

Shore Lines

Newsletter of the Association to Preserve Cape Cod

Summer 2017



APCC
Association to
Preserve Cape Cod

APCC's 2017 intern team apply their skills while exploring innovative scientific approaches to projects that will benefit Cape Cod's ecological resources.

Read about it on page 4.

Making Cape Cod's water quality a priority

by Andrew Gottlieb, Executive Director

Having begun my tenure as APCC's new executive director in April, my respect for the great and diverse work being done here continues to grow. In my years working as a Mashpee selectmen, as the executive director of the Cape Cod Water Protection Collaborative and as assistant commissioner at MassDEP and chief of Commonwealth Development, I was always impressed with APCC's work, presence in the community and thoughtful and well-informed policy positions. I will be looking to build on APCC's nearly 50-year history of success while expanding our leadership role in the implementation of the wastewater management necessary to improve our water quality.



To that end, APCC is a lead supporter of legislation to create the Cape Cod Water Protection Trust. Its purpose is to help towns offset the high cost of nutrient management with a non-property tax based revenue stream to lessen their reliance on property taxes to finance water quality improvements. APCC believes that appropriate financial assistance from the Commonwealth will accelerate the pace of wastewater management projects and improvements to water quality.

As envisioned in the bills filed by Representative Sarah Peake and Senator Julian Cyr, the Trust would be an independent regional quasi-governmental entity serving the fifteen towns of Cape Cod. It would finance projects designed to reduce or eliminate the flow of nutrients to the region's impaired waterbodies.

The purpose of the Trust is to subsidize and lower the cost of municipal projects. The Trust could distribute funding through grants, loans, loan guarantees, loan forgiveness, principle buy-downs, payment of debt service on existing infrastructure, and funding of debt service reserve funds. The Trust would be capitalized through a number of revenue sources to provide fiscal relief to Cape towns and property tax payers. The primary source of funds is expected to be revenue generated by the expansion of the hotel/motel tax being considered by the state legislature.

The pursuit of this legislation and the dedication of non-property tax revenue to provide necessary relief for water quality improvements to Cape residents is APCC's top legislative focus and is the center piece of a legislative agenda supported by our Action Fund. More information about APCC's Action Fund can be found at www.APCC.org/actionfund.

Osterville Library rain garden offers attractive stormwater solutions



The Osterville Library is the proud owner of a rain garden installed in June by APCC and our partners from Horsley Witten Group, the town of Barnstable, and the Barnstable Clean Water Coalition as part of our stormwater management project funded by the EPA to clean up the Three Bays watershed.

APCC's Restoration Coordination Center is managing the Three Bays project, which includes construction of stormwater treatment systems in the watershed using "green" technology as well as public education and outreach efforts such as the demonstration rain garden at the library.

AmeriCorps' Audrey White (center) assists APCC's Kristin Andres and April Wobst in prepping the ground for the rain garden.



Above: Taking a well-deserved break while admiring their creation: left to right, APCC's Bryan Horsley, APCC intern Margaret O'Brien, Kelly Moore of Horsley Witten Group, APCC's Kristin Andres and April Wobst, and Michelle West, Rich Claytor and Matt Lehman of Horsley Witten Group. Photo credit: Horsley Witten Group.



Left: Planting the rain garden in the foreground are APCC intern Margaret O'Brien, Matt Lehman of Horsley Witten Group and Dale Saad from the Barnstable Department of Public Works. In the rear are volunteer Holly Peterson and P.J. Hakopian of AmeriCorps.

Rain gardens attached to a gutter are an easy way to help capture and reuse rain water. The shallow depression created by a rain garden allows the water to soak into the ground rather than run off hard surfaces, which can transport pollutions into our waterways. Deep-rooted, drought tolerant native plants like the Pennsylvania sedge, fern, purple coneflower and columbine included in the library rain garden create an attractive addition to the landscape and help remove pollution from the water.

With assistance from AmeriCorps Cape Cod, the library staff and volunteers from the public, the team was able to install a beautiful new garden in two days. For more information on the project and how to create a rain garden go to www.apcc.org/snep.

APCC helps secure funding for Cape Cod Stormwater Coalition

In March, APCC's Massachusetts Bays Program regional coordinator teamed with the Cape Cod Commission and partners to apply for state funds to conduct studies needed to form a Cape Cod Stormwater Coalition. Ten towns and the county supported the proposal.

This past June, the state awarded a \$50,000 grant to the Commission for the project.

In 2016, the U.S. EPA and Massachusetts DEP issued the 2016 Small Municipal Separate Storm Sewer General Permit (aka MS4 permit) requiring municipalities above a certain size to manage their stormwater runoff. Approximately 260 municipalities in Massachusetts are affected, including 12 towns on Cape Cod.

The 2016 permit updated a previous 2003 permit by establishing more stringent stormwater management requirements. The new standards are a greater challenge, but also an opportunity for towns to work together through a stormwater coalition in a coordinated cost-effective manner.

In late June, the EPA postponed the start date of the MS4 permit to July 1, 2018. Although this postpones stricter stormwater measures, towns can use the extra time to plan for meeting MS4 requirements. APCC will continue to work with partners to carry out the establishment of a stormwater coalition.

There's more to learn at APCC's website! Check it out at www.APCC.org

APCC internships open the door for career advancement and new approaches to environmental protection

APCC is once again fortunate to host three talented individuals in our summer internship program. This year, our interns are working on several projects that include researching innovative approaches to protecting and restoring the Cape's natural resources. See below for a brief introduction to each intern. APCC internships are made possible through the generous support of our members. Find out more at www.APCC.org/internships.

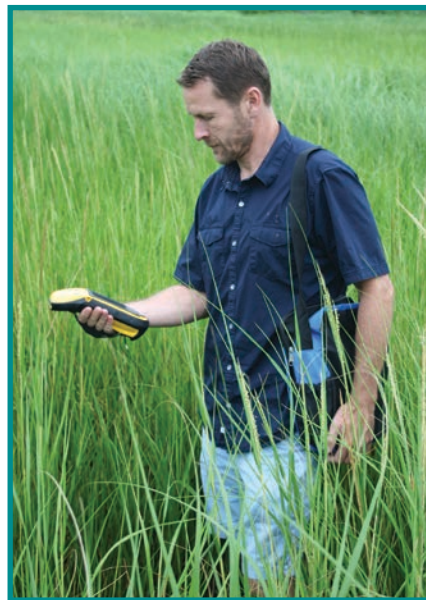


Margaret O'Brien, this year's Maggie Geist intern, is working on several projects for APCC, including conducting a feasibility test of the EPA's cyanobacteria monitoring program. The EPA program was developed for citizen groups monitoring cyanobacteria, a.k.a. blue-green algae, which often form algal blooms in nutrient-enriched ponds and coastal waters. She is monitoring two ponds in Brewster and one in Dennis. (See page 5 for more information.) Margaret is also working with Carl DePuy, APCC's special projects intern, to research criteria and potential sites where thin layer deposition may be useful as a possible salt marsh restoration method. She is also assisting the APCC Restoration Coordination Center staff with monitoring of current and potential salt marsh restoration sites in Brewster, Truro and Yarmouth.

Margaret is a rising senior at Hamilton College in Clinton, New York where she is working towards a major in geoscience. Last spring, she studied in Costa Rica, learning about tropical biodiversity and sustainable development and conducting avian research involving spectral analysis of the black hooded antshrike's song in relation to road proximity. Margaret is enthusiastic about leveraging her knowledge and skills in order to enhance APCC's environmental programs.

Carl DePuy, a familiar face at APCC, is the 2017 special projects intern and is returning for his eighth season working with salt marsh research and monitoring. This summer he is investigating how dredge material can be used as sediment nourishment on salt marshes to help keep pace with sea level rise. He is also mapping the border between high and low salt marsh plant communities and mapping native plant communities in salt marshes.

Carl attended Huxley College of Environmental Science at Western Washington University and received his master's degree in environmental science at Green Mountain College. He wrote his thesis on salt marsh dieback within the Cape Cod National Seashore. During his APCC internship in 2015, Carl wrote a research paper about salt marsh migration and sea level rise, which helped APCC and state agencies prioritize salt marsh restoration projects on Cape Cod. Carl teaches ecology at Dennis-Yarmouth High School.



**Have you responded to the summer appeal for the APCC Action Fund?
If you already have, THANK YOU!**

**If you haven't, please take a moment to mail in your contribution or go
to www.APCC.org to make a secure online donation.**

And remember, your gift to APCC is tax deductible.



Christopher George is a master of science candidate in environmental studies with a concentration in conservation biology at Antioch University New England. His master's project is a prospectus on computer automated fish counting of juvenile herring, done in conjunction as APCC's 2017 Whitlock intern. Chris is researching and designing methods of video recording at Stony Brook in Brewster for young-of-the-year river herring in their migration to the sea. It includes an underwater housing containing a video camera through which juvenile herring will pass. The goal is to assess the feasibility of automated counting that includes collaboration with the MIT Sea Grant image recognition software development team. Chris will report his findings on the technical feasibility for APCC to develop a yearly monitoring program using video.

After the completion of his degree, Chris hopes to remain on Cape Cod and contribute to conservation in the local ecosystem.

Cyano-monitoring looks for early clues to toxic blooms

APCC is conducting a pilot test of a new cyanobacteria monitoring program in Walker's Pond and Upper Mill Pond in Brewster and Scargo Lake in Dennis.

Cyanobacteria are microscopic aquatic organisms that can bloom on the surface of freshwater ponds and release toxins that can be harmful to humans, domestic animals and wildlife. Nutrient enrichment of ponds across the Cape from excessive wastewater, stormwater, fertilizer runoff and atmospheric deposition initiates cyanobacterial growth.

The pilot test by APCC entails bi-weekly collection of water samples, microscopy to identify which cyanobacteria genera are present, and photosynthetic pigment analysis.

The goal of the monitoring program is to engage citizen scientists to collect photographic and water quality data to help document, report, track and even predict cyanobacteria blooms before they occur. The ultimate objective is to build a better understanding of cyanobacteria blooms to protect environmental and public health.

The program was conceived by the Cyanobacteria Monitoring Collaborative, which consists of staff, researchers and students from the U.S. Environmental Protection Agency and the University of New Hampshire.



Bryan Horsley, APCC's restoration technician, and Margaret O'Brien, intern, collect water samples from Scargo Lake in Dennis.



APCC stands up against policy changes at the national level that threaten Cape Cod's water, air and unique natural resource areas

In recent months, APCC has responded to rollbacks by the federal government on key environmental policies that will have an adverse effect on Cape Cod's water, air and natural resources. These policy shifts have sought to repeal, weaken or delay federal regulations that protect the environment and would also scale back conservation of important natural resources.

- ❖ **EPA Review of Environmental Regulations:** In a letter to EPA Administrator Scott Pruitt, APCC stated opposition to any moves to repeal or weaken existing EPA regulations that protect the nation's—and Cape Cod's—environment and public health. APCC expressed particular concern about efforts to dismantle the EPA's Clean Power Plan, which plays a critical role in reducing carbon pollution from existing power plants. (Visit www.APCC.org/positionstatements to read more.)
- ❖ **EPA MS4 Stormwater Permit Delay:** APCC objected to the EPA's one-year delay in implementing a stormwater permit for Massachusetts. The new permit updates a 2003 stormwater permit by establishing more stringent stormwater management requirements for municipalities, including most Cape Cod towns. APCC believes the new permit's improved requirements are urgently needed to address the Cape's serious water quality issues created by stormwater discharges. (See related article on page 3.)
- ❖ **Reassessment of National Monument Designations:** APCC wrote to U.S. Interior Secretary Ryan Zinke opposing the potential shrinking or elimination of over two dozen national monuments, including the Northeast Seamounts and Canyons Marine Monument located 150 miles east of Cape Cod. Repeal of national monument designations could open sensitive resource areas to mining and drilling, and in the case of the Seamounts and Canyons, expose unique marine habitats to irreparable damage. (Visit www.APCC.org/positionstatements to read more.)
- ❖ **Deletion of Climate Change Data:** Under the new administration, the EPA has deleted information and research about climate change from its website. Fortunately, this important data was "captured" before deletion and is now posted on the websites of several U.S. cities. To help facilitate access to this information, APCC has provided a link on our website to the data. (Visit www.APCC.org/climatechange for the link and other climate change info.)



APCC wishes to thank AmeriCorps member Tara Racine for her service throughout the 2016-2017 AmeriCorps season.

APCC's Rain Barrels for Cape Cod program in April and June offered rain barrels made of repurposed food barrels for \$79. About 100 rain barrels were pre-purchased with a portion of the proceeds going to APCC. We couldn't have done it without the assistance of our good neighbors at Cape Abilities Farm, where the barrels were delivered.

If there is continued interest, we will offer the program again.

If interested, contact Kristin Andres at kandres@apcc.org.



Living landscape laboratory takes root

The Living Landscape Laboratory at APCC's Dennis office is evolving. Our meadow area is ablaze with the yellow of black-eyed Susans and oxeye sunflowers. The rose swamp milkweed is luring monarchs to lay their eggs. The rain garden, installed last September, is now robust with plants, including purple coneflower, Joe-Pye weed, boneset, asters and winterberry.

We are reducing lawn area in favor of native perennials and shrubs, which we hope to plant later this year. Our goal is to only retain lawn area for footpaths around the property. Native plants will provide more visual interest, support native pollinators, and their deep roots will help cleanse rainwater before it reaches the aquifer.



APCC's meadow area bursts with bloom.



As part of a workshop held this spring, we constructed our "Edible Garden." See the video at www.APCC.org/videos. The raised beds were created from repurposed logs and the trellis was made from repurposed invasive vines. The vegetable garden was constructed with the help of Edible Landscapes.



The edible garden was crafted from repurposed logs and invasive vines.

Association to Preserve Cape Cod

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The Association to Preserve Cape Cod is a 501(c)(3) non-profit organization founded in 1968 to foster policies and programs that promote the preservation of natural resources on Cape Cod.

Support comes from over 5,000 members, and from gifts and grants from individuals, foundations and businesses.

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Leave a Lasting Legacy

Bequests from our members and friends help make it possible to continue our efforts to speak out for Cape Cod and fight for the protection of our environment, just as we have done since 1968. The sample language shows just how easy it is:

I bequeath to the Association to Preserve Cape Cod, Inc. (APCC), a charitable corporation established by law in the Commonwealth of Massachusetts, the sum of _____ dollars (or percentage of estate) to be used for the general purposes of APCC at the direction of its Board of Directors or added to APCC's permanent endowment.

Consider donating appreciated assets. Donating property that has appreciated in value, like stock, can result in a double benefit. Not only can you deduct the fair market value of the property (so long as you've owned it for at least one year), you avoid paying capital gains tax. Normally, appreciated property is subject to capital gains tax at disposition but there's an exception for donations to charitable organizations.

Please note: This information should not be considered as legal, tax or financial advice. Consult your professional advisor for further information and guidance.