people and the press release was included on the NH Fish & Game website.

Press coverage included Pre seminar announcements and articles in the Boston Globe and seacoast newspapers and two separate articles after the seminar, one in the Portsmouth Herald and one in the Hampton Union. Also, it was noted that a representative from NH National Public Radio and Clear Channel Radio was present at the seminar.

With technical assistance from the NH Shellfish Program and NH Sea Grant, a newsletter about NH clam harvesting opportunities and the ongoing research study was printed and mailed to seminar attendees.

Results and Discussion:

Press releases for both the Marine Discharge Area Forum and the NH Shellfish Resource Seminar were distributed through the University of New Hampshire news bureau. Connecting to the press through this resource resulted in a large number of newspaper articles and editorials that appeared both before and after in local and regional newspapers. These articles reached a far greater number of people than ever could have been reached with the public meetings alone. This extensive press coverage led to an increased understanding of the issues presented.

As in previous years, GBCW volunteers have provided not only a valuable source of manpower for NHDES Shellfish Program personnel but have also proved themselves to be an exceptional conduit for information. While working at their sampling sites or in their communities, GBCW volunteers have ample opportunity to converse with neighbors and visitors about the work they are engaged in. These conversations provided the impetus behind the Estuarine Education Series



Figure 4 Seabrook resident clamming in Seabrook Harbor 1916

Recommendations:

Working with GBCW creates an opportunity for agencies like NHEP to connect directly with citizens and identify issues important to them. These issues can then be addressed through local forums and seminars similar to those completed through this grant. Addressing local concerns in this manner informs and empowers citizens who are then more likely to become advocates for proposed changes. Continued support for GBCW public forums will allow volunteers to continue to be actively involved in identifying public information needs.

Bibliography:

No –discharge forum

Aronson, Emily. “DES hopes to extend no-discharge rule.” Portsmouth Herald. 13 August. 2004.

Associated Press. “N.H. seeks to ban dumping of sewage.” Boston Globe. 8 August. 2004

Editorial: “Our Coastal Waters are a trust we dare not violate.” Foster’s Daily Democrat (Dover, NH). 14 August. 2004.

Kitterage, Claire. “Offshore sewage targeted in N.H.” Boston Globe. 5 August. 2004.

McGowan, Patrick. “End to coastal dumping may be near.” Foster’s Daily Democrat (Dover, N.H.) 13 August. 2004.

N.H. Clam resources seminar:

Kitterage, Claire. “Ways to revive clam beds explored”. Boston Globe 16 September.2004.

Kitterage, Claire. “Shellfish Topic of Seminar”. Boston Globe 5 September. 2004, Globe North 2.

Morse, Susan. “Clam flats population harmed by ebb flow.” Portsmouth Herald 19 September 2004.

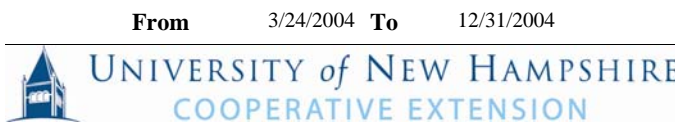
Morse, Susan. “Knowles unhappy with shell fishing closures”. Hampton Union 14 September. 2004.

Stewart, Rochelle. “Shellfish beds to be studied.” Portsmouth Herald 17 September. 2004.

Appendix:

Appendix A

Time and Mileage Summary Report Final Report



Project *NHEP*

Grant Number 13V045 **Project Starts** 3/24/2004 **Project Ends** 12/31/2004

EdS./Shellfish Support

Report Time and Milage

Activity **Clerical Work**

	Time (min.)	Miles
Summary for 'Activity' = (14 detail records)		
Sum	3275	672

Activity **Marine No discharge Forum**

	Time (min.)	Miles
Summary for 'Activity' = (3 detail records)		
Sum	2305	64

Activity **Shellfish Sampling**

	Time (min.)	Miles
Summary for 'Activity' = (2 detail records)		
Sum	270	30

Activity **Shellfish Seminar**

	Time (min.)	Miles
Summary for 'Activity' = (10 detail records)		
Sum	5232	1353

Activity **Transporting**

	Time (min.)	Miles
Summary for 'Activity' = (23 detail records)		
Sum	7530	1632

Summary for 'Project' = (52 detail records)

	Time (Minutes)	Miles
Sum	18612	3751
Value	\$5,130.71	\$1,406.63

Appendix A

Project *NHEP EdS./Shellfish Support*

Grant Number

Project Starts

Project Ends

13V045

3/24/2004

12/31/2004

	Time (Minutes)	Miles	Time Value : \$	16.54
Grand Total	18612.00	3751.00	Mileage Value: \$	0.375
Total Value	\$6,537.33			

Matching Funds

Source	Amount	Inkind Match	Comments
Salary	\$1,490.00	Cooperative Extension	None
Fringe	\$603.00	Cooperative Extension	
Total:	\$2,093.00		

Donations

Amount	Date Given	Comments	Contact ID
\$500.00	8/12/2004	Wentworth Marina Tent Use Donation	0
Total:	\$500.00		

Grand Total Match: \$9,130.33

GREAT BAY COAST WATCH

NH Shellfish Resource Seminar



Ashworth Hotel, Hampton Beach, NH

Thursday, Sept 16, 6:00 PM – 8:00 PM



- ◆ Please sign in, enter your **affiliation**, and **travel mileage** to and from the event.
- ◆ The **total time, in hours**, should include your length of time spent at the event plus your total round trip **travel time**.
- ◆ Thank you! Your attention to this matter helps us ensure we meet our grant requirements.

Name	Affiliation	Time (Hours)	Miles
1 O'Connell	GBCW		10
2 Chris Nash	DES	-	-
3 Gally Fries	UNH Marine Dept		
4 Rosam Manock	clammer	2 hrs	4
5 Ray Grizzle	UNH	2 hrs	40
6 Phill A. White	Norman Cow Assoc.	2 hrs	38
7 Jim Donovan	DIGGER	2 hrs	8
8 Tony Rudolph		2 hrs 4 hrs	40
9 Donald C Hopkins	Clammer	2 hrs	30
10 Sue Foote	SEC,	2.5 hrs	14
11 Rochelle Stewart	PORTSMOUTH Herald	3 hrs	30
12 Michael Belgar	Clamer oyster	2 hr 5 min	2
13 Richard King	Clam oyster	2 hrs 5 min	4
14 Kristen Paradise	GBCW	4	100

Name	Affiliation	Time (Hours)	Miles
15 Jason Charatier	CSD	3 hr	30 miles
16 Neil Savage	AERC	2 hr 20 min	16 miles
17 Dean Merchant	WRITER	20 mins	7 miles
18 Steve Engstrom	Seacoast Sci Center	2 1/2 hrs	40
19 Col Ewart	Green Party NH	3 hrs	20
20 Gary Lord	Clammer	3 hrs	12
21 DAVID O'HEARN	CLAMMER	20	12
22 Roger Wool	NHTR / CLAMMER Channel	2 HR	25.
23 FRANK PLYSON		3	20
24 Jeffrey A. Anderson	Clam Digger	3	15
25 Mark Capone	Jackson Lab	3	20
26 Mary Sullivan		10 min	2
27 Johann Loch	Docent	60 min	30
28 Rob Rowe	GBCW volunteer	2 1/4	40
29 Susan Mance	Hampton Univ	2	4
30 Ann S. Reid	GBCW	—	—
31 Steve Jones	UNH	3	40
32 JEFF PROEHL	DARTMOUTH	6	300
33 ATA BILGILI	DARTMOUTH COLLEGE	6	300
34 Mark Coellman		1 hour	to 2 here
35 DV Cote		3	10

Name	Affiliation	Time (Hours)	Miles
36 - Danb Zulkiewicz	Self	.15	15
37 Keith Noyes	self	.15	15
G 38 Frank Richardson			
39 Paal G			
40 Bruce Smith			
G 41 Jennifer Fox	GBCW	1.5	30
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GREAT BAY COAST WATCH



Marine No-discharge Forum

The Wentworth Marina, New Castle, NH
 Thursday, August 12 at 6:00 PM – 8:00 PM



- ◆ Please sign in, enter your **affiliation**, and **travel mileage** to and from the event.
- ◆ The **total time, in hours**, should include your length of time spent at the event plus your total **travel time**.
- ◆ Thank you! Your attention to this matter helps us ensure we meet our grant requirements.

Name	Affiliation	Time (Hours)	Miles
1 Ann S. Reid	GBCW Coordinator	—	
2 Jen Drociak	NH Coastal Program		
3 Dave Kellam	NH Estuaries Project		
4 Howard Lindy	UNH Marine Dept.		
5 Paul Goodwin	Wentworth Marina		
6 Lynna Cratoan	Wentworth Marina		
7 [unclear]	—		
8 Jen Kennedy	Blue Ocean Society		15
9 Cheryl Strong	Wentworth Marina		
10 Cheryl Clancy	NH Marine Patrol		
11 Ann Stanford	Wentworth Marina		
12 Pat Kelley	Wentworth Marina		
13 Glen Stanford	Rye resident		

Name	Affiliation	Time (Hours)	Miles
14	Jage North	Wentworth Marina	
15	Tim Stone	Stonewall Environmental Portsmouth Board	1hr 3
16	Emily Aronson	Ports. Herald	
17	Stephen Root	Portstow	25min 15mi.
18	DAVID PENSER	WENTWORTH MARINA	
19	PAT MCGOWN	fosters daily dem	
20	Sakey Stafford	UNH docent	15
21	Ken Anderson	Ports Harbor Tow	2 3
22	JOHN MOULTON	Ports. Harbor Tow	2 3
23	GIL GELINEAU		1
24	Mark Lewis	Wentworth	-
25	Ann Rodusey	617-918-1505 - Fax 617-918-1538 phone. US EPA	
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