

Sound *UPDATE*

Newsletter of the Long Island Sound Study

FALL 2008

Connecting Stormwater to the Health of Long Island Sound

By Sarah Deonarine and Mark Parker

The health of Long Island Sound (LIS) is inextricably connected to the health of the watershed that surrounds it. Keeping a watershed, the area of land that drains into a common outlet such as a river, lake, bay or ocean, free of pollution is extremely important to the health of the entire ecosystem. Two types of pollution plague watershed health, "point source" and "nonpoint source" pollution. Point source pollution is pollution that comes from a single, identifiable source, such as a sewage treatment plant discharge pipe. This type of pollution is relatively easy to locate and control. Nonpoint source pollution, however, cannot be attributed to an identifiable, single point because it is the accumulation of many small pollution sources that enter the ecosystem from diverse and often unseen locations.

Stormwater "runoff" is the term given to precipitation as it flows over the surface of the land on its way to a water body. Runoff, which is not absorbed and filtered by the ground, has the potential to collect nonpoint source pollution on the ground and become contaminated as it travels downhill through a watershed. This water is not absorbed by the ground because the soil is either already saturated with water or is covered with an "impervious surface," or an impenetrable material. Structures with impervious surfaces include roadways, rooftops, sidewalks, driveways, and parking lots. Research has shown that water quality in surface waters is related to the amount of impervious surface cover in a watershed. Poor water quality occurs when impervious surfaces cover 25 percent or more of the watershed, allowing runoff to move pollutants into the receiving water body.

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Learn how you can reduce polluted runoff, see page 8.

Eileen Keenan



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Sound Update is published to inform the public about issues pertaining to the Long Island Sound Study.

"If it goes on the ground, it goes in the Sound"

Think of all of the pollutants that you see caught in storm drains: plastic bottles, discarded cans, cigarette butts, leaves, and other debris. Do you know what happens to this trash? Many residents believe that water that flows into storm drains goes to a treatment plant where the debris is removed. This is not the case. Water that enters storm drains flows directly to Long Island Sound, carrying all of the pollutants with it.

What about the pollutants that you cannot see? Rainfall, snowmelt, and even water from your sprinkler can become polluted as it flows over surfaces and collects substances such as excess fertilizer, pesticides, oil, and gasoline. This polluted runoff then flows into the nearest storm drain or water body, or soaks into the ground. This stormwater ultimately carries pollutants into Long Island Sound.

This issue of Sound Update focuses on Sound-friendly ways to have a beautiful lawn and healthy garden while reducing the amount of contaminants that contribute to the nonpoint source pollution that flows to Long Island Sound.

Organic Approaches to Home Vegetable Gardening

By Kimberly Stoner

Vegetable gardening is increasing in popularity as the cost of food rises, and as people recognize the benefits of eating local food: freshness, nutrition, flavor, and knowing where your food comes from. Growing your garden organically reduces the risk of exposure to pesticides for you and your family and also reduces the risk of pollution from pesticides and highly soluble synthetic fertilizers to Long Island Sound.

First, take care of the basics. Pick a garden site with plenty of sun and access to water for irrigation. Start building up your soil with organic matter. Find or make compost and add it to your soil. Turn in fall leaves if you have them. Then, get your soil tested. Adjust the acidity of your soil, as recommended, by using limestone. Then, use natural fertilizers to slowly release the nutrients you need.

As your seeds or transplants grow, you will see that each vegetable species has its own array of insect pests and diseases. Identifying the pest or disease will help you find information about how to manage it organically. Some good resources for identifying pests and disease are: the Resource for Organic Insect and Disease Management at www.nysaes.cornell.edu/pp/resourceguide, the Plant Pest Handbook at www.ct.gov/caes, and Vegetable MD Online at vegetablemdonline.ppath.cornell.edu.



Kimberly Stoner

Row covers help to keep pests like flea beetles, cabbage maggots, and imported cabbageworms from colonizing the plants, such as the turnips shown above.

When fertilizing your lawn... don't guess!

Soil testing determines the acidity level, the amount of available nutrients (such as phosphorus, potassium, calcium, and magnesium), and the content of organic matter of the soil in your lawn or garden areas. Proper levels of each of these indicators are important to keep plants healthy and drought and disease resistant.

Remember, when it comes to fertilizer, more is not better. Plants can only absorb a certain amount of nutrients. Excess fertilizer that is not absorbed by your lawn or garden will be carried away with the rain and end up in Long Island Sound!

To get your soil tested, contact:

Connecticut:

Soil Nutrient Analysis Laboratory
University of Connecticut, Storrs, CT
860.486.4274 or www.soiltest.uconn.edu

New York:

Nutrient Analysis Laboratory
Cornell University Ithaca, NY
607.255.7656 or cnal.cals.cornell.edu

Organic Methods of Control for the Home Vegetable Garden:

- 1. Screen out the pests.** Row covers (such as Reemay®) let in light, air, and water, but keep pests from colonizing the plants. These are especially useful early in the season to protect vulnerable seedlings.
- 2. Handpick the pests.** Many vegetable pests are easy to see and remove, as long as you are committed to spending the time. Some examples: Colorado potato beetles, Mexican bean beetles, Japanese beetles, squash bug eggs, imported cabbageworms, and tomato hornworms.
- 3. Change the time of planting.** Plants in the cabbage family (broccoli, cauliflower, turnips, many Asian greens) planted early in May are attacked by cabbage maggots in the roots and flea beetles on the leaves. Consider planting these in early August for fall harvest.
- 4. Choose resistant varieties.** Many vegetable varieties have been bred for resistance to common plant diseases (see Vegetable MD Online for lists). Some are resistant to insects, too. Butternut squash is resistant to squash vine borers. 'King Harry' potatoes are resistant to potato leafhoppers and other varieties have tolerance to their damage as well.
- 5. Use low toxicity sprays.** *Bacillus thuringiensis* products (such as Dipel®) are very effective against a wide variety of caterpillars. Insecticidal soaps work on aphids and other small, soft bodied insects. Neem products are most effective when used against immature stages of insects. There is good information about organic materials in the Resource Guide for Organic Insect and Disease Management, including results of university tests for effective control.

Stoner is an Associate Scientist at the Connecticut Agricultural Experiment Station in New Haven, Connecticut.

Rethinking Plant Selection for the Sustainable Home Landscape: Going Native

By Carl A. Salsedo

Native plants, also called indigenous plants, have evolved over hundreds or thousands of years in a particular region. They have adapted to the geography, hydrology, and climate of the region and to the other species of plants and animals inhabiting that region. As a result, native plants are part of a community that provides habitat (food and shelter) for a variety of native wildlife species, beneficial insects, and pollinators such as butterflies. Native plants, when used in home landscaping, provide the ecological benefit of supporting local wildlife while requiring minimal maintenance due to their adaptation to local climate and soil conditions.

The native plants of North America have not traditionally been popular in American gardens. Only recently have they become more mainstream.



Carl Salsedo

Native plants, such as this shadblow, make great additions to any landscape and are also better for the local environment.

Native plants worthy of consideration in your landscape:

SHRUBS FOR DRY SUNNY AREAS

- Bayberry (*Myrica pensylvanica*)
- Low bush Blueberry (*Vaccinium augustifolium*)
- Ground Juniper (*Juniperus communis*)
- Sweet fern (*Comptonia peregrina*)

SHRUBS FOR MOIST AREAS

- Dogwoods (*Cornus* spp.)
- Elderberry (*Sambucus canadensis*)
- High bush Blueberry (*Vaccinium corymbosum*)
- Shadblow (*Amelanchier canadensis*)
- Swamp azalea (*Rhododendron viscosum*)
- Sweet Pepperbush (*Clethra alnifolia*)
- Viburnums (*Viburnum* spp.)
- Winterberry (*Ilex verticillata*)
- Witch Hazel (*Hamamelis virginiana*)

SHRUBS FOR SHADED SITES

- Hazelnut (*Corylus americana*)
- Mountain Laurel (*Kalmia latifolia*)

WOODY PLANTS FOR ATTRACTING WILDLIFE

- Black Cherry (*Prunus serotina*)
- Choke Cherry (*Prunus virginiana*)
- Eastern Red Cedar (*Juniperus virginiana*)
- Eastern Hemlock (*Tsuga canadensis*)
- Flowering Dogwood (*Cornus florida*)
- Hickories (*Carya* spp.)
- Northern White Cedar (*Thuja occidentalis*)
- Oaks (*Quercus* spp.)
- Walnuts (*Juglans* spp.)
- White Pine (*Pinus strobus*)

Early gardeners preferred the clipped yew hedges and tidy flowerbeds of Europe, signifying man's control over nature, to the wild untamed trees and flowers of nearby forests. However, native plants did have some supporters. Nearly a century and a half ago, while living on the shores of Walden Pond in Concord, Massachusetts, Henry David Thoreau came to know the forest, meadows, trees, and herbs in all their seasonal moods. His writings celebrated the beauty of native plants and the natural landscape.

Today, there is a renewed interest in incorporating native plants, in part due to a backlash against invasive exotic plants and to an increased awareness of the untapped beauty of many indigenous plants. Landscaping with native plants contributes to conservation landscaping and to sustainable landscapes in many ways.

Benefits of Native Plants:

- 1. Native plants are adapted to live in local conditions** and support the local ecosystem. They provide food and shelter for birds, butterflies, and other desirable wildlife.
- 2. Native plants stay put**, unlike non-native species that often spread rapidly and crowd other plants. Native species are members of a community that includes other plants, animals, and microorganisms. A natural balance keeps each species in check, allowing it to thrive in suitable conditions but preventing it from running amok. Native species rarely become invasive unless a major disturbance disrupts the natural balance of the community.
- 3. Native plants are interesting.** The diversity of native plants includes interesting flowers and foliage. Native trees and shrubs provide a variety of heights, shapes, and textures in the landscape. Many provide winter interest with their bark or seedpods. Native plants also have historical and cultural interest. Some of these plants played a role in Native American culture or in European exploration and settlement of the continent. Many species have

value as food or medicine. Others have been used for rope and twine, fabrics, dyes, and other domestic purposes. Native plants provide the people of today with a tangible link to the past.

Salsedo is an Extension Educator in Sustainable and Environmental Horticulture at the University of Connecticut.

On the web...

Want to know more about these native plants?

Search the USDA PLANTS database at: www.plants.usda.gov/

CUT IT OUT!
Bring this list with you next time you are shopping for plants!



Continued from page 1.

Anything that ends up on the ground from human activity may end up traveling to LIS in either stormwater runoff or in groundwater infiltration. Examples include: automotive oil and grit from roadways, excess fertilizers and pesticides from lawns, cigarette butts and other trash, soap from car washing, pet waste, and soil particles from construction sites. Other pollutants (such as bacteria and toxic chemicals) can also adhere onto soil particles and be carried to LIS. This untreated runoff enters LIS leading to decreased water quality, aquatic habitat loss, and decreased diversity in aquatic life. Increased nutrients carried by surface waters or groundwater may lead to algal blooms, which can contribute to low dissolved oxygen in bottom waters, a major issue in the western LIS.

Two primary ways we can reduce polluted runoff is, first, to reduce the amount of stormwater runoff from our developed (impervious) land areas and, second, to reduce the amount of nonpoint source pollution on the land surfaces. For reducing stormwater runoff, we can use construction practices, such as Low Impact Development (LID). LID uses storm water Best Management Practices (BMPs) to reduce the amount of surface runoff during storms. These include rain gardens and grassy swales to collect and percolate storm water. Old and new pavement technologies are being utilized to create 'pervious' surfaces allowing water to seep through and into the ground below. Examples include cobble or brick pavers for driveways and sidewalks and pervious asphalt for parking lots and roads. These all help to reduce flooding and surface runoff, allowing the ground to filter and slowly release stormwater to local water bodies.

The problem of nutrient pollution from nonpoint sources is up to us as individuals to solve. Like phosphorous, which is the primary nutrient causing algal blooms in fresh water (see the Lake Champlain article, page 6), nitrogen is the primary nutrient causing algae to grow in brackish and salt water systems like Long Island Sound. The other articles in this newsletter provide suggestions for how you can reduce nonpoint source pollution from your home and yard.

Deonarine is the Long Island Sound Study Coordinator for the New York State Department of Environmental Conservation. Parker is the Long Island Sound Study Outreach Coordinator for the Connecticut Department of Environmental Protection.



Our watershed (shown in green). All water in this area, including polluted runoff, eventually drains into Long Island Sound.

Fertilizer Reduction in New York

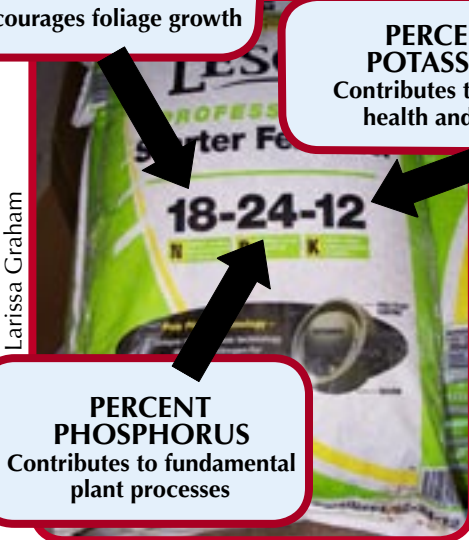
By Larissa Graham

According to a County legislative report, 15 community public supply wells and ten percent of private wells in Suffolk County exceeded the maximum contaminate level for nitrates in 2006. In response to this and other environmental concerns, Suffolk County Executive Steve Levy and local environmental organizations in Suffolk County created a Comprehensive Fertilizer Reduction Plan to reduce the amount of nitrogen-based fertilizers that are applied to Suffolk and residential properties. This plan was passed into law by Suffolk County in January 2008 and, if successful, could reduce the amount of nitrogen leached into ground and surface waters by 25 percent.

PERCENT NITROGEN
Encourages foliage growth

PERCENT POTASSIUM
Contributes to overall health and vigor

Larissa Graham



What's with the label? This bag of fertilizer contains 18% nitrogen, 24% phosphorus, and 12% potassium. The remaining percent is comprised of other nutrients and filler.

The plan includes banning fertilizer application between November 1st and April 1st when the ground is usually too cold for plants to absorb nutrients, allowing the nutrients to leach into groundwater and surface waters. Fertilizers cannot be applied to any county properties, except golf courses, athletic fields, and the Suffolk County Farm in Yaphank. Golf courses will be restricted to only use slow-release fertilizers, applying 3 pounds of nitrogen per 1,000 square feet.

Best management practices will be used for nutrient management on the Suffolk County Farm. Educational programs will also be expanded to promote more sustainable methods to apply fertilizer. All licensed landscapers will be required to take a turf management course about proper use and application of nitrogen and methods to control leaching. Lastly, all stores that sell fertilizers will be required to post signs to advise consumers about the negative impacts of fertilizers and to help them choose fertilizers that are safer for the environment.

In response to Suffolk County's new legislation and other environmental concerns, Nassau County has also released new recommendations for fertilizing lawns. It is suggesting that residents only fertilize their lawns two or three times a year, specifically in late May (Memorial Day), early September (Labor Day), and late November (Thanksgiving). Recommendations also include using a slow-release fertilizer and only applying one-pound of nitrogen each time for every 1000 square feet of lawn.

Graham is the Long Island Sound Study Outreach Coordinator for New York Sea Grant.

Natural Lawn Care:

Focus of “Green Fields, Clean Water” Program

By Patti and Doug Wood

Turf pesticides and synthetic fertilizers may give you a lush, green, weed-free lawn, but these products take a significant toll on the environment, particularly on marine ecosystems. Lawn pesticides and synthetic fertilizers find their way into runoff, which flows into streams, rivers, and bays that feed Long Island Sound.

“Lawn pesticides” is a catch-all term that includes herbicides, insecticides, and fungicides. Of the 30 pesticides most often used in lawn products, 24 are known to be toxic to fish, even in small amounts. Less understood is the effect of sub-lethal exposures, but recent studies show that some pesticides may alter hormones and disrupt sensitive developmental processes in marine wildlife.

Synthetic lawn fertilizers are typically water soluble, so they are easily dissolved in stormwater runoff and carried to local waterways. Many common brands contain high levels of phosphorus and nitrogen, which promote algae blooms that can starve water of oxygen and drastically alter the normal balance of marine ecosystems.

So what do you do if you want a great looking lawn, but want to protect the environment as well? These days, many municipalities, institutions, corporations, and individual homeowners are opting for natural lawn care. Natural or “organic” lawn care relies on the basic fundamentals of soil biology to create lush, resilient lawns that are naturally resistant to weeds, pests, and drought. They’re completely safe for kids, pets, and every other living thing, and, once they’re established, they’re less expensive to maintain than chemically-maintained lawns.

A typical natural lawn program begins with a soil test to determine the basic chemical make-up of the lawn and identify missing nutrients. The soil test may have indicated the need for fertilizer. Organic fertilizers are made of all natural ingredients, and are formulated to break down through the process of microbial action, rather than the presence of water. As a result, they contribute much less to stormwater contamination than their synthetic cousins. The soil test will also reveal the degree of compaction of the soil. Compaction results from athletic use, repeated foot traffic or machinery, and is the number one enemy of turfgrass (roots of grass plants don’t actually grow in the soil, they

grow in the air space around soil particles!). To relieve compaction, a mechanical process called aeration is used to punch holes in the ground, loosening soil and introducing air into the sub-soil. This process also provides a “window” into the soil, allowing moisture and nutrients to penetrate below the compacted surface and promote deeper root growth.

Compost “top dressing” is the process of spreading compost directly on the surface of a lawn to promote microbial activity and increase its organic matter percentage. For lawns in transition from a chemical to natural program, this process may need to be repeated as often as twice a year until the amount of organic matter is sufficient to sustain the lawn. Also, to keep lawns healthy and lush, a new crop of grass plants should be seeded regularly, right on top of the existing lawn. This technique of “over-seeding” fills in bare spots and provides a constant supply of vigorous new plants.

These natural lawn care techniques can be used on any lawn, from private homes to corporate headquarters to football fields. While natural lawns may require a little more care at first than chemically-treated lawns, once established they are virtually indistinguishable.

For several years, Grassroots Environmental Education has been conducting the “Grassroots Healthy Lawn Program,” a highly successful pesticide reduction and public awareness program which has been recognized with awards from the Environmental Protection Agency and the Westchester County Board of Health. The program has trained hundreds of Westchester and Long Island landscapers in the science of natural or organic lawn care.

This year, Grassroots has initiated the “Green Fields, Clean Water” program, a comprehensive educational program designed to help municipalities bordering Long Island Sound and the Hudson River learn more about maintaining turf on public property without synthetic fertilizers or chemical pesticides. Among the goals of the program, which is conducted in partnership with Westchester County, is the desire to limit nonpoint source pollution.

“Nonpoint source pollution, including the runoff of lawn and garden pesticides into Long Island Sound and the Hudson River, is a major environmental concern,” says Pete Grannis, New York State DEC Commissioner. “I commend Grassroots Environmental Education for initiating this important educational program.”

The “Green Fields, Clean Water” program provides a full day of professional instruction by nationally-recognized natural turf expert Chip Osborne. Courses will be given at various locations in Westchester, and are open to public works managers and personnel, groundskeepers, parks department employees, local school facilities directors, and private landscapers performing contract work for municipalities or schools. The program is made possible in part by a generous grant from the Westchester Community Foundation. For more information, contact Grassroots’ Westchester office at (914) 422-3141 or the Long Island office at (516) 883-0887.

The Woods’ are the principals of Grassroots Environmental Education, a non-profit organization based in Port Washington, NY.



Doug Wood/Grassroots

The warning sign. A pesticide warning sign at a waterside home.

Don't "P" on Your Lawn in the Lake Champlain Watershed

By Colleen Hickey

Nonpoint source runoff, a bugaboo for nearly every watershed in the nation, including Long Island Sound (LIS) and Lake Champlain, is challenging for municipalities. Unlike LIS, whose main nutrient of concern is nitrogen, in Lake Champlain's freshwater ecosystem, phosphorus or "P" is a leading contributor to water quality degradation. Phosphorus is a nutrient found in most lawn and garden fertilizers. When fertilizers run off into waterways, they feed unsightly, smelly, and potentially toxic algal blooms.

A June 2008 State of the Lake report released by the Lake Champlain Basin Program indicated that, while steady progress has been made to reduce phosphorus loads from wastewater treatment plants in the New York, Vermont, and Quebec portions of the Lake Champlain watershed, about 90% of the remaining total phosphorus load comes from nonpoint sources. This includes runoff from roads, rooftops, storm drains, fertilized lawns, eroding riverbanks, and agricultural sources. A 2007 land use study further estimated that developed land contributed about 46% of the phosphorus runoff basin-wide to Lake Champlain. Encouraging homeowners, businesses, and local municipalities to switch to phosphorus-free lawn fertilizers is one step to help reduce urban contributions.

"Don't 'P' on Your Lawn" is a coordinated campaign launched by the Lake Champlain Basin Program, Cornell Cooperative Extension, the Lake Champlain Committee, the Vermont Agencies of Agriculture and Natural Resources, and the Lake Champlain Sea Grant/University of Vermont Extension program. In 2006, these groups began pooling resources to create a coordinated outreach message. In addition to promoting the phosphorus free fertilizer, the group has created other tips for "Green Lawns, not Green Lakes."

"Most people want to do the right things for the lake, but messages can sometimes be unclear or even contradictory," said Buzz Hoerr, Chair of the Vermont Citizens Advisory Committee on Lake Champlain. "Don't 'P' on Your Lawn gets your attention and invites you to learn more."

A key component of the message is that a healthy lawn can benefit water quality. A poorly maintained lawn that is bare and patchy with exposed soil does not filter runoff nearly as well as a healthy lawn. However, an over fertilized lawn is also a source of phosphorus. In suburban areas, a solution is to create healthy soil and grass that traps rainfall and filters it before it reaches waterways. Healthy lawns also reduce the need for pesticides and herbicides.



Lake Champlain Basin Program

"Don't P" brochures are being distributed through the Lawn to Lake partners and retailers in the Lake Champlain Basin.



Lake Champlain Basin Program

The Lake Champlain Basin stretches through New York, Vermont, and part of Canada.

As part of the Don't "P" campaign, the Lake Champlain Basin Program designed a new website (www.lawntolake.org) which is used by all of the outreach partners to drive citizens to additional resources. The site provides more details about phosphorus, healthy lawn requirements, research articles, locations to purchase "P"-free fertilizer, and a summary of two neighborhood studies with measurable results that have been developed by Don't "P" partners. Television public service announcements targeted to key football, baseball and NASCAR events, training for fertilizer and pesticide dealers, public presentations, and the distribution of more than 10,000 fliers are other campaign components.

While outreach campaigns within any watershed are important, achieving measurable results can be more challenging. The Vermont Agency of Agriculture will monitor the sale of "P"-free fertilizers statewide over the next few years to see if "P"-free fertilizers are increasing and if fertilizers containing "P" are decreasing. In addition, many new retail outlets have begun carrying and promoting "P"-free fertilizers. More neighborhood specific projects will also be encouraged in the future.

Hickey is the Education and Outreach Coordinator for the Lake Champlain Basin Program in Grand Isle, Vermont.

Congressional Member Profile: Chris Shays

Party: Republican

District: CT's Fourth Congressional District

First elected: 1987

Now serving: 10th term in the House

Education: Principia College

Birthplace: Darien, CT



Chris Shays' office

Q: What are the issues related to Long Island Sound (LIS) that most concern you?

A: Water quality and pollution continue to be of major concern because approximately 10 percent of the American population lives within 50 miles Long Island Sound. It is one of the most populated, visited, and traveled areas of the country. As our communities grow in population and our coasts continue to develop, we must remain conscious of our environmental impact to ensure the Sound is safe, healthy, and sustainable. That means not only ensuring safe, recreational access, but also healthy fisheries and marine habitats.

Q: How have you been supporting the protection of LIS?

A: In 2006, Congress passed the Long Island Sound Stewardship Act, and I am grateful Congress was able to fund this important legislation for the first time, this year. As Co-Chairs of the bi-partisan Long Island Sound Caucus, Congressman Steve Israel (NY) and I worked to acquire \$5 million for Stewardship and Restoration activities. Congressman Israel and I led the Caucus this year in requesting full authorized funding for the Long Island Sound Stewardship and Restoration Acts for Fiscal Year 2009, of \$25 million and \$40 million, respectively. Funding of these important acts give those most familiar with the Sound's precious and diverse resources the tools necessary to continue their conservation and restoration efforts, and applies the most effective methods available to identify, protect, and enhance sites with ecological, educational, and recreational value in Connecticut and New York. I have also advocated increased funding for the National Estuary Program (NEP), from which the Sound also receives support.

Since coming to Congress, I have worked toward cleaning up and preserving Long Island Sound, including helping establish and fund the Long Island Sound Study Office, passing the Long Island Sound Restoration and Stewardship Acts, and advocating federal support through the Long Island Sound Caucus.

Q: How have concerns with climate change, the price of oil, and the economy changed the debate on environmental conservation? Are there some new opportunities to address these issues in tandem?

A: Yes – climate change is impacting the chemistry of our marine habitats and the level of our tides, affecting not only Long Island Sound's water quality, but also the health of its fisheries and those who enjoy it recreationally. We need a long-term energy policy that affirms our commitment to energy conservation, which will ultimately reduce carbon emissions, and increase our domestic supply of alternative and renewable energy sources as well as traditional energy sources. That's why I joined Congressman Maurice Hinchey (NY) in writing H.R. 1945, the Energy For Our Future Act, a comprehensive bipartisan energy reform bill that has three principal goals for our national energy policy: improving the fuel efficiency of passenger vehicles; incentivizing the purchase of energy-efficient appliances; investing in renewable energy, and repealing extraneous tax breaks for industries that are very profitable and have plenty of incentive to develop additional supply.

For archived issues of *Sound Update*, visit www.longislandsoundstudy.net/publications.htm

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“What Can I Do?”

Simple ways you can help reduce polluted runoff.

1 Don't be a Litter Bug! Don't throw trash, not even cigarette butts, on the ground. Storm drains empty into Long Island Sound, so never dump any substances down them.

2 Clean your local beach. Organize or join a local beach clean-up. For more information about beach cleanups in your area, visit the American Littoral Society's Web site (www.alsnyc.org) or Save the Sound's Web site (www.ctenvironment.org).

3 Clean your neighborhood. Organize a neighborhood cleanup to pick up trash and recyclables. Remember, “If it goes on the ground, it goes in the Sound”.

4 Properly dispose of household wastes. Hazardous substances from products such as paints, oil, unwanted medicines, and pesticides can end up in drinking water and Long Island Sound if they are thrown out with the everyday trash. Visit the EPA's website (www.epa.gov/epawaste/conserve/materials) to determine what materials are hazardous to our environment and health, and search www.Earth911.org to find the collection facility near you for proper disposal!

5 Plant native plants. Native plants not only are adapted to live in local conditions, but they also support the local ecosystem and stay put, unlike non-native plants.

6 Use natural methods to control pests. Prevent pests from the start by planting resistant varieties, screening out pests, and changing the planting season. Handpicking pests or using organic sprays are good alternatives to using high toxicity pesticides.



Doug Wood/Crassroots

An organic lawn is indistinguishable from a chemically-maintained lawn.

7 Fertilize wisely. Don't fertilize your lawn before a rainstorm. When you do apply, use fertilizer sparingly. Organic, slow-release fertilizers are better for your lawn and the environment. Also, fertilize during the growing season, not during the winter or a drought.

8 Keep your lawn tall. Taller grass allows for a deeper root system and works better to slow the movement of water. Leave grass clippings on the lawn to naturally provide nutrients for your lawn, but be sure to clean clippings from the street and walkways so they are not picked up and transported by runoff.

9 Avoid wasting water. Your lawn and most plants are happy with one inch of water per week, so invest in a rain gauge and don't over-water! A two-inch layer of mulch around shrubs, under trees, and in gardens will also prevent water from evaporating- keeping soil moist, the ground cool, and weeds to a minimum.

10 Spread the word. Pass what you've learned on to a friend or family member to teach them about Long Island Sound and how to protect it!

On the web...

CPTV's “Gardening With Nature” series teaches about sustainable lawns, native plants, low-maintenance landscaping, biodiversity gardens, and recycling yard waste!

Check it out at:
<http://www.cpbm.org/program/gardening-nature>

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