

# SOUND OUTLOOK

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

## Connecticut's Maritime Heritage: The Old and the New


**A**t first glance, Connecticut's coast might appear entirely devoted to recreational pursuits and residential development. In many places, however, the state's shoreline and port cities still exhibit our rich and continuing heritage of maritime activity.

Native tribes first ventured into Long Island Sound in search of food, harvesting fish and shellfish, and even chasing whales. By the mid 1800s, New London had become the third largest whaling port in the U.S., as reflected in the captain's houses along the city's Whale Oil Row and the famous wooden whaleship *Charles W. Morgan* at nearby Mystic Seaport. Long Island Sound oystering, which enjoyed its heyday around 1900, remains a vital industry today. Lobster boats are still to be found scattered among many Connecticut ports, while Stonington Borough hosts the state's last commercial finfishing fleet.

Early on, both native Americans and European settlers added maritime trade to their fishing activities. Beginning with wampum and furs, Connecticut seafarers built commercial networks to export locally produced agricultural and manufactured goods. Currently, the commercial ports of Bridgeport, New Haven, and New London contribute to both the state and regional economy by importing and exporting commodities such as fuel oil, lumber, scrap metal and bananas. In the future, feeder barge service for transport of manufactured goods may expand the use of Connecticut's ports.

Connecticut's early maritime traders built their vessels for their own use and for owners elsewhere, ranging from fishing schooners, trawlers, clipper and packet ships, and Civil War gunboats, to steamships and submarines. While Mystic Seaport exemplifies this heritage, Derektor Shipyard, in Bridgeport, today produces luxury yachts, high-speed ferries and other modern vessels. In addition, many smaller boatyards across the State have produced small craft for recreational use.

Connecticut's ships transported people as well as goods. In the middle 19<sup>th</sup> century, luxurious steamers carried passengers between New York and Hartford, Providence and Boston. While the development of railroads and automobiles reduced the Sound's steamers to a memory, their tradition persists in the cross-Sound ferries at Bridgeport and New London. Fast ferry service for commuters to New York City and other points is a future possibility.

Railroads and automobiles also offered inland residents easy access to Connecticut's shoreline. First the wealthy, and later the middle class, flocked to the shore to enjoy resort hotels, bathing beaches, and ultimately waterfront residences. After World War II, accelerated suburbanization and growth in leisure activities helped create the Connecticut shore we know today, where recreational pastimes and residential life dominate the scene. Like Connecticut's early residents, most still take to the Sound with boats and fishing gear, but now for enjoyment rather than to earn a living. Even so, the state's maritime past has left its mark, and evidence of this continuing heritage is never hard to find. 

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The theme of this issue of *Sound Outlook* is **Connecticut's Historical and Cultural Marine Resources**. Connecticut has a remarkable diversity of both. The articles and columns that follow describe a number of those resources and the management programs through which they are maintained and protected for enjoyment and education of state residents and visitors.

We encourage readers to visit the sites described, and to learn more about the issues that are introduced on these pages.

## Connecticut's National Heritage Corridor

**D**id you know that Connecticut has its own National Heritage Area? The Quinebaug-Shetucket Rivers Valley National Heritage Corridor (QSRVNH), encompassing 35 towns in eastern Connecticut and south central Massachusetts, is part of the National Park System.

National Heritage Areas (NHAs) are designated by Congress as places where natural, cultural, historic and recreational resources combine to form a cohesive, nationally distinctive landscape arising from patterns of human activity as shaped by geography. The federal government does not own or manage the land within Heritage Corridors. Instead, citizens, businesses, nonprofit cultural and environmental organizations, local and state governments, and the National Park Service work together to preserve the NHAs' heritage values. Staff of the DEP Water Management and Outdoor Recreation Bureaus participate on several working committees that advise the QSRVNH's administrators.



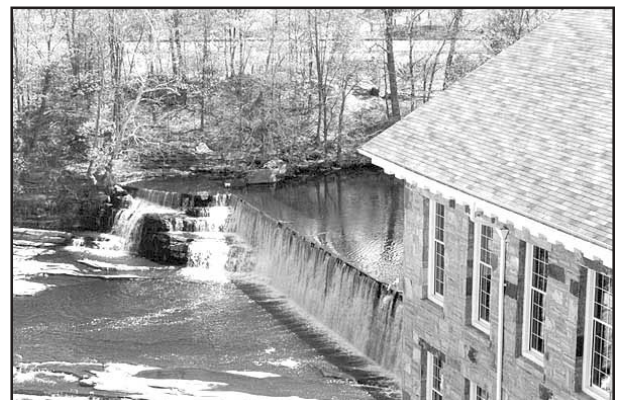
construction of hydro-power dams stopped fish from swimming upstream from the Sound to spawn in inland

The Quinebaug and Shetucket Rivers flow through an area known as the "Last Green Valley" within the sprawling Boston-to-Washington, DC megalopolis. Located within the Thames River Basin, discharges from these watersheds ultimately flow to Long Island Sound. In the early 1900s the area was a thriving center of the textile industry. Unfortunately, the

waters, and the release of waste chemicals from the mills damaged aquatic ecosystems.

Most of the textile companies have since shut down, leaving behind more than 80 historic mills. Many of these factories have experienced new life as housing, antique centers, craft shops, and high-tech industrial sites. These changes have also brought environmental benefits. Reforestation within the Corridor has increased runoff filtration and nutrient absorption, greatly reducing the nitrogen loading of waterways and enhancing the health of the Sound. As a result of discontinued pollution, 81% of the Corridor's rivers now fully support aquatic life, and fish passage has been restored around former mill sites such as the Greenville Dam in Norwich.

Today the scenic farms, lush woodlands and clean waterways of Connecticut's "Quiet Corner," complement the remnants of the region's textile industry, providing unique evidence of the state's history and culture. For more information about the Quinebaug-Shetucket Rivers Valley National Heritage Corridor, visit [www.thelastgreenvalley.org/welcome.html](http://www.thelastgreenvalley.org/welcome.html). For information about the Thames River Basin, contact Eric Thomas, DEP Bureau of Water Management, at [eric.thomas@po.state.ct.us](mailto:eric.thomas@po.state.ct.us).



*Willimantic Thread Mill and Willimantic River dam.*

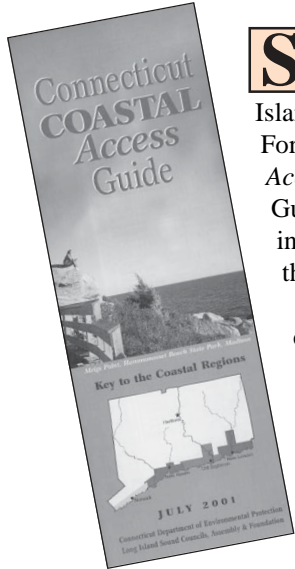
## Shennecossett Yacht Club Certified as a "Clean Marina"

Congratulations to Shennecossett Yacht Club in Groton, which was designated this past May as the third certified "Connecticut Clean Marina." The DEP applauds Shennecossett's operation above and beyond the normal standards of environmental regulatory compliance. DEP also salutes the voluntary

commitment of club members to reduce nonpoint source pollution by: collecting and recycling waste antifreeze, oil and lead-acid batteries; using absorbent materials to catch drips of fuel at the gas dock; disposing of boat sewage at the club's pumpout station; and employing tarps and vacuum sanders when

conducting debris-producing boat maintenance. To date, twenty-five other facilities have signed a Clean Marina Pledge to become certified within one year. For more information about Connecticut's Clean Marina Program, call Elke Sutt at 860-424-3034 or visit [www.dep.state.ct.us/olis/cleanmarina](http://www.dep.state.ct.us/olis/cleanmarina).

# SPOTLIGHTED Coastal Access: Fort Nathan Hale Park



**S**ituated prominently on the east shore of New Haven Harbor is a public coastal access site that offers scenic views of Long Island Sound, as well as a unique window on American history. Fort Nathan Hale Park (see site no. 132 in the *Connecticut Coastal Access Guide* printed in 2001, or check Site Search on the Access Guide website, [www.lisrc.uconn.edu/coastalaccess/index.asp](http://www.lisrc.uconn.edu/coastalaccess/index.asp)) includes several fascinating structures that provide a link to the past.

The original installation, Black Rock Fort, was constructed during the Revolutionary War. The Battle of New Haven took place on this site on July 5, 1779. As part of a combined assault on both the west and east shores of New Haven Harbor, British General William Tryon, commanding British troops, Hessian (German) mercenaries and a Tory regiment called “The King’s Americans,”

landed at Lighthouse Point near Black Rock Fort. The 19 local militia manning the fort resisted the attack until their ammunition ran out. By nightfall, the British troops, demoralized by Colonial sniper fire, returned to their ships, but not before taking the militia members prisoner and setting fire to the barracks at the fort.

Black Rock Fort was abandoned after the Revolution, but a larger fortification, named after Connecticut patriot Nathan Hale, was constructed on the site in the early 1800s when tensions arose again between the U. S. and Britain. During the war of 1812, Fort Hale’s cannons successfully defied a number of British raiders threatening New Haven. A new Fort Nathan Hale was built adjacent to the historic structure in 1863 to thwart Southern Raiders during the Civil War, but the fort saw no action during that conflict.

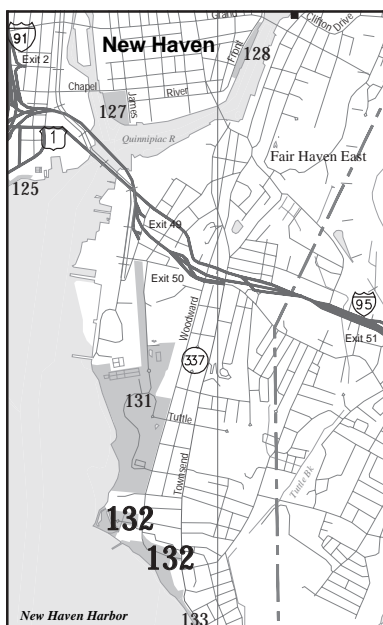


*Black Rock Fort overlooking New Haven Harbor.*



*Civil War reenactment at Fort Nathan Hale.*

Photos courtesy of Fort Nathan Hale Restoration Projects, Inc.



Remnants of Fort Hale’s moat, drawbridge, gun mounts and “bombproof” bunkers have been maintained or restored, and are visible to the public today. Informational pamphlets describing the lengthy history of Fort Nathan Hale Park are available at the site, which is open daily from Memorial Day to Labor Day. The Park is handicapped-accessible and admission is free. Other activities available at the Park include picnicking, fishing and beach use. For information about on-going Fort Nathan Hale Restoration Projects, visit [www.fort-nathan-hale.org](http://www.fort-nathan-hale.org).

To reach the Park, take I-95 Exit 51 southbound or Exit 50 northbound. Follow signs to Woodward Avenue and proceed south. Fort Nathan Hale Park will be on the right.



## LOOK OUT for upcoming events!!

DEP offers a variety of educational opportunities for teachers and students highlighting resources and research in Long Island Sound.

**DEP Environmental Educator Workshops**  
Call (203) 734-2513 to register.

**Salt Marsh Ecology Field Methods**  
**Friday, Oct. 22, 9:00 AM - 2:00 PM**  
**Saturday, Oct. 23, 9:30 AM - 2:30 PM**  
Kellogg Environmental Center, Derby and Hammonasset Beach State Park  
Teachers Grades 9-12

Learn about salt marsh ecology, field sampling and species identification.

**Marine Mammals of Long Island Sound**  
**Saturday, Oct. 23, 9:00 AM - 12:00 PM**  
Kellogg Environmental Center, Derby  
Teachers Grades 6-8

The following programs may be scheduled at any time during the school year. Call Alberto Mimo at 203-734-2513 for more information.

**High School Research Projects**  
The DEP Center for Environmental Research Education works with high school students to conduct research.

**Long Island Sound Indicators**  
Teachers and students will learn how beach inventories indicate the health of Long Island Sound. Students will provide the DEP with a rocky shore profile and a species inventory. Grades 9-12.

**Salt Marsh Ecology**  
Students will conduct plant inventories at Hammonasset Beach State Park for use by DEP. Grades 9-12.

**Long Island Sound Research Conference**  
**Thursday-Friday, November 4-5**

Stony Brook University, Stony Brook, NY  
Presentations by CT and NY scientists.

**November:** Harbor seals arrive in LIS from northern New England; winter flounder move into shallower water.

**December:** Bald eagles return to Connecticut for the winter. Call 1-800-368-8954 after December 8 for reservations at the Shepaug Eagle Observation Area.

**January:** LIS License Plate Request for Proposals will be mailed and posted on the DEP website. Contact Kate Brown, DEP, Office of Long Island Sound Programs, 860-424-3034 for more information.

**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)

# Long Island Sound Fund 2004 Grant Awards

**O**n May 20, 2004, the Long Island Sound (LIS) Fund Advisory Committee voted to award \$286,731 in grants for 19 projects to help preserve and protect Long Island Sound. The projects were selected through a competitive grant process. Highlights of the approved projects include:

## Education and Outreach:

- Creation of a video by the Connecticut River Museum describing the River's resources and its connection to Long Island Sound.
- Establishment by the Housatonic Valley Association of a lower Housatonic River Steward program, to include employment of a river steward and educational outreach programming within the watershed.
- Purchase and installation by the Norwalk Maritime Aquarium of a live web camera at Sheffield Island Lighthouse, transmitting live images of harbor seals and other wildlife to the internet for educational programming and data collection.



USS Nautilus on the Thames River

- Design and installation of three educational signs at the USS Nautilus Museum in Groton detailing the maritime history of the Thames River estuary, its unique characteristics, and its relationship to Long Island Sound.

## Public Access:

- Purchase of stainless steel beach wheelchairs for Rocky Neck, Hammonasset, Silver Sands and Sherwood Island State Parks to provide access to the water for disabled visitors.
- Acquisition by the New Haven Land Trust, Inc. of two significant tidal wetland areas of Hemingway Creek in New Haven.
- Purchase by the Quinnipiac River Watershed Association of a portable bird blind and spotting scope, installation of an osprey platform in the Quinnipiac River marsh, and scheduling of 12 organized public wildlife viewing days.
- Removal by the Town of Waterford of old pilings and derelict structures at the mouth of Jordan Cove to restore safe navigation and pedestrian public access along the beach.

## Research:

- A research study to collect information about Connecticut's Atlantic sturgeon population and their habitat.

The DEP looks forward to working with the successful applicants. Connecticut residents can support future projects by purchasing a Preserve the Sound license plate, acquiring a People's Bank LIS credit card, or making a direct contribution to the Fund. LIS license plates can also be purchased as gifts.

To learn more about how to purchase your LIS license plate, call 1-800-CT-SOUND, or visit our website at [www.dep.state.ct.us/olispl/licplate.htm](http://www.dep.state.ct.us/olispl/licplate.htm). To obtain information about the program and its grant opportunities, contact the Long Island Sound Fund Coordinator, Kate Brown, at (860) 424-3034, or by e-mail at [kate.brown@po.state.ct.us](mailto:kate.brown@po.state.ct.us).

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



### As of July 31, 2004:

- Plates sold: 124,910
- Funds raised: Over \$4.3 million
- Projects funded: 265

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

# Sound Tips

## Help Protect Your Watershed

Would you like to help keep our state's rivers and streams clean and restore and preserve Long Island Sound? Get involved in your local community and watershed. There are a variety of environmental groups, land trusts, friends of parks, town commissions, heritage area organizations (see [Connecticut's Natural Heritage Corridor](#), page 2), lake associations, and watershed associations that need your help. All these groups have openings or membership opportunities for interested citizens.

You can become an advocate for Connecticut's environment by increasing your knowledge of the important and interrelated roles played by Long Island Sound and its associated tidal wetlands and rivers. Visit the DEP and Long Island Sound Study websites, or search the internet for subjects related to the keywords "watershed" or "Connecticut watershed associations." Call or write to your local watershed association or contact the DEP for assistance in starting your own group. Inquire at your City or Town Hall about opportunities to serve on municipal Conservation, Inland Wetlands, Water Pollution Control, Planning and Zoning, or Open Space Land Acquisition Commissions. Visit your local commission meetings to learn what actions they are taking to preserve and restore these resources. Finally, take responsibility for reducing pollution and conserving water in your own home.

Together with other people and organizations you can make a difference in restoring and preserving LIS and the waters of our state. For more information about watershed protection in Connecticut, you may speak with one of DEP's four regional watershed coordinators, as listed below, by calling the Bureau of Water Management at (860) 424-3020: Chris Malik (Southwestern); Susan Peterson (Western); Sally Snyder (Central); or Eric Thomas (Eastern).

- 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).

## SPOTLIGHTED Coastal Resource: Sand and Gravel

**S**and and gravel deposits are an important, but unseen, coastal resource, underlying many nearshore areas of Long Island Sound. These sediments were laid down in the Long Island Sound basin and river valleys by the many streams fed by melting glaciers thousands of years ago. As sea level subsequently rose and flooded the LIS basin, these sand and gravel deposits were reworked and eroded, resulting in the formation of many of the coastal features seen today.

Historically, sand and gravel deposits were mined commercially, primarily from the Housatonic River, and provided much of the aggregate used in concrete products, blacktop and construction fill. In the late 1940s, the U. S.



*Sand dredged from Clinton Harbor is transported aboard the U.S. Army Corps of Engineers dredge Currituck.*

Army Corps of Engineers' Beach Erosion Control Board published reports that were the impetus for many of the shoreline erosion control projects of the 1950s and early 1960s. Recommended projects included the placement of sand on eroded beaches to widen and raise them as a buffer from storms and to provide valuable recreation. This sand was pumped from offshore by hydraulic dredges onto the adjacent beaches including those located from Milford Point east to the area now known as Silver Sands State Park.

Waves and currents have taken their toll over the years and many shorefront areas throughout the Sound would now benefit from renourishment. However, impacts to the offshore areas caused by dredging, including loss of bottom habitat, make it unlikely that the same offshore sources could be used again. Instead, the proposed maintenance dredging by the Corps of Engineers of the navigation channels in the state's major rivers may be a good potential source of sand for beach nourishment. Beneficial reuse of dredged sand could turn a navigation problem into a source of readily available nourishment for area beaches, solving two pressing problems. The Corps is currently evaluating the feasibility of using sand from channel dredging, if it is clean enough and costs are not excessive, as nourishment for eroding beaches.

For more information on dredging in Connecticut waters, contact George Wisker at 860-242-3034 or by email at [george.wisker@po.state.ct.us](mailto:george.wisker@po.state.ct.us).

## Balancing Historic Lighthouse Preservation and Natural Habitat Protection

**C**onnecticut's shoreline is graced with 21 lighthouses, relics of a time in the state's history replete with stories of shipwrecks, ocean storms, and a bustling shipping and whaling industry. Built of sturdy materials such as granite, brick, wood and steel, these beacons serve not only to safely guide vessels through Long Island Sound, but also as a reminder of our rich maritime history.

Many of these lighthouses are positioned on barrier beaches, bluffs or islands, where they mark reefs and other navigational hazards. Given their proximity to the water and exposure to wind and wave action, lighthouses are often in need of repair or protection from erosion. Maintenance activities are often complicated, as the work or resulting permanent structures or fill may pose potential adverse impacts to natural resources. An example of this type of conflict recently occurred at Faulkner's Island in Guilford.

Faulkner's Island Light was constructed in 1802 to provide safe navigation around

the treacherous shores of the three-acre rocky island, which is now owned by the U.S. Fish and Wildlife Service as part of the Stewart B. McKinney National Wildlife Refuge. Because of its natural habitat, the island is home to numerous species of birds, including breeding colonies of roseate terns, an endangered species, and common terns. Due to severe erosion of the bluff upon which the lighthouse is situated, local historians became concerned about the survival of the lighthouse. However, wildlife experts were equally concerned about the impacts of a large erosion control project on nesting bird populations.

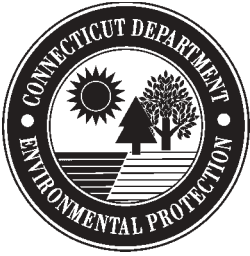
Through coordination between State and Federal regulatory agencies, adverse impacts to the nesting habitat were minimized. By constructing a stone revetment along the face of the eroded bluff and planting hardy, salt-resistant plants along the top to stabilize the area, much of the nesting habitat was preserved in 2001. Ongoing studies have provided

recent evidence that the erosion control project is not a deterrent to tern habitation on Faulkner's Island. Instead, in the years since construction was completed, the consumption of tern eggs and chicks by black-crowned night herons has unexpectedly become a greater threat to the terns. The resulting tern population



*Faulkner's Island and lighthouse, Guilford*

declines stabilized somewhat in 2004 with the occurrence of fewer predatory night herons, but the future remains uncertain. As such conflicts arise, coastal managers will continue to work together with historians and natural resource staff to preserve not only our historical past, but our coastal biological diversity as well.



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## Industry Update --Textile Mills

**T**he evolution of Connecticut’s textile industry has been one of growth and decline. European settlers quickly found Connecticut’s many rivers and streams to be an abundant and inexpensive source of power, leading to the construction of sawmills and gristmills which were later converted to cotton, woolen and silk mills. By the early 1900s, textiles were the state’s leading manufactured product. Manchester’s Cheney Silk Co. had become the nation’s largest and most profitable silk mill by the late 1880s. Willimantic was dubbed “Thread City” in the 1890s with the production of 85,000 miles of silk and cotton thread each day. By 1909 there were 47 silk manufacturers in the state, and by 1920 Killingly was known as “Curtain Town” for its seven operating curtain companies. Along the shore in Mystic, the Rossie Velvet Mill manufactured velvet while the Mystic Manufacturing Co. produced woolens and worsteds. Connecticut’s textile industry was so diverse and successful that it was possible for these two large companies to thrive and grow without interfering with each other. The environmental price of this prosperity, however, was the pollution of streams, rivers and Long Island Sound itself. Many mills discharged raw sewage, spent dye solutions and waste acid wash waters directly into our state’s waters.

During the 1930s, many mills closed or were converted to new and emerging industries, allowing rivers to slowly recover as discharges ceased. Those companies that remained open began connecting their waste discharge pipes to city sewer systems and paying municipalities to treat wastes at the city sewage treatment plants. During the 1960s, Connecticut passed new clean water laws enabling more stringent enforcement of wastewater treatment standards. Today, companies such as the Warren Corp. in Stafford have treatment systems that pretreat their waste waters before discharging them to the city sewage

treatment system. Pretreatment discharge permits, monthly discharge reports and regular compliance inspections are required by DEP. Through DEP’s comprehensive commitment to watershed management and clean water programs, the health of both Connecticut’s rivers and the Sound continues to improve. For more information about Connecticut’s textile industry visit [www.millmuseum.org](http://www.millmuseum.org) and [www.cthistoryonline.org/sitemap.html](http://www.cthistoryonline.org/sitemap.html).

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

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