Sound UPDATE
Newsletter of the Long Island Sound Study Summer 2010

Oil Spills: Common, Even in the Sound

By Larissa Graham

No matter where you go, you can't escape the news of the Deepwater Horizon oil spill in the Gulf of Mexico. The explosion on April 20, not only took the lives of 11 platform workers but also resulted in what seemed an unstoppable flow of crude oil that has already affected Gulf wildlife, habitats, and fishing and tourism industries. The exact flow rate is uncertain, but experts estimate that 35,000 to 60,000 barrels of crude oil were gushing into the Gulf of Mexico each day. While BP tested numerous technical fixes to permanently stop the flow, crews were deployed to protect beaches, wetlands, and estuaries from the oil coming ashore. This incident has left managers, researchers, and communities frustrated and overwhelmed as they try to organize efforts to contain the largest offshore oil spill in US history.

University of California, Davis

Sea turtle experts engaged in the Gulf of Mexico oil spill response clean a small Kemp's ridley turtle with a toothbrush.

Disasters such as this make us look to our own valuable ecosystems and wonder how we would respond in such a situation. Long Island Sound is not like the Gulf of Mexico; our shorelines are not peppered with oil and gas rigs. In fact, there isn't any offshore drilling within Long Island Sound. However, this does not mean that oil spills are not a threat; in fact oil spills are very common in our estuary, too. Believe it or not, according to the Coast Guard there have been 791 reported incidents in the Long Island Sound watershed in the past five years, spilling an estimated 84,940 gallons! This number does not indicate how many gallons ended up in Long Island Sound, however as many of the spills were cleaned up or occurred on land and the oil did not make it to the Sound.

Some of the oil contamination comes from automobile accidents. Just recently, on June 25, an oil spill occurred when a truck driving on I-95 by Mystic, CT, crashed into a guard rail on the bridge. According to the Connecticut Department of Environmental Protection, 150 gallons of diesel fuel and 15 gallons of motor oil spilled onto the bridge and into the Mystic River.

Other oil spills come from leaking pipes within buildings. On June 21, oil was found expelling from a building in Bridgeport, CT About 1500 gallons of fuel had spilled due to a broken fuel line in the building's boiler room and was being pumped into a storm drain that empties into the Yellow Mill River. In a similar case on June 2nd, an oil spill was discovered on the Bronx River in White Plains, NY. Heating oil was leaking in the basement of an apartment building nearby and entering the river through an internal storm sewer that flushes directly into the Bronx River. The spill was estimated to consist of hundreds of gallons of oil that extended three miles down the river before being stopped by booms.

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Oil Spills

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Sound Update provides readers with news about the Sound and the Long Island Sound Study.

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Keeping Oil Contamination Out of Long Island Sound!

The Deepwater Horizon oil spill in the Gulf of Mexico certainly makes us wonder if a similar situation could happen here and, if it did, how we would respond. This issue of Sound Update focuses on oil spills within Long Island Sound, the effect of the Gulf of Mexico spill on our Sound, and our preparedness to handle such events.

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Spills from barges can also be a source of oil pollution. Long Island Sound is an important transportation route for many barges that carry petroleum products into oil terminal facilities located in our harbors and on the Connecticut River. In 2003, a tank barge carrying more than two million gallons of fuel oil ran aground in Long Island Sound, off of Norwalk, CT. It was estimated that about 2,226 gallons of oil spilled into the Sound.

Another source of oil pollution within Long Island Sound comes from the "drip-by-drip" oil spill occurring everyday (see article on page 5). Oil leaking from boats, cars, and heavy equipment can flow into Long Island Sound directly or as it is washed from our roads into storm drains that lead to Long Island Sound. All of these drips add up to some serious pollution!

These oil spills are, of course, dwarfed by the spill that occurred in the Gulf of Mexico. Although we might feel hopeless and helpless about what has happened in the Gulf, we should all learn from this experience in order to prepare for future incidents. Most importantly, we must realize how our everyday actions affect the world around us and take pro-active steps to protect and restore all of our estuaries, including Long Island Sound.

Graham is the Long Island Sound Study Outreach Coordinator with New York Sea Grant in Stony Brook, NY.

Is Oil from the Gulf of Mexico Coming to Long Island Sound?

Jim O'Donnell, Ph.D. is a researcher from the Department of Marine Sciences at the University of Connecticut. His primary research goal is to understand the physical processes that determine the circulation in the coastal ocean. Recently, O'Donnell and his colleagues, Penny Vlahos and Annelie Skoog, traveled to Baton Rouge for a conference to identify gaps in information and determine an effective cleanup plan of the oil spilling from the Macondo Well Site in the Gulf of Mexico. We caught up with this scientist to ask him how the oil from the Macondo Well Site could effect Long Island Sound.

Long Island Sound Study (LISS): How possible is it that the oil from the Gulf of Mexico will reach Long Island Sound beaches?
O'Donnell: While it is well established that water from the Gulf of Mexico is transported by the Florida Current and Gulf Stream along the edge of the continental shelf of the east coast of the United States, it is unlikely, in my opinion, that there will be obvious impacts of oil in the coastal waters of southern New England.

LISS: Will the impact be lessened because the oil will be diluted as it travels up the coast?
O'Donnell: Yes, as the oil moves within the Gulf and in the Atlantic, patches are stretched and twisted by irregularities in the flow. This accelerates horizontal and vertical mixing and leads to dilution. Using a stirrer to create motion in a cup and mix cream into coffee exploits the same principles. A recent simulation of the transport of a dye released at the Macondo Well Site by the National Center for Atmospheric Research suggests that dye would be diluted by factor of about 1,000,000 before it reached New England. Natural oxidation processes would reduce the concentration even more.

On the Web... Where will the oil go?

Watch the video of how oil released at the location of the Deepwater Horizon disaster on April 20 in the Gulf of Mexico may move in the upper 65 feet of the ocean. Visit: www2.ucar.edu/news/ocean-currents-likely-to-carry-oil-spill-to-atlantic-coast

Jim O'Donnell, a researcher from the University of Connecticut, works to understand the physical processes that determine the circulation in the coastal ocean.

LISS: What are some of the complications detecting oil as it travels in ocean currents?
O'Donnell: Crude oil, the type of oil that is spilling from the Macondo Well Site, is a complex mixture of a lot of hydrocarbon compounds and so its behavior in the ocean is very complicated. Dispersants have been added to the oil originating at the well near the seabed since the accident. The dispersants tend to make the oil form small globules and filaments, rather than extensive surface slicks, which accelerate the oxidation processes and will further reduce the chance of detecting oil in New England waters.

LISS: Are scientists concerned that the oil droplets will have an impact on wildlife?
O'Donnell: Yes, many scientists are concerned that there could be significant toxicological impacts of the dispersants and the oil droplets on species that spend time in the Gulf of Mexico and indirect effects on New England species.

LISS: What other impacts might we see from the oil spill?
O'Donnell: Our beaches might witness more tar balls, which are often associated with oil spills. We might see more tar balls in the late summer this year, but since there is little hard data on what is normal, only sophisticated oil "fingerprinting" will be able to detect whether they originated from the Macondo Well Site.

What is a tar ball?

Tar balls form as oil, whether from natural seepage or an anthropogenic oil spillage, is weathered. The small oil molecules evaporate or dissolve in water, leaving the heavier parts of the oil behind and creating a sticky, dark-colored piece of oil the size of a coin. Although not recommended, an occasional encounter with a tar ball will not harm you unless you are extremely sensitive to hydrocarbons.

Preparedness for Coastal Spills

By Robert Burg

Major oil spills of 10,000 gallons or more are a rare occurrence in Long Island Sound. Oil spills close to the scale of the Gulf of Mexico disaster have, fortunately not occurred. But spills do happen here. As a result, an "Area Contingency Plan" for Long Island Sound is in place to help guide the response of federal, state and local authorities.

On the Web...
To read the full Long Island Sound Area Contingency Plan, visit the Coast Guard's Web site at:
http://homeport.uscg.mil
Or, for the direct link,
visit: http://bit.ly/c8x41F

The Area Contingency Plan, prepared by US Coast Guard Sector Long Island Sound spells out which agency takes charge in coordinating the response to spills in the Long Island Sound Area. This includes the Sound, Connecticut and Long Island communities, and the waters south of Long Island up to 200 miles offshore. Inland Westchester, the Bronx, and Queens are guided by an Area Contingency Plan for the New York and New Jersey Harbor area.

Sean D. Elliot/The Day

Firefighters work to extend an oil containment boom across the Mystic River June 25 after a tractor trailer struck a guard rail, rupturing its saddle tank, which then fell into the river.

The plan documents how the Coast Guard works with federal, state and local governments to prepare for and respond to oil spills—from a minor spill on a dock at an oil transport facility to a tanker carrying millions of gallons of oil running aground on a rocky coast. It maps out the responsibilities of agencies and the procedures for mechanical recovery of oil such as the use of deploying booms, development of a protocol on the use of chemical dispersants to reduce oil slicks, shoreline cleanup, protection of sensitive environmental areas, and protection, rescue, and rehabilitation of fisheries and wildlife.

Under the plan, the Coast Guard is the "Federal On Scene Coordinator" coordinating response with different agencies for accidents that occur in the Sound and in the lower part of rivers navigable by large boats. If the accident occurs further upstream, the EPA is the On Scene Coordinator. The Coordinator's job is to determine whether state and community (and the private sector if a company was involved in the accident) response capability is adequate to clean up the spill, or whether federal involvement is necessary. Resources that can be deployed can include Coast Guard vessels such as a 65-foot cutter and fireboats, a Coast Guard "strike team" that specializes in oil and hazardous spills cleanup, contractors with hazardous materials cleanup expertise, technical support from EPA's Environmental Response Team, and scientific support from the National Oceanic and Atmospheric Administration.

The plan also designates a local "Incident Commander." If an oil spill or a hazardous material is released in a Connecticut community, the local fire department is to assume the role of Incident Commander. The Connecticut Department of Environmental Protection (CT DEP), through its Oil and Chemical Spill Response Division, also provides emergency response to mitigate and clean up hazardous material spills and coordinate response between federal coordinators concerned about the spill discharging into the Sound and its tributaries and the local community incident commander. If an oil spill occurs in New York, the New York State Department of Environmental Conservation has the responsibility to respond to occurrences of petroleum and hazardous substance incidents and to proceed with cleanup and removal operations in accordance with environmental priorities. Local fire departments are responsible for responding to any fire hazards resulting from a spill of a combustible material.

The procedures in the plan have been very successful in the past. For example, in January of 2009, the asphalt company, Tri-Ram, reported an oil release into the CT River, near Portland CT. The release came from a storage tank that had a faulty check valve on a pump. Approximatly 6,000 gallons of oil leaked into a secondary containment area. Of that, an estimated 3,000 gallons made it into the CT River through a storm drain. The release, believed to have started a week earlier, was noticed when the operator saw that they went through a month worth of oil in 10 days. They inspected the tank and discovered the oil pool. At that time there was snow on the ground and the river was frozen solid. CT DEP, EPA, local fire departments and the Coast Guard worked together to investigate and supervise the containment and clean up. The facility hired a Bridgeport company to conduct the clean up (costing them more than half-a-million dollars) and agreed to pay $68,400 in penalties for failing to comply with federal regulations designed to prevent oil spills from reaching waterways.

At the time of report the Coast Guard Pollution Investigator was dispatched to the scene and a unified command was established with the contracted clean up company, Coast Guard, CT DEP, and Tri-Ram. Air assets were utilized to take overhead pictures and conduct oversight of the spill area. The source was quickly found and secured. The contracting removal company started removing the oil from the secondary containment area via vac trucks. Initially, it was unknown how much oil made it to the River but the iced and snowed-in shoreline contained the oil. A safety plan was set up due to the icy conditions and vac trucks were used to remove product. Holes were cut into the ice to determine how much had leaked. Booms were deployed along the southern end of the effected river bank and

Continued on page 5.

How Will the Gulf Oil Spill Affect Sea Turtles in Long Island Sound?

By Kimberly Durham

The Long Island Sound is home to four species of sea turtles. Under the Endangered Species Act, the Kemp's ridley and leatherback sea turtles are listed as endangered whereas the loggerhead and Atlantic green sea turtles are listed as threatened. Sea turtles lead highly migratory life cycles with juveniles and adults undertaking extraordinary journeys of thousands of kilometers in their quest to connect feeding grounds to nesting and breeding sites.

The catastrophic event in the Gulf of Mexico and its unprecedented impacts to the environment and wildlife has experts struggling to predict the full impact to sea turtle species that rely on the Gulf for critical developmental, foraging, and reproductive habitats. The majority of sea turtles that have been recovered oiled from the Gulf have been the Kemp's ridley and Atlantic green sea turtles. These species have also historically been the most frequently encountered species rescued from Long Island Sound's beaches.

On the Web...

To learn more about the Riverhead Foundation for Marine Research and Preservation's Marine Mammal and Sea Turtle Rescue and Research Programs or to learn how you can support the work of the Riverhead Foundation down in the Gulf of Mexico please visit www.riverheadfoundation.org. To report an injured, sick or deceased marine mammal or sea turtle please call the Riverhead Foundation's Hotline at 631-369-9829.

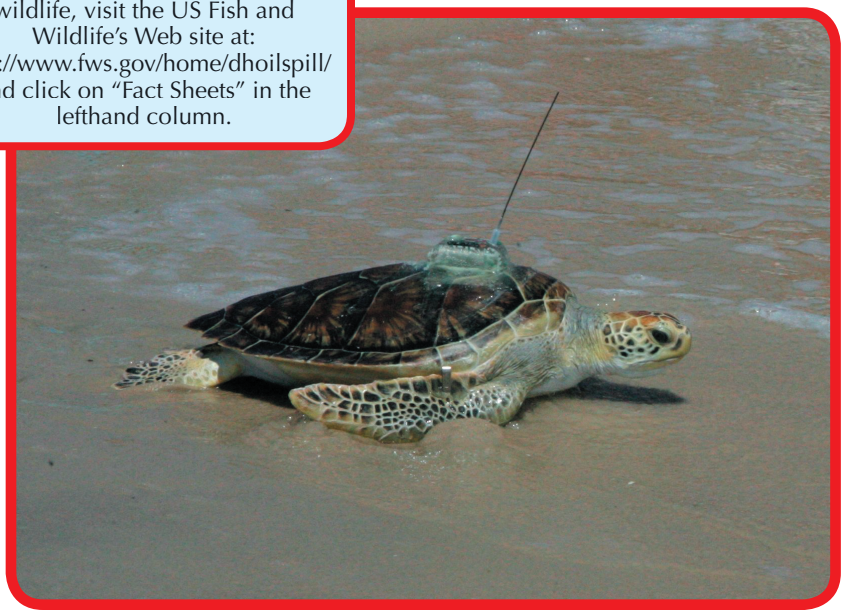
Sea turtles are at risk from oil spills due to their decreased avoidance behavior in oiled waters and a predilection to feeding in convergence zones where oil can accumulate. Sea turtles must also surface frequently to take a breath of air, which exposes them to volatile chemicals during inhalation. Inhalation of chemicals associated with the oil or dispersants can result in the irritation of respiratory tissues as well as pneumonia. Ingestion of these harmful substances can result in inflammation and ulceration of the gastrointestinal tract. Absorption of inhaled or ingested contaminants can lead to the damage of vital organs such as the liver or kidney, which if left untreated may result in the death of the animal. Long term chronic effects of oil contamination can result in immune suppression and decreased reproductive success which could ultimately reduce the numbers of juvenile sea turtles in local waters.

Satellite tracking technology has unraveled some of the mysteries of sea turtle migrations along the US eastern coastline and has become an invaluable tool for investigations focused on these migrant species. The Riverhead Foundation for Marine Research and Preservation's Director and Senior Scientist, Robert DiGiovanni Jr., has implemented this technology over the last five years to investigate coastal movements of sea turtles within Long Island Sound and the Atlantic Ocean. This work has highlighted the connectivity between local marine resources and the coastal waters of Southeastern United States.

The trek of one juvenile Atlantic green sea turtle named "Louie" offers a unique perspective on the connectivity between the waters of Long Island Sound and South Florida. Louie was rescued from Southold Town Beach on November 24, 2007. At the time of his arrival to the Riverhead Foundation's hospital facility, Louie was diagnosed as cold stunned with an internal temperature of 42 degrees Fahrenheit (approximately 30 degrees below normal). On August 16, 2008 Louie was released from Westhampton Beach and equipped with a satellite-linked transmitter; called a PTT (Platform Transmitter Terminal). Louie was tracked for the next 207 days and traveled a remarkable 2301 km against winds and ocean currents to South Florida. Louie's amazing journey is foreboding when one considers how the disaster in the Gulf of Mexico may affect Long Island's endangered and threatened sea turtle populations.

More on wildlife...

For more on how oil spills affect wildlife, visit the US Fish and Wildlife's Web site at: http://www.fws.gov/home/dhoilspill/ and click on "Fact Sheets" in the lefthand column.



Riverhead Foundation

Louie, the Atlantic green sea turtle, equipped with a satellite tag affixed to the shell, was released at a Westhampton Beach and, over 207 days, traveled a remarkable 2301 km to South Florida.

The Riverhead Foundation for Marine Research and Preservation currently has staff members in the Gulf of Mexico assisting wildlife search and rescue response teams through the Wildlife Branch Marine Mammal and Sea Turtle Unit of the Unified Command for the Deepwater Horizon Oil Spill. Riverhead Foundation staff members are assisting NOAA Fisheries with on water operations involved with the capturing, examining, cleaning, and transfer of oiled sea turtles to rehabilitation facilities.

Sea turtles are considered by many as "ambassadors" of the oceans. They recognize no state, regional or country boundaries and through their unique ability to travel great distances can unite local and international coastal regions. The effects of this environmental and ecological disaster on our local sea turtle populations are far from being fully examined or understood. These impacts may, however, last for decades and for species such as the critically endangered Kemp's ridley sea turtle, may lead to long-term population loss.

Durham is the Rescue Director for the Riverhead Foundation in Riverhead, NY.

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a spread zone was established. Contaminated ice and snow was removed and sorbent pads were placed along the shorelines. Due to freezing conditions, much of the oil removal in the water consisted of scraping contaminated ice into sections for easy removal to trucks for disposal. As the temperatures rose, clean up teams monitored boom effectiveness and discovered no sheening outside the booms occurred, skiffs were then used with sorbent pads to recover what was left.

Although large oil spills are rare in Long Island Sound, our "Area Contingency Plan" directs federal, state, and local authorities to ensure a plan for a quick, efficient response.

Burg is the Communications Coordinator for the Long Island Sound Study and works for the New England Interstate Water Pollution Control Commission in Stamford, CT.

The Oil Spill in Our Backyard

By Jack Schneider

Depending upon the date and source, for three months somewhere between 1.5 and 4.2 million gallons of oil poured from a mile-deep well, threatening to contaminate marine and coastal habitats in the Gulf of Mexico and beyond. This big, spectacular ecological and financial disaster has been the center of attention for months.

However, there is a more insidious and widespread oil spill—largely unnoticed—right in our own neighborhoods. Across the country, according to a 1991 survey by Perdue University cited on the U. S. Geological Survey website, over half of a million gallons of oil are being "spilled" each day across the country by each of us, our families, friends and neighbors. A National Academy of Sciences study released in 2002 indicates that half of this amount, or a quarter of a million gallons, is being improperly discarded here in the Northeast, between Maine and Virginia—including the Long Island Sound watershed. Some of this oil is trapped in the ground but much of it ends in the ocean, contributing to the estimated 25 million gallons being released to the sea annually, according to the study.

Judy Preston

Fix those drips!
Oil accumulates on hard surfaces and then is washed into the Sound or other water body during the next rain storm.

Did you know?

Recycling just two gallons of used oil can generate enough electricity to run the average household for almost 24 hours? Visit www.recycleoil.org for more information and a list of places that recycle motor oil in your neighborhood.

Where does this oil come from? Often, it comes from "do it yourself" oil changers who let oil drain onto the ground or into storm drains. In addition, used motor oil discarded in the trash can spill during pick-up and transport or when it goes to landfill. In all these cases, oil can seep into ground and surface waters (which we drink!) and flow downstream into the Sound. This has been happening day after day, week after week, year after year. The cumulative volume from this homemade oil spill dwarfs BP's.

Although many of us feel helpless to act on the BP disaster, you and I can do something about the drip by drip oil spill that affects Long Island Sound every day. If you change your oil or see someone changing oil, be sure it gets disposed of properly. Many auto parts stores and municipalities will accept and recycle used oil. Contact your town for household hazardous waste collection events or visit Earth911.org for a list of oil collection sites.If you see a dark oil spot beneath your car then fix the leak! If you know someone who drives a car that drips oil or gas, let them know that as little as four quarts of oil or gas can pollute a million gallons of water, including the water we drink!

Disposing and controlling the half a million gallons of oil that spill into our water each day won't go away unless everyone helps!

Schneider is the Curator of Animals and Director of Education at The Maritime Aquarium in Norwalk, CT.

Envisioning Millions

Millions of gallons seem to be a lot but what does it mean to us? We need an everyday measure to understand. We have a sense of the amount of rice in a one-pound bag—about 29,000 grains of long-grain rice, according to Producers Rice Mill. Using the estimate from the U. S. Department of Energy in the table to the right, if grains were gallons, the rice in a one-pound bag would represent about the same number of gallons that was pouring from the BP pipe every half hour. Imagine pouring 48 lbs. of rice from a container to the floor and then having to clean up!

Sources of Oil (and estimated volumes)	Gallons, daily	Pounds rice
Homemade: United States	0.5 million	17
Homemade: Maine to Virginia	0.25 million	8.5
BP Oil Spill (US Dept. Energy est.)	1.47 million	48
BP Oil Spill (BP worst-case est.)	2.52 million	87
BP Oil Spill (Experts worst case)	4.2 million	145

The Citizen Role in Spills and Other Issues

By Damian Griffin

In November 2009, a Con Ed transformer ruptured after a fire, and a faulty containment system allowed thousands of gallons of mineral oil to flow through the storm sewers and into the Bronx River, two miles away. The current carried the oil five miles downsteam, where a Bronx River Conservation Day was scheduled for that afternoon, and beyond—past hastily placed sorbent booms meant to absorb the oil in slow-moving water. A lack of hands-on knowledge of the river left responders placing booms where vehicle access was easy rather than where oil was likely to be contained.

The smell was noticeable before we reached the river, and looking down from Burke Bridge we could see the sheen flowing downstream. We decided to make a quick change in our plans due to the oil spill. The Bronx International students were broken up into groups, provided data sheets and a GPS unit, and charged with finding areas along the river bank where oil was pooled and could be recovered. conservation effort was turned into a rescue effort of sorts.

Bronx River Alliance

A sorbent boom is used to slow the spread of oil during the November 2009 oil spill on the Bronx River.

On the Web...

Check out the Bronx River Alliance's BLOG at: http://bronxrivereducation.edublogs.org/ to learn more about the work taking place on the Bronx River!

The data that the students collected was immediately transmitted to the New York State Department of Environmental Conservation Region 2 Spill Response Coordinator who used the information to help responders contain and recapture the oil. The youth not only used scientific methods and technology in a real world context, but effected change in an ongoing effort.

Though not the usual form of citizen science that is practiced by the Bronx River Stewards, which is part of the Bronx River Alliance Education program, having concerned people monitoring the Bronx River on a regular basis made this response possible. The Alliance-trained Stewards are mostly attached to local schools and organizations and use protocols to collect data such as dissolved oxygen, pH and turbidity. Data collection is used as a teaching tool and also provides much needed "eyes" on the River. Since the spill, teachers at Banana Kelly High School have been collecting macroinvertebrate data to gauge any possible long-term effects. Though sometimes disparaged as not being scientifically rigorous enough, citizen science—when the only information available—becomes quite valuable.

A similar spill occurred recently this past June in White Plains, NY, when a storm sewer system carried 200 gallons of heating oil into the Bronx River. This spill was undetected until a jogger reported a strong smell near the river. Occurring in slow moving water, the oil was contained before it traveled downstream. Some water pollution issues are much larger than we are able to grapple with, but we do our best to impart the importance of observation and notification as monitoring tools to our volunteers and community members. Monitoring programs, like the Bronx River Stewards, give citizens an opportunity to participate in research that matters to their communities and provide a clearer perspective to when there is a change in the river, be it positive or negative.

Griffin is the Education Director for the Bronx River Alliance in the Bronx, NY.

More about the Alliance...

The Bronx River Alliance is a nonprofit organization that partners with the New York City Department of Parks & Recreation to work towards the rehabilitation of the Bronx River and its environs, and act as a support and partner for over 100 other community-based organizations that share common goals for improving the river. Visit them at: www.bronxriver.org

Bronx River Alliance

A young cyclist points to an oil slick from the November 2009 oil spill on the Bronx River.

Spotlight: Senator Charles Schumer

Position: US Senator for New York
Party: Democrat
First appointed: 1998
Now serving: 2nd term
Education: Harvard College and Harvard Law School
Birthplace: Brooklyn, NY

Senator Schumer's Office

Q. What are the issues related to Long Island Sound that most concern you?

A. The Long Island Sound has arguably been one of the most important economic and environmental resources in New York for over 200 years. From the early American colonial era to the present day, the Sound has produced the seafood we eat and the recreation that keeps New York's economy strong. But this has come at a price. With development and growth have come grave environmental challenges that have brought the ecosystem of the Sound to near collapse. Thankfully, the significant investments we've made in wastewater upgrades and ecological restoration that have started to turn the tide and the Sound is rebounding. We need to continue to address the stormwater and sewage issues and work to preserve open space along the Sound.

Q. How have you been supporting the protection of Long Island Sound?

A. In the 2010 budget, I worked with my Congressional colleagues to secure over $7 million for Long Island Sound, a significant increase compared to previous years. This year, the Long Island Sound Restoration Act expires, and the Long Island Sound Stewardship Act expires next year. With my Senate colleagues, I introduced The Long Island Sound Restoration & Stewardship Act, which combines the two separate programs and authorizes them through 2015 at $325 million over 5 years. This legislation includes new areas of concentration including climate change adaptation, sea level rise and resource management.

Long Island Sound Study Thanks Yarish for 14 Years of Dedicated Service to the STAC

Charles Yarish, PhD, a professor for the Department of Ecology and Evolutionary Biology at the University of Connecticut has stepped down after 14 years of dedicated service as the Long Island Sound Study Science and Technical Advisory Committee (STAC) Connecticut co-chair.

Yarish was a founding member of the Science and Technical Advisory Committee and has been making important contributions to scientific research in Long Island Sound for several decades. His recent projects have included investigating bait worm packaging as a vector for invasive species, serving on the organizing committee for the International Workshop on Bioextractive Technologies for Nutrient Remediation, and other bioextraction initiatives in Long Island Sound.

The STAC provides objective scientific and technical guidance for the restoration and protection of Long Island Sound. Carmela Cuomo, Ph.D., a professor at the University of New Haven and coordinator of their marine biology program has been voted in as the new STAC Connecticut co-chair. Cuomo has also been involved in research related to Long Island Sound for many years. Her most recent projects include an investigation of recurring hypoxia in Smithtown Bay and exploring potential biofuels produced from Long Island Sound algae.

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www.seagrant.uconn.edu
www.ct.gov/dep
www.dec.ny.gov

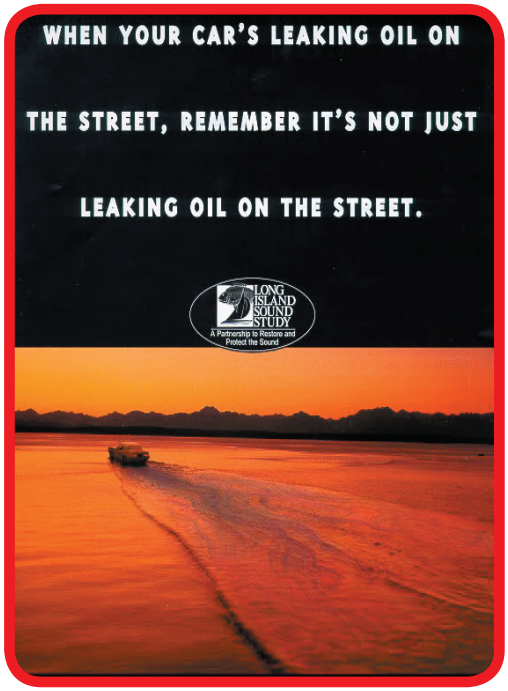
"What Can I Do?"

Simple ways to keep oil out of our Sound.

1 Fix those leaks. Keep an eye out for oil leaking beneath cars and from heavy equipment. Remember, oil leaking onto our streets will be washed down storm drains and into the Sound during the next rain storm. Also, maintain your boat to not leak oil into Long Island Sound or other waterbodies. Scientists estimate that four quarts of oil or gas can pollute a million gallons of water, so fix and prevent those leaks!.

2 Recycle used motor oil. Get your oil changed by a professional or, if you are going to do it yourself, make sure you properly dispose of the oil. Never pour motor oil on the ground, down a storm drain (it's illegal in CT and NY), or in the garbage. Instead, recycle used oil!

3 Think about all chemicals. Oil isn't the only contaminant that can affect Long Island Sound. Be sure to dispose of all household and yard chemicals properly (Visit Earth911.org for collection events in your area) and never pour toxic wastes, chemicals, or any medications down the toilet or drain. Your wastewater goes to a sewage treatment plant, cess pool, or septic tank—none of which can remove all contaminants from the water before it is released into the ground or Long Island Sound!



When oil leaks from our cars onto streets and driveways, it is washed into nearby storm drains andeventually makes its way into lakes, streams, and Long Island Sound. Picture the number of cars in your area and imagine the amount of oil that finds its way from leaky gaskets into our waterways. So please, fix oil leaks and never dump motor oil or other engine fluids down storm drains or onto the ground.

On the Web...
For more information about the oil spill in the Gulf of Mexico and volunteer opportunities, visit the following Web sites:
www.epa.gov/BPSpill
www.deepwaterhorizonresponse.com
www.gulfseagrant.tamu.edu/oilspill/index.htm

4 Wait until after the rain. Never have your driveway sealed before or during a rain event. Chemicals from the sealant can runoff and end up in the closest waterbody. Also, only use licensed contractors to do such work to protect both yourself and your environment.

5 Reduce your oil dependency. The best way to prevent oil spills is to reduce the amount of oil that we use in our everyday lives. Buy local, leave your car at home (instead walk, bike, use mass transit, or carpool), turn off those appliances when not being used, and use low-energy products.

6 Recycle your plastics and paper. You might not connect recycling with oil, but the simple act of putting those recyclables out each week can reduce oil consumption. Recycling one ton of plastic bottles reduces oil consumption by 1.8 tons and, recycling one ton of paper, saves 380 gallons of oil—enough to drive a car 1,260 miles!

7 Donate to the Gulf. To donate your time, call the Deepwater Horizon Response Volunteer Request Line or make a cash donation to a reputable organization that is working in the Gulf. See the "On the Web" box above for more great Web sites with more information!

8 Volunteer for the Sound! Long Island Sound is home to many migratory animals that live part of their lives in the Gulf. Do your part at home and make sure these stressed animals have a clean, safe home in Long Island Sound. Visit www.longislandsoundstudy.net and click on the "Volunteer for the Sound" link for opportunities near you.

Long Island Sound Study
c/o New York Sea Grant
146 Suffolk Hall
Stony Brook University
Stony Brook, NY 11794-5002

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