

# SOUND OUTLOOK


A NEWSLETTER OF THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
EXPLORING LONG ISLAND SOUND – ISSUES AND OPPORTUNITIES

## Connecticut Celebrates 25 Years of Coastal Management








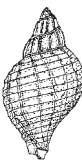














**W**hen DEP staff, legislators, local officials, business and environmental groups, and interested citizens sat down to write Connecticut's Coastal Management Program in the 1970s, a fundamental goal was to create a mechanism by which consideration of coastal resources and impacts to those resources could become integral to decision making at all levels of government. Today, the success of that effort is seen in every one of Connecticut's coastal towns, where municipal officials regularly work together with state and federal agencies and the public in a constructive partnership to better manage our coast for both long term environmental and economic health.

Through this partnership, we have realized many successes since 1980, when the Connecticut Coastal Management Act became effective and the National Oceanic and Atmospheric Administration (NOAA) approved Connecticut's Coastal Program under the Federal Coastal Zone Management Act. Coastal public access has increased dramatically. The state's preexisting Tidal Wetlands Program has been expanded to form one of the most advanced coastal habitat restoration programs in the country. We have witnessed increased public awareness that Long Island Sound is Connecticut's most significant natural resource, and widespread understanding of the need to protect its health. We have seen the state embrace its role as steward of the public trust, and recognize that the Sound belongs to all of us. We have seen public victories in the many coastal development approvals that have advanced water-dependent uses and economic growth while ensuring protection of sensitive coastal resources. We have made great strides in revitalizing our urban waterfronts.

Despite these achievements, we still face significant challenges as we continue efforts to manage the increasing use conflicts facing the coast. We must continue to pursue the reduction of non-point source (NPS) pollution as the next frontier in protecting water quality in the Sound. We need to expand our efforts to acquire and protect coastal open space before the opportunity is lost to increasing development pressures. We must address climate change – we are already seeing its effects on sea level and native species. We must be vigilant in controlling invasive species like water chestnut and non-native *Phragmites*. We must expand our research efforts in Long Island Sound to identify critical habitats and resources so that we can better manage the growing need for transportation and energy facility development. We need to resolve continuing conflicts over the disposal of dredged material in the Sound, and we must continue efforts to reinvigorate our urban waterfronts.

Looking back, we have learned that we can make a difference by forming cooperative partnerships between government, the private sector, and the public for the benefit of our coastal environment and our citizens. As you read the following articles, I hope that you will learn more about what has been accomplished and where we have yet to go. 

Charlie Evans, Director  
Office of Long Island Sound Programs

			
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This issue of *Sound Outlook* celebrates significant anniversaries of both **Connecticut's Coastal Management Program** and the **Long Island Sound Study**. Both programs have related missions to protect and enhance the quality of Long Island Sound and its associated habitats and resources, and the historic uses that define its character. The following articles offer insights on the evolution of these initiatives, the partnerships that have carried them forward, and their roles in the future of the Sound.

## The Long Island Sound Study - 20 Years and Counting!

**T**his year we commemorate the 20<sup>th</sup> anniversary of the Long Island Sound Study (LISS). Established in 1985, the LISS began as a six-year program to investigate environmental problems in the Sound, including reduced dissolved oxygen concentrations, fish kills and toxic contamination, and to develop an ecosystem-based management plan for the estuary. Funding was provided by the U.S. Environmental Protection Agency (EPA) with a 25 percent match pledged by Connecticut and New York. The



timing of this initiative was fortuitous, as sampling during the summers of 1986 and 1987 revealed the previously unknown extent of hypoxia

(severely low dissolved oxygen) in the western Sound, which contributed to unprecedented finfish mortality.

At that time, estuaries like Long Island Sound were being recognized at the national level as critical ecosystems in need of management and preservation. In 1987, the federal Clean Water Act was amended to create the National Estuary Program (NEP), and in March 1988, the Sound was designated an "Estuary of National Significance" under the nascent NEP. It was one of the first estuaries nominated to the program, making the LISS Management Conference, the stakeholders' group overseeing the LISS, eligible for federal assistance. At the same time, Connecticut and New York Congressional delegates formed the Long Island Sound Caucus in the U.S. House of Representatives, providing a strong measure of federal advocacy for restoring and preserving the Sound.

By 1994, many of the study's initial monitoring and research objectives had been met, enabling the LISS Management Conference to conclusively identify key problems and to establish priority goals for restoring the Sound through development of the Comprehensive Conservation and

Management Plan (CCMP). The CCMP called for, among other things, reductions in beach and shellfish bed closures caused by water quality degradation. A Habitat Restoration Initiative began in 1998 with goals of restoring 100 river miles of anadromous fish passage and 2,000 acres of coastal, tidal and subtidal habitat by 2008. In the ten years since the adoption of the CCMP, the LISS has continued to study the Sound, realizing that it is a complex ecosystem that responds to the pollution caused by human activities in ways that we are still learning about.

As Connecticut and New York implement management actions to reduce pollution and restore habitats around the Sound, continued monitoring and research are necessary to ensure we stay on track. Realization of the LISS goals also requires citizens of both states to remain vigilant in their care and stewardship of the Sound. Thus, the LISS Citizens Advisory Committee (CAC) also plays a key role in the preservation and restoration of the Sound by identifying stakeholder interests and actions relevant to this Estuary of National Significance. (See page 4 for more information about the CAC.) The continued successful improvement of Long Island Sound must therefore remain a cooperative effort by all of these partners.

For more information about the Long Island Sound Study, contact Mark Parker at 860-424-3276 or [mark.parker@po.state.ct.us](mailto:mark.parker@po.state.ct.us).

If you did not receive this issue of *Sound Outlook* in the mail and would like to be placed on the mailing list, please send your name and address to: *Sound Outlook*, Connecticut DEP, Office of Long Island Sound Programs, 79 Elm Street, Hartford, CT 06106-5127; or email your address to [laurie.valente@po.state.ct.us](mailto:laurie.valente@po.state.ct.us).

View past issues of *Sound Outlook* at [www.dep.state.ct.us/olisp/soundout/soundout.htm](http://www.dep.state.ct.us/olisp/soundout/soundout.htm).

Connecticut Coastal Area Management (CAM) Program approved by NOAA

1980



First municipal coastal management program approved (Waterford)

1982

First coastal restoration project completed (Barn Island, Stonington)



Coastal Embayment Advisory Board formed

1983



1984

Legislature passes Harbor Management Act

DEP publishes Model Municipal Harbor Management Plan

1985



Long Island Sound Study (LISS) established

# SPOTLIGHTED Coastal Access: A History of Accomplishment

**P**ublic access to the Connecticut shore is a cornerstone of our state's coastal management program. The Connecticut Coastal Management Act (CCMA) encourages expansion of coastal public access opportunities at state-owned facilities, and requires that private, non-water dependent, waterfront construction projects address public access to coastal waters below mean high water (MHW). While a total of more than 12 additional miles of coastal public access has been established through these efforts, the state is continuing to explore future access opportunities.

For example, two early access projects were completed in downtown Mystic through the municipal coastal site plan review (CSPR) process, where the addition of waterfront boardwalks and walkways were required as conditions of the permits issued for construction of the Powerhouse Condominiums along the Mystic River in Groton and the S&P Oyster Company Restaurant across the river in Stonington.



Powerhouse Condos Walkway, Groton

Recently, as described in Issue No. 16 of *Sound Outlook*, the state expanded public access opportunities at Barn Island Wildlife Management Area in Stonington with the acquisition of adjoining property, made possible through an innovative partnership of federal, state and municipal government agencies working with nonprofit conservation groups and private

benefactors. Public access facilities have also been constructed with funds raised from the sale of "Preserve the Sound" license plates: since 1993, more than \$1,230,000 has been awarded for the construction of 75 access projects across the coast, including boardwalks, observation platforms, canoe and kayak trails, boat launch ramps, and beach wheelchairs.



S&P Oyster Co. Walkway, Stonington

The DEP is presently working to identify potential future access sites through the state's acquisition programs and through the national Coastal and Estuarine Land Conservation Program (CELCP), a recently established and evolving land acquisition program administered by the National Atmospheric Administration's Office of Ocean and Coastal Resource Management in cooperation with coastal states and municipalities. Another fledgling program with potential to enhance coastal access is the Long Island Sound Stewardship Initiative. The Initiative is a proposed bi-state (Connecticut/New York) public-private partnership operating under the auspices of the EPA's Long Island Sound Study to identify, protect and enhance the Sound's most significant ecological and coastal recreation areas. Proposed federal enabling legislation would authorize up to \$25 million a year to protect the Sound's most significant coastal areas.

DEP's coastal public access goals for the future include: 1) encouraging state acquisition of significant coastal properties; 2) aggressively pursuing federal and other institutional grant funding opportunities for coastal land acquisition and coastal public access improvements; 3) continuing to help coastal towns acquire recreational public access facilities, such as small boat launches, through the CSPR process and the LIS License Plate program; and 4) ensuring that state agencies provide coastal access facilities when replacing or modifying transportation and other infrastructure adjacent to coastal waters.

Our next issue will resume our regular in-depth coverage of individual access projects described in the *Connecticut Coastal Access Guide*, available at [www.lisrc.uconn.edu/coastalaccess](http://www.lisrc.uconn.edu/coastalaccess).

## LOOK OUT for upcoming events!!

**June:** Rivers Month

**July:** Osprey young begin to fly.

### Connecticut Audubon Coastal Center

Milford Point, Milford, CT  
Call 203-878-7440 for info. and registration.  
YOUTH PROGRAMS

**Tuesdays, Jun-Aug,** 10:30-11:30 AM.  
*Nature Babies*, Children 3-5 with parent.

### FAMILY PROGRAMS

**Saturdays, Jun-Aug,** times vary.  
Field studies of birds, fish, invertebrates, wildflowers and more.

### FAMILY CANOE PROGRAMS

**Saturdays, Jun-Sep.**  
Tour the Charles Wheeler Salt Marsh.

### Norwalk Maritime Aquarium

10 North Water Street, Norwalk, CT  
*Marine Life Study Cruises*  
**Weekends, Jun, Sep & Oct,** 1:00 PM.  
**Daily, Jul & Aug,** 1:00 PM.  
Call 203-852-0700, ext. 2206 for info.

**Late August:** Plovers and terns begin southward migration.

**August-September:** Sea turtles move into LIS. Boaters please watch out for them!

### Coastweeks Events

**Sat., Sep 17:** *International Coast Clean-up Day*,  
Call Save the Sound, 1-888-SAVE LIS.  
**Sat., Sep 17:** *Battle Between the Bridges Regatta*, Mystic River  
Mystic Chamber of Comm. 860-572-9578  
**Sun., Sep 18:** *Coastweeks Row Regatta*, Mystic River  
Call CT Sea Grant, 860-405-9110.  
**Sat., Sep 24:** *National Estuaries Day*

Please be sure to check the Calendar of Events listed on DEP's website:

[www.dep.state.ct.us](http://www.dep.state.ct.us)

First Harbor Management Plan approved (Milford)

1986

Coves & Embayments municipal grant program established

Coastal permitting jurisdiction extended to the "high tide line"

1987

LIS nominated to National Estuary Program

Public Trust Workshop held at the Norwalk Maritime Center

1989

Long Island Sound Research Fund established

OLISP publishes *Best Management Practices for Coastal Marinas*

1991

CAM Program becomes Office of Long Is. Sound Programs (OLISP)

1992



## LIS Fund and LISS Citizen Advisory Committee: Creating Partnerships

The creation of partnerships is critical to the sustained improvement of Long Island Sound. The Long Island Sound Fund and the Long Island Sound Study's (LISS) Citizens Advisory Committee (CAC) are good examples of programs that have fostered meaningful partnerships among governments, private citizens and corporations, enabling local communities to effectively conduct activities that benefit the Sound.

The Fund was set up in 1993 to support projects with no other sources of funding. Largely funded by the sale of "Preserve the Sound" license plates, the program encourages applicants to form partnerships, and provides challenge grants or seed money with which to leverage matching funds and in-kind services from other funding sources and volunteer groups. For example, this approach has been used effectively to design, construct and maintain fishways to restore riverine migratory corridors for passage of anadromous fish such as blueback herring, alewife and sea-run brown trout.



Site of future Fishing Brook fishway

One notable fishway project is located on Fishing Brook, a tributary of the Oyster River in Old Saybrook. The Old Saybrook Land Trust is sponsoring the project with technical assistance from the DEP Fisheries Division and support from the property owners. The Fund awarded \$24,500 for this project in 2002. Since then, the Old Saybrook Land Trust, working with DEP, has leveraged additional funds from the Natural Resource Conservation Service's Wildlife Habitat Incentives Program (WHIP), Fish America Foundation, and the Long Island Sound Futures Fund, which is administered by the National Fish and Wildlife Foundation in cooperation with the LISS. Local businesses have also contributed to the project, including engineering services from Nathan Jacobson & Associates and dam safety related tree removal activities by Wilcox Tree Removal. Thanks to this extensive partnership, completion of the fishway is expected in 2005.

The Citizen's Advisory Committee, created as part of the LISS in 1985, has assisted the LISS Management Committee in the development, revision, and implementation of the Comprehensive Conservation and Management Plan for Long Island Sound. The CAC comprises stakeholders in New York and Connecticut, including environmental groups, land trusts, marine trades, industries, municipalities and schools. CAC members are involved with public education and outreach activities in both states, participate on the LISS Science and Technical Advisory Committee and provide a citizen's voice in the process. The vibrant involvement of the LISS CAC in the preservation and restoration of Long Island Sound is testimony to the value of the stakeholder and partnership processes that characterize the National Estuary Program.

For information about the Long Island Sound Fund, contact Kate Brown at 860-424-3034 or [kate.brown@po.state.ct.us](mailto:kate.brown@po.state.ct.us). For information about the Long Island Sound Study, contact Mark Parker at 860-424-3276 or [mark.parker@po.state.ct.us](mailto:mark.parker@po.state.ct.us).

### Purchase of a LIS License Plate supports the LIS Fund



#### As of March 31, 2004:

- Plates sold: 127,450
- Funds raised: Over \$4.4 million
- Projects funded: 246

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

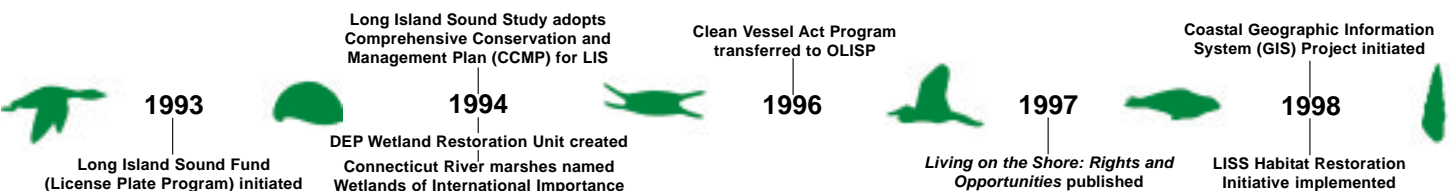
For information on ordering a Long Island Sound license plate, call 1-800-CT-SOUND.

## Sound Tips Clean Energy for a Cleaner Connecticut

This issue's cover article lists climate change as an important challenge to the protection of Connecticut's coast. You can help to meet that challenge by choosing to buy clean energy for your home or business. Every customer of Connecticut Light & Power and United Illuminating can sign up for either 100% or 50% clean energy.

In Connecticut, clean energy is defined as energy from wind, solar, small-scale hydro, landfill gas, fuel cells, ocean thermal or waves/tides, and small-scale sustainably harvested biomass. The clean energy mix offered by Sterling Planet includes: 33% from wind, 33% from small hydroelectric generation, and 34% from landfill gas generation. The other clean energy supplier, Community Energy, draws 60% of its power from wind and 40% from landfill gas generation. The average household that purchases a 100% clean energy product will pay approximately \$10 more per month for its electricity; the 50% option will cost half of that. Billing for clean energy appears on regular monthly utility bills.

The clean energy market in Connecticut has grown in recent years with the restructuring of the electric market, the legislative requirement for increasing percentages of clean energy in our supply mix, and growing awareness that clean energy is available and as dependable as conventional sources of energy. Clean energy has many environmental and societal benefits. The reduced emission of greenhouse gasses benefits water quality and fisheries in Long Island Sound, which have suffered negative consequences from the atmospheric deposition of nitrogen and mercury. Choosing clean energy also benefits LIS by reducing the demand for non-renewable energy resources and the related construction of oil and gas pipelines in the Sound. To learn more, visit [www.gocleanenergy.com](http://www.gocleanenergy.com).



# SPOTLIGHTED Coastal Resource: Habitat Restoration - A History of Success

**H**abitat restoration is the process of returning a habitat to the condition that existed prior to its degradation by human impacts. When conditions exist that do not allow restoration to exact pre-disturbance conditions, the goal becomes to restore as fully as possible the habitat type's functions and values. In order to assure the successful restoration of degraded habitats, DEP has partnered with many federal agencies and non-profit groups including the EPA's Long Island Sound Office, the U.S. Fish & Wildlife Service, Natural Resources Conservation Service, and National Marine Fisheries Service, The Nature Conservancy, Save the Sound, Inc., Ducks Unlimited, American Rivers and academic experts.

Since 1980, over 1,875 acres of degraded tidal wetlands have been restored through such partnerships. Between 1983 and 1998, DEP issued

municipal grants, funded through the state's Clean Water Fund, to study and/or restore 17 degraded sites in tidal waters under the Coves and Embayments Program. An additional 19 restoration projects have been funded through the "Preserve the Sound" License Plate program. Activities have included: removal of tidegates to restore tidal exchange; channel dredging to improve tidal circulation and water quality; construction of osprey platforms; fencing of beaches to protect piping plover and least tern nest sites; planting of beach grass to stabilize shorelines and prevent beach erosion; and installation of fish ladders to reestablish anadromous fish runs.



The restoration of eelgrass beds, which were decimated by reduced light transmittance caused by nitrogen-induced algal blooms, has resulted from successful efforts to improve water quality in Long Island Sound through elimination of wastewater discharges. Another restoration goal is the removal of invasive species. While efforts to eradicate non-native *Phragmites australis* (Common reed) from tidal wetlands are well known, we are also focusing on the removal of water chestnut (*Trapa natans*) which has threatened to overtake many freshwater wetlands and other shallow waterbodies.

In future years, DEP and its partners will continue their efforts to restore native plant communities and provide habitat for resident and migratory wildlife. For more information on restoration activities, contact Harry Yamalis at 860-424-3034, or by email at [harry.yamalis@po.state.ct.us](mailto:harry.yamalis@po.state.ct.us).

## Protecting Long Island Sound: A Look to the Future

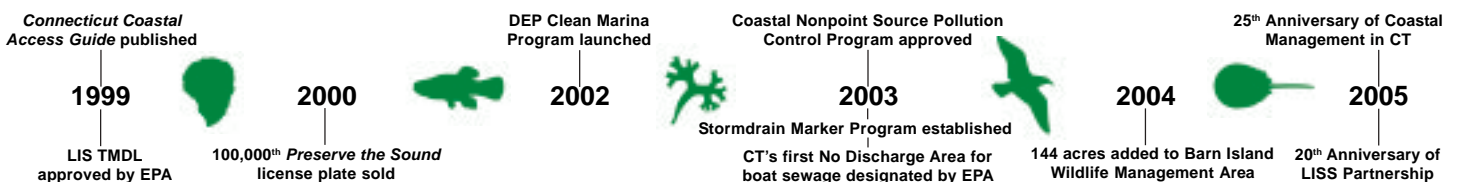
**I**n the 1980s, in response to known environmental problems, the states of Connecticut and New York established targeted programs and goals for water quality and habitat improvements in Long Island Sound. As previously reported in *Sound Outlook*, water quality in LIS has improved as the result of reduced nitrogen inputs to the Sound and the introduction of a nitrogen credit exchange program. We are also working cooperatively with New York and our federal partners to improve coastal and riverine habitat. Those partners include the Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Geological Society, Natural Resources Conservation Service, and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service.

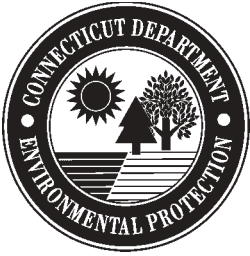
As water quality improvements make LIS more attractive for different uses, and as coastal population increases, previously unforeseen use conflicts have arisen. It is unlikely that 25 years ago, either Connecticut or New York would have anticipated the current proposal for a liquefied natural gas facility in the middle of the Sound. Nor is it likely that the framers of our Coastal Management Program could have anticipated the current demand for energy transmission lines across the Sound,

proposals for large structure-based aquaculture facilities, newly established or expanded security zones around waterfront facilities, the conflicts surrounding high-speed ferries, the current controversy regarding the disposal of dredged material, or even the impacts of sea level rise.

These issues raise questions as to whether our current coastal management tools are adequate to manage these potentially conflicting uses. We recognize that all potential management options require more investigation, and most involve legislative action and cooperation with the state of New York. Should we consider extending land use zoning concepts to the Sound, assigning specific uses in designated areas? Shall we specify corridors across the Sound for cables, pipelines and other energy transmission facilities? Should there be a separate use surcharge for LIS energy projects? Should the state of Connecticut consider submerged lands leasing?

In this anniversary year, as we look to the future of coastal management, we understand that demands on the Sound will continue to change. While we systematically work toward meeting our water quality goals, we are also beginning a dialogue to help us manage the changing uses of Long Island Sound.





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## Industry Update: Information Technologies

**T**he development of modern information technologies has transformed our ability to protect the quality and character of Long Island Sound. Twenty five years ago, when Connecticut's Coastal Management Program was established, few would have envisioned the electronic marvels that today are standard issue for resource managers. Gone, for the most part, are the days of drafting boards and measuring tapes.

Today's computer software and applications have revolutionized resource exploration and mapping. For example, remotely sensed imagery such as side-scan sonar is used to plot the bottom contours of Long Island Sound, identify deep water fish habitat, monitor the physical impacts of fishing gear, locate subsurface geological formations that affect the siting of cables and pipe-lines, determine the best disposal sites for dredged material, and identify shipwrecks whose preservation contributes to knowledge of our maritime heritage.

Global Positioning System (GPS) and Geographic Information System (GIS) technology enables resource specialists to accurately delineate the boundaries of tidal wetlands, eelgrass beds and leased shellfish beds, to track the progress of oil spills, and to help verify whether regulated structures comply with issued permits. This type of electronic mapping has replaced hand-drawn, hard-copy overlays, and helps scientists better identify, analyze, and manage the natural resources of the Sound.

The internet enables us to efficiently transmit all of this information to managers and the public alike, facilitating better communication at a fraction of the cost and time previously required. A perfect example is the web publication of the *Connecticut Coastal Access Guide* ([www.lisrc.uconn.edu/coastalaccess](http://www.lisrc.uconn.edu/coastalaccess)) – we are able to provide more extensive and current information about each access site than we could possibly fit on the original paper version.

No one knows what new technological innovations are likely to come along in the next 25 years. It is safe to say, however, that both our need for and access to resource information will continue to grow.

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

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