



SOUND OUTLOOK

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

Maritime Commerce Contributes to the Value of Long Island Sound

The total economic value of Long Island Sound has been calculated to equal more than \$8.25 billion, with value assigned to both the natural resources of the Sound and to the recreational and commercial uses that take place there. Past issues of *Sound Outlook* have featured articles describing the importance to Connecticut and its citizens of the Sound’s tidal wetlands, intertidal flats, submerged aquatic vegetation, subtidal sediment deposits and rocky shores, as well as numerous public access facilities and cultural amenities.

In this issue of *Sound Outlook* we will look at the commercial and industrial uses of Long Island Sound and of Connecticut’s tidal rivers, and their contribution to the economy of the state and the region.

The uses that are discussed on the following pages include shipping, transportation of energy products, commercial and recreational fishing, recreational boating, and tourism. Numerous Connecticut citizens make their living in these and related industries, contributing to the character and traditions that typify our state. The relative economic effect of certain of these activities has been determined through an accounting process that takes into consideration the value of the activity, and both the direct and indirect, or “ripple,” effects of the activity on the economy. This analysis was conducted by Dr. Marilyn Altobello at the University of Connecticut for the Long Island Sound Study. Her calculations of economic value, initially developed in 1991, have been updated to 2007. Using commercial fishing as an example, *value* would include the income received by a fisherman for his catch. *Direct effects* would include the fisherman’s expenditures for necessities associated with his business, such as boat fuel, fishing gear, ice and insurance. *Indirect effects* would include wages paid to employees of fishing-related businesses and subsequently spent on goods and services by those wage earners.

Dr. Altobello calculated the user values and direct and indirect effects of the major water quality-dependent LIS activities. She found that recreational boating has the greatest overall economic effect (60% of the total LIS value), followed by recreational fishing (19%), and then by swimming (15%). Of additional, but lesser, economic importance are commercial fishing and shellfishing (3%) and intrinsic values - those that are not easily measured, including intangibles such as aesthetics and uncertainties such as future demand (3%).

The information cited above was prepared for the Long Island Sound Study. To learn more about this economic analysis, or about commercial activities in Long Island Sound, please contact Mark Parker at 860-424-3276 or at mark.parker@po.state.ct.us.

			
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Energy, Transportation and Construction Activities in LIS

A number of commercial and industrial enterprises are prominent in Long Island Sound, notably associated with our port and energy facilities. While Connecticut is not a large state, we do have a number of ports that are important to the economy of southern New England. Connecticut's deep water port facilities are located in New London, New Haven and Bridgeport, while shallow water barge operations take place in Norwalk, Stamford and Branford, and along the Connecticut River. Commodities that are transported by barge and ship on LIS include unpackaged bulk materials such as scrap metal, coal, cement, petroleum products and stone, and "break bulk" materials that are packaged in various forms. Interestingly, the port of Bridgeport annually receives shipments of four million tons of bananas, plantains and clementines.



MV Barkald "lighters" The MV China Joy outside Bridgeport Harbor.

One critical and interesting activity associated with Connecticut's energy infrastructure takes place in open water. Connecticut depends for energy in part on coal-fired power plants, one of which is located on the Bridgeport harbor shorefront. The coal ships that supply the Bridgeport plant come all the way from Indonesia, delivering clean-burning, low-sulfur coal needed to comply with state- and federally-mandated reductions in sulfur emissions. However, because the dockside loading facility does not have the necessary equipment to unload the large Indonesian ships, the ships must be "lightered." In this process, a "self-discharging" ship, the 600 foot *MVBarkald*, uses its own on-board cranes to transfer coal from the holds of the coal ship to waiting barges, which are then offloaded at the dock. Additionally, because Bridgeport harbor is in need of dredging and is not deep enough for this operation to take place in port, lightering is presently conducted while the vessels are anchored at a designated open water "lightering area" located in Long Island Sound outside Bridgeport Harbor. Lightering areas are designated by the U. S. Coast Guard in consultation with DEP and other state and federal resource agencies. There are three such designated areas in Connecticut's portion of the Sound.

A related use of our tidal waters is the operation of petroleum-carrying barges in our harbors and on the Connecticut River. Oil barges call at New Haven, where petroleum products are offloaded for shipment via the underground Buckeye pipeline. The pipeline is used to transport refined oil to Hartford and to Springfield, Massachusetts, and jet fuel to Bradley International Airport and to Westover Air Force Base in Chicopee, MA. Heating oil is also transported by barge up the Connecticut River to the NRG Energy terminal in Middletown. Deliveries occur, on average,

50 times per year, although this in fact represents a significant decline in oil barge traffic in recent years as use of the Buckeye pipeline, described above, has increased. As a result, former riverfront oil terminal facilities in the Hartford area have been closed. A number of submerged natural gas pipelines and electric transmission cables presently carry energy across the Sound, while others are proposed. Issues surrounding these uses of LIS were discussed in the October 2003 (No. 14) issue of *Sound Outlook* – visit www.ct.gov/dep/lis.

Transportation related commerce is also an important element of Connecticut's maritime economy. Large vehicle ferries ply the waters from New London and Bridgeport to ports on the north shore of Long Island, while smaller ferries leave New London bound for Block Island, Rhode Island and Fishers Island, New York. In recent years, the cruise ship industry has gained a foothold in Connecticut. The *American Eagle*, a small (170 foot) New England cruise ship, docks at the Custom House pier at New London's Waterfront Park. Over the last several years, New London has also become a regular port-of-call for Holland America Line's oceangoing cruise ships, three of which are scheduled to dock at the State Pier there during 2007.

Still other important contributors to the LIS economy are the dredging and waterfront construction industries. Both commercial port facilities and recreational marinas along the shore are dependent on periodic maintenance dredging to ensure the continuation of safe navigation. Both the state and federal governments operate permit programs that authorize qualified dredging projects so as to minimize environmental impacts and ensure the economic viability of this important component of the waterfront community. Likewise, existing public and private shorefront structures require periodic repair or reconstruction. Provided there are no associated adverse environmental impacts, marine contractors work to repair bulkheads, seawalls, jetties, groins and other properly authorized shoreline structures.

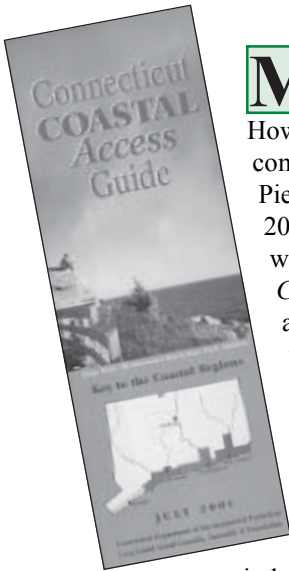
For more information about the activities described above, contact Tom Ouellette at 860-424-3034 or at tom.ouellette@po.state.ct.us.



*Passengers disembark from the Holland America Line's MS Maasdam at New London's State Pier.
Photo by Tim Cook, Courtesy of The Day.*

SPOTLIGHTED Coastal Access:

New London's Waterfront Park Features Interpretive Signs



Most of the articles in this issue of *Sound Outlook* describe present-day commercial activities in Long Island Sound. However, if you would like to learn about some of the historic commercial uses of the Sound, pay a visit to New London's City Pier and Waterfront Park. The 3½ acre park was completed in 2001, culminating efforts to connect the city to its historic waterfront. The site is described in the *Connecticut Coastal Access Guide*, available online at <http://www.lisrc.uconn.edu/coastalaccess>. Waterfront Park includes five piers and a promenade stretching nearly a half mile along the New London shoreline. Interpretive signs describe the City's historic and continued reliance on maritime and water-dependent industries. The Park offers berthing for large and small vessels, public moorings, a car-top boat access ramp, and space for cultural events. Opportunities exist for fishing, picnicking, walking, jogging and sightseeing. Seasonal sanitary facilities and on-street parking are available. Parts of the site are wheelchair accessible, although others are not.



Waterfront Park promenade, New London.

New London's naturally deep harbor enabled early trading ships to berth along the river bank, in the area now known as Bank Street, with as many as 150 merchant vessels entering and clearing the port each year during the height of West Indies Trade from 1720-1770. In the 1800s, New London became an important whaling port (although of lesser renown than either New Bedford or Nantucket), and in 1845, New London was home to the world's second largest whaling fleet. During the second half of the 1800s, changes to the downtown waterfront were made to accommodate and expand rail operations, while steamboat companies took over the whaling docks. The U.S. Custom House on Bank Street adjacent to Waterfront Park was built in 1833 to receive customs duties and other documents from shipping agents, and remains the oldest operating custom house in the nation. Presently, it also houses the New London Maritime Society and the Museum of Maritime History - visit www.nlmartimesociety.org for detailed information.



U.S. Custom House, New London.

New London's first shipyard opened for business in 1660. Thames Shipyard, located along the shore north of Waterfront Park, is one of the largest and oldest commercial maritime repair facilities between New York and Boston. During the early 1900s, the shipyard built many vessels and maintained a fleet of tugs and barges; today it specializes in the repair and retrofitting of ferries, which have operated on the Thames River since 1651. The New London Ship and Engine Company was established in Groton in 1911, later becoming General Dynamics' Electric Boat Shipyard. Electric Boat has been manufacturing submarines since 1924, becoming the world's leading submarine producer. You can read more about present-day transportation related commerce in New London on page 2 of this issue. The variety and history of commercial uses described above clearly attest to the fact that New London Harbor is one of the most important ports along the northeast coast.



Cross Sound Ferry's MV Cape Henlopen motors past Electric Boat shipyard in Groton.

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LOOK OUT for upcoming events!!

June: Rivers Month

July: Osprey young begin to fly.

Norwalk Maritime Aquarium

10 North Water St., Norwalk, CT
Call 203-852-0700 x2206 for information, times, costs and registration.

Marine Life Study Cruises

Saturdays and Sundays in June; 2-1/2 hour cruises.

Collect and study marine life in Norwalk Harbor aboard *RV Oceanic*. Passengers must be 42 inches tall.

Marine Explorers Summer Camp

Sessions: 1 & 2 weeks, full day and half day between late June and late August. Ages: 6-11

Weekly themes: *Adventure Under the Sea; Sounds Fishy!; Otterly Awesome; Survival.*

Connecticut Audubon Coastal Center

Milford Point, Milford, CT
Call 203-878-7440 for information, times, and registration.

Family Canoe Program

Saturdays, June 16 and 30.

Guided tour of Charles E. Wheeler Salt Marsh. Time and route weather dependent - call to confirm.

Late August: Plovers and terns begin southward migration.

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

Coastweeks Events

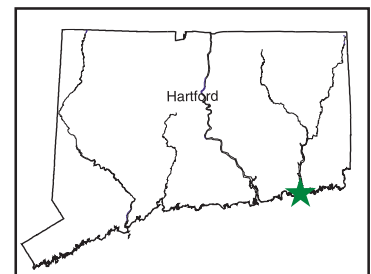
Sat., Sep 15: International Coast Clean-up Day,

Call Save the Sound, 1-888-SAVE LIS.

Sat., Sep 29: National Estuaries Day; visit <http://www.estuaries.gov>

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

www.ct.gov/dep



Putting Your Plate Money to Work: Long Wharf Harbor Panoramic Signs

With a \$4,500 grant from the Long Island Sound Fund in 2005, the New Haven Land Trust has made a significant educational improvement to the Long Wharf Nature Preserve in New Haven, which provides a clear view of New Haven Harbor's east shore. A series of three panoramic signs depict the shoreline, identifying for the visitor what appears on the waterfront and describing the economic and social importance of each site.

Here the global economy – and our dependence on foreign imports – are made visible. In 2005, almost 200 ships and barges entered New Haven Harbor, the largest deepwater port in Connecticut. New Haven handles more cargo than the other state ports combined. Refined petroleum is the port's principal commodity, delivered as gasoline, diesel, and home heating oil. These products are subsequently shipped out of New Haven both by truck and by pipeline, as described on page 2 of this issue of *Sound Outlook*.

In 2003, the City of New Haven created the New Haven Port Authority to “enhance the economic competitiveness of the greater New Haven region and all of Connecticut through waterborne transportation.” Covering 366 acres, the port district is populated by many different industries in addition to petroleum products, including marine terminal handling for a variety of construction materials, water pollution control, and power generation.

The harbor provides a variety of other important water dependent uses such as public parks, historical sites rich with maritime heritage, and recreational boating facilities. The U.S. Coast Guard, Sector Long Island Sound is also located here, and performs search-and-rescue operations and homeland security services, maintains aids to navigation such as buoys, lights and other markers, and responds to oil and chemical spills in Long Island Sound. New Haven Harbor and the various uses that co-exist there demonstrate how commerce on Connecticut's waterways is inextricably linked to our state's economy and quality of life.

To learn more about the various uses of New Haven Harbor, visit the Long Wharf Panoramic Sign project at Long Wharf Nature Preserve. Directions are available at the *Connecticut Coastal Access Guide* website at <http://www.lisrc.uconn.edu/coastalaccess>. Parking is available along Long Wharf Drive adjacent to the adjoining Vietnam Veterans Memorial Park. While visiting the Preserve, be sure to tour Memorial Park and nearby Long Wharf Pier and Long Wharf Maritime Center Esplanade. All of these sites are more fully described in the *Access Guide*. 🐦



Panoramic signs at Long Wharf Nature Preserve show New Haven Harbor's working waterfront.

Purchase of a LIS License Plate supports the LIS Fund



As of March 31, 2007:

- Plates sold: 135,002
- Funds raised: Over \$4.7 million
- Projects funded: 283

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

In addition to the informational resources identified in the articles in this issue, you can learn more about the history of commerce and industry in Long Island Sound by visiting the following institutions:

The Mashantucket Pequot Museum & Research Center in Ledyard features exhibits describing how early French and English fishermen traded cod harvested off the coast of Newfoundland for pelts of beaver and other fur-bearers taken by native Americans in southern New England. The Dutch also came to North America to profit from the fur trade in what are present-day New York and Connecticut, traveling on Long Island Sound to trading posts they established on the Connecticut River.

Mystic Seaport in Mystic is a collection of more than 30 historic buildings representing traditional New England trades and businesses, from shipsmiths and coopers to woodcarvers and riggers. The wooden whaleship *Charles W. Morgan* and early 20th-century New England fishing vessel *L.A. Dunton* offer glimpses of long-past seafaring days. Historic methods of wooden shipbuilding can be witnessed in the Seaport's Henry B. duPont Preservation Shipyard.

The Connecticut River Museum in Essex, overlooking the relatively undeveloped lower river corridor, maintains a River Industries Collection that showcase tools used in the area's historic shipbuilding industry.

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 juliet.bryan-powell@po.state.ct.us.

View past issues of
Sound Outlook on the
DEP website at
www.ct.gov/dep/lis

SPOTLIGHTED Coastal Resource:

Commercial and Recreational Fishing in Long Island Sound

The commercial and recreational fishing industries in Long Island Sound not only evoke memories of Connecticut's maritime history, but will, with our careful stewardship, provide economic benefit and nutritional sustenance long into the future.

Some commercial fishing boats fish exclusively within the Sound for lobster, scup, summer flounder, winter flounder, bluefish, whelk and horseshoe crab. These catches are landed at ports spanning the Connecticut coast. In 2005, the largest catches in terms of both weight and monetary value were recorded in Stonington and Groton, with landings of lesser value occurring at Bridgeport, Guilford and New Haven. The value of the fish landed at these ports in 2005 totaled \$2,366,437. Other commercially fished species that are not recorded by port of landing include clams and oysters.

The DEP Marine Fisheries Division estimated the total economic value of commercial fisheries landings in Connecticut from LIS to be \$47.2 million in 2003 and \$45.4 million in 2004. Economic value in this context includes the ex-vessel value (dollars received by fishermen for their catch) multiplied by a factor to account for the ripple effects on the economy. Ripple effects may include: expenditures by fishermen for fuel, ice, gear, bait and insurance; wages paid to suppliers of these goods and services; and fishing employee wages spent in the region.

The major ports of landing for boats fishing outside Long Island Sound are New London and Stonington. In 2005, the weight of the catch landed at New London was greatest, while the monetary value of the catch landed at Stonington was highest. Species landed at the two ports include silver hake

(whiting), red hake, squid, monkfish, summer flounder, scup, skate and sea scallop. The total value of those landings in 2005 was \$16,017,670.

The average annual economic value of the recreational fishery in the Sound was estimated to be \$149.3 million between 2000 and 2004 based on annual surveys by the National Marine Fisheries Service and the U.S. Fish and Wildlife Service. Entrepreneurs who earn their living serving the recreational fishing industry include party and charter boat operators, bait and tackle shops, boat dealers and engine repair shops.

While it was stated on page 1 of this issue of *Sound Outlook* that the fishing industry is not the greatest contributor to the LIS economy, it is nevertheless one that touches many individuals and elements of our society. For more information about commercial and recreational fishing in Long Island Sound, contact Matthew Gates of the DEP Marine Fisheries Division at 860-434-6043 or at matthew.gates@po.state.ct.us.



Commercial fishing fleet, Stonington Harbor.

Connecticut's Recreational Boating Industry

Connecticut's boatyards, marinas and yacht clubs have played an important role in providing residents and visitors with access to Connecticut's coast for recreational boating since at least the late 1800s. Recreational craft were reportedly first developed from the small working boats of the day, although some vessels were specifically designed for wealthy yachtsmen for pleasure rather than work. Leisure time has progressively become more available and more dear as life's hustle and bustle have increased, and recreational boating facilities today help to maintain the quality of life that residents and visitors love about our beautiful state.

There are an estimated 250 recreational boating establishments in Connecticut. Many services are offered to recreational boaters at these facilities other than just a place to keep a boat in the water. The duties performed by operators of these businesses include work on engines and sails; hull maintenance including washing, sanding and painting; fiberglass repair;

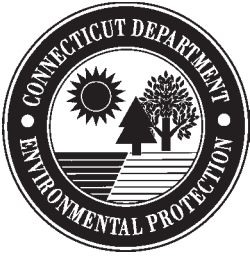


Milford Boat Works marina, Milford.

winter storage (either in the water or on land); bilge cleaning and winterizing. Approximately 30 percent of these facilities provide sewage pump-out stations for use by recreational mariners – some are free while others are fee-based. Some marinas and boatyards have ship's stores and/or fueling stations where supplies and consumables may be purchased for use aboard.

The economic value of recreational boating in Connecticut is significant. According to the Connecticut Marine Trades Association, as many as 600 businesses employing approximately 10,000 people are dependent on Connecticut's recreational boating industry. Such boating-related enterprises include maritime insurance companies, electronics dealers and general boating supply stores. The boating facilities themselves also use the professional services of engineers and construction firms to design, build and maintain their properties. Boaters are educated in safe vessel handling through volunteer-run training programs and by private, profit-based educators.

Connecticut would certainly be a much less inviting place to live and work without these important points of access to our coastal waters. For more information concerning recreational boating in Connecticut, contact Rick Huntley at 860-424-3034 or at rick.huntley@po.state.ct.us.



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Then & Now: “You Can Get There From Here”

In colonial times Long Island Sound served chiefly as a work environment for those involved in agriculture (primarily salt haying for fodder and bedding, and pasturing of livestock), local subsistence fishing, commercial shellfishing and shipbuilding. The industrial revolution ushered in a new concept that altered people’s use of the Sound: *vacations*. As both wealthy and working class people saved money and earned vacation time, they journeyed from cities like New York, New Haven, Hartford and Providence to escape the summer swelter and relax, swim, boat and fish along the Connecticut shore.

As early as the 17th century, access to the coast was provided by the Boston Post Road, also known today as U. S. Route 1, which led to destinations like the Cedar Island peninsula in Madison. By 1907 the Shoreline Electric Railway Co. was in operation, bringing riders from New Haven to Branford’s Stony Creek, and in 1910, extending service known as the Shoreline Trolley line to Ivoryton through the coastal towns of Guilford, Madison, Clinton, Westbrook and Old Saybrook. By 1916 the Shoreline Trolley had become New England’s fifth largest trolley system. Still, transportation alternatives continued to evolve as private automobiles offered citizens the opportunity to travel without the personal obligation for infrastructure maintenance that was required of the trolley operators.

Today, residents and vacationers use the state highway and rail systems to reach this treasured body of water. Readily available leisure activities include swimming at the many state, municipal, and private beaches; fishing from boats, beaches, piers and jetties; canoeing and kayaking on coastal embayments and tidal rivers; hiking and biking shoreside trails; and wildlife observation. More recent has been the emergence of the “ecotourism” industry, with schools and environmental groups leading tours and studies of Connecticut’s coastal environment. Visit DEP’s Long Island Sound web page at www.ct.gov/dep/lis for links to more information about the Sound’s recreational resources, and view the *Connecticut Coastal Access Guide* at <http://www.lisrc.uconn.edu/coastalaccess> for directions to destinations of interest. 🌿

Visit the DEP website at www.ct.gov/dep.

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