

## Spring 2013 (Click to read)

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*Working to preserve, protect and enhance the natural resources of Cape Cod.*

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Just in time for the 2013 river herring season, APCC has completed an analysis of different herring runs that show trends in herring populations over the past several years. The results were recently presented at a workshop sponsored by APCC.

While count data for this year is still in the process of being collected by volunteer herring counters, the results from previous years indicate the following:

- In 2012, herring run sizes generally increased compared to 2011, although numbers are still not high enough to allow a lifting of the current prohibition on the taking of herring.
- Cape Cod runs on Nantucket and Vineyard sounds tended to be larger than runs on Cape Cod Bay or the Atlantic Ocean side.
- There appears to be a multi-year trend towards earlier onset of herring migration than what has typically occurred in the past.
- There is a strong correlation between the peak time when most herring are running and the total run size, which suggests that peak count may be a useful indicator of run size.
- After 30-plus years of a non-functional run, Upper Shawme Pond in Sandwich saw the return of herring due to replacement of a fish ladder.
- Herring runs that have been restored had measurable numbers of herring, while some runs awaiting restoration had only a few herring.

As of 2012, the Cape had the largest number of herring count programs in Massachusetts, covering 13 runs. Ten of these were started by APCC and the Massachusetts Bays Program, working with local partners. Most count programs support restoration projects, and volunteers provide invaluable data that helps to document the success of restoration.

APCC's work with the herring count program is supported by the Mary-Louise Eddy and Ruth N. Eddy Foundation, the Friendship Foundation, and the Mass Bays Program. For references and more information on previous years' run size estimates and other results, go to [www.apcc.org/herring](http://www.apcc.org/herring).

This table shows 2012 run size estimates and whether population numbers increased (+) or decreased (-) from 2011. NA means not enough counts were available to estimate run size.

Herring River, Wellfleet:	11,653 (+)
Pilgrim Lake, Orleans:	5,931 (+)
Stony Brook, Brewster:	41,028 (+)
Bound Brook, Dennis:	34,580 (first year)
Herring River, Harwich:	101,624 (+)
Mill Creek, Sandwich:	8,756 (+)
Upper Shawme Pond, Sandwich:	4,089 (electronic counter) (+)
Mashpee River, Mashpee:	226,754 (+)
Quashnet River, Mashpee:	NA
Santuit Pond, Mashpee:	143,262 (first year)
Cedar Lake, Falmouth:	NA
Red Brook, Bourne:	NA
Marstons Mills River, Barnstable:	87,308 (+)
Coonamessett River, Falmouth:	NA
Trunk River, Falmouth:	NA



As Cape Cod's leading voice for protection of the environment, APCC scrutinizes proposed developments and other projects for potential harm to the Cape's natural resources and quality of life. In this role as Cape Cod's environmental watchdog, APCC has expressed strong concern over multiple adverse impacts that would result from the Lowe's Home Improvement store proposed in South Dennis.

**Water Quality:** The proposed Lowe's site is located in the Bass River watershed, which is impaired by excessive nitrogen from wastewater. According to the Lowe's project application, the development will exceed the Cape Cod Regional Policy Plan's allowable nitrogen loading standards for sensitive marine watersheds. Instead of meeting the nitrogen loading requirement, Lowe's proposes to mitigate its wastewater impacts through a cash contribution. Because of this, the development will add to Bass River's already-serious water quality problem. APCC is particularly concerned that a large new retail development could contribute to the region's most serious environmental challenge, even while the problem continues to worsen and the price tag for a solution continues to rise.

**Traffic:** Lowe's will generate 3,112 vehicle trips on an average weekday and 5,774 trips on an average Saturday. It will adversely impact traffic on several of the area's important roadways, including Route 134 at the Mid-Cape Highway. This location is already a major traffic chokepoint, particularly at midday on summer Saturdays—the time of the week when Lowe's is expected to generate the most vehicle trips.

**Community Character:** The proposed Lowe's calls for a 127,683 square foot building and garden center and 373-space parking lot. A "Big Box" development of this size is completely out of scale with existing single-use retail businesses in Dennis or elsewhere on Cape Cod, and is at odds with the traditional sense of place that has made the Cape such a desirable location to live or to visit. Lowe's threatens to permanently change the character of South Dennis' historic neighborhoods.

APCC will release a position statement and testify at upcoming Cape Cod Commission hearings concerning Lowe's. For more information, go to [www.apcc.org/lowes](http://www.apcc.org/lowes).

The wastewater treatment system proposed by Lowe's in South Dennis would not remove all of the nitrogen created by the development, adding pollution to the nitrogen-impaired Bass River.

Quality of life on Cape Cod is inextricably linked to the quality of our water resources. Our region's greatest priority is to successfully address the challenge of wastewater.



Last fall, APCC convened a summit of environmental nonprofit organizations across Cape Cod. The summit declared wastewater as the number one environmental challenge facing the Cape.

Since the summit, APCC has advocated for more involvement by the state in dealing with wastewater challenges, and has released an outline for state action on the issue.

In other related developments, the state recently awarded a \$3.35 million grant to the Cape Cod Commission to update the region's Clean Water Act Section 208 Plan and integrate it with the Regional Wastewater Management Plan (RWMP) developed by the Cape Cod Commission and published this past December. A generous grant from the Prospect Hill Foundation allowed APCC to play a key role in writing and editing the RWMP. The plan is available at <http://www.capecodcommission.org/regionalplans/RWMP>.

Currently, APCC is actively working to engage the business community to become more involved in promoting effective wastewater management and related land use planning. APCC is a member of the Cape Cod Chamber of Commerce working group tackling wastewater, and is also participating in ongoing related efforts with the Cape Cod Business Roundtable.

APCC has also recently initiated an outreach program in Orleans, which is focused on adoption and implementation of Phase One-A of the town's Comprehensive Wastewater Management Plan.

Information about all of APCC's work to address the Cape's wastewater challenges, including the complete environmental summit consensus statement and our outline for state action, is available at [www.apcc.org](http://www.apcc.org).



Untreated stormwater runoff from roads, parking areas, lawns, golf courses and other developed areas drains into water bodies, causing water pollution, flooding and erosion. Runoff impacts water quality, wetlands, shellfish beds, beaches and aquatic habitat.

A recently released survey conducted last summer by APCC's 2012 Maggie Geist intern, Aaron Bryant, sheds some light on local efforts to manage stormwater. Aaron's interviews of municipal stormwater managers included questions about areas involved, typical problems, use of green infrastructure or low-impact design methods, budgets, staffing, maintenance, training, outreach, and needs. Stormwater managers from 12 of 15 towns were interviewed, along with the USDA Natural Resources Conservation Service. Our survey revealed the following:

- Towns have worked since the 1990s to address flooding and public safety, repair and upgrade old stormwater infrastructure, improve beach and shellfish bed water quality, and prevent erosion.

- The 12 towns surveyed had a total of approximately 3,100 miles of roads that receive runoff from an estimated 138 square miles of impervious surface. When runoff from private properties and private, state and federal roads flows onto town roads, it becomes the town's responsibility to manage the runoff.
- Planning for repair and upgrades requires knowledge of the value and extent of stormwater infrastructure. The combined estimated value for known infrastructure in eight towns is \$128,350,000.
- Some towns do not have a complete inventory of infrastructure but most have maps of stormwater outfalls into water bodies.
- Barnstable, Brewster, Chatham, Falmouth, Mashpee, Provincetown, Sandwich and Yarmouth use "green" methods to manage runoff, utilizing natural processes such as infiltration and plants to remove pollutants.
- Common challenges include insufficient funding and staffing, lack of area to install suitable treatment, high groundwater, and difficulty in planning due to uncertainty of future requirements of federal stormwater permits.
- Towns have competed well for state and federal funding to fix storm water outfalls. Still, there are many more outfalls to fix than can be done through available funding. Citizens can help towns manage stormwater by supporting funding for stormwater management and by making sure that activities don't add pollutants to runoff. For more information, visit [www.apcc.org/stormwatermanagement](http://www.apcc.org/stormwatermanagement).



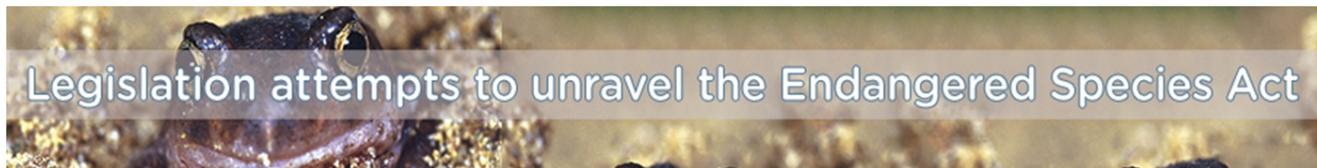
APCC has received a grant from the Mary-Louise Eddy and Ruth N. Eddy Foundation to map salt marsh boundaries in order to identify which marshes will be able to migrate landward in response to sea level rise. Mapping marsh boundaries will support valuable climate change research that is needed to help guide regional efforts to address climate change impacts on sensitive ecosystems.

Recent studies predict a one to two foot rise in sea level, with a possible rise as much as four feet, in the northeast by the year 2100. Climate change and sea level rise (SLR) represent a serious threat to towns, their natural resources and physical structures. Determining the extent of sea level rise and creating a management plan are forward-thinking ways to prepare and protect communities and the natural resources upon which they rely.

Of all the ecosystems, salt marshes are one of the most susceptible to SLR. To adapt to SLR and continue to function, salt marshes must be able to migrate landward and form new salt marsh as older salt marsh becomes inundated by rising ocean water. The migration potential is determined by available undeveloped floodplain and the extent of man-made and natural barriers.

APCC will coordinate the marsh boundary mapping data with newly released Light Detection and Ranging (LiDAR) data to determine accurate elevations at marsh boundaries, and to identify areas where salt marshes have the capability to migrate. LiDAR is a detection system that works on the premise of radar, but uses light instead of microwaves or radio waves to map physical features with very high resolution.

This data will be used to create Geographic Information Systems (GIS) maps, which can be utilized to develop conservation plans for coastal wetlands.



The most vulnerable animal and plant species on Cape Cod and across Massachusetts are under attack in the state legislature.

The Massachusetts Endangered Species Act (MESA), adopted over two decades ago to protect the state's rare and endangered species, is the focus of a fierce assault in the form of two proposed bills that, if enacted, would essentially gut MESA and leave hundreds of endangered species and thousands of acres of rare species habitat unprotected.

Senate Bill 345 and Senate Bill 411 were filed in the state legislature this year after a similar attempt was halted at the end of last year's session, thanks to a unified effort on the part of APCC and other environmental organizations across the state.

Passage of S.345 and S.411 would have devastating consequences on Massachusetts' rare species and their habitats. It would strip the state's Division of Fisheries and Wildlife of its ability to use current regulations to enforce MESA, leaving no process to screen proposed development or other activity before it could inflict permanent harm on rare species.

In response to these anti-MESA bills, APCC strongly supports the adoption of an alternative bill, House Bill 756, which reaffirms the vital role of MESA in protecting the Commonwealth's interests, and which codifies existing regulations for enforcing MESA.

APCC encourages our members to contact their state legislators and urge them to oppose S.345 and S.411, and to support the adoption of H.756.

## Other Legislation

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Zoning Reform Bill: APCC was one of the state leaders in the development and drafting of House Bill 1859, An Act Promoting the Planning and Development of Sustainable Communities, which provides much-needed improvements to the state's outdated and

ineffective land use, planning and zoning laws. The bill was filed by Rep. Stephen Kulik (D-Worthington) and Sen. Dan Wolf of the Cape and Islands.

Updated Bottle Bill: APCC is among a coalition of organizations in support of An Act Updating the Bottle Bill, House Bill 2943 and Senate Bill 1588, which would expand the existing beverage container refundable deposit requirements to include bottled water, juices and sports drinks. The expanded refundable deposit requirement would encourage consumers to recycle these containers instead of discarding them.

Keep an eye out for updates and action alerts from APCC regarding these and other environmental bills.