

SOUND OUTLOOK

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

Looking Out for the Sound: Continuing Efforts


This issue of *Sound Outlook* introduces a number of new projects - and updates several continuing initiatives on which we have previously reported – that are intended to preserve and protect Long Island Sound and all of Connecticut’s diverse coastal resources.

The Connecticut Department of Environmental Protection and a number of federal agency partners are pursuing that overarching objective through, among other actions, the administration of grant funds related to habitat restoration, ecosystem management, and stewardship of ecosystem services, as described on pages 4 and 5 of this issue.

Ecosystem and habitat restoration projects along the shore are intended to protect and restore coastal and related inland habitats, including migratory fish and coastal bird habitat, to preserve native species populations and their diversity, and to improve stormwater management and water quality. Activities that achieve those ends include, among others, open space acquisition; invasive species control; dam removal; fishway construction and beach grass planting.

Ecosystem services are the benefits provided to society by the natural environment, and include amenities and activities that many citizens associate with the outdoors. Examples of ecosystem services include clean water, timber, wildlife habitat, pollination of native and agricultural plants, and of increasing importance, the ability for landward migration of tidal wetland and other habitats threatened by sea level rise. Although it is often the case, we cannot afford to take these services for granted.

Increasingly, however, these efforts are essential not only to protecting the health of the Long Island Sound ecosystem as we know it today, but also to achieving mitigation of, and adaptation to, climate change as we can expect it to affect the state’s land and water resources in the years ahead. We are therefore excited to begin in this issue a new feature that will regularly update climate change issues and describe evolving adaptation strategies.

Meeting the goals embodied by the activities described on the following pages will better ensure that we are able to sustain Connecticut’s natural resources for the benefit of the state’s citizens and visitors both now and in the future. 

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Update: Long Beach West Restoration Project Moves Forward

Barrier beaches in their natural state are a disappearing treasure as more humans choose to live near the water where they are able to enjoy unmatched views and opportunities for communing with nature. As a result, barrier beaches are vulnerable to the threat of development even though they present an unstable platform on which to build. By contrast, when left in their natural state, these dynamic landforms of shifting sands serve many important natural functions while providing for certain human uses as well; for example, much of the potential damage from coastal flooding is absorbed by barrier beaches. They are nature's first line of defense.

One of Connecticut's longest stretches of barrier beach is Long Beach West in Stratford, nestled between Lewis Gut and Long Island Sound. In a rare reversal from development to nature, Long Beach West is being restored to its natural state with assistance from several financial sources including federal stimulus money, U.S. Fish and Wildlife Service funds and a challenge grant from the Long Island Sound license plate fund.

We first reported on this project in the February 2009 issue of *Sound Outlook* (see www.ct.gov/dep/soundoutlook). Since then, more than 40 abandoned and deteriorating summer cottages have been demolished, many of which once polluted Lewis Gut with raw sewage. Removal of debris and contaminants begun this past fall and winter is nearly complete. Long Beach West now provides a much-needed resting spot for migratory birds such as the state- and federally-threatened piping plover and the state-threatened least tern, where they will be sheltered and nourished by the grasses that have become reestablished on the beach. Long Beach West and Bridgeport's adjacent Pleasure Beach are in fact components of the National Audubon Society's Great Meadows Important Bird Area, which recognizes the statewide significance of the habitat there.



Long Beach West, Stratford, looking west.



Photos courtesy of Scott Tucker's Expedition New England.



Long Beach West, Stratford, restoration.



Photos courtesy of Land Tech Consultants, Inc.

Barrier beaches are integral components of a complex and interdependent coastal environment in which actions that alter one landform will in some way affect the function of others. Their very existence protects our existence. The partnerships forged to protect and revive Long Beach West are a testament to the will of preservation organizations and environmentalists. Full restoration of the beach is expected by summer 2011.

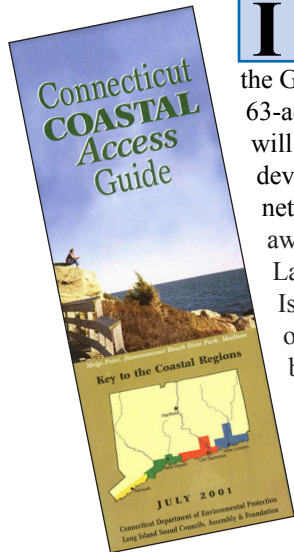
While the town of Stratford currently owns and maintains Long Beach West, the U. S. Fish and Wildlife Service may offer to purchase the property for inclusion in the Stuart McKinney Wildlife Refuge Preserve in the future. The intent of the project partners is to eventually provide public access to the project site, as required by the federal grant, following completion of construction activities and consistent with all necessary measures for protection of wildlife. In its restored condition, Long Beach West will remain a valuable asset in perpetuity. For more information on this continuing effort, contact Carol Szymanski at 860-424-3138 or carol.szymanski@ct.gov

View past issues of *Sound Outlook* at www.ct.gov/dep/soundoutlook



SPOTLIGHTED Coastal Access:

Historic Groton Sheep Farm Preserved



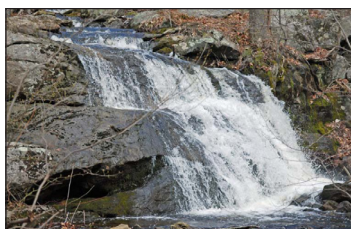
In the fall of 2010, the Department of Environmental Protection (DEP) awarded two grants totaling \$616,500 to the Groton Open Space Association (GOSA) to acquire an historic 63-acre colonial-era sheep farm in Groton. The acquisition will permanently conserve a property permitted for residential development that will now instead become part of an existing network of regionally-significant protected open space. DEP awarded GOSA \$534,300 from the Open Space and Watershed Land Acquisition Grant Program and \$82,200 from the Long Island Sound Fund, which collectively provided 70 percent of the total of \$878,500 needed to acquire the property. The balance of the purchase price was raised from eight foundations and many individuals.

The Conservation Fund of Arlington, Virginia played a critical role in the acquisition by providing bridge loan financing needed to close on the property prior to the December 31, 2010 expiration of GOSA's purchase option. GOSA has sought for years to protect this rugged, yet ecologically sensitive, property from a variety of developments, including most recently, a 34-lot residential subdivision. The Sheep Farm, as the property is affectionately known, dates back to the early 1700s, retaining some of its historic character as well as evidence of colonial industry, such as an intricate network of original stone walls and an early 18th century grist mill.

The property's ecological and habitat diversity and quality and its proximity to a highly urbanized area distinguish the site, which is situated in one of the few remaining core forest areas within Connecticut's eastern coastal ecoregion. The property's resources include a temperate hardwood forest remarkably devoid of invasive species, old fields, extensive inland wetlands, and vernal pools. Fort Hill Brook, a high-quality cold water stream and migratory fishway that flows into Mumford Cove, supports eelgrass beds, critically important nursery habitat for finfish and shellfish. The site is part of a patchwork of connected dedicated open space, including Bluff Point and Haley Farm State Parks, that contributes significantly to the value of this conservation success.

The Sheep Farm's mountain laurel forest, grassland meadows, numerous seeps and highly productive wetlands provide ideal habitat for a wide array of plants, birds, amphibians and mollusks, including salamanders, wood frogs and snails. The site's 10-foot waterfall on Fort Hill Brook forms a natural barrier to migrating fish, with the exception of the American eel, which can scale this cataract. The acquisition also provides flood control benefits, particularly for Groton's densely populated Poquonnock neighborhood, and protects water quality in one of the many local coastal watersheds that have been altered by past development.

More information about the Sheep Farm can be found on GOSA's website at www.gosaonline.org. GOSA is a non-profit association founded in 1967. It seeks to promote, acquire, or maintain open space for public use, alone or in cooperation with local, state or federal agencies or with other nonprofit organizations. A further goal is to educate the public about the value of open space, water resources, conservation, and environmental preservation. For more information about Connecticut's coastal public access program, contact Dave Kozak at 860-424-3608 or david.kozak@ct.gov.



Fort Hill Brook waterfall.



Vernal Pool - Yellow-spotted salamander egg masses.



Corner of colonial dry-stone gristmill dam on Fort Hill Brook.

Photos by Susan and John Sutherland.

LOOK OUT for upcoming events!

Norwalk Maritime Aquarium

10 North Water St., Norwalk, CT
Call 203-852-0700 x2206 or visit www.maritimeaquarium.org for information, costs and registration:

Touch a Shark

Daily, February 12-27.

Free with Aquarium general admission. Special touch tank features comparatively docile nurse sharks. Learn how special scales give shark skin the feeling of sandpaper.

Winter Creature Cruises

Most weekends through April (dates and times TBD); 2-1/2 hr. cruises.

View seals and winter waterfowl. Ages 8 and up. Bring binoculars, dress warmly.

Seasons of Change: Global Warming in Your Backyard.

Daily through May 30, 2011

Use innovative hands-on displays to discover how climate change is impacting the landscape of New England. Operate a large global climate-change simulator.

Connecticut Audubon Coastal Center

Milford Point, Milford, CT
Call 203-878-7440 or visit <http://www.ctaudubon.org> for information and registration.

Terrific Turtles

March 3, 10:30-11:30 AM.

Meet our resident turtles. Their amazing abilities let them thrive on land and at sea.

Springing into Spring.

Thursday, March 17, 10:30-11:30 AM.

Search for signs of spring at the beach and around the Coastal Center.

Earth Day Beach Clean-up & Celebration

Call for date and time.
Participate in an Earth Day beach clean-up to aid shorebirds and help remove invasive plants from the property. Trash bags and gloves will be provided. Free.

DEP EARTH DAY EVENTS!

Check the Calendar of events listed in DEP's website for dates and details:
www.ct.gov/dep

Grant Funds Awarded for LIS Protection and Restoration

The Department of Environmental Protection awarded \$4,471,181 in grants in December of last year for a total of 17 projects intended to protect habitats and restore ecosystems along Long Island Sound and elsewhere throughout Connecticut. Funds will be used by cities, towns and environmental organizations to restore and protect unique and critical lands, including tidal wetlands. Funding for twelve of these projects was derived from a number of environmental enforcement settlements, while the remaining five grants were provided by the Long Island Sound Fund (LISF), which is supported primarily by the sale of Preserve the Sound license plates. This combined funding offered the chance to build on previous LISF work to support more and larger projects, and a much wider variety of ecosystem and habitat restoration projects than in previous offerings. This was one of two important grant rounds conducted during the past year – the other is described on the following page.

Some of the projects receiving settlement funds will permanently protect unfragmented forest areas, watershed lands and wetlands, including a particularly notable open space acquisition in Groton, discussed in our Spotlighted Coastal Access column on page 3 of this issue of *Sound Outlook*. Other funded projects will focus on construction of migratory fish ways or dam removals in Bloomfield, Bristol, East Berlin, East Granby, Lyme, Manchester and Norwalk. Wetland and streambank restoration projects will be conducted in Manchester and Southbury, and at a series of combined sites in the lower Connecticut River in East Haddam, Essex, Lyme, Old Lyme and Old Saybrook. All of these projects will be situated in either the Connecticut River watershed or the Connecticut coastal watershed, and will ultimately benefit the health and diversity of the Long Island Sound ecosystem into which they flow.



Hallville Dam, Preston, CT. A fish ladder will be constructed at the far right end of the dam.

Photo courtesy of Eastern Connecticut Conservation District.

The five LISF-funded projects include the restoration of upstream migratory fish passage in rivers located in Bridgeport, Preston and Wallingford, and tidal wetland restoration activities at Cove River in West Haven. Preservation of lands through our ecosystem management efforts will protect the natural habitats and ecosystem services which are so important to maintaining our quality of life in Connecticut.

Connecticut residents can show their support for future projects by purchasing a Long Island Sound license plate, acquiring a *Preserve the Sound* credit card or making a direct contribution. LIS license plates can also be purchased as a gift. Information and order forms for purchasing LIS license plates can be obtained by calling 1-800-CT-SOUND or by writing to Long Island License Plate, 60 State Street, Wethersfield, CT 06161-6001. For more information about the Long Island Sound Fund, contact Kate Hughes Brown, Grants and Outreach Coordinator at 860-424-3652, katebrown@ct.gov or visit the DEP website at www.ct.gov/dep/lislicenseplate.

LONG ISLAND SOUND ESTUARY PROGRAM (LISS) COMMITTEE REPORTS

The LISS **Management Committee** held its annual planning meeting in Port Jefferson, NY, October 21-22, 2010. Committees and work groups presented their annual work plans and goals related to habitat restoration, watershed nonpoint source pollution, nitrogen management, environmental indicators and stewardship. The Management Committee also set the budgetary agenda for its January 2011 meeting.

The LISS **Science and Technical Advisory Committee** (STAC) met November 19, 2010 in Stony Brook, NY. The major topic of discussion was climate change and adaptation planning in Long Island Sound.

The LISS **Citizens Advisory Committee** (CAC), meeting on December 9, 2010 in Bridgeport, CT, identified as a priority need the support of volunteer monitoring programs in embayments and harbors around Long Island Sound. EPA Region 1 will assist volunteer groups by loaning them equipment and other resources to support bay and harbor ecosystem monitoring.

The LISS **Management Committee** reconvened on January 20, 2011 at UCONN, Stamford. Priority needs for 2011-2012 were identified, including additional Embayment Volunteer Monitoring projects and a web-based Impervious Cover GIS tool. The online Long Island Sound Futures Fund (LISFF) Grants Library was presented, through which interested parties may search the National Fish & Wildlife Foundation (NFWF) website for information on LISFF-funded projects. Minutes of all past LISS committee meetings are posted at <http://longislandsoundstudy.net/about/committees>.

Purchase of an LIS License Plate supports the LIS Fund



As of 12/31/10:

- Plates sold: 146,078
- Funds raised: Over \$5.1 million
- Projects funded: 331

The LIS Fund supports projects in the areas of education, public access to the shoreline, habitat restoration and research.

For information on ordering a Long Island Sound license plate, call 1-800-CT-SOUND.

Investing in a Healthy Sound: LIS Futures Fund Awards

The State of Connecticut and its partners in the Long Island Sound Study (LISS) National Estuary Program continue to provide grant money to local and regional nonprofit environmental groups and municipalities. One LISS grant program is the Long Island Sound Futures Fund (LISFF), administered by the National Fish and Wildlife Foundation (NFWF). In 2010, NFWF, with dollars leveraged from corporate sponsors and additional financial support from the Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service and FedEx, awarded over \$2,400,000 in grants to 38 recipients, including community groups and state and local governments. Combined with \$4,400,000 in in-kind matching funds contributed by the recipients themselves, a total of \$6,800,000 was designated for on-the-ground conservation projects in Connecticut and New York over the next two years to restore the health and living resources of the Sound. Project activities will include construction of fish passes or removal of old dams, preservation of open space, and stormwater management. Two of the funded projects are described below.

A grant of \$500,000 was awarded to the City of Stamford to improve water quality and to restore and protect degraded



*Mill River, Stamford, CT.
Site of stormwater swales.*

riparian areas in the lower Rippowam (Mill) River watershed, which drains 37.5 square miles from the New York border to Long Island Sound. The City matched the grant with an additional \$1,800,000. The project will construct four stormwater swales planted with native vegetation to capture and filter contaminants transported in the first inch of rainfall over the 11.5 acre site. Treated stormwater will then be released into the river. Pre- and post-

construction monitoring will be conducted to quantify the reduction in contaminants. Important species, including shellfish, river herring, and eels will benefit from the reduction of hydrocarbons and sediment flowing into the Mill River.

The Valley Council of Governments, which serves the communities of



*O'Sullivan's Island, Derby, CT.
Site of bioremedial superswale.*

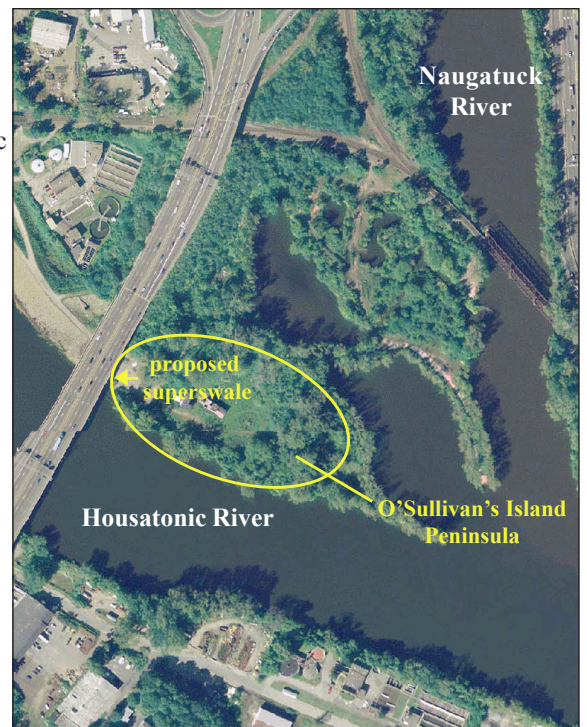
Ansonia, Derby, Shelton and Seymour, received \$39,074 to construct a half-acre rain garden and bioremedial "superswale" to treat highway, bridge, boat ramp and parking lot runoff at O'Sullivan's Island, a 20-acre peninsula on the Housatonic River in Derby. The swale and rain garden will capture suspended solids, oil and grease, trash, hydrocarbons, bacteria, road sand and other pollutants. The grant will be matched by \$325,000 from the Housatonic River Restoration Subcommittee, which will be used to build a handicapped-accessible fishing pier along the bank of the Housatonic River. The project will include educational signs and programs about the water quality problems that will be remediated.

The Long Island Sound Futures Fund was created in 2005 and, to date, the program has provided \$6.9 million in funding. When combined with \$16 million in grantee matching funds, more than \$22 million has been invested in 176 local conservation projects in communities surrounding the Sound.

Thanks to projects supported by the Fund, 68 river miles are being opened up for fish passage, and more than 400 acres of critical fish and wildlife habitat have been restored and acquired. This habitat includes lakes, underwater grasses, woodlands, meadows, wetlands, beaches, dunes and park frontage. For more information on these

programs, contact Mark Parker at 860-424-3276 or mark.parker@ct.gov

Photos courtesy of Valley Council of Governments.



*O'Sullivan's Island, Derby, CT.
Photo courtesy of Valley Council of Governments.*

Climate Change: Updates of Local, State and Federal Activities

Since publication of the October 2010 issue of *Sound Outlook* (www.ct.gov/dep/soundoutlook), in which intergovernmental climate change adaptation initiatives were featured, related actions have continued at the local, state and federal levels. In this and future issues, we will highlight current and on-going efforts of interest to all readers, beginning with those listed below.

ICLEI Local Governments for Sustainability and Connecticut DEP have published a draft report, *Preparing for Climate Change in Groton, Connecticut*. The report builds on the Groton Climate Change workshops cosponsored by the two organizations in the winter and spring of 2010. The report identifies physical, planning and educational strategies to increase local resilience to sea level rise and coastal flooding.

ICLEI and DEP also convened a Connecticut Municipal Climate Protection Network meeting on November 22, 2010. The meeting brought together local government representatives to discuss, share, and collaborate on successful climate mitigation and adaptation programs, including the Adaptation Resource Toolbox. Additional needs that were identified by the participants include: better understanding of existing climate change and adaptation planning; financial information necessary to justify municipal sustainability efforts; ready-to-use planning tools for small towns, including practical adaptation measures such as rain gardens; and incorporation of storm surge and river flood modeling in adaptation planning.



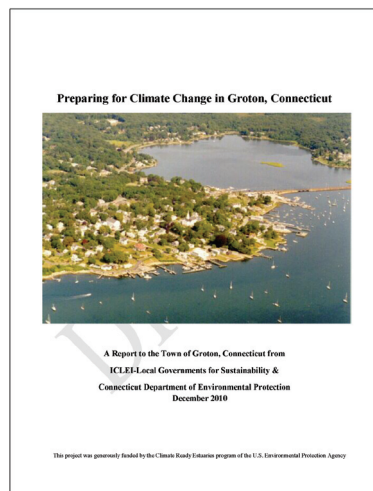
Connecticut Summit on Business Sustainability.
L-R: Stewart J. Hudson, President, Emily Hall Tremaine Foundation; Curt Spalding, EPA Regional Administrator; CT Representative Clark Chapin, Environment Committee; Amey Marrella, DEP Commissioner

Recent state initiatives include the *Connecticut Summit on Business Sustainability* co-hosted by the Connecticut Business and Industry Association (CBIA) and DEP on December 7, 2010. More than 250 attendees heard directly from Connecticut businesses about their sustainability initiatives that save money, increase profits, promote recognition, and offer new business opportunities. Sessions included interactive peer-to-peer workshops and a listening session in which businesses were given the opportunity to provide input on how the State can better support their efforts. Comments submitted are summarized at <http://ctclimatechange.com/wp-content/uploads/2010/12/Summary-of-comments-CT-Summit-on-Business-Sustainability.pdf>.

On the national level, the Environmental Protection Agency's (EPA) State and Local Climate and Energy Program is working with states, communities and tribes to promote climate mitigation and clean energy, and to help achieve a variety of economic, social and public health benefits. The Program website (www.epa.gov/statelocalclimate/index.html) has specific pages on climate impacts and adaptation actions for states and local governments that feature links to a number of resources from federal and other sources. The Program maintains an inventory of climate change related listservs for state and local users at www.epa.gov/statelocalclimate/listservs/index.html#a01. EPA's State Climate and Energy Partner Network works with energy, environmental and utility officials to understand and explore climate change issues and related energy policies.

EPA recently produced a number of climate change adaptation webcasts. The first, *Climate Impacts & Risk Communication* was held on November 18, 2010. Dr. Joel Scheraga (EPA) emphasized that governments must consider climate adaptation in decision-making processes and explore ways to reduce green house gases in order to avoid the adverse impacts of climate change, including risks to public health and the economy (including impacts on agriculture, and forestry); non-attainment of air quality standards; and loss of cultural resources. A second webcast on December 15, 2010 provided an overview of frameworks that states and municipalities can use in assessing risks associated with climate change and in developing strategies to increase resilience. A third session on January 13, 2011 reviewed federal efforts to develop a national adaptation strategy, and the guidance, technical assistance and funding that are offered to support state and local efforts in this regard. Webcasts can be found at www.epa.gov/statelocalclimate/web-podcasts/local-webcasts.html#adap1.

For more information on climate change planning activities, contact Jennifer Pagach at 860-424-3295 or at jennifer.pagach@ct.gov



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL
PROTECTION
79 Elm Street
Hartford, CT 06106-5127
www.ct.gov/dep
Amey Marrella, Commissioner

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

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