

ANNUAL REPORT

July 1, 2013 - June 30, 2014

GREAT POND FOUNDATION



GREAT POND FOUNDATION

President: Thomas Wallace

Vice President: David Luening

Treasurer: Robert Rukeyser

Directors: William Darman

Anne Mazar

Brendan O'Neill

Mark Patinkin

Mike Shalett

Director Emeritus: Robert Hughes

Director of Science & Education: Robert Woodruff

Foundation Administrator: Barbara Conroy

Publications Director: Jane Hawkes



Photo by Samantha Chaves

Great Pond Foundation, PO Box 2005, Edgartown, MA 02539

postmaster@greatpondfoundation.org

www.greatpondfoundation.org

508.627.7222

Cover photo taken on 12/13/2013
Nessie in foreground; town dredge in background

From the President...

August 2014

Dear Friends and Supporters,

I am pleased to report that the Great Pond Foundation achieved significant progress during 2014. Working closely with the Town of Edgartown, we saw that relationship mature into a true public-private partnership. We also made substantial progress in broadening our revenue base, and we significantly extended our science and education programs.

Public-Private Partnership. The most visible indication of our strong partnership was the extended presence in the Pond of the Edgartown town dredge alongside our own "Nessie" for the first time. Less visible, but critical to our mission of *enhancing the health of Edgartown Great Pond*, is the Town's active role in the Oyster Restoration Project by creating sanctuaries and their central role in conducting water quality studies.

The Town has matched the funding that the Great Pond Foundation has directed to maintaining water quality on Edgartown Great Pond, substantially leveraging our own fundraising. The Foundation aggressively advocates for the Pond with the various stakeholders in town government. There are very few registered voters living on Edgartown Great Pond who can participate in the April Annual Town Meeting that determines funding for various town activities. By showing our support and setting the example of putting forth our own funds first, we have achieved excellent cooperation and strong support from the Town of Edgartown.

Broadening Revenue Base. From our early dependence on a single neighborhood, we have made strong progress in drawing generous support from around the Pond and beyond. Again in 2014, I continued to enjoy the hospitality of neighborhood homeowner meetings, finding that, as neighbors understand our mission and programs, they respond with a gratifying and generous willingness to give their support. That support is augmented by modest contributions from other Edgartown residents as well as several small grant awards. Together, these allow us to fund our operations fully.

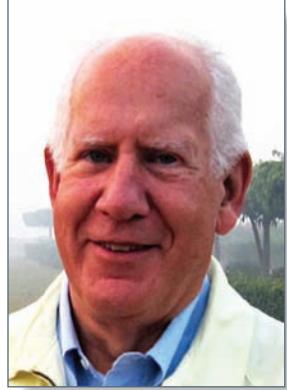
Science and Education. Last summer, we installed three digital data loggers in the Pond to gather data every hour on salinity, temperature, and water level. This data will provide valuable information on changes over long time periods as well as on the impact of periodic openings to the sea. We also implemented significant enhancements to our intern program during 2014.

So, to carry out our mission, we are operating on many fronts, including dredging, water quality, education and advocacy with the town. These Great Pond Foundation programs have played a significant role in improving the water quality of Edgartown Great Pond. Only with continued support from our generous existing donors and from new donors can we continue this effort to preserve this fragile estuary.

Tom C. Wallace, President

Great Pond Foundation





Finance...

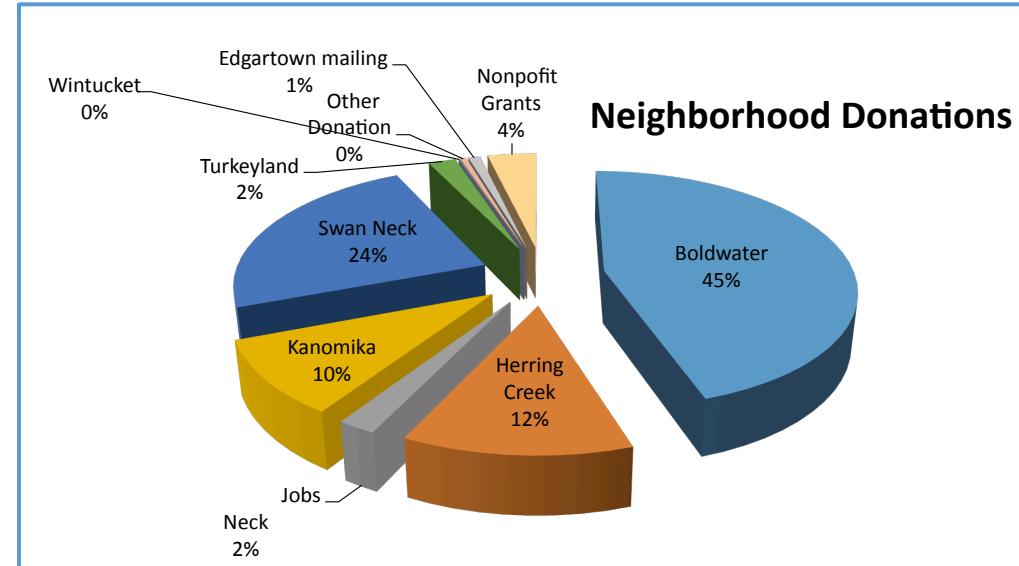
*Bob Rukeyser
Treasurer*

The Great Pond Foundation further strengthened its financial position in fiscal 2014, bolstered by significant broadening of our donor base. A broad base of donor support is a key strategic objective to help ensure our long-term ability to carry out our core mission to enhance the health of Edgartown Great Pond.

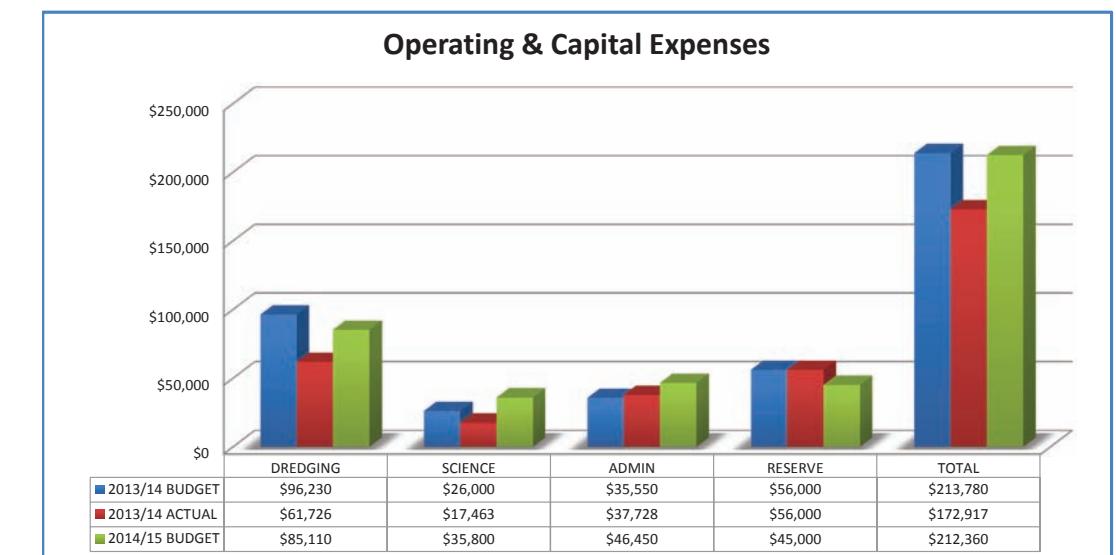
Fiscal Year 2014

Our highest priority is maintaining a channel through the delta at the barrier beach to enable successful openings to the sea. Five years ago, we raised more than \$800,000 to buy a dredge ("Nessie"), equip it, and put it in operation. Over the winter, Nessie worked in tandem with the Edgartown Town dredge, which was in the Pond for the first time in years. Together, they removed some four times the sand removed in 2013, resulting in an exceptional 24-day opening to the sea beginning in late March. Effective periodic exchanges of pond and sea water are essential to the health of the Pond.

The seven-year restoration of a vibrant oyster population, in cooperation with the MV Shellfish Group, has also been a major positive development. Each adult oyster can filter up to 50 gallons of water per day, removing a substantial volume of nitrogen from the Pond.



Revenues for 2014 were \$216,340, exceeding the \$205,000 goal we set a year ago. We continued to receive generous support from our traditional contributors, but importantly, contributors from other neighborhoods markedly increased their giving. Over just the past two years, donors from neighborhoods other than Boldwater increased their share of total donations from 39% to 55%, even as Boldwater donors' total contributions remained stable.



This year, we were also able to complete important projects thanks to grants received from the Cape Cod Five Foundation, the Gus Daniels Foundation, and the Edey Foundation. A mailing of our newsletter to all Edgartown post office box holders raised awareness of the Foundation's programs while also broadening our contributor base.

Total expenses of \$172,917 were significantly under budget, benefiting principally from the presence of the Edgartown Town Dredge, so a major share of expenses was assumed by the Edgartown Dredge Committee, but also due to harsh winter weather, which reduced time available for dredging. Science and Education was also below budget, but all planned programs were accomplished. General operating and administrative expenses were below budget even with the expense of the town-wide newsletter mailing.

The excess of our revenues over expenses enables us to build reserves to maintain and, ultimately, to replace Nessie, and also to enable us to weather damaging storms and other risks to the health and stability of the Great Pond. The generous support of our donors is strengthening our ability to prepare for these prospects and contingencies.

Although FY '14 financials have not yet been audited, the numbers presented herein may be considered reliable estimates.

FISCAL YEAR 2015

We have established a fundraising goal of \$214,100 for FY'15. This will support anticipated dredging activities and on-going science and education programs and a substantially enhanced intern program.

We have been making solid progress in diversifying revenue sources, and this continues to be a top priority. Our long-term ability to achieve our mission is best assured by continuing to broaden our base of contributors with these actions:

- seek support from all those who live around the Pond, particularly those in under represented neighborhoods to achieve better balance,
- seek support from those who live elsewhere in the watershed,
- secure additional grants from foundations and agencies, and
- build on our good relationship with the town of Edgartown to gain financial support for operating the dredge in Edgartown Great Pond.

With the support of 55 generous donors in fiscal 2014, the Great Pond Foundation is in sound condition. We have an exceptional asset -Nessie - that was built for and is dedicated to serving to the unique needs of Edgartown Great Pond. Nessie's good work, along with the oyster program, water monitoring and other science and education programs have paid rich dividends for all who live near, or care about the Pond, in the form of clear, healthy water. This pond is a fragile asset, worthy of our care and stewardship

Your continued support is extremely important and is very much appreciated.

The Great Pond Foundation is a 501(c) (3) tax-exempt organization.

Financial support for the organization is provided largely by contributions from individual donors.

The fiscal year of the Foundation runs each year from July 1st through June 30th.

Tax returns filed by the Foundation are available for public inspection on our website www.greatpondfoundation.org

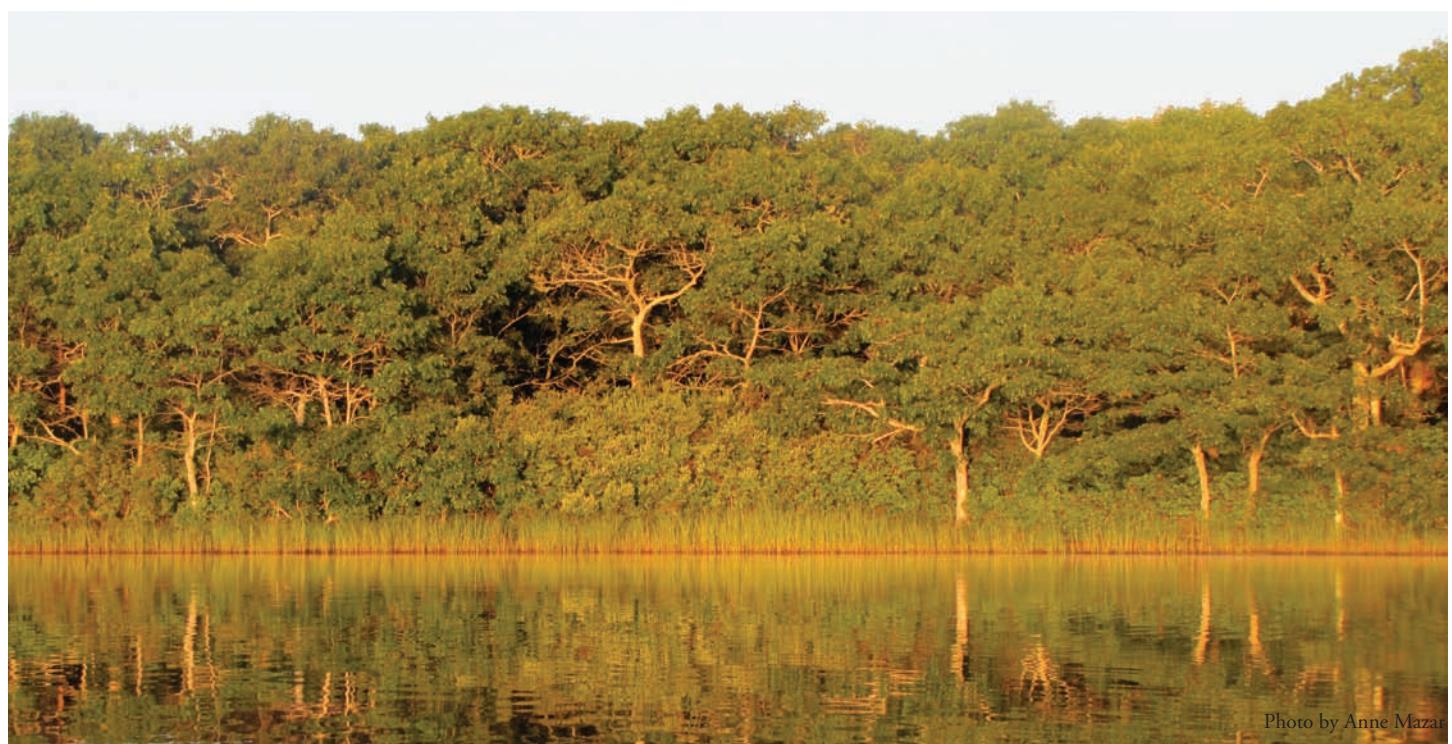
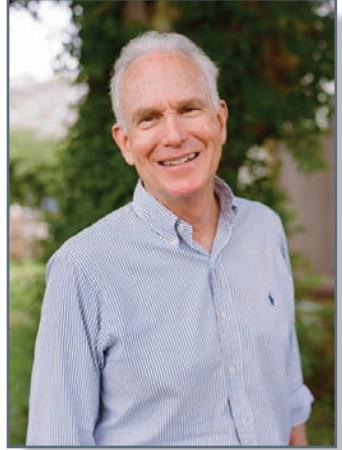


Photo by Anne Mazan

A white swan is captured in flight, its wings spread wide against a clear blue sky. It is positioned in the upper right quadrant of the frame, appearing to fly over a body of water. The background is a soft-focus view of the water and sky.

POND ENHANCEMENT PROJECTS	IMPROVED CIRCULATION	INCREASED SALINITY	REDUCED NITROGEN	PARTICIPATING PARTNERS
Cut Through Barrier Beach to the Sea	X	X	X	Town of Edgartown, GPF
Oyster Restoration		X	X	Shellfish Committee, MV Shellfish Group, GPF Intern Program
Dredge Delta Channel to Opening	X		X	Dredge Committee, Aquamarine, Shellfish Committee, Edgartown Harbormaster, GPF
Dredge Other Permitted Areas	X	X		Shellfish Committee, Dredge Committee
Seek Dredge Permits - Other Areas	X	X		Shellfish Committee, Dredge Committee
Water Quality Monitoring			X	Mass. Estuaries Project, Town of Edgartown, GPF
Manage Invasive Plant Species				Nature Conservancy, Sheriff's Meadow Foundation, GPF
Reduce Local Fertilizer Use			X	Property Owners in Watershed, GPF, town advocates
Algal Bloom Research & Remediation			X	Woods Hole Oceanographic, URI Marine Science, GPF
Support Responsible Development Rules			X	Planning Board, MVC, Ponds Advisory Committee, Edgartown Board of Health
Support Existing Sewer Developments			X	Edgartown Board of Health, Wastewater Commission, Pond Advisory Committee
Monitor Nitrogen Plume (test wells)			X	Nature Conservancy, Edgartown Board of Health, GPF
Public Education Programs			X	MVC, private land owners, Ponds Advisory Committee
Monitor New Denitrification Technologies			X	MVC, Edgartown Board of Health



*Tom Wallace
President*

Dredge Permitting and Operations...

The Edgartown Great Pond is a spring-fed barrier beach pond, owned by the Commonwealth of Massachusetts and managed by the town of Edgartown. Open to the public, the 860 acre pond is enjoyed by shoreline (riparian) property owners, island residents, and visitors who swim, sail, fish, birdwatch, kayak, etc. The Pond is home to a large commercial shellfish population and other marine flora and fauna.

Run-off from local septic systems, and nutrient-rich contaminants like fertilizers as well as naturally occurring organic debris have leached into the Pond. As development and other human activity increase, this run-off has caused an overload of nitrogen, phosphorus, and organic matter which then stimulates a dense growth of phytoplankton (algae). The algae concentrate on the surface of the water, turning it a murky green and impeding light to penetrate. Some of the algae are consumed by herbivores; most die and sink to the pond bottom. This debris, along with the diminished light, virtually smothers the oxygen producing organisms. The water bodies can become so enriched (dystrophic) that they become stagnant, unable to support aquatic plant and animal life. The Pond “dies” and eventually is filled in by noxious plants like phragmites.

Over the past twenty years, efforts have been made to address the problem of excess nutrient loading in the Edgartown Great Pond. In the mid-1990's, after several studies came out about Pond water quality, the town of Edgartown upgraded its waste water treatment plant; however, nutrient-rich ground water from that old plant will continue to impact the Pond for some years to come.

In 2008 the Great Pond Foundation began its dredging program using a rented dredge. After a hugely successful fund raising campaign, the Foundation was able to purchase its own dredge “Nessie” and has maintained a dredging schedule every year since.

Dredging by Nessie cuts through the sandy delta in the Pond at the site of previous openings to allow a much better chance of a good, thorough flushing of the Pond water. The flushing is critical to reducing the nitrogen load that can accumulate over time with run-off and natural debris stagnating in the pond waters.

2014 Dredging Operations

Events of the past few years have resulted in unprecedented challenges for the Foundation and its dredging program. The Halloween Storm of 2011 hit the eastern seaboard just two months after Hurricane Irene, and damage caused by Hurricane Sandy in October of 2012 was exacerbated by a nor'easter the following month. For the Edgartown Great Pond, the aftermath was an unusually large amount of sand deposited on the barrier beach and the delta.

This year, despite “Nessie’s” best efforts, the volume of sand proved to be more than the dredge could handle, and the Foundation asked for and received assistance from the Town of Edgartown and their large dredge. It was an unprecedented solution to an



Amazing aerial photos of barrier beach opening-spring 2014



Future Forecasts Prompt Discussion on Need for Operating as well as Capital Reserve:

The Great Pond Foundation is committed to its mission of enhancing the health of Edgartown Great Pond. Recent weather and climate conditions have served to underline the need not only for our continuing a working partnership with the Town of Edgartown but also for us to plan for increasing costs of operating our dredge and keeping it in the best possible working order.

Six years ago, with the generous support of many donors, the Foundation was able to purchase its own dredge (fondly named “Nessie”). Since then we have been dredging over several cycles throughout each year. We are building a healthy reserve fund for replacing the dredge when that time comes; however, until recently, insufficient attention had been given to how to fund the adequate care, maintenance, and storage of “Nessie”. This past year’s huge dredging operation presented us with unanticipated costs which, fortunately, were shared with the Town of Edgartown. If the pundits are at all correct, we can expect more and stronger storms in the coming years, resulting in greater damage to the shores of the Great Pond. We must prepare not only for the replacement of “Nessie” in the long term, but also for crucial care of this important piece of equipment. “Nessie” deserves no less; our supporters should expect no less.



unprecedented problem. More than four times the amount of sand was removed from the barrier beach and delta area compared to prior years.. The successful opening and dredging of the Great Pond this year was a shining example of public and private entities working together for the common good of the Pond.

After routine maintenance was performed on the dredge and the trailer, our dredge was put into the water in October. At the same time the town excavator was digging a channel through the delta. The Pond opened on March 28th and stayed open until April 24th! As part of our efforts to keep folk apprised of news concerning the Pond, the friends and supporters of GPF received emails with photos and video of the spring opening.



Bob Woodruff

Director of Science & Education

Science & Education...

Internship Program

The Foundation is pleased to announce the hiring of Vineyard native Emma Green-Beach, to oversee its Intern Program, now over a decade old. With a Masters degree from Rutgers in Marine Biology, and long experience in oyster ecology, Emma brings special knowledge of the Great Pond, having grown up on the Pond.

Joining her are interns Samantha Chaves, and Aidan Varkonda.



Sammi is a 2013 graduate of the Martha's Vineyard Regional High School. She is fascinated by the ocean and greatly appreciates being able to grow up on the Island. She will be attending Wheaton College in the fall of 2014 and will be majoring in Biology.



Aidan grew up in Edgartown surrounded by the ecology and conservation work of his parents, long time State Forest Superintendent John Varkonda and conservation Commission Agent Jane Varkonda. Aidan loves the outdoors and is really looking forward to learning more about the Great Pond. He will graduate from MVRHS in 2016.

A major focus of the Internship Program again will be assisting William "Boo" Bassett with the MV Shellfish Group Oyster Restoration Project. The interns will also be assisting Emma in updating the invasive Phragmites reed mapping on the Pond and assisting Craig Saunders with water quality monitoring.



Tiny oyster set on scallop shell Photo by Samantha Chaves



Phragmites Reed Management

Phragmites, or Common Reed, is a tall invasive grass believed to have been introduced in Colonial times for roof thatch. It is a threat to native wetlands because it is a dominant species forming dense monocultures which all but eliminate native species. About 20 stands exist on the Great Pond, the largest of which is on the westerly end of Swan Neck.

For the past three years a landowner on the Pond has contracted with an environmental services company to manage the stand using cutting and herbicide treatment. More than 90 percent of that stand has been eliminated, and annual management will continue until the stand is gone. Several other Pond landowners are also involved in Phragmites management efforts.

Pond Water Quality Monitoring

In order to insure the health of the Pond, the Foundation collects and tests water samples from six stations in the Pond before and after each opening. Currently, water quality in the Pond is good. August, with its high water temperatures, is the critical period in the annual cycle, when excessive nitrogen in the Pond can cause blooms of phytoplankton in the Pond, and periodic blooms of macro algae. Beginning in August, Chris Edwards, a biologist at the MV Shellfish Group, will be in charge of the water sampling/testing.



Last fall three digital recording loggers were installed in westerly, central, and easterly areas of the Pond to record date, time, temperature, salinity, and water levels. Despite the wells being toppled by winter ice movement, the loggers survived and have given us eight months of data at 15 minute intervals. The recorders will be relocated to the main body of the Pond, and will be deployed in the non-winter months, to avoid the problems encountered last winter. Data will be available in spreadsheet format for anyone doing scientific work on the Pond.

Our consulting hydrologist, Craig Saunders, who oversees all monitoring work on the Pond, will be re-testing the monitoring wells south of the old Edgartown Wastewater Treatment Facility in coming weeks. The old facility is the major source of nitrogen in the Pond, and, while a healthy oyster population exists in the Pond, the eel grass in the Pond continues to be limited, indicative of excessive nitrogen in the system. Also of increasing concern in water quality monitoring is the appearance of pharmaceuticals in water bodies. Testing done last summer in Edgartown Great Pond revealed that it had the highest levels of acetaminophen of any of the 20 sites tested in the region.



GPF Research Vessel Launched

Recently, the GPF science staff and interns, christened and launched "Burt", a 14 foot aluminum work boat given to the Foundation by Burt Fleming, long time member of the GPF Board of Directors and Chair of the Science and Education Subcommittee. The Flemings sold their property on the Pond last year and are deeply missed. "Burt" will be a fond reminder of the Flemings and a much-appreciated means for access to the Pond for our science work in the years ahead.



"Burt"

A Day in the Life of a GPF Intern

by Samantha Chaves

I have been working with the Great Pond Foundation and Emma Green-Beach since the beginning of this summer. This is my first summer working with shellfish of any sort, and I really didn't know what to expect. I have had a lot of opportunities to work in different areas during this internship which has been very exciting. We have been working on a few different projects and have had a lot to do to prepare for the Edgartown Great Pond oyster spawn. I have been learning so much in the process and have even been able to drive the boat which is great practice! My future goals involve working and conducting research out on the water. I feel that this internship has already taught me much about boats, the pond and about shellfish. I am grateful for everything I have already learned and look forward to the remainder of this summer's internship.



We spent the first few weeks of the summer preparing over 300 shell bags and lines for the oysters that would be naturally spawning in the pond. The shell bags are made out of chicken wire and are filled primarily with recycled scallop shell. Around the time we were putting the bags out, we conducted two separate plankton tows out on the boat to see if there was any oyster larvae in the spawning cage areas. I transported the samples to the Shellfish Hatchery in Vineyard Haven so they could be viewed under a microscope. When we brought the first sample over, the team at the hatchery could not see any larvae. A few weeks later we conducted our second tow, and they were able to see that there was, indeed, oyster larvae in the pond, which was great news! We have since put the lines out and have recently been able to see baby oysters attached to the scallop shell in the bags!

We have just finished making 300 more shell bags using a mesh material. Most of these bags have been put out in two large tanks that are set up on the edge of the pond. They will act as an anchor for the oyster larvae to attach onto. This group of oysters in the tank is called a "remote set". We recently put out the oyster larvae from the Shellfish Hatchery into these tanks and now have to give them some time to grow and "set" on the shell before they can be put out on their own in the pond.

A few weeks ago, I was able to help GPF Hydrologist Craig Saunders test well water in Edgartown. I knew very little about the island wells, and I enjoyed participating as good water quality is so important. We spent almost a whole day testing wells. I am not sure what the results of the tests are but am definitely curious! I did not realize how long of a process this project was. It takes a lot of work and during the day, Craig even had to cut part of a tree with a chainsaw because it had fallen over and landed on one of the wells. It is definitely not an easy job. There are a lot of readings that need to be taken. I was fascinated by all of the equipment needed to test the wells and was amazed by how many steps there are. It was a great experience that I enjoyed being a part of. I greatly admire all of Craig's hard work!



I have had the opportunity to observe clam, scallop and oyster spawning at the Shellfish Hatchery in Vineyard Haven. It was a unique experience; I was fascinated by their spawning process. I have familiarized myself with the Pond and its coves and have enjoyed being able to see the shellfish in different stages of their lives. I have also been enjoying our time spent out on the boat where I am learning quite a bit about boat handling. I feel that this knowledge will be helpful for me as I hope to be conducting my own research on boats in the future. I am excited for the rest of our summer work and am anxious to bring some of this knowledge to college with me. I know that college will offer me many opportunities to explore different areas in the field of science (particularly marine and animal science). I hope to be able to bring what I learn in college back to the island and use that knowledge to help the island and the Great Ponds thrive even more!

From learning how to drive the boat to actually helping with shellfish spawns; I never expected I would be learning so much in such a short amount of time! I am eager to learn more about the Edgartown Great Pond and the processes required to help keep the Pond functioning smoothly in the coming weeks. I enjoy working with Aidan and am grateful to be working with Emma and Boo Bassett, who have taught me everything I know about shellfish and the Great Pond up to this point. I appreciate the time they have taken to help me learn. I am very much looking forward to the rest of our work this summer.



Turning Lemons into Lemonade: Potential Nitrogen Remediation via Phragmites Harvest

by Emma Green-Beach

The common reed *Phragmites australis* is a cosmopolitan species considered to be highly invasive in North America. It reproduces clonally through underground rhizomes and creates a dense monoculture of stalks that exclude native vegetation. For this reason they are subject to increasing extermination programs aimed to increase biodiversity of native plants and wildlife. Despite its invasive nature, there is scientific evidence that Phragmites provides important ecological services, most especially sequestration of nitrogen, carbon, and phosphorus. Selective harvesting of existing stands may provide a practical and affordable means of mitigating the nutrient overloads that are responsible for the ecological demise of the Island's ponds.

Nearly all of the Island's water bodies so far studied under the Massachusetts Estuaries Project are impaired to some degree by high nitrogen. Over enrichment by nitrogen is the greatest threat to our coastal water bodies resulting in noxious algal blooms (both micro- and macroalgal), hypoxia, loss of shellfish habitat and overall damage to the integrity of their marine ecosystems. At present, the Island community is struggling to find ways to meet the suggested Total Maximum Daily Loads (TMDLs) for nitrogen and begin the process of restoring the health of our ponds. Bioremediation, the practice of utilizing the natural processes of living organisms, such as shellfish, algae, and marsh reeds to reduce excess nitrogen, is one of the alternatives to sewage systems that is receiving increasing attention.

We believe harvesting existing stands of Phragmites may offer an especially favorable means for bioremediation for these reasons:

1. Phragmites are “green sponges” known for their ability to absorb and store nutrients. They are used in retention ponds and storm water ditches for their superb nutrient uptake efficiency. Their roots penetrate 6 feet deep and so may intercept nitrogen rich groundwater in addition to surface runoff. The reeds are documented to accumulate 66–100% of the inflowing dissolved inorganic nitrogen in plant tissue. High concentrations of nitrogen stored in the plant tissues resulted in recommended harvest of the above ground plant tissues for nitrogen mitigation.

2. Phragmites are already present in the riparian zone of some ponds. Shellfish and seaweeds are known to offer excellent nitrogen mitigation opportunities, but they must be propagated in order to achieve large quantities of nitrogen sequestration. Taking advantage of already existing standing stocks of Phragmites means there is no time and labor required to plant and culture the bioremediating organisms.

3. Phragmites are an invasive species. Annual harvests when above ground biomass is at its maximum have been reported to weaken the plant and potentially keep the stands from spreading. Maximum N content in the tissues occurs prior to seed set, so optimal harvest times may also prevent the formation of seeds thus inhibiting spread via seed germination.

4. Harvested Phragmites could be utilized as a valuable high N for: green component in compost; raw material for the production of biochar; a stable, high carbon soil amendment being promoted as a means of carbon sequestration; and sustainable feed source for local livestock.

This summer and fall we will be taking several samples of Phragmites from Lagoon Pond and Edgartown Great Pond. (We will send these samples to a laboratory to be analyzed for nitrogen content and determine when there is the most nitrogen contained in the plants—a combination of nitrogen concentration and plant biomass.) Then, using reed stand area estimates and this maximum nitrogen value, we can calculate how much nitrogen is contained in the green Phragmites around some of our coastal ponds. We may learn that well-timed harvest—and disposal—could be a viable means to remove nitrogen from our pond systems.

In the meantime, we are working with Mermaid Farm in Chilmark to explore the potential of Phragmites for animal feed or bedding. One man's trash could be another man's treasure.





On the Wild Side...

Photo by Samantha Chaves
What are these tiny things? Answer: Baby scallops!

Learning more about the Ribbed Marsh Mussel: A Super Bivalve

by Emma Green-Beach

The ribbed mussel, *Geukensia demissa*, is one of those creatures most people don't see until they look for it. Once you know the identity of this extraordinary bivalve, you will see that it is extremely common on the Island. They tolerate a wide salinity range; therefore, you can find them in nearly every coastal pond. As they are not considered a favorable food item you will never see them at your favorite fish purveyor.

Ribbed mussels typically like to live at the base of marsh grass at the edge of the water in the intertidal zone so they are under the water at high tide and out of the water, exposed to the air at low tide. The mussels and marsh grass have a synergistic relationship; they benefit from each other's presence. The grass gives the mussels substrate to cling onto and attach their *bryssal threads* to. The nooks and crannies of the marsh provide perfect spaces for small juvenile mussels to hide from crabs and other predators like birds. The mussels, in return, fertilize the marsh with their feces and also provide very important armoring against erosion and wave energy from storms, tides and boat wake.



In the Great Ponds, however, you will more likely find ribbed mussels clustered with oysters. This is most likely because the Great Ponds are not typically tidal, and when they are opened to the ocean the waterline retreats several feet. If the mussels lived at the water's edge, they would be dry for more than a few days, which even a super rugged ribbed mussel cannot tolerate. For this reason, ribbed mussels don't fulfill their role as marsh stabilizers in the Great Ponds.

The last fact I like to tell everyone about ribbed mussels lately, is that they can eat a very large variety of food, which makes them extremely adaptable to varied conditions. Ribbed mussels can eat, digest and grow from ingesting bacterial particles, which our other native shellfish cannot. Oysters are amazing and wonderful in a myriad of ways, but they cannot eat bacteria as well as ribbed mussels can.

One experiment we will be doing with ribbed mussels this summer is trying to catch their seed as we do for oysters. We will look at the effects of adult mussels on the seed (with vs. without adult mussels) and position in the water (floating vs. on the bottom) on the settlement of ribbed mussels vs. oyster seed.

Bag #	With Mussels	Without Mussels	On the surface	On the bottom
1 – 3	X		X	
4 – 6		X	X	
7 – 9	X			X
10–12		X		X

The hypotheses are that a) more mussels will settle in the bags with adult mussels in them and b) more mussels will settle in the bags on the sediment.

Stay tuned for our results!

Editor's note: Please visit our website www.greatpondfoundation.org for up-dates on this and other Pond projects.

Edgartown Great Pond Beach Nesting Birds

The beach nesting bird season started out quite well for Edgartown Great Pond. In early May we had six pairs of plovers and two pairs of oystercatchers with eggs. The Martha's Vineyard Public Charter School environmental science class had graciously helped us install all of the low predator fencing in anticipation of a tern colony.

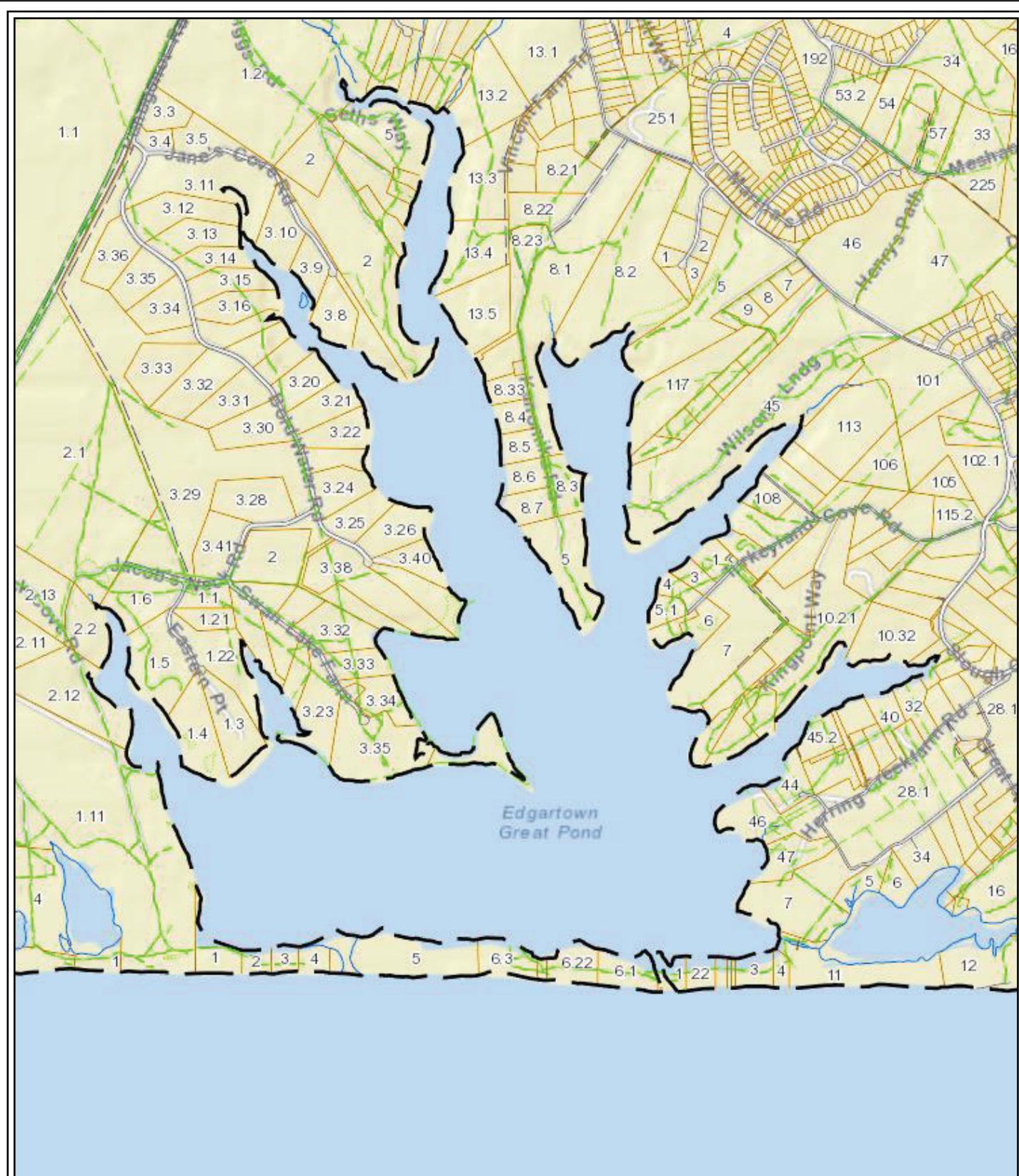
We were ready for a blissful and early season. Then one by one the crows began keying into nests, and things began to shift. Nests were lost, but the birds pushed on moving around and nesting again and again. Finally, after a couple pairs of plovers had nested inside the low predator fencing where a small tern colony (15 pairs) was established, we were hopeful. With the protection from the terns these birds will be successful. Skunk activity however continued to increase, and eventually with the motivation of eggs inside they dug under the low-predator fencing getting the remaining nests.



Liz Baldwin, Assistant Director of BiodiversityWorks kindly submitted this article and the map below showing nesting areas. Biodiversity Works is an Island nonprofit formed in 2011. Their mission is to promote conservation of biodiversity through wildlife research and monitoring while providing opportunities for people to engage in hands-on nature study. They work on Martha's Vineyard and throughout southeastern Massachusetts.



Photo by Lanny McDowell



Edgartown, MA
1 Inch = 1800 Feet
July 25, 2014

Data shown on the online GIS site for Edgartown is provided by CAI Technologies. The data is provided for planning and informational purposes only. The Town and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of maps created from this website. Users should note that map data is for assessment purposes and is not valid for legal description or conveyance.

www.cai-tech.com
CAI Technologies
Precision Mapping. Geospatial Solutions.



Please join us to support our Great Pond!

Photo by Anne Mazar

Having established ourselves as a small but vibrant organization, we would like to reach out to all our neighbors in the Great Pond Watershed. We need to hear from you about anything concerning the Pond that you believe might be important. We also welcome your questions on any of our projects. We hope that you will join us in our efforts to care responsibly for this great resource. Your tax-deductible donations would be greatly appreciated as well!

Where to find us:

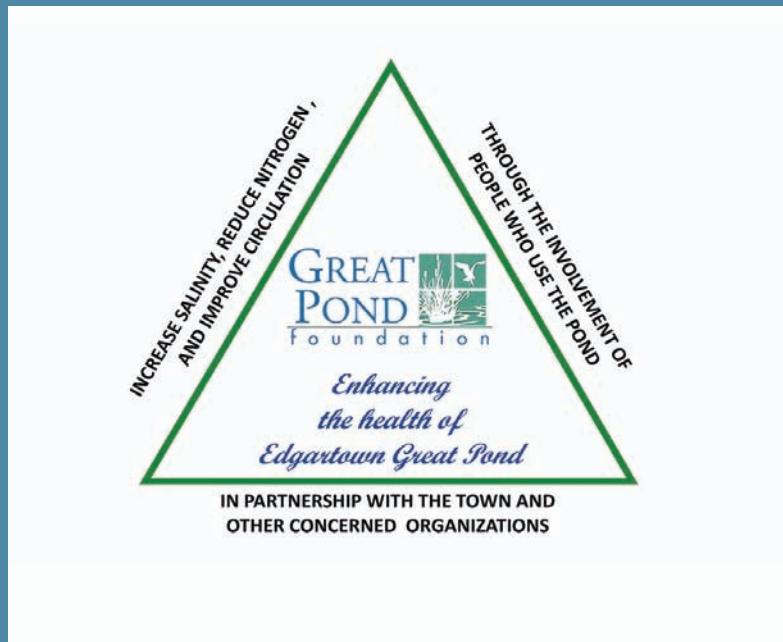
On the web: www.greatpondfoundation.org

By postal mail:
Post Office Box 2005
Edgartown, MA 02539

By email: postmaster@greatpondfoundation.org

By phone: **508-627-7222**

By Fax: **508-627-9777**



Printed on partially recycled paper

