



A Partnership to Restore and Protect the Sound

Habitat Restoration Workgroup

of the Long Island Sound Study
website: <http://www.longislandsoundstudy.net>

HABITAT RESTORATION & CLIMATE CHANGE MEETING SUMMARY

December 4, 2012
9:30 AM to 2:00 PM

NY State Department of Environmental Conservation
205 N Belle Mead Rd, Suite 1 E. Setauket, NY 11733

LONG ISLAND SOUND STUDY HABITAT RESTORATION WORKGROUP

COORDINATOR

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Hurricane Sandy, October 28 as it happened.

Source: telegraph.co.uk

Habitat Restoration in the Face of Climate Change

In the wake of Hurricane Sandy, the LIS Habitat Workgroup and invited guests met to discuss the storm's impact on the habitat & ecological resources within the Long Island Sound and to think about the future of habitat restoration in light of the climate change modeling predictions for our area.

HRWG Member's ecological observations associated with Sandy

Positives

- Generally habitats & species are adapted to a dynamic coast line
- Natural habitat was resilient & responded well, serving as a buffer against storm surge
- New habitat was created (ex. Sunken meadow tidal flow restored, shorebird habitat created)

Concerns

- Extensive wrack mats smother habitat and possibility create invasive species problems
- Large downed trees create holes in the forest canopy for invasives to sneak in (esp. in NYC area)
- Water quality concerns associated with CSOs
- Storm impacts on listed & sensitive species (ex. habitat loss for roseate terns, eel grass burial from eroding dunes)
- Sediment disturbance in areas with toxins – potential to spread to new areas
- Habitat conversion
 - Land use changes in converted areas (ex. breeches opened area previously designated for wildlife. Areas are now connected to open water and various forms of recreation)
- People feel vulnerable leading to knee jerk reactions. Building harder, faster, taller structures

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Areas workgroup members discussed & are currently contributing to*

- Ensuring that we have space for habitat to move & migrate
- Ensuring that we maintain natural habitat to serve as storm buffers
 - o TNC is conducting an analysis to look at the value of natural shorelines to coastal community protection
- Working to shape laws that incentivize alternative shoreline protection
 - o NYSDEC, TNC & others are speaking with regulators on resilient infrastructure, soft shorelines & retreat from the coast

*Please send topic expansion or action item ideas to Kelly, Harry & Georgia

ACTION ITEMS

Carbon credits for wetland restoration

Brian Needleman's group is looking for restoration projects on which to pilot wetland restoration methodology for carbon credit. If you have suggested pilot projects, let Brian know bneed@umd.edu

Visit the [State of CT's climate change website](http://ctclimatechange.com/) <http://ctclimatechange.com/> and connect with Jennifer Pagach if you have information that you would like posted jennifer.pagach@ct.gov

Two RFPs have been released through the [Sentinel Monitoring Group](#). Contact Sarah Deonarine for more information sndeonar@gw.dec.state.ny.us

NY Sea Grant is conducting a workshop that will focus on the use of [living shorelines](#) for small scale erosion protection on low to moderate wave energy shorelines as a potential adaptation to sea level rise. Contact Jay Tanski for more information at: jjt3@cornell.edu

TNC is looking at the [value of natural shorelines to coastal community protection](#). If you have photos, stories or other info on areas that fared well vs. those that did not send that info to Nicole Maher, nmaher@tnc.org

Susan Kennedy of the American Littoral Society is conducting a rapid assessment of habitat impacts caused by Sandy for NFWF. Please share your stories, anecdotes, pictures, etc, with Susan at: susan.m.kennedy@gmail.com

Responding to Climate Change through Habitat Restoration

Kelly Hines Leo

Kelly Hines Leo gave an overview of the report *Restore-Adapt-Mitigate: Responding to Climate Change through Coastal Habitat Restoration*. This report is a useful tool to guide habitat restoration in thinking about climate change. Based on the recommendations from the report, we as the Habitat Restoration Workgroup are encouraged to: a) think on a landscape scale ; b) take a system-wide approach to restoration; c) focus on restoring processes & d) plan ahead & prioritize projects as we have limited resources.



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Mitigating Climate Change Impacts through Habitat Restoration

Brian Needelman

Dr. Brian Needelman, Associate Professor of Soil Science at the University of Maryland and co-author & editor of *Restore-Adapt-Mitigate: Responding to Climate Change through Coastal Habitat Restoration*, presented the possibilities of mitigating greenhouse gases through coastal habitat restoration. Brian discussed methodology for carbon credits through wetland restoration- currently under development. See full presentation (attached) for further detail. One take home message was the extent of human impact is much higher than marshes can mitigate for (1 car=1.6 acres of marsh).

What Climate Change Adaptation Means for Restoration

Jennifer Pagach

Jennifer Pagach, CTDEEP, discussed a vision for climate change adaptation and what this might mean for the future of habitat restoration in LIS. She noted that adaptation is the recognition that things are changing and emphasized the value of using the changes people are seeing as effective communication opportunities. Jen also mentioned that living shorelines have been promoted and added to Public Act 12-101 <http://www.ct.gov/dep/cwp/view.asp?A=2705&Q=512226>. For more location specific information on climate change Check out this publication *Evidence of Sea Level Acceleration at U.S. and Canadian Tide Stations, Atlantic Coast, North America* <http://www.jcronline.org/doi/pdf/10.2112/JCOASTRES-D-12-00102.1>



Species are on the move and ranges are shifting. Photo of a Rufous Hummingbird in Jen's yard. The appearance of these western hummingbirds in the east is a recently noted occurrence.

Juliana Barrett

Juliana gave the workgroup an update on the progress of the Sentinel Monitoring Workgroup, a bi-state effort to understand the impacts of climate change in LIS. The group developed a list of 6 priority sentinels and core parameters. More detail is available in the attached presentation. She also outlined some of the impacts of the storm to the CT coastline, commenting that the marshes fared well and did exactly what they were supposed to do in serving as a buffer for the mainland, slowing and absorbing surge.

Hurricane Sandy Impacts to Connecticut Beach/Dune Systems

- Impacts localized
- Blowouts and breaches in many areas
- Damaged culverts (tidal flow)
- Sand pushed landward into tidal creeks and marshes
- Beach/dune systems flattened
- Potential new piping plover habitat

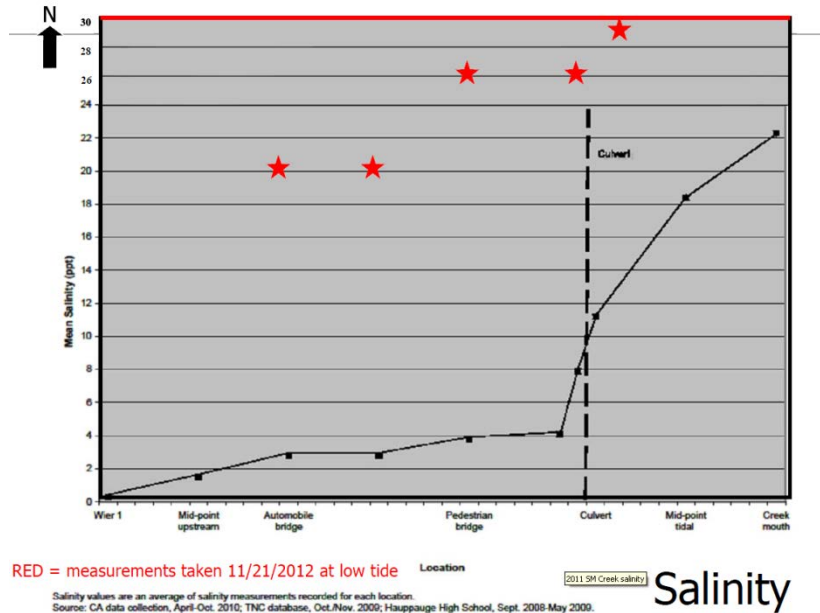


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Sandy Restores Tidal Flow at Sunken Meadow State Park

Ariana Newell

Ariana Newell, NYS Parks, presented on a priority restoration project for LIS and its partners that Hurricane Sandy helped to implement by removing a man-made berm and restoring tidal flow at Sunken Meadow State Park. The chart below shows average salinity measurements recorded at various points at Sunken Meadow site before Sandy (black line) and post Sandy (red stars) after tidal flow was restored.



Ellen Hartig, NYC Parks, lead a roundtable discussion that we wish could have lasted longer. Member's shared great input and insight regarding what we are seeing post-storm throughout the Study area. SET practitioners (including Ellen Hartig, Nicole Maher & Kelly Leo) will continue measuring surface elevation changes and will take sediment cores to note changes in deposition resulting from Sandy. This information will be contributed to a region wide effort monitor changes in surface elevation in marshes from the Carolinas to Maine post-Sandy.

Jim Latimer summarized important CCMP updates. Kelly Hines Leo represents the HRWG on the CCMP revision core team and will keep the workgroup informed and included as the process continues.

Next Steps	
➤ Summarize CT and NY accomplishments under 1994 CCMP	Dec. 2012
➤ Select contractor and develop detailed work plan	Dec. 2012
➤ Draft framework for use in workgroup and public outreach	Dec. 2012
➤ Begin solicitation of input from LISS workgroups (including the Habitat Restoration Workgroup)	Jan 2013
➤ Prepare for public input by core team	Jan. 2013
➤ Conduct public input phase 1	Spring 2013

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Sandy's impact on LI's North Shore Beach Habitat

Steve Papa

Steve Papa, Senior Fish & Wildlife Biologist at USFWS, gave an overview of Hurricane Sandy's impacts on Long Island's north shore beach habitat. An assessment is currently being conducted to help understand storm induced habitat changes. Long Island saw several breeches and more shorebird habitat creation. The group had a lively discussion on breeches and whether we should allow systems to change into different types of habitat (tidal instead of freshwater for example). Social concerns, like the ability to walk on a familiar stretch of beach, as well as ecological and political concerns, such as ownership changes, were discussed.

ATTENDEES

HRWG Members:

Juliana Barrett	UCONN CLEAR
Georgia Basso	USFWS
Sarah Deonarine	NYSDEC/LISS
Charles DeQuillfledt	NYSDEC
Larissa Graham	NY Sea Grant
Ellen Hartig	NYC Parks
Jim Latimer	EPA
Kelly Hines Leo	NYSDEC/LISS
Gwen Macdonald	Save the Sound
Nicole Maher	NY TNC
Dawn McReynolds	NYSDEC/LISS
Ariana Newell	NYS Parks
Steve Papa	USFWS
Suzanne Paton	USFWS
Jenna Pirrotta	NOAA
Ron Rozsa	Retired, LISS/CTDEEP
Jim Turek	NOAA
Tim Wenskus	NYC Parks
Harry Yamalis	CTDEEP

Speakers & Guests:

Jennifer Pagach	CTDEEP
Brian Needelman	Univ of Maryland
Lynn Dwyer	NFWF
Kerri Dikun	Audubon- NY (SWG member)
Kate Biocourt	EPA, Hudson-Raritan Estuary Program
Matt Sclafani	Cornell University Cooperative Extension
Laura Schwanof	GEI, Inc
Steve Sinkevich	USFWS
Byron Young	
Annie McIntyre	NY Parks (SWG member)
Steve Young	NY Natural Heritage Program

NEXT MEETING: March 12, 2013

The next habitat restoration workgroup meeting will be held on March 12, 2013 - agenda and location will be circulated closer to the meeting date. If you have meeting ideas or suggestions please contact Harry, Kelly or Georgia.

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