In January, Dr. Chris Neill, who has skillfully guided FACES for the past several years, stepped down as President due to increased professional commitments. Although we doubt that we can fill his shoes, we agreed to serve as co-presidents and know that we will benefit from his continued presence on the Board.

Some of you may have noticed the name “Falmouth Water Stewards” being used alongside “FACES”. In March, the Board of Directors voted to change the name of the organization to better reflect our long-term objectives and activities: to protect, preserve, and restore our waters. This change will become effective if approved by the membership at the Annual Meeting. Although it was hard to change history, we hope you’ll agree that this change makes sense, and we also hope that you like the new logo.

As Falmouth’s environmental problems, particularly with regard to water quality, have become more obvious and the Town has become more serious about addressing them, non-profit organizations such as this one have assumed greater responsibility to educate and engage our citizens.

Recognizing that whatever we do to or on the land ultimately affects our waters, FACES has teamed with The 300 Committee to co-sponsor occasional talks and programs. On May 15th, Dr. S. Jeffress Williams gave the first such talk in which he addressed climate change, the new FEMA maps (page 4), and the potential impact on Falmouth.

In the May local election, FACES supported Ballot Question 1 and worked for its successful passage (see article on page 5). The work is on-going as the town’s Water Quality Management Committee continues exploring supplemental solutions to our water problems, beyond the necessary sewering of the Little Pond area. Thanks to all those whose work and donations helped advance this critical step in improving Falmouth’s water quality.

At the Board retreat last October, five working committees were established and have since been very active. In addition, a new category, Advisory Associates, was created as a way of attracting people with expertise to the organization. If you are interested in learning more about opportunities to engage with us, whether as a board member, a sometimes advisor, or an occasional volunteer, please let us know.

We look forward to seeing you at the Annual Meeting on Thursday, July 31st (see announcement for details). Mass Audubon’s Ian Ives will speak about his work on the restoration of the wetland habitat of spadefoot toads. His talk promises to be dynamic and informative — we hope you can join us!

As we have written about in previous issues of this newsletter, FACES has been working for some time on an oral history project, entitled ‘Remembering Our Bays.’ The purpose of the project is to capture the memories and experiences of some of Falmouth’s long-time residents who have watched Falmouth’s coastal- and land-scapes change over the decades.

The group working on this project has done several interviews to date, including with FACES Board Members Doug Brown and Priscilla Moor. Excerpts of three of these oral histories are included in our new Falmouth Water Stewards Public Service Announcement, soon to be available on our website and in play on FCTV.

If you’d like to learn more about this project please contact us.
NATURALIST’S CORNER: IN PRAISE OF BIRD BATHS
By Priscilla Moor

The old house had vegetable gardens enhanced with flowers and a bird bath — an old trash barrel lid on the ground. This bird bath was visited by gray squirrels, red squirrels, chipmunks, voles, moles, skunks, foxes, raccoons, woodchucks, pheasants, and bobwhites. The skunks were not striped but were white-backed, which made them easier for us to see and avoid as dusk approached.

Bats, too, came out at dusk, diving over our heads for the mosquitoes.

Trails to the bird bath made by the larger animals were visible. Litter trails led to the old house, made by house mice, white-footed deer mice, rats (I am sure, which also lived in the compost pile), and shrews chasing the mice. The shrews ran with their bodies touching the kitchen baseboard and were easily caught in a large coffee can held in their path into which they almost unseeingingly ran.

The raccoons were allowed to live in the kitchen chimney for the duration of the mother-raccoon-feeding-babies period that spring. Rabbits were everywhere. Garter snakes were common and one puffed adder (eastern hog-nosed snake) played dead for a while in the garden.

During one period of drought, a box turtle found the bird bath and sat in the water for three hours. It stayed in the area for a couple of days using the birdbath (offerings of watermelon helped) before ambling off towards Bournes Pond.

Birds using the bird bath regularly include: cat birds, robins, chickadees, titmice, blue jays, eastern towhees, gold finches, house finches, grackles, red-winged blackbirds, crows, house wrens, orioles, house sparrows, starlings, cardinals, song sparrows and morning doves.

Opossums showed up in the nineties and coyotes in the 2000s. Bobwhites and pheasants became scarce but Carolina wrens, red-bellied woodpeckers, cardinals and turkeys are now more numerous.

By adding a pedestal birdbath to the yard, a new bird, a screech owl, was attracted and joined in the bathing, much to the befuddlement of the ‘regulars’.

In the woodland stream areas, and along the estuaries’ shores, you can find ducks, geese, and shore birds like herons, egrets and many species of sandpipers feeding in preparation for the trip further north or readying to overwinter and raise their young right here.

Nearby Bournes Pond provides room for a coyote female to play with her offspring. Osprey are everywhere. Crows announce the arrival of foxes to your area but not yet the coyotes.

River otters are in Child’s River, Salt Pond and many of the small fresh water...
Join FACES Today!

FACES is a 501c3 non-profit organization that is mainly supported by member dues and donations from neighborhood associations, community organizations, local businesses, and concerned citizens.

Please renew your membership or join FACES today so we can continue to work to protect, preserve, and restore our fresh and coastal waters. Or, donate in any amount.

Membership Dues

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Dues or donations in any amount may be sent to:
FACES
PO BOX 156
Falmouth, MA 02541

Or pay or donate online:
www.facesfalmouth.org

Thank you for your generous support!

Donations and dues to FACES are always tax-deductible.

STUDENTS WIN FACES SCIENCE FAIR PRIZE

Each year, high school students at both Falmouth High School and Falmouth Academy participate in science fairs at their respective schools. And each year, FACES awards a $250 prize for a high quality project on a water quality-related issue to a student or team at each school.

FHS FACES Science Fair Winner Lucas Repeta. Photo: Marisa Repeta

This year, Falmouth High School student Lucas Repeta won the FACES science fair prize with his project, “The Ocean Methane Paradox: Measuring Methyphosphonic Acid in Seawater using MAGIC and Hydrophobic Interaction Mass Spectroscopy.” Lucas’ project also won a 1st place award in the Massachusetts State Science and Engineering Fair.

FA Winner Samuel Graber. Photo: Coffee Pond Photography

Freshman Samuel Graber won the Falmouth Academy FACES Award for his project, “How Do Algae from Different Environments React to Chemicals Commonly Used in Fertilizers?”

Congratulations to Lucas and Samuel. We look forward to more scientific contributions from each of them in the years to come.

NATURALIST’S CORNER Continued from page 2

Dolphins are often seen in the south-facing ocean ponds. Fishers are back in Falmouth, as well as snowy owls and a bobcat, and we’ve even been visited by a black bear in recent times. Herring make their annual run, observed by wildlife specialists and dedicated volunteers. Striped bass, bluefish, eels, trout and fresh water fish make their homes or pass through ponds around town. Seals are special to Falmouth’s varied environment, especially at the Crane Reservation.

So open your eyes and your ears and enjoy all of the many critters who share our seaside home.

Priscilla Moor is a former science teacher, active citizen, long-time FACES board member, and avid observer of the natural world.
Stories about the compelling scientific evidence of global climate change and regional and local impacts are reported almost daily. These articles in newspapers and popular magazines are based on a wealth of new studies published in scientific journals as well as two just-published climate assessment reports.

The UN’s Intergovernmental Panel on Climate Change (IPCC) released their latest report (AR5) earlier this year and the U.S. National Climate Assessment was released this spring. Both are ‘dense’ reading for the lay public but each has a summary of key findings and recommendations. The basic conclusions of both reports are that climate change is underway now with a variety of impacts, is likely to increase in the future, is largely due to the emissions of greenhouse gases into the atmosphere from the burning of fossil fuels and land-use practices over the past century and longer, and enough is known of the risks to take action now to address it.

The evidence for global warming is unequivocal, accepted as reality by more than 95 percent of climate scientists in the U.S. and world-wide.

Coastal regions such as Falmouth, Cape Cod and the Islands are particularly vulnerable to impacts of a warming world, such as sea-level rise, greater storm activity, salt water intrusion into fresh water aquifers, increased erosion, more frequent ‘nuisance’ tidal flooding, loss of beach and wetland resources, and more extreme weather events. Adding to global sea level rise is the fact that the New England region is also undergoing land subsidence due to natural geologic processes of isostatic rebound related to loading of the crust during glaciation and unloading that started some 20,000 years ago when the glaciers covering this region started melting and retreating north. The Cape and Islands are very much products of past sea level rise of about 400 feet and long term coastal erosion of 1-4 feet per year.

These dynamic processes are more active today and are very likely to increase in decades ahead. Sea level rise has already increased 50 percent in the past two decades and recent reports of accelerated ice sheet melting in Greenland and Antarctica suggest that sea level rise for Falmouth could be 4 feet or more by the year 2100.

Stories in the way of hurricanes and winter nor’easters have also shaped the coast and caused damage and loss of life due to storm-surge flooding and high winds. The last significant hurricane was Bob in August 1991, which was minimal in strength but is still fresh in many memories for the damage it caused.
More than two decades ago, leaders and members of FACES — David Palmer, Brad Stumcke, Jack Barnes, Chris Neil and many others — began to voice their concerns about the declining health of Falmouth’s coastal ponds. Long-time residents like Joe Netto, Priscilla Moor and Doug Brown knew just by looking at the water in the summer that the healthy estuaries of their childhoods were gone. Work by Woods Hole scientists pointed to excess nitrogen from increased residential development as the primary source of the nutrient pollution that was resulting in algal blooms, loss of eel grass, and, ultimately, loss of shellfish.

The result was a rising sense of alarm in the community but there was no plan to address the problem.

In the early 1990’s the Massachusetts Department of Environmental Protection (DEP) established the Massachusetts Estuarine Project (MEP): a rigorous program to look at land use, calculate nitrogen loads to all the coastal ponds, and measure the existing amount of nitrogen in the ponds. Data collection was funded 50% by the DEP and 50% by the Town. The DEP then used these data to set TMDL’s, Total Maximum Daily Load Limits, for each pond. The MEP studies found that most of Falmouth’s south coastal ponds were well above their limits, requiring 100% removal of the existing septic load to meet the required standard.

In 2007, Falmouth hired GHD Engineers to develop a Comprehensive Wastewater Management Plan. In 2011, Falmouth Town Meeting created a permanent Water Quality Management Committee to oversee clean-up efforts for all the water bodies in Town, and to involve the public in a full-scale planning process using a wide variety of technologies.

In January 2014, the Committee’s plan was approved by the Secretary of Environmental Affairs. The watershed of the most polluted estuary, Little Pond, would be sewered, removing 88% of the nitrogen load. The width of the Bourne’s Pond inlet would be doubled by constructing a new bridge, removing about 50% of the nitrogen load. With the help of many members of FACES and the general public, bonding to construct these projects passed at the ballot on May 20, 2014. This $49 million project does not raise the tax levy, and marks a major step forward in cleaning up two of Falmouth’s 15 coastal ponds. Many thanks to all who contributed time or money, set out yard signs, and educated their neighbors.

Virginia Valiela is Vice-Chair of the Falmouth Water Quality Management Committee.

PROTECTING CAPE COD’S SPADEFOOT TOAD WITH IAN IVES

Ian Ives, the Director at Mass Audubon’s Long Pasture, Ashumet and Skunknett River Wildlife Sanctuaries on Cape Cod, will be the featured speaker at FACES’ 2014 Annual Meeting to be held on July 31st at 7:30 pm (please see the flyer on the back of this newsletter for details).

Ian is a strong advocate for endangered species conservation and wetland protection in Massachusetts.

Prior to his work with Mass Audubon, Ian received his Master’s degree in Conservation Biology and conducted wildlife surveys on locally rare reptile and amphibian species, including the threatened Blandings turtle and marbled salamander.

The eastern spadefoot toad is the rarest frog species in Massachusetts; its status in the state is listed as “threatened”. Ian will explore the secret life history of this elusive and little known species and introduce a reintroduction project aimed at protecting the eastern spadefoot toad population on Cape Cod. Please join us for this exciting event!
How and Why to Build a RAIN GARDEN

Build a Rain Garden in Five Steps

1. LOCATION: Choose a flat or gently sloping spot – at least 10 feet from foundations and septic systems – where water tends to flow or collect during storms.

2. SOIL: Test your soil to see if it drains well by digging a hole, filling it with water, and timing the drainage. A 6 inch by 12 inch hole should drain within 24 hours. Soil mixes for rain gardens are ideally 50-60% sand, 20-30% topsoil and 20-30% compost.

3. SIZE: Estimate the square footage of the impervious surfaces that will send runoff to the garden. Divide this number by six, and you have the approximate size your rain garden needs to be to absorb runoff.

4. MAKE IT: Dig bowl to depth of 6”, slope sides using a shovel, loosen bottom 3” of soil, cover with compost, select native plants with good root systems, (see box at right) plant them and apply mulch.

5. MAINTAIN IT: Water and weed as needed, avoid fertilizers and pesticides, and enjoy!

Falmouth's Water: KEEP IT BLUE
Rain Gardens DO:
- Reduce pollution going to ponds, rivers and the ocean.
- Reduce flooding and erosion.
- Recharge groundwater.
- Attract butterflies and birds.

Rain Gardens DON'T:
- Attract mosquitoes.
- Hold water for more than 2 days.
- Cost a lot!
KEEP IT BLUE UPDATE

FACES continues to move forward with its Keep It Blue Stormwater Education Campaign. If you visit Falmouth’s beaches and marinas this summer, keep your eyes open for our stormwater pollution reduction posters, which cover five themes: scooping the poop, proper fueling of boats, pumping septic systems, avoiding fertilizer and pesticide use, and washing cars on grassy (permeable) surfaces or at car washes.

We are working on a sixth theme at the request of the Waterways Committee: ‘feeding the birds pollutes our waters’ and ‘boaters can help by using a pump-out station’ and plan to get these versions made and posted soon.

If you know of a good venue for a stormwater education poster or two, please let us know. We also have brochures and other

SEAL LEVEL from page 4

Super storm Sandy in October 2012 was a much more powerful storm that impacted New Jersey and New York with high winds and a surge of about 14 feet, and if not for a blocking jet stream, Sandy would likely have taken a more normal northeastern track up the coast and had more impact on the Cape and Islands. It is just a matter of time before the Cape is hit with a major hurricane such as Sandy. Hurricane Sandy was not caused by climate change but it was intensified by warm ocean waters, a warm atmosphere, and recent sea level rise along the NJ-NY coast.

Falmouth, like all coastal communities, needs to plan for climate change and implement cost-effective measures to adapt to the impacts that are coming in the near future. The newly revised FEMA flood risk maps are a good guide to understanding vulnerability on a town-wide and even individual property-specific lot, but these maps are actually conservative in conveying risk because the maps are based solely on historic storm and sea level rise data and model analysis. The maps do not factor in any climate change projections. Maps such as the figure on p. 4 showing potential storm surge elevations for category 1-4 storms are useful in visualizing the impacts of both surge and sea level rise of up to about 14 feet along the South coast and even higher surge along the Buzzards Bay coast. Much of Falmouth to Rte. 28 and Rte. 28A would likely be flooded and waves would add to the devastation of property.

Falmouth would be wise to act on the two reports done by the Coastal Resources Working Group over a decade ago as well as reports by the State, the IPCC, and the National Climate Assessment that contain valuable information and recommendations.

Jeff Williams is Senior Scientist Emeritus with the U.S. Geological Survey and is on the faculty at the University of Hawaii, Manoa. His research includes studies of coastal and wetland change due to storms and sea-level rise and climate-change impacts on coasts.

SEWER SOCIALS

If your community organization, business, neighborhood association or school is interested in learning more about what’s going on with water quality in Falmouth, contact us to set up a Sewer Social.

We’ll give an overview of the big issues and how organizations, businesses and individuals can contribute to solutions and do their part to protect and restore our fresh and coastal waters.

CONTACT US
info@facesfalmouth.org
Saving Our Wetland Communities One Pool at a Time:
The Spadefoot Toad and Wetland Restoration Project

With guest speaker IAN IVES of Mass Audubon

THURSDAY, JULY 31st at 7:30 PM
Falmouth Arts Center
137 Gifford Street

JOIN US!
FACES' 2014 ANNUAL MEETING