

Sound Bytes

NEWS FROM THE LONG ISLAND SOUND STUDY



Fall 2016

LISS NEWS

Warm Weather Leads to Summer Decline in Water Quality



increase the area of the Sound with low levels of dissolved oxygen (or hypoxia) compared to last year.

Not only does warm water contain less oxygen, but heating of the surface water can also prevent atmospheric oxygen from mixing down to the deep water, adding to the problem of hypoxia, which is harmful to aquatic life.

The area of hypoxia in Long Island Sound increased from 38 square miles in 2015 to almost 200 square miles this year. This is the largest area of hypoxia since 2012, another warm year, when it was 288 square miles.

Oxygen concentration of the deep water is one of the best measures of water quality in Long Island Sound. Oxygen concentrations above 5 milligrams per liter (mg/L) are healthy for fish and other animals in the Sound. Oxygen concentrations below 3 mg/L defined as hypoxic for Long Island Sound waters, are not healthy.

Nitrogen is an essential nutrient which stimulates the growth of plants such as phytoplankton (microscopic algae) in Long Island Sound. However, too much nitrogen pollution added to the Sound from wastewater causes large “blooms” of the algae which die, sink to the bottom of the Sound, and are decomposed by bacteria, using oxygen in the process. If oxygen is too scarce, fish and other marine life can die or be forced to scatter. While nitrogen pollution to Long Island Sound has been greatly reduced through improvements in wastewater treatment, additional nitrogen reductions are needed.

Sound Check, an occasional feature of this newsletter, highlights a recently updated indicator in the Long Island Sound Study's status and trends indicators presentation. The hypoxia indicator [appears](#) in the water quality section.

Restored Fish Passage Celebrated at Tree-Planting Event

Dams threaten the Long Island Sound ecosystem by blocking the passage of migratory fish to upstream riverine habitats. There are thousands of dams in Connecticut, but there is one less thanks to a project in Lyme conducted by The Nature Conservancy with the permission of the owner who agreed to have the dam removed. On Oct. 5, TNC held a ceremony to celebrate the dam removal at the East Branch of the Eightmile River. The event also included a volunteer tree planting project to restore vegetated buffer that was lost when the dam was built.

In This Issue

- [Warm Weather Leads to Summer Decline in Water Quality](#)
- [Restored Fish Passage Celebrated at Tree-Planting Event](#)
- [A Sound Future: An Open Forum for Shaping the Long Island Sound Blue Plan](#)
- [Local Volunteers Join International Coastal Cleanup](#)
- [Long Island Sound Report Card Released](#)
- [Organic Lawn Care Course to be Offered in Long Island](#)
- [EPA Awards Trash Free Grants for Long Island Sound Projects](#)
- [Maritime Aquarium Receives Large NOAA Coastal Education Grant](#)
- [Understand Climate-Related Risks at Updated Website](#)
- [Then and Now on the Bronx River](#)



Volunteers with the Nature Conservancy plant trees along the east branch of the Eightmile River in Lyme on Wednesday, Oct. 5, 2016, during a celebration event commemorating the removal of the Ed Bills Pond dam and restoration of the river. Credit: Tim Cook/The Day

The dam removal, which took place last fall at what was formerly known as the Ed Bills Pond, has resulted in opening 8.3 miles of valuable upstream river habitat to migratory fish. It opens the river to sea lamprey, American eel, Atlantic Salmon, brook trout, blueback herring, alewives, and other fish. The project in part was funded by a \$150,000 grant from the Long Island Sound Futures Fund. The ceremony was featured in an [article](#) in the New London Day. You can also see a picture of the dam being demolished on the Long Island Sound Study [website](#).

A Sound Future: An Open Forum for Shaping the

Long Island Sound Blue Plan



Boaters angle for good views as tall ships enter the mouth of the Thames River in Connecticut. Credit: Syma Ebbin/CT Sea Grant

The Nature Conservancy is hosting an evening meeting to learn about, discuss and help shape the Long Island Sound Blue Plan – a new State and stakeholder initiative to better guide future uses of the Sound. This is the Blue Plan Advisory Committee's kick-off event to educate and engage the public about the Plan, which is intended to protect the Sound's natural resources and its traditional human uses such as boating, fishing, recreation and maritime commerce, among others.

When: Wednesday, November 16th, 6:30-9:00 PM. Reception at 6:30 PM. Program at 7:00 PM.

Where: The Maritime Aquarium at Norwalk, 10 N. Water St., Norwalk, CT 06854

Free admission and refreshments

RSVP: <http://bit.ly/RSVP-Norwalk>

Come learn about the Blue Plan process, watch the short documentary film Ocean Frontiers II, and join the conversation about what the Plan will accomplish. There will be plenty of chances to ask questions, make comments and discover how you can help shape the Blue Plan.

Speakers include DEEP Commissioner Rob Klee, Dr. Brian Davis of The Maritime Aquarium at Norwalk, Christine Nelson of the Town of Old Saybrook, Nathan Frohling of The Nature Conservancy in Connecticut, Bill Gardella of the Connecticut Marine Trades Asso., Melissa Gates of Surfrider Foundation, Dick Harris of Norm Bloom and Son/Copps Island Oysters, Mike Theiler, Commercial Fisherman and Brian Thompson of DEEP.

Hosted by: The Maritime Aquarium at Norwalk, Connecticut DEEP, Connecticut Sea Grant, The Nature Conservancy in Connecticut, Connecticut Marine Trades Association, Long Island Sound Study, Connecticut Charter and Party

Boat Association, Surfrider Foundation, Connecticut Chapter of the American Planning Association, Norm Bloom and Son/Copps Island Oysters, North American Marine Environment Protection Association, New England Science and Sailing, Town of Old Saybrook, Harbor Watch (a program of Earthplace) and Green Fire Productions.

AROUND THE SOUND

Local Volunteers Join International Coastal Cleanup



Kendall Perkins displays a skull she found during Save the Sound's Coastal Clean-up Day held in September at White Sand Beach. Credit: Chris Cryder/Save the Sound

September marks two important coastal events: International Coastal Cleanup and National Estuaries Week. Around the Sound, Long Island Sound residents participated, mainly through dozens of local volunteer cleanups of their beaches, bays, and harbors.

In Connecticut, Save the Sound organized 28 cleanups on Sept. 17, the official date for the International Coastal Cleanup. By the end of October, the New Haven-based environmental group is expected to help organize 70 cleanups around Connecticut – all in the Long Island Sound watershed. In New York, the American Littoral Society

by the end of October is expected to help coordinate 210 cleanups, including about 65 that are in the Long Island watershed.

The Connecticut cleanups are co-hosted by a wide array of local partners, including high schools, youth groups, and scout troops; churches; boaters and divers; watershed associations, park stewards; and land trusts. In New York, the list includes local municipalities, county and state parks, and the National Park Service.

"The diversity of the groups involved really reflects the truth that ocean health affects all of us," said Chris Cryder, special projects coordinator for Save the Sound. "Clean beaches and oceans are safer for beachgoers and boaters, they're healthier for wildlife that aren't eating plastic or getting tangled up in trash, and they're economic powerhouses for the fishing and tourism industries."

Last year, over 3,000 volunteers picked up more than 70,000 pounds of trash on Long Island Sound beaches for International Coastal cleanup events. See Long Island Sound's [status and trends](#) indicators presentation for a year-by-year comparison.

For the past 31 years, the International Coastal Cleanup has brought together hundreds of thousands of people each year to remove plastic bags, broken glass, cigarette butts, and other trash from the world's shores and waterways. National Estuaries Week was celebrated September 17-24. Since 1988, National Estuaries Week has been held to celebrate healthy, thriving coastal ecosystems. Throughout the country, including in Long Island Sound, local and national organizations, watershed groups, National Estuarine Research Reserves, and National Estuary Programs organized special events, like beach clean-ups, hikes, canoe and kayak trips, workshops and more to recognize the special role estuaries play in everyday lives.

Long Island Sound Report Card Released

Save the Sound released the second ecosystem health report card for Long Island Sound on Oct. 5. The report card shows that the Sound is stressed by high nitrogen levels, with water quality conditions ranging from very good in Eastern Sound to very poor in the Western Narrows off New York City.



US Rep Joe Crowley talks about the importance of protecting the Sound during an Oct. 5 news conference announcing the release of the Long Island Sound Report Card. The event was held on board a boat at the World's Fair Marina in Flushing. University of Maryland scientist William Dennison is sitting on the right. Credit: Robert Burg

The aim of the Report Card is to provide a transparent, timely, and geographically detailed assessment of the health of Long Island Sound, with health defined as the progress of water quality indicators (dissolved oxygen, water clarity, chlorophyll a, and a nutrient score combining total nitrogen and total phosphorus) toward scientifically-derived ecological thresholds. The Sound is divided into five sub-regions, each of which are graded for these indicators and then given an overall grade.

The report card assessment was conducted by Save the Sound, working with area scientists Jamie Vaudrey and

Jason Krumholz and scientists from the University of Maryland Center for Environmental Science.

You can check out the grades at the EcoHealth report cards [website](#).

Organic Lawn Care Course to be Offered in Long Island



Landscape architects, landscaping professionals, and educators will have the opportunity in November to take an accredited 30-hour course on organic lawn care in Long Island. The course will be held Nov. 7, 8, 14, and 15 at Cornell Cooperative Extension of Suffolk County in Riverhead. It will be taught by well-known landcare professionals, including: Chip Osborne, Mike Nadeau, Paul Wagner, Frank Crandall, and Todd Harrington.

The course is sponsored by the Northeast Organic Farming Association of Connecticut (CT NOFA). See CTNOFA [website](#) for more information.

EPA Awards Trash Free Grants for Long Island Sound Projects

The US Environmental Protection Agency has awarded \$365,000 for seven projects that will prevent plastic trash from polluting water bodies in New Jersey and New York, including two with a focus on the Long Island Sound watershed. The funding was awarded through a competitive grant process run by New England Interstate Water Pollution Control Commission (NEIWPCC), and is aimed at stimulating comprehensive solutions to the burgeoning problem of plastics in lakes, rivers, harbors and oceans.

Aquatic plastic pollution is getting worse every year. It is estimated that over 8 million metric tons of plastic pollution enter the world's oceans annually. By 2025, this amount is expected to more than double. A recent study by NY/NJ Baykeeper showed that at least 165 million plastic particles are floating in the New York-New Jersey Harbor Estuary at any given time. This grant program is focused on projects that will support the EPA's Trash Free Waters initiative's goal of reducing the volume of plastic trash entering fresh and marine water environments, approaching zero-loading of trash into U.S. waters within 10 years.



A cleanup sponsored by the Bronx River Alliance along the Bronx River.

The two Long Island Sound projects are:

- The Product Stewardship Institute will use a \$56,425 grant to reduce the amount of single-use plastics— including bags, bottles, cups and lids, straws, and plates — that are used by guests and customers of waterfront commercial properties along Long Island’s North Fork.
- Bronx River Alliance “Project WASTE” (Waterway and Street Trash Elimination) will use a \$52,886 grant to reduce the amount of plastic trash entering the Bronx River from upstream sources. Working with NYC Parks’ Natural Resource Group and the New York Botanical Gardens, the Bronx River Alliance will conduct floatable trash assessments at trash collection booms and at accumulation hot spots in upstream, midstream and downstream locations, and will analyze the data to determine the sources of the trash.

Read the EPA [news release](#) on the EPA website for a full description of all seven funded projects.

Maritime Aquarium Receives Large NOAA Coastal Education Grant



The research vessel *Spirit of the Sound* will be used as a floating classroom to teach students about what they can do to lessen the effects of environmental hazards in their communities.

Nearly 2,000 students from 10 Fairfield County towns will explore how severe storms, erosion and other environmental hazards threaten their communities – and also how they can participate in lessening the effects – thanks to a three-year, \$484,955 federal grant to The Maritime Aquarium at Norwalk.

The grant, from the National Oceanic and Atmospheric Administration (NOAA), is the largest federal award received in The Maritime Aquarium’s 28 years. It will fund an initiative called “Sound Resilience – Get On Board!” Over the next three years, The Maritime Aquarium will use the grant to involve as many as 1,875 middle- and high-school students in Greenwich,

Stamford, New Canaan, Darien, Norwalk, Westport, Wilton, Weston, Fairfield and Bridgeport. Education and research will occur in school classrooms and also aboard the Aquarium’s hybrid-electric research vessel *Spirit of the Sound*.

AROUND THE WEB

Understand Climate-Related Risks at Updated Website



Check out a video, *Building Resilience: Getting Started* to learn about the purpose and components of the Climate Resilience Toolkit.

The US Climate Resilience Toolkit is a recently updated [website](#) designed to help people find and use tools, information, and subject matter expertise to build climate resilience. The Toolkit offers information from all across the US federal government in one easy-to-use location. The goal is to improve people's ability to understand and manage their climate-related risks and opportunities, and to help them make their communities and businesses more resilient to extreme events.

Then and Now on the Bronx River



A before and after photo of the site of the new Hunts Point Riverside Park near the mouth of the Bronx River.

Bronx River Greenway: Then and Now is a New York City Parks [web page](#) that describes the successful 40-year effort to bring back a river notoriously known for being an open sewer filled with trash, old tires, and cars to a vibrant place with parks, restored habitats, and renewed wildlife. The page includes several before and after photos.

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