

Sound Bytes



NEWS FROM THE LONG ISLAND SOUND STUDY

Spring 2015

LISS NEWS

LISS Gets pH and CO₂ Sensor to Study Ocean Acidification



The sensor will be installed on a water monitoring buoy operated by University of Connecticut's LISICOS program.

EPA is providing the Long Island Sound Study with \$65,000 in National Estuary Program funds to support a high precision pH and CO₂ sensor on Long Island Sound. LISS is one of four National Estuary Programs selected to assist EPA in assessing how global, coastal, and regional factors are impacting ocean and coastal acidification. EPA Headquarters selected the proposal for funding based on specific criteria, including consideration for current work on acidification, technical expertise for maintaining the instruments, potential collaboration with the regional science community, and potential synergies with ongoing or planned efforts. The funds will be

awarded by EPA Region 1 in New England to one of LISS's partner programs, the Long Island Sound Integrated Coastal Observing System maintained by the University of Connecticut. The sensor will be installed on one of LISICOS's water quality monitoring buoys in the Sound.

Ocean acidification is defined as the increased concentration of carbon dioxide in sea water, causing a measurable increase in acidity (i.e., a reduction in ocean pH). This may lead to reduced calcification rates of calcifying (shelled) organisms such as corals, mollusks, algae and crustaceans. In February, scientists at the National Resources Defense Council, University of California at Davis, the Ocean Conservancy, and Duke University, and collaborators from nine additional institutions released the first nationwide vulnerability assessment for ocean acidification in the

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journal Nature Climate Change. In a [news release](#) about the study, Long Island Sound was identified as an example of an at-risk "hot zone" for having an abundance of nitrogen pollution that exacerbates ocean acidification in shellfish-rich areas. The Ocean Acidification International Coordination Centre news stream website has posted an [article](#) about the impact on acidification in Long Island Sound, which was originally published in Newsday in 2014.

Experience Trails Day at a Long Island Sound Stewardship Site



Kris Vagos of US Fish and Wildlife Service shows a volunteer what invasive pepperweed looks like at a volunteer event at Sheffield Island in Norwalk during the 2014 Trails Day weekend. Photo by Jack Silky.

On National Trails Day weekend in the first weekend of June, shoreline visitors can see a historic lighthouse on an island off the Long Island Sound coast, learn about native shellfish, while enjoying recreational shell fishing, and check out the Baltimore checkerspot butterfly at a grassland restoration project. These are a few of the many guided activities you can enjoy at a Long Island Sound Stewardship site on June 6 and 7. In total, LISS is involved in sponsoring or getting the word out for 10 guided activities at Stewardship sites on National Trails Day weekend.

Since 1993, National Trails Day events in Connecticut have been coordinated by the Connecticut Forest and Park Association as part of Connecticut Trails Day weekend. In 2012, the Long Island Sound Stewardship Initiative sponsored a walk at Barn Island Wildlife Management Area, one of the Sound 33-designated Stewardship Areas, as its first contribution to Connecticut and National Trails Day activities. LISS has expanded its involvement since, including organizing events for the first time in New York in 2014, where nature hikes, bird walks, beach cleanups, and invasive species removal activities were conducted. These events, and more continue into 2015, where they aim to make the public aware of the recreational and ecological importance of these treasured areas around the Sound.

If you would like to participate in one of the many Trails Day events in Connecticut or New York, visit the LISS Trails Day [web page](#) or LISS [calendar](#) for more information.

Summit Scores Well with Long Island Sound Citizens

This year's Long Island Sound Citizens Summit, held in the Harbor Club of Webster Bank Arena in Bridgeport on April 10, was a hit. More than 150 people attended the 24th annual Summit. They had a chance to hear experts discuss the status of a nitrogen pollution control reduction plan for Long Island Sound, and learn what the next steps to improve water quality are. Excess nitrogen has been identified as a major source contributing to low oxygenated coastal waters. Through advancements at wastewater treatment plants as part of the nitrogen control plan adopted in 2000, New York and Connecticut are on target to meet a goal of reducing more than 40 million pounds of nitrogen a year by 2017. At the Summit, citizens heard from experts on ideas to reduce nitrogen on land that drains into waterways through stormwater runoff and leaching and new technologies to remove nitrogen from water in a process called nutrient bioextraction.

The Summit was organized by Save the Sound, through a grant awarded by EPA to the New England Interstate Water Pollution Control Commission. Save the Sound has posted a full recap of the program on its [Green Cities Blue Waters blog](#), including access to contact information, presentation slides, and additional resources from the presenters.

LISS/NEIWPCC Releases Low Cost Retrofit Report



Keynote speaker, CT State Senator Ted Kennedy Jr, flanked by Bridgeport Mayor Bill Finch, left, and NY State Assemblyman Steve Englebright at the Citizens Summit.

Jeannette Brown, former executive director of the Stamford Water Pollution Control Authority, recently completed a report for LISS on Low Cost Retrofits for Nitrogen Removal at Wastewater Treatment Plants in the Upper Long Island Sound Watershed. The study was designed to assess the feasibility and cost-efficiency of installing low-cost biological nitrogen removal retrofits at select WWTPs in the upper Long Island Sound watershed states of Massachusetts, New Hampshire, and Vermont.

Funding for this study was awarded by EPA to the New England Interstate Water Pollution Control Commission in partnership with the Long Island Sound Study. NEIWPCC entered into a contract with Brown to conduct the study. The report is available on NEIWPCC's Long Island Sound Total Maximum Daily Load [web page](#).



AROUND THE SOUND

Dignitaries Dedicate New Bronx River Fishway

On April 10, Bronx politicians, community groups, and citizens as well as project managers and staff gathered along the banks of the Bronx River at a ribbon-cutting ceremony to celebrate the completion of a decade-long project to provide migratory fish with access to swim up the Bronx River. The newly installed fish passage at the 182nd Street Dam, just south of the Bronx Zoo, will provide migratory fish access to parts of the Bronx River during their spawning run that has not been possible for over 400 years.

Since the 1600s, dams built for industry and agriculture have existed on the Bronx River, preventing river herring, alewife and blueback herring, from completing their annual spring migration from the Atlantic Ocean to the river's freshwater reaches to spawn, thus impacting herring population numbers. New York City Department of Parks and Recreation, along with partners the Bronx River Alliance, Rocking the Boat, Sustainable South Bronx, and Lehman College, recognized this impact and worked to complete the project through various funding sources, including with a \$150,000 grant from the Long Island Sound Futures Fund.

The fish passage will allow fish to move up and over the dam to access 0.8 miles and 12 acres of upstream spawning habitat. This project will help to reestablish a sustainable river herring spawning run in the river and



(L-R) Marit Larson (Director of Wetlands-NYC Parks), Jim Turek (Bronx River Partnership Coordinator-NOAA), Linda Cox (Bronx River Administrator & Executive Director-Bronx River Alliance), John Calvelli (Vice President for Public Affairs-Wildlife Conservation Society), Mitchell Silver (Commissioner-NYC Parks), Wendy Rodriguez (Chair-Community Board #6), Jose Serrano (Congressman-15th Congressional District), and Ruben Diaz Jr. (Bronx Borough President) cut the ribbon on April 10, 2015 to officially open the Bronx River Fish Passage at the 182nd Street Dam.



Clams harvested on the first day shellfish beds were reopened in 2011. Photo by Carol DiPaolo.

contribute to the regional effort to increase population numbers for these ecologically important fish. This fish passage is the first of three passages planned for the dams on the Bronx River.

A [video](#) news story about the event is available on the Bronx News 12 website. Information about the Bronx River and its wetlands is available on the New York City Parks [website](#).

Hempstead Harbor Becomes New York's Second Highest Producer of Hard Clams

The Hempstead Harbor Protection Committee issued a [press release](#) in April to highlight a successful 2014 harvest year for hard clams in New York State, in which Hempstead Harbor became the second-highest producer of clams in the state. According to the press release, the harvests in Hempstead Harbor added nearly \$1.36 million to the local economy.

For several years, local, state, and federal agencies have supported Hempstead Harbor's efforts to restore oyster and clam harvesting and improve water quality. For example, since 2005 the Long Island Sound Futures Fund has contributed more than \$300,000 for water quality monitoring and shellfish seeding projects. In 2011, these efforts helped in the reopening of 2,500 acre of shellfish beds that had been closed for 45 years because of pollution.

Hempstead Harbor's success is part of an overall increase in New York harvests on Long Island Sound. Clam production increased by nearly 70 percent from 2012 to 2014. Oyster production has increased by more than 370 percent in the same period. For more information about the harvest numbers see the clam and oyster indicators in the Long Island Sound Status and Trends web page under [marine and coastal animals](#).

LISS Partners Permanently Protect the Preserve

The largest unprotected coastal forest between New York and Boston is now permanently protected as open space. On April 30, 2015 with assistance from the [Trust for Public Land](#), the [State of Connecticut](#), the Town of Old Saybrook, and the Essex Land Trust acquired over 1,000 acres of coastal forest and wetlands protecting it in perpetuity as open space. The [Preserve](#) is located in the Towns of Old Saybrook, Essex and Westbrook.

The property includes 38 vernal pools, 114 acres of wetlands, and more than 3,100 linear feet of streams with riparian vegetation. A variety of birds, amphibians, and animals inhabit the property. The dense forest and the



The Preserve Property.

Pequot Swamp Pond are used as a refueling stop by migrating birds. Protection of the property will insure good water quality for the watershed area draining to the Oyster River, Mud River, and Trout Brook, all of which flow to Long Island Sound. Protection of the Preserve will ensure that stormwater on the site is recharged to local aquifers ensuring recharge of an aquifer protection area located just east of the Preserve. The Preserve also offers benefits for coastal resiliency in the face of climate change, and conservation of it will ensure lessened stormwater impacts from hurricanes and other intense storms.

For many years the properties had been eyed by developers to build homes and a golf course but thanks to a grass roots effort of citizens and conservation groups this pristine piece of watershed has been saved. Through a creative mosaic of funding sources from Connecticut's [Recreational and Natural Heritage Trust fund](#), CT's [Open Space and Watershed Land Acquisition Grant Program](#), the [Town of Old Saybrook](#), a grant from the [National Park Service](#) Land & Water Conservation Fund, and the [Essex Land Trust](#) and Town of Essex donors. In the 2014 session of the General Assembly, action was taken to approve a proposal from Governor Dannel Malloy authorizing the transfer of most of the lands included in The Preserve to the state and the Town of Old Saybrook for joint ownership and management of these critical lands and the Essex Land Trust will manage the 70 acres of the Preserve that lie within Essex. Just as is found in the collaborative spirit of the National Estuary Program system, the power of partnership has again proved to be invaluable in preserving the health of estuary watershed lands.

CTDEEP Anticipates 2015 Milestone of Removing 1 Million Gallons of Boat Sewage



Bridgeport's new pumpout boat at its inaugural launch this April.

Connecticut's Department of Energy and Environmental Protection announced earlier this spring that in the 2014 boating season, pumpout facilities removed a record level of 995,000 gallons of recreational marine sewage from vessels in Connecticut waters of Long Island Sound and Candlewood Lake.

"With this impressive record on the books our sights in 2015 are set on the next milestone – 1 million gallons," said CTDEEP Commissioner Robert Klee in a news release. "Using pumpouts is the responsible way to make improvements to water quality and boaters on Long Island Sound and Candlewood Lake will enjoy the same level of services in the 2015

boating season as they have come to expect."

For the 2015 boating season, 44 Connecticut Marine Facilities will receive \$1,034,598.47 in funding under CTDEEP's annual Federal Clean Vessel Act (CVA) program. In an effort to improve water quality in navigable waterways within Connecticut, this program, which is managed through the CTDEEP's Boating Division, provides

federally funded matching grants for qualifying projects that provide boat sewage disposal facilities, more commonly known as pumpouts. Four of the 44 grant recipients will receive funding for the construction of new or replacement pumpouts. The remaining projects fund operation and maintenance of land based pumpouts and mobile pumpout boats.

For more information about this program, visit the CTDEEP CVA [web page](#) or contact Kate Hughes Brown, BIG/CVA Program Coordinator, at (860) 447-4340 or by email at Kate.brown@ct.gov.

Both New York and Connecticut waters in Long Island Sound are designated as [No Discharge Areas](#) by EPA.

EPA 2 Region Administrator Visits Alley Pond to Highlight Importance of Wetlands



A newly installed boardwalk at Alley Pond looks over a restored wetland.
Photo by Melissa Czerniawski.

On May 28, US Environmental Protection Agency Regional Administrator Judith A. Enck joined NYC Parks Commissioner Mitchell J. Silver, and Irene Scheid, the Executive Director at the Alley Pond Education Center, to mark progress of EPA-funded work to restore wetlands at [Alley Pond](#), in Douglaston and Flushing, Queens. Enck also discussed EPA's new Clean Water Rule, which will protect streams and wetlands. Alley Pond, a Long Island Sound Stewardship Area, has received funds from the Long Island Sound Futures Fund to restore wetlands and other habitats and to fund outreach events highlighting the values of estuaries on National Estuaries Day.

New Haven Non-Profit Installs Bioswales to Treat Stormwater

On March 25, the Urban Resources Initiatives in New Haven, along with Mayor Tony Harp, held a news conference highlighting the benefits of eight bioswales to treat polluted stormwater. These green infrastructure projects are being built in the city with volunteers, students, and ex-offenders as part of a job skills program. The project is being partially funded through the Long Island Sound Futures Fund.

A bioswale is a channeled depression or trench that receives rainwater runoff from impervious surfaces, such as a parking lot, and has vegetation, such as grasses, that can break down pollutants before the water drains into rivers and streams and Long Island Sound. The green infrastructure projects are an alternative to conventional infrastructure projects such as concrete storm sewers that do not treat pollutants and convey water at a fast rate that can lead to flooding downstream. The New Haven initiative, which will also include a 1,000 square-foot rain garden, is expected to treat 2.81 million gallons of stormwater; and provide five acres of habitat for birds, pollinators, and other wildlife.

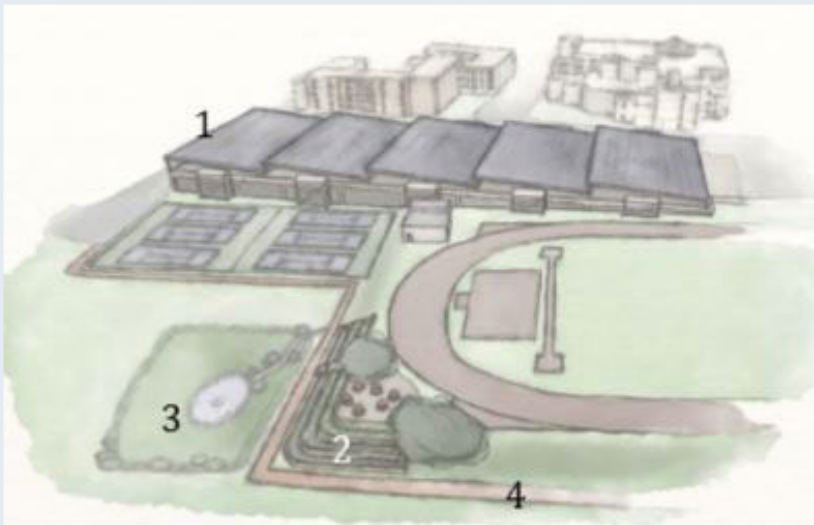
The [New Haven Independent](#) published an article about the news conference with pictures of some of the projects.



Urban Resource Initiative's GreenSkills crew building the first of eight residential bioswales to divert stormwater runoff in December 2014.



A scene from "The Oyster Men."



A schematic drawing showing the Queens College design in which a photovoltaic energy system over a parking garage and green infrastructure would capture stormwater and produce electricity.

Long Island Oystermen Video Wins Cinematography Prize

On Long Island, men who make a living harvesting oysters, clams, and scallops are called Bay Men. This year, the video company *Show Love* featured some of these Bay Men working on the Sound to harvest one of the Sound's most popular natural resources. The [video](#) won best cinematography in the 2015 Real Food Media Contest. An [article](#) about the video appears in the *Daily Meal* blog.

Queens College Students Receive EPA Award

Congratulations to a student design team from Queens College who were the second place winner in the Demonstration Project Category for the EPA Campus RainWorks Challenge. The awards were announced on Earth Day, April 22.

The Campus RainWorks Challenge is a design competition to engage college and university students in reinventing water infrastructure. Student teams proposed

innovative green infrastructure designs to reduce stormwater pollution and develop sustainable communities.

The Queens College team's design proposes installation of a photovoltaic canopy and a rainwater harvesting system over a campus parking garage. This would direct runoff into vegetated terraces, a bioswale and a retention pond, resulting in infiltration and groundwater recharge. Annually the system is designed to capture 3.75 million gallons of runoff and produce 1.4 gigawatt hours of electricity. It would reduce stormwater flow to the combined sewer system, mitigate concrete leaching and snow

overloading on the parking structure, ensure electricity to campus buildings during natural disasters, and serve as a teaching laboratory for students.

Learn more at EPA's green infrastructure [web page](#).

Report Highlights Green Infrastructure Best Practices



The US Department of Housing and Urban Development has [published](#) the *Green Infrastructure and the Sustainable Communities Initiative* report, which shares the green infrastructure best practices and outputs of the EPA's Sustainable Communities Initiative. As part of EPA's commitment under the Green Infrastructure Collaborative, the report features 30 grantees that have incorporated green infrastructure strategies and projects within their Community Challenge and Regional Planning grants. Grantee profiles describe EPA-funded planning projects and discuss how green infrastructure investments advance communities' economic, environmental and infrastructure goals. One of the grantees highlighted is the Capital Regional Councils of Governments, based in Hartford, which received a grant for its Sustainable Knowledge Corridor project.

Belugas Spotted by Fishing Buddies off the Coast of Fairfield



On May 20, four college buddies on an angling trip in Long Island Sound spotted beluga whales – and shot video to document their story. NBC Connecticut [reported](#) on their whale of a trip. If you see whales or dolphins in the Sound, please stay a safe distance from them to protect wildlife and your own safety.

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