



**A Newsletter from the Connecticut Department of Environmental Protection  
Exploring Long Island Sound - Issues and Opportunities**

### A Fresh Outlook on the Sound

You will notice that this issue of *Sound Outlook* has a new, fresher appearance. This transformation is part of an agency-wide initiative to reach a broader audience by improving the scope and efficiency of all our publications. DEP's goal is to, collectively, provide more information of direct interest to specific constituencies about our diverse programs and activities.

Toward this goal, we have begun publication of two new electronic newsletters to serve the municipal and business communities respectively. The same electronic publication and distribution system is being used for *Sound Outlook*. Since there are many overlapping interests among citizens, you may see some of the same issues addressed in these multiple publications. Rest assured, however, that *Sound Outlook* will continue to include its regular features and columns addressing coastal public access, living marine resources, grant activities and climate change adaptation.

We are also initiating a new subscription service that will make it easier for both new and existing subscribers to register to receive any or all DEP publications. This will increase the ability of all readers to find out about more of what we are doing. Try it out at [www.ct.gov/dep/newslettersubscription](http://www.ct.gov/dep/newslettersubscription) - we think you'll like it!

### DEP Welcomes Commissioner Esty



Commissioner  
Daniel C. Esty

Daniel C. Esty was sworn in as Commissioner of the Connecticut Department of Environmental Protection on March 18, 2011. Since that date, Commissioner Esty has worked on Governor Dannel P. Malloy's proposal to transform DEP into the Department of Energy and Environmental Protection (DEEP), a new agency that would add energy issues to the DEP's traditional responsibilities. With this expanded authority, DEEP will play a key role in developing 21st century energy policies to make Connecticut more competitive and a leader in clean energy, as well as continuing DEP's efforts to protect

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Connecticut's environment and natural resources.

Prior to joining DEP, Commissioner Esty held faculty appointments in Yale University's Environment and Law Schools, and served as the Director of both the Yale Center for Environmental Law and Policy and the Center for Business and Environment at Yale. Esty has written extensively on environmental policy issues and the relationships between environment and corporate strategy, competitiveness, trade, globalization, governance, and development. Commissioner Esty has served as a Planning and Zoning Commissioner in Cheshire, Connecticut and on the Boards of Directors of The American Farmland Trust, Resources for the Future, and the Connecticut Fund for the Environment. He earned a B.A. from Harvard, an M.A. from Oxford, and a law degree from Yale.

We look forward to working with Commissioner Esty as we continue our programs and initiatives to protect the environmental quality and recreational amenities of Long Island Sound.

## SPOTLIGHTED COASTAL ACCESS: Canoe/Kayak Trails Explore the Connecticut River Estuary

As memories of Connecticut's cold and snowy winter fade, what better way could there be to explore the great outdoors than in a kayak or canoe? Both new and experienced boaters can get the most out of a day on the water by following one of four canoe/kayak trails that tour the lower Connecticut River estuary. Originally established as a Long Island Sound license plate-funded project, the mapped trails lead through the harbors and marshes of Old Saybrook, Old Lyme, Essex and Deep River.

The canoe/kayak trails range in length from 3 to 6 miles round-trip. Each trail consists of two or more shorter loop segments extending outward from a central parking and launch area - the loops can be completed individually. Each trail map features a number of waypoints of scenic, historical, educational or environmental significance.

The trails lead through tidal marshes and estuaries that in 1994 were designated Wetlands of International Importance pursuant to the Ramsar Convention on Wetlands signed in Iran in 1971. One of only nine Ramsar sites on the eastern seaboard, this designation recognizes the nearly pristine and undisturbed character of these resources, resulting from the relative absence of development at the mouth of the Connecticut River. This wetland complex, which extends from Long Island Sound north to Cromwell and Portland, provides essential habitat for numerous rare and endangered species. The entire Connecticut River



## Sound Tips: Boating & Fishing Information

Now that the summer boating and fishing season has arrived, remember to make use of the following online information provided by DEP. The list below identifies tips and data unique to each website, although many of the sites include over-lapping references to the same materials.

### Angler's Guide

[www.ct.gov/dep/anglersguide](http://www.ct.gov/dep/anglersguide)

Find a summary of the rules and regulations governing sport fishing in Connecticut

### Clean Marina Program

[www.ct.gov/dep/cleanmarina](http://www.ct.gov/dep/cleanmarina)

This site will direct you to the *Clean Marina Guidebook* with information about maintaining your boat.

### Clean Vessel Act website

[www.ct.gov/dep/cva](http://www.ct.gov/dep/cva)

Use this website to find pumpout stations and mobile pumpout boats.

### Boating

[www.ct.gov/dep/boating](http://www.ct.gov/dep/boating)

This site includes information on everything about boating, from the latest *Boater's Guide* to a directory of boat launch ramps.

### Fishing

[www.ct.gov/dep/fishing](http://www.ct.gov/dep/fishing)

This website provides tide tables and directions to bait & tackle shops.

### Fisheries Licenses and Permits

[www.ct.gov/dep/fishinglicense](http://www.ct.gov/dep/fishinglicense)

Follow this link to learn about required fishing licenses for both inland and marine waters.

### Connecticut Coastal Access Guide

[www.lisrc.uconn.edu/coastalaccess](http://www.lisrc.uconn.edu/coastalaccess)

Use this website to find recreational and educational facilities along the Connecticut coast.

View past issues of  
*Sound Outlook* at  
[www.ct.gov/dep/soundoutlook](http://www.ct.gov/dep/soundoutlook).



One of four Canoe and Kayak Trails in the lower Connecticut River.

corridor has also been designated an American Heritage River, one of only 14 nationwide, signifying its historic role in the culture and commerce of New England.

Laminated maps of all but the Essex trail are available by contacting the office of the Connecticut River Estuary Regional Planning Association (CRERPA) in Old Saybrook at 860-388-3497 or by visiting [www.crerpa.org/index.html](http://www.crerpa.org/index.html) and searching under **River and Sound**. The maps can be downloaded from the website and printed.

**Subscribe to Sound Outlook or any other DEP newsletter.**

### DEP Grants Fund Restoration of Fish Habitat

Over the last two years, DEP has administered the award of several grants that will collectively restore 28.5 miles of diadromous fish habitat in the Farmington River watershed. Species that will benefit include Atlantic salmon, American shad, alewife, blueback herring, sea lamprey, white perch and American eel. The funded projects include the eventual removal of the Spoonville Dam between Bloomfield and East Granby, the Winchell-Smith Dam in Farmington, and the Middle Street Dam in Bristol.

The removals will be completed progressively, starting with the seaward-most Spoonville Dam and moving upstream. Removal design was funded with a \$55,250 Farmington River Enhancement Grant in 2009. The project subsequently received a \$500,000 challenge grant in December 2010 from the combined Ecosystem Management and Habitat Restoration Grant Program and Long Island Sound Fund (EMHR/LISF) to pay for acquisition of all necessary authorizations and a portion of the removal costs. The EMHR funds were derived from a number of environmental enforcement settlements, as described in the February 2011 issue of Sound Outlook ([www.ct.gov/dep/soundoutlook](http://www.ct.gov/dep/soundoutlook)). The challenge grant will be applied toward a total of \$1.4 million needed for the subsequent removal and disposal of the dam.

**Purchase of an LIS License Plate Supports the LIS Fund**

**As of 3/31/11:**  
**Plates sold: 146,520**  
**Funds raised: Over \$5.1 million**  
**Projects funded: 331 (including Ecosystem Management projects)**

The LIS Fund supports projects in the areas of education, public access to the shoreline, habitat restoration and research.

**For information on ordering a Long Island Sound license plate, call 1-800-CT-SOUND.**

**\$2.7 Million Available for Grants to Restore**

Next up is the Winchell-Smith (aka Smith Gristmill) Dam in Farmington. Removal alternatives were evaluated and final design completed with another \$55,250

Farmington River Enhancement Grant. For information about these two projects, contact Eileen Fielding, Executive Director of the Farmington River Watershed Association at 860-658-4442 or [www.frwa.org](http://www.frwa.org).

Farthest upstream is the Middle Street Dam on the Pequabuck River in Bristol. The Pequabuck is a major tributary of the Farmington River. Final engineering, design and permit preparation were funded in 2010 through an EMHR/LISF grant of \$164,500. Additional funds will be sought for deconstruction of both the Winchell-Smith and Middle Street Dams.

While removal of any dam requires careful planning, the elimination of multiple dams within a river system mandates sophisticated analysis of risks as well as benefits. Potential bank erosion, sedimentation and flooding have been evaluated, and mitigation plans prepared for the dams, individually and together. Those risks are balanced by environmental and recreational benefits at the three sites. Fish passage will be reestablished at Spoonville Dam by slowing water that now flows too fast for native herring and shad to swim upstream. Recreational safety will improve at that site as current velocity is slowed, although the effect on white-water kayaking remains to be seen. River habitat at all sites will be restored through reestablishment of natural river hydrology and hydrodynamics.



*Spoonville Dam, Farmington River. Photo by Tom Ouellette.*

For information on the status of these projects, contact Kate Hughes Brown at 860-424-3652 or [kate.brown@ct.gov](mailto:kate.brown@ct.gov).

## SPOTLIGHTED COASTAL RESOURCE: Glacial Remnants in LIS

Some of the most visible and characteristic features of Long Island Sound are the islands that shape the Connecticut shoreline. These islands are remnants of a series of "moraines," rock and sediment (also known as "drift") that were scoured during the southward advance of the glaciers that once covered New England and then deposited in piles as the ice sheets retreated to the north. Long Island is known as a terminal moraine, formed when the movement of the Wisconsin Glacier, the most recent North American ice sheet, was halted by the melting of the ice front due to a regional warming trend. Connecticut's coastal islands represent a recessional moraine, deposited when the same receding glacier was similarly stalled in a temporary "equilibrium" position.



*Moraine deposit at Meigs Point, Hammonasset Beach State Park, Madison, CT.*

The primary terminal moraine of Long Island includes the Harbor Hill moraine, which traces the north shore of Long Island, crosses LIS to Fisher's Island and continues through Rhode Island's South County. A narrow passage through the moraine between Orient Point and Fisher's Island, known as the Race, influences the ecology of the entire Sound. The incoming and outgoing tides that funnel through the Race generate strong currents that scour the estuary bottom to

depths exceeding 300 feet and that may someday power subsurface hydroelectric facilities.

The recessional moraine deposits of LIS typically occur within a 10-kilometer wide strip along the Connecticut shore, and include the Captain, Norwalk and Thimble Islands. Additionally, the Hammonasset-Ledyard-Queens River moraine, which extends from Madison, Connecticut to Queens River, Rhode Island, is visible as large boulders along the Meigs Point beach at Hammonasset Beach State Park. More information on this unique geologic history is available on the DEP State Parks website ([www.ct.gov/dep/stateparks](http://www.ct.gov/dep/stateparks)).



*Harbor seal rests on a glacially-deposited rock along the Connecticut shore. Photo by Paul J. Fusco / CT DEP-Wildlife.*

Glacial deposits have their own unique ecological functions. The relative isolation of the rocky islands from the mainland offers their wildlife inhabitants a degree of protection from predators and human disturbance, providing for example, safe haul-out spots for the seals that visit the Sound in increasing numbers each winter. They provide shelter for species like Roseate terns and lobster. Their constant exposure to tidal waters creates preferred habitats for species that thrive in the resulting turbulent and oxygenated seas, including certain macroalgae, sponges, bryozoans - small encrusting animals - and tunicates or sea-squirts.

More information on island geology and ecology can be found at a number of federal government websites, including those for the U. S. Geological Survey and the U. S. Fish and Wildlife Service.

## Long Island Sound Dredged Material Management Plan

The Long Island Sound Dredged Material Management Plan (LIS DMMP) is an Army Corps of Engineers (ACOE)-led, comprehensive planning process to address the management of dredged material in Long Island Sound. The Plan will be completed by June 2013. The overall goal of the LIS DMMP is to develop a comprehensive document recommending practicable options to manage dredged material in an environmentally acceptable and economically feasible manner in LIS for the next 30 years. Development of the DMMP was a requirement of the EPA Final Rule designating the Western and Central LIS disposal sites. Those two subsurface sites are used for deposition of sediment dredged from harbors and navigation channels in Connecticut, with appropriate material management to prevent any degradation of water quality. The DMMP will examine a wide array of upland and open water sediment management methodologies, and will cost approximately \$12 million dollars. To date, \$7.33 million has been appropriated by Congress.



*Dredging of New Haven Harbor by Great Lakes Dredge and Dock Company's #54 dredge, 2004. Photo by George Wisker.*

The DMMP document will identify an array of options that non-federal dredging proponents can utilize to manage their dredged sediments. It will also identify both a baseline, or least cost environmentally acceptable plan, and a recommended management plan for all ACOE LIS dredging projects. A Programmatic Environmental Impact Statement (PEIS) is being prepared concurrently by the ACOE with the DMMP.

Tasks that have been completed with reports posted on the ACOE website

([www.nae.usace.army.mil/projects/ri/LISDMMP/LISDMMP.htm](http://www.nae.usace.army.mil/projects/ri/LISDMMP/LISDMMP.htm)), include:

- Dredging Needs Identification
- Upland Placement/Beneficial Use/Sediment Dewatering Phases 1,1A, & 2 Locations
- Cultural Inventory Update
- Economic Update

A Stakeholders Working Group has been established including individuals representing a wide range of maritime trades and environmental, governmental, and military interests in dredged material management. The Working Group will assess various management options for dredged sediments. A Multi-Criteria Decision Analysis tool will be used to help determine which options best meet a broad range of assessment criteria. The Working Group's progress may be followed on its website ([www.lisdmp.org/default.htm](http://www.lisdmp.org/default.htm)). For additional information about dredging in Connecticut, contact George Wisker at 860-424-3614 or at [george.wisker@ct.gov](mailto:george.wisker@ct.gov).

## Climate Change Update

In the October 2010 issue of *Sound Outlook* we introduced the Connecticut Municipal Climate Network, which includes representatives of local governments throughout Connecticut (see [www.ct.gov/dep/soundoutlook](http://www.ct.gov/dep/soundoutlook)). The Network is an outgrowth of two projects funded by EPA's Climate Ready Estuaries (CRE) Program ([www.epa.gov/cre](http://www.epa.gov/cre)): the Groton Coastal Climate Change Adaptation workshops held in 2010 and the Adaptation Resource Toolbox (ART), still in development, which will be used by towns in Connecticut and beyond. "Adaptation" means dealing with climate change effects that can't be avoided, some of which may offer opportunities to improve resource management. These initiatives have subsequently been combined with DEP's efforts toward "mitigation" of the impacts of climate change, specifically through helping towns to reduce greenhouse gas emissions, the main cause of the rising atmospheric carbon levels that are driving climate change.

A program that combines both adaptation and mitigation activities is the SOAR (Sustainable Operations: Alternative and Renewable) Energy Initiative, operated at five Connecticut Community Colleges and funded in part by the U.S. Department of Labor. SOAR students gain practical training in careers related to clean energy alternatives and renewable energy resources, including sustainable facilities, alternative transportation technology, building efficiency, and sustainable landscape ecology and conservation. Students also receive Certificates in Sustainable Energy ("green certificates").

The DEP and the Connecticut Clean Energy Fund together use funds provided by the Emily Hall Tremaine Foundation in New Haven to pay SOAR students to work as interns helping municipalities to develop climate change adaptation and mitigation projects that the towns identify. The Town of Groton is one of ten Connecticut communities to be awarded a SOAR Climate Change Intern this semester. Laurie Roberts, a student at Three Rivers Community College in Norwich, is working with the Town to advance climate change adaptation strategies begun at the Groton Climate Change Workshops, including the identification of planning areas based on their relative resiliency to climate change, and the ongoing town-wide sea level rise vulnerability assessment. In several other towns, SOAR students are conducting mitigation projects, including benchmarking of municipal buildings, developing municipal greenhouse gas inventories, and working to install or purchase clean energy technologies.

For more information on climate change planning activities in Connecticut, contact Jennifer Pagach at 860-424-3295 or at [jennifer.pagach@ct.gov](mailto:jennifer.pagach@ct.gov).

Visit the DEP website at [www.ct.gov/dep](http://www.ct.gov/dep).

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