



2010 Project Summaries Show Impact on Coastal Waters, Communities, Youth, Economy & Educators

January 2011 — New York Sea Grant has issued a series of impact statements for projects completed in 2010. The work of New York Sea Grant (NYSG) educators has benefited diverse stakeholders from coastal managers and property owners to students and educators, commercical fishermen, seafood safety inspectors, and municipal leaders throughout New York. Educational opportunities facilitated by NYSG have extended beyond our shores to scientists and communities around the world.

Stakeholder testaments and project impacts underscore the value of 40 years of "*Bringing Science to the Shore*." Project impacts in 2010 included:

- "Without a doubt, I'd rather learn here on the dock than offshore when it's 5 degrees in February."
 — John Scheu of the Kimberly fishing vessel crew participating in Safety at Sea training
- More than 1400 NY boaters pledged to be "clean and safe"
- Two municipalities used East Coast Winter Storms website information to obtain \$1million for storm damage restoration and mitigation projects
- "We were surprised at how well the site worked during the past northeasters. It is being put to good use." — East Rockaway Village Emergency Manager John Baroni
- The combined VHS research-outreach effort of Cornell University and NYSG received the first National Sea Grant Research Application Award.

Partnerships with national state, regional and local partners have made the following projects possible:

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- Advancing Effective Stormwater Management
- Developing Educational Materials for NY's Eastern Lake Ontario Region
- Helping Local Leaders Understand Hudson River Shoreline Environments
- I FISH NY: Sharing Fishing Facts & Fun in NYC and on Long Island
- New York Commercial Fishing Fleet Practices Safety-At-Sea
- New Web Site Helps Coastal Managers Respond to Nor'easters
- New Yorkers Take 2010 Discover Clean
 & Safe Boating Pledge
- NY Sea Grant Strengthens E-Partnership with Marine Educators
- NYSG Assists Czech Republic Development of Reservoir Trawling Program
- NYSG Facilitates Online Training to Ensure Seafood Safety
- NYSG Training Extension & Agencies in Climate Literacy
- Preventing & Containing VHS in Aquaculture
 Operations
- Revised Long Island Sound Web Site Makes a Splash!
- Teaching the Next Generation of Concerned Citizens

See the full extent of New York Sea Grant programming online at www.nysgextension.org

These projects meet performance measures for Sea Grant's Coastal & Ocean Literacy, Hazard Resilience in Coastal Communities, Healthy New York Coastal Communities, and Safe & Sustainable Seafood Supply focus areas. Sea Grant Extension administration is located at 112 Rice Hall, Cornell University, Ithaca, NY 14853.



New York Commercial Fishing Fleet Practices Safety-At-Sea

Commercial fishing is listed as one of the most dangerous occupations^(*) and each year thousands of dollars are spent responding to commercial fishing vessels that are in distress while at sea. In the past, NOAA and the U.S. Coast Guard expressed concern about the safety record for the commercial fishing fleet in the Northeast. In New York, there has been no formal Safety-At-Sea training in more than 10 years.

New York Sea Grant, with financial support from the New York Center for Agricultural Medicine and Health (NYCAMH) and other partners, including the U.S. Coast Guard, Long Island Occupational and Environmental Health Center (LIOEHC), and Cornell Cooperative Extension of Suffolk County Marine Program, hosted a Safety-At-Sea workshop at Inlet Seafood Packing House, Montauk, NY. This training featured instructors certified by the Alaska Marine Safety Education Association.

Captains and crew members who attended this one-day training learned about cold water survival strategies, practiced safety drills,



donned immersion suits, deployed distress signals and a full size inflatable life craft, extinguished mock engine room fires. and learned about other damage control techniques.



"Without a doubt, I'd rather learn here on the dock than offshore when it's 5 degrees in February." – John Scheu of the Kimberly fishing vessel crew. Photo: Barbara Branca, NYSG

Fishermen obtained a formal inspection of their safety equipment.

More than 60 commercial fishermen and fisheries biologists benefited from this training:

- 14 percent of the participants had never participated in formal Safety-At-Sea drills.
- Approximately 21 percent of the safety equipment did not meet the US Coast Guards standards and owners were encouraged to replace them.
- 15 commercial fishermen received new state-of-the-art personal flotation devices (PFDs). One fisherman received a new immersion suit. LIOHEC donated the safety equipment.

This type of safety training is invaluable to commercial fishermen who risk their lives daily to work the waters of New York.

* U.S. Bureau of Labor Statistics, US Department of Labor (2010)

Safety-At-Sea training participants practice emergency vessel-repair techniques. Photo: Barbara Branca, NYSG

This project meets the performance measures of Sea Grant's Safe & Sustainable Seafood Supply focus area. New York Sea Grant Extension administration is located at 112 Rice Hall, Cornell University, Ithaca, NY 14853. This project summary was written by Antoinette Clemetson, Marine Fisheries Specialist, 613-727-3910, aoc5@cornell.edu, www.nyseagrant.org



Teaching the Next Generation of Concerned Citizens

New York Sea Grant (NYSG) is dedicated to ensuring a scientifically and environmentally informed citizenry for the future by making science/environmental education a priority issue. Our educational efforts are part of the goals and strategies outlined under the Healthy New York Coastal Ecosystems focus area.

In 2010, NYSG worked with 18,160 students and 900 teachers. By using a "teach the teacher" approach, NYSG was able to reach an additional 27,700 students, making the statewide total more than 45,000 students who learned about critical environmental issues such as water quality and invasive species.

Utilizing innovative approaches and fifth-year funding from the Centers for Ocean Sciences Education Excellence Great Lakes (COSEE GL), NYSG conducted teacher training workshops, and conference presentations.

The mission of COSEE GL is to foster lasting relationships through networks that link Great Lakes educators with ongoing research in the region and connect freshwater science with its marine (saltwater) equivalent. COSEE GL is co-funded by the National Science Foundation, the National Oceanic and Atmospheric





Teachers participating in a COSEE GL tour learn about the Eastern Lake Ontario Dunes & Wetlands Area. Photo: Paul Focazio, NYSG

Administration, and the National Sea Grant College Program.

Highlights of the training in 2010 under this successful partnership include:

- Lake Ontario Workshop for Teachers a week-long COSEE GL workshop along Lake Ontario for 15 educators that involved 19 scientists from around the state (http://coseegreatlakes.net/weblog/),
- a week-long teachers workshop on Tropical Marine Ecology,
- Science Exploration Day that brought 500 high school students and teachers to the University at Buffalo to learn from scientists about topics varying from invasive species to environmental engineering, and
- a NYSG distance learning program that introduced 1.000 students and their teachers to the impacts of invasive species through the Authentic Learning program at the Buffalo Museum of Science.

Tour leader Helen Domske, at the microscope, helps teachers identify lake invertebrates. Photo: Paul Focazio, NYSG

This project meets the performance measures of Sea Grant's Healthy New York Coastal Ecosystems focus area. New York Sea Grant administration is located at 112 Rice Hall, Cornell University, Ithaca, NY 14853. This project summary was written by Helen Domske, Coastal Education Specialist, 716-645-3610, hmd4@cornell.edu, www.nyseagrant.org. 1/11



NYSG Facilitates Online Training to Ensure Seafood Safety

A New York Sea Grant (NYSG)-funded study documented that the seafood industry contributed more than \$7.9 billion to New York state's economy and employed 96,000 New Yorkers in 1999. To remain competitive and prosperous, this industry must use sciencebased systems to maximize the safety and quality of its products.

New York Sea Grant's outreach activities include on-site and distance education training programs, workshops, newsletters, and direct technical assistance. These programs involve collaboration with businesses, regulatory agencies, the national Sea Grant network, and university resources.

In 2010, more than 1,150 individuals from seafood companies and state or federal regulatory agencies participated in food safety training programs conducted or managed by NY Sea Grant.

Internet-based Training

In 2010, more than 850 individuals enrolled in the Internet-based Seafood HACCP Training course that enables them to meet the training requirements of the US Food and Drug Administration's seafood Hazard Analysis Critical Control Point regulation (http://seafoodhaccp.cornell.edu). The online Good Manufacturing Practices course (http://gmptraining.aem.cornell. edu) taught 130 individuals basic food safety practices for food processors, wholesalers and warehouses.

Since these two courses were created, more than 5,700 people have received instruction.

> NYSG has created in-person and online training in science-based preventative systems, such as HACCP (Hazard Analysis Critical Control Point), to help the seafood industry produce safer products.

Training Workshops

In 2010, NYSG conducted five training workshops in New York on seafood safety requirements for 100 individuals from seafood firms and federal and state food safety inspectors. More than 750 people have participated in these "live" training courses since 2002.

Developing Training Resources & Expertise for the Future

NYSG is one of four Sea Grant programs in the US that received a \$600,000 grant from USDA's National Integrated Food Safety Initiative in 2009 to update the national Seafood HACCP Alliance training program. The program, developed in 1995, incorporates new scientific findings and regulatory requirements for a national network of qualified trainers. In 2010, NYSG was a key member of the national team that conducted three train-the-trainer courses for 75 food safety professionals from across the U.S.

In 2011, NYSG will participate in a train-thetrainer course in China. The course will enable foreign food safety professionals to train seafood producers that export to the US in the latest HACCP compliance procedures.



This project meets the performance measures of Sea Grant's Safe and Sustainable Seafood Supply focus area. New York Sea Grant Extension administration is located at 112 Rice Hall, Cornell University, Ithaca, NY 14853. This project summary was written by Ken Gall, Seafood Specialist, 631-632-8730, klg9@cornell.edu, www.nyseagrant.org.



Revised Long Island Sound Web Site Makes a Splash!

With more than 8.8 million residents living in the Long Island Sound (LIS) watershed, the Long Island Sound Study (LISS) Communications team — whose mission is to educate LIS watershed residents — must use the most effective and efficient tools possible. Several of its outreach tools, however, needed improvement. The LISS Web site, for example, was reaching a wide audience but the content was not presented in a logical manner, making it difficult for users to find the information.

The LISS Outreach Coordinator and Communications Team administered an RFP (request for proposal) and recruited a Web site designer to redesign the LISS Web site. The goal was to streamline the content and make it easier for users to locate information of interest.

Under the redesign plan, existing content was reorganized under new logical headings. Side boxes were added to highlight and link to related topics and Web pages.

Based on feedback from stakeholders, new Web pages to promote healthy coastal ecosystems that are featured include:

- "Volunteer Opportunities" providing information to residents looking to help protect and restore the Sound,
- "What You Can Do" listing tips targeting homeowners, recreational users, and and educators, and
- "Teaching Resources" listing free publications and offering resources on how teachers can incorporate the LISS into curricula.



The newly redesigned Web site has made quite a "splash" among Long Island Sound stakeholders. Since May of 2010, the Web site has had more than 19,293 visitors and much positive feedback. Stakeholders are able to find the information they are looking for easily and new users are drawn in to learn more about the Long Island Sound.

Visit the Long Island Sound Study website at www.longislandsoundstudy.net

This project meets the performance measures of Sea Grant's Healthy New York Coastal Ecosystems focus area.

New York Sea Grant Extension administration is located at 112 Rice Hall, Cornell University, Ithaca, NY 14853. This project summary was written by Larissa Graham, Long Island Sound Study Outreach Coordinator, 631-632-8730, ljg85@cornell.edu, www.nyseagrant.org.



NY Sea Grant Strengthens Partnership with Marine Educators

The New York State Marine Education Association (NYSMEA) promotes marine awareness among educators throughout the state of New York. Specifically, this group encourages the growth and exchange of instructional resources within scientific, commercial, and educational communities. With almost 500 educators on its mailing list, NYSMEA needed efficient and effective communication from the Executive Board to its membership. In 2010, NY Sea Grant (NYSG) partnered with NYSMEA to strengthen its communication tools to help the Association attract new members.

NYSMEA Web Site Redesigned

The Long Island Sound Outreach Coordinator was appointed to chair the *Ad Hoc* Web Site Committee, worked with NYSG's Web Content Manager to develop a plan for redesigning the NYSMEA Web site. Together, they conduct monthly site maintenance. NYSG partially funded the Web site redesign.

The new design makes it easier for members to search the content and receive regular notices of upcoming events and opportunities. Members now have access to job, volunteer, internship, and professional development opportunities, scholarships and grants, field trip destinations, and marine-related lesson plans.

Since the re-launch of the NYSMEA Web site in April 2010, more than 1,400 educators have visited the site.

Social Media Communications Added To notify members of new postings to the Web site and other upcoming events, the *Ad Hoc*



Web site Committee started social media pages (Facebook, Linked In, and Twitter) and creates and distributes an electronic newsletter to NYSMEA members every month.

NYSG now has a direct means to contact a diverse group of educators around the state of New York. NYSG Communication staff will engage NYSMEA members in the development of classroom materials. This project will improve educators' understanding of healthy coastal ecosystems, sustainable coastal development, safe and sustainable seafood, and hazard resilience in our New York coastal communities.

Visit the New York State Marine Education Assocation website at www.nysmea.org

This project meets the performance measures of Sea Grant's Healthy New York Coastal Ecosystems focus area.

New York Sea Grant Extension administration is located at 112 Rice Hall, Cornell University, Ithaca, NY 14853. This project summary was written by Larissa Graham, Long Island Sound Study Outreach Coordinator, 631-632-8730, ljg85@cornell.edu, www.nyseagrant.org.



Helping Local Leaders Understand Hudson River Shoreline Environments

New York Sea Grant Extension is part of the Hudson River Research Reserve's Shorelines Project Team, a group of agencies and organizations conducting research and outreach with funding from NOAA and the New York State Department of Environmental Conservation (NYSDEC) Hudson River Research Reserve (HRNERR). The Shorelines Project aims in part to understand how climate change may impact the river's edge. River community boat launches, parks, beaches and the estuary's tidal marsh habitats may all be impacted by sea level rise and possible flooding due to changing precipitation patterns, and communities will need to adapt to these changes.

In 2010, in partnership with the NYSDEC HRNERR and the NYSDEC Hudson River Estuary Program, New York Sea Grant Extension served on the planning committee and participated in a National Sea Grant Law Center-sponsored Pace University Land Use Law Center training program. The workshop, made possible by Sea Grant resources, focused on existing land use law in the





The Hudson River and shoreline at Poughkeepsie, NY. Photo: Nordica Holochuck, NYSG

context of meeting challenges brought by climate change. Shoreline Project Team members presented a clear and concise overview of climate predictions for the river valley, and the status and state of the river's shoreline habitats. Workshop organizers brought in guest speakers from NOAA's Northeast Regional Climate Change Center at Cornell University, and Coastal Resource managers for the New York State Department of State.

Approximately 40 Hudson Valley community leaders residing and working in the counties directly bordering the Hudson River (from Albany south to Rockland County) participated in the four-day workshop. Municipal officials, town supervisors, planning board members, and environmental educators from nongovernmental organizations now have resources and understand who best to contact to obtain the most current scientific research-based information to aid them in important decisions regarding their shoreline.

This child enjoys a sunny day along the Hudson River in Ulster County, NY. Photo: Nordica Holochuck, NYSG

This project meets the performance measures of Sea Grant's Sustainable Coastal Development focus area. New York Sea Grant Extension administration is located at 112 Rice Hall, Cornell University, Ithaca, NY 14853. This project summary was written by Nordica Holochuck, Hudson Estuary Specialist, 845-340-3983, nch8@cornell.edu, www.nyseagrant.org.



I FISH NY: Sharing Fishing Facts & Fun in NYC and on Long Island

Despite unprecedented threats to the world's ocean and water resources and being literally surrounded by water, many New York residents do not realize the quality fishing and thriving aquatic ecosystems they have right in their own frontyard. To address this problem, I FISH NY in New York City and Long Island — a joint program of the New York State Department of Environmental Conservation and New York Sea Grant — offers public event and school programs to connect New Yorkers to their water resources through angling.

Despite a late state budget, no funding for nearly six months, and reduced staff hours, I FISH NY conducted a nearly full complement of angling outreach programs in 2010.

I FISH NY New York City

In 2010, I FISH NY in New York City continued outreach into the city's more remote and neglected corners. This effort culminated in a highly successful public event, conducted in partnership with local civic organizations in Baisley Pond Park, South Jamaica, Queens. Plans are already underway to repeat next year, and schools from non-English speaking



neighborhoods in Flushing, Queens, and economicallychallenged sections of the Bronx are lined up for the 2011 in-school program.

Showing off a brown bullhead catfish at the 2010 Fall Family Fishing Festival, Hempstead Lake State Park. Photo: Ann TeNyenhuis, NYSG



An I FISH NY staff member helps four New Yorkers try their angling luck in the Hudson River during the Little Red Lighthouse Festival, September 25, 2010. Photo: James MacDonald, NYSG

I FISH NY NYC also made a more concerted effort to work with the media to publicize fishing events, and that effort that paid off not only in Baisley Pond but at the Little Red Lighthouse Festival at Fort Washington Park where a record number of people enjoyed an afternoon of angling and education in September.

I FISH NY Long Island

In 2010, I FISH NY continued to offer wellattended public and non-public fishing clinics across Long Island in partnership with public agencies and municipalities. A public clinic held in partnership with the Town of Brookhaven at Lake Ronkonkoma provided 74 beginner anglers with a fun introduction to fishing. Through collaboration with the New York State Office of Parks, Recreation and Historic Preservation, I FISH NY offered three public fishing events at Long Island state parks in 2010, reaching a total of 2,750 people.

I FISH NY continued to partner with summer camps to provide an enjoyable and safe fishing experience for children. In 2010, I FISH NY saw a total of 827 students at local summer camps, including Girl Scouts of America at Camp Edey and the Western Suffolk BOCES Marine Studies Enrichment Program.

This project meets the performance measures of Sea Grant's Safe and Sustainable Seafood Supply focus area.

New York Sea Grant Extension administration is located at 112 Rice Hall, Cornell University, Ithaca, NY 14853. This summary was written by James MacDonald, Recreational Fisheries Specialist, 718-484-4940, jam635@cornell.edu, 1/11 and Ann TeNyenhuis, Program Aide, 631-444-0238, amt237@cornell.edu, www.nyseagrant.org.



Advancing Effective Stormwater Management

Stormwater runoff is one of the top water quality issues on Long Island. A number of waterbodies no longer support shellfishing and swimming. The New York Sea Grant Nonpoint Education for Municipal Officials (NYSG NEMO) Program helps municipalities improve stormwater management which protects public health, improves water quality, and supports the fishing, tourism, and recreation industries.

In urbanized areas throughout the country and Long Island, regulations arising from the Clean Water Act require municipal operators of stormwater conveyance systems to implement stormwater management programs to prevent pollutant discharges to waterbodies.

NYSG NEMO supports municipal stormwater management compliance through on-site visits, consultations, presentations, workgroups, an email listserv, and feedback on annual stormwater program reports. NYSG NEMO's efforts help Long Island communities to address such contaminants as disease-causing bacteria (pathogens), sediment, toxic chemicals, excess fertilizers, and debris. Municipalities achieve their goals by educating the public, eliminating illicit discharges, reducing construction and development impacts, and preventing municipal facility pollutant discharges.





Above and below: Stormwater contaminants pose threats to public health and wildlife. Photos: Eileen Keenan, NYSG NEMO

NYSG NEMO programming in 2010 included:

- co-chairing the Peconic Estuary Program Stormwater Workgroup,
- one-on-one consultations.
- on-site visits and reviews of municipal facilities.
- convening and speaking at a pathogens management seminar,
- · participating as a panelist at the Peconic Estuary Program's Call to Action Conference,
- presentations to promote inter-municipal initiatives, to mitigate the impacts of construction and development, and to facilitate establishment of sustainable funding frameworks,
- increasing listserv subscriptions for dissemination of information pertaining to research, training and funding opportunities, and
- facilitating establishment of formalized inter-municipal initiatives in the Oyster Bay/ Cold Spring Harbor and Peconic Estuary drainage areas, both of which have received funding to hire coordinators.

This project meets the performance measures of Sea Grant's Healthy New York Coastal Ecosystems focus area. New York Sea Grant Extension administration is located at 112 Rice Hall, Cornell University, Ithaca, NY 14853. This project summary was written by Eileen Keenan, NYSG NEMO Program Manager, 631-444-0422, 631-632-3093, ek72@cornell.edu, www.nyseagrant.org. 1/11

Sea Grant

A Joint Program of • State University of New York • Cornell University • NOAA, Dept. of Commerce

NYSG Training Extension & Agencies in Climate Literacy

Climate change is poised to impact coastal ecosystems and economies in New York State. Most extension educators lack sufficient expertise in climate change to accurately communicate it to their audiences, particularly audiences that may be skeptical about climate change and incredulous of scientific information. Extension professionals need to be better informed about climate science and must also be trained in communication tools that will improve technology transfer and decision making among their coastal community stakeholders. Unfortunately, there have been few training opportunities on climate change for extension educators.

With funding from the NOAA Coastal Climate Change Adaptation Initiative (CCCAI), NY Sea Grant (NYSG) organized a two-day climate literacy training workshop in 2010 for 42 extension educators offering programming in natural resources, agriculture, consumer education, and youth education, and for staff from the National Weather Service. This NYSG workshop effectively integrated information on climate science with potential impacts of climate change and stakeholder communication strategies.

The evaluations indicate the workshop was highly successful in preparing the educators to communicate climate change impacts to meet their audiences' information needs.

Participants identified the workshop as their most comprehensive and effective climate change training and committed to:

• integrate the workshop information into their existing curricula,



Climate Change Literacy workshop organizers and participants included NY Sea Grant, Cornell University, Northeast Regional Climate Center and National Weather Service personnel: (back row l to r) David MacNeill, Allison Chatrychan, Katherine McComas, Holly Menninger, Chuck O'Neill; (front row l to r) David Nicosia, Art DeGaetano, Bruce Lewenstein, David Wolfe. Photo: Kara Lynn Dunn, NYSG

- · relay information directly to colleagues,
- develop companion climate change workshops for their colleagues using the NYSG workshop as a model, and
- establish a Statewide Climate Change Program Work Team, within the Cornell University system, to solidify the bridge between Sea Grant and Land Grant programs.

As a direct result of this workshop, extension educators in New York State are now better positioned to develop clearly focused climate change outreach and adaptation strategies for diverse audiences.

New York Sea Grant is actively engaged in climate change outreach coordination in both Great Lakes and marine program environments.

This project meets the performance measures of Sea Grant's Hazard Resilience in Coastal Communities focus area. Sea Grant Extension administration is located at 112 Rice Hall, Cornell University, Ithaca, NY 14853. This project summary was written by David B. MacNeill, Fisheries Specialist, 315-312-3042, dbm4@cornell.edu, www.nyseagrant.org.



NYSG Assists Czech Republic Development of Reservoir Trawling Program

n the Czech Republic there are more than 100 large artificial reservoirs created as river empoundments. These empoundments are the major freshwater supplies to many communities in the Czech Republic. Fish community structure, an important indicator of water guality in these systems, is monitored by the Fish Ecology Unit (FishEcU, www.fishecu.cz) of the Institute of Hydrobiology of the Czech Academy of Sciences. Passive tools (gillnetting) are used for sampling adult fish in open water, however, they are ineffective for capturing small fish and must be deployed overnight in several areas to obtain representative samples of the fish communities.

In the Great Lakes of North America, trawling is most commonly used for sampling offshore fish communities. For more than a decade in the Czech Republic, preliminary trials were conducted using trawling gear, a preferred active sampling method. The trials proved unsuccessful due to the FishEcU staff unfamiliarity with trawl design and operation, particularly in freshwater.

In 2008, NY Sea Grant organized a trawl design workshop with Rhode Island Sea Grant and the Memorial University of Newfoundland (MUN). Dr. Tomas Juza attended the workshop as a representative of the FishEcU from the Czech Republic. Upon his return home, the FishEcU was able to use the NYSG training to design a new trawling vessel and trawl to begin a new reservoir sampling program.

In 2010, the Czech team reported that the new vessel and trawling technique enabled the Fish-EcU to obtain representative, quantitative fish



This trawling research vessel was designed and built in the Czech Republic using a training program developed by NY Sea Grant. Photo: FishEcU, Czech Academy of Sciences

Because fish communities influence the nutrient dynamics and amount of plankton in waterbodies, fish community structure is an excellent indicator of water quality.

In the Czech Republic, water quality in large drinking water reservoirs and recreational fishery waters is now monitored using fish community indices from trawling operations developed with assistance from New York Sea Grant.

samples in only 20 minutes of trawling in each reservoir, compared to the overnight gillnetting.

The new trawling system has now been successfully applied in the United States and in assessment projects in the Czech Republic, Spain and Germany, resulting in the publication of at least four research papers in international journals in 2009 and 2010.

This project meets the performance measures of Sea Grant's Healthy New York Coastal Ecosystems and Safe and Sustainable Seafood Supply focus areas. Sea Grant Extension administration is located at 112 Rice Hall, Cornell University, Ithaca, NY 14853. This project summary was written by David B. MacNeill, Fisheries Specialist, 315-312-3042, dbm4@cornell.edu, www.nyseagrant.org.



Preventing & Containing VHS in Aquaculture Operations

VHS, viral hemorrhagic septicemia, threatens the sustainability of global fisheries and aquaculture. The viral pathogen (VHSV) is considered to be one of the more serious fish pathogens known and has the potential to devastate hatchery operations. Prior to 2007, little information concerning the containment of the virus and disease was available. Since then, New York Sea Grant (NYSG) has been taking steps to educate fish health and culture professionals about VHS in an effort to protect wild fish stocks and maintain the viability of aquaculture in the Northeast.

With NY Sea Grant funding, renowned fish disease experts Dr. Paul Bowser and Dr. James Casey of the Aquatic Animal Health Program at the Cornell University College of Veterinary Medicine developed and refined a molecular technique used to diagnose the disease. These researchers also generated valuable research essential to prevent and/or contain the disease and pathogen.

During 2008–2010, NYSG partnered with the Cornell researchers and Rhode Island, Pennsylvania and Lake Champlain Sea Grant programs to organize regional workshops to disseminate the results of this research to diverse stakeholder groups. Hatchery managers of the Vermont Fish and Wildlife Department





Above: The research-outreach project of NY Sea Grant Fisheries Specialist David MacNeill (left) and Dr. Paul Bowser of the Cornell University of College of Veterinary Medicine Aquatic Animal Health Program earned the National Sea Grant 2010 Research Application Award. Photo: Stephanie Specchio, Cornell University

were among the first to use the information to evaluate their current practices and maintain their walleye stocking program.

The National Sea Grant Office recognized the success of this research and outreach partnership and presented its first-ever "Research to Application Award" to Dr. Bowser and NYSG Fisheries Specialist David B. MacNeill in October, 2010.

As of January 2011, VHSV has not been found in any fish culture facility in the eastern U.S.

This project highlights New York Sea Grant's ability to quickly identify and respond to a high priority by supporting cutting edge research and delivering newly generated information to diverse constituencies in partnership with researchers.

Left: Diagram of a single VHSV specimen. Science-based research on the virus now supports prevention and containment protocols. Photo: Lorenzen et al, 1999

This project meets the performance measures of Sea Grant's Healthy New York Coastal Ecosystems and Safe and Sustainable Seafood Supply focus areas. Sea Grant Extension administration is located at 112 Rice Hall, Cornell University, Ithaca, NY 14853. This project summary was written by David B. MacNeill, Fisheries Specialist, 315-312-3042, dbm4@cornell.edu, www.nyseagrant.org.



Developing Educational Materials for New York's Eastern Lake Ontario Region

The current economic climate has New York Sea Grant (NYSG) constituents seeking educational materials that can reach numerous audiences using innovative delivery methods. To supplement ongoing efforts that promote environmentally-responsible use of the Eastern Lake Ontario Dunes and Wetlands Area (ELODWA) and the Sandy Creeks watershed, NYSG expanded its toolbox of educational materials that include a guidebook, brochure, traveling trunks and interpretive panels in 2010.

Twenty identical traveling trunks, which are large totes filled with educational materials, were assembled. These totes will be used by formal and informal educators to increase public appreciation for ecologically appropriate recreational enjoyment of the ELODWA. These trunks are available in local school districts.

NYSG developed the traveling trunks in partnership with the Oswego County BOCES, Oswego County Soil & Water Conservation District (OCSWCD), The Nature Conservancy (TNC), and New York State Department of Environmental Conservation (NYSDEC).

In addition to the traveling trunks, a series of interpretive panels was developed to educate constituents about various components of the Sandy Creeks Watershed, an Ecosystem-based





This NYSG traveling trunk is in use by the Pulaski School District Environthon Team, high school science classes and Middle School Science Club. Photo: Mary Penney, NYSG

Management Demonstration Area in New York State. The panels' text and graphics promote stewardship and highlight previously overlooked issues that define these unique ecosystems. Topics include sand dune formation, the sand transport system, eastern Lake Ontario wetlands, and riparian restoration. Visitors encounter the panels at public access properties within the 17-mile stretch of the ELODWA and at streamside locations.

NYSG developed the panels in partnership with the New York State Office of Parks, Recreation and Historical Preservation; the New York State Tug Hill Commission; OCSWCD; TNC; NYSDEC; and Great Lakes Seaway Trail.

The New York State Department of State provided two grants totaling \$59,000 for project funding.

Left: Walkers approach the Great Lakes Seaway Trail interpretive panel at Sandy Island Beach State Park. The New York Sea Grant interpretive panels for the Eastern Lake Ontario Dunes and Wetlands Area and Sandy Creeks watershed employ the design style of the Great Lakes Seaway Trail panels. Photo: George Fischer, Great Lakes Seaway Trail

This project meets the performance measures of Sea Grant's Healthy New York Coastal Ecosystems focus area. New York Sea Grant Extension administration is located at 112 Rice Hall, Cornell University, Ithaca, NY 14853. This project summary was written by Mary Penney, Coastal Community Specialist, 315-312-3042, mp357@cornell.edu, www.nyseagrant.org.



New Web Site Helps Coastal Managers Respond to Nor'easters

While hurricanes get more attention, winter storms known as northeasters (or nor'easters) are more frequent, longer lasting, and much larger than hurricanes, and cause more damage on New York's coast. Unfortunately, coastal managers and planners did not have the information they needed to better respond to these destructive events. To help coastal communities deal with nor'easters. NY Sea Grant worked with NOAA's Northeast **Regional Climate Center at Cornell** University to develop the East Coast Winter Storm Climatological and Forecasting Data Web site.

As part of a NOAA-funded project, NY Sea Grant assembled a team of coastal managers and emergency personnel to help guide Web site design and to ensure it provided needed information in a usable form. The resultant site provides:

- · seasonal forecasts of storm activity,
- historical storm data,
- access to sites providing real-time environmental measurements, and
- a tool that automatically matches forecasted storms with the most similar historical events and provides information on the impacts of these events to help audiences better prepare for predicted storms.

NY Sea Grant held workshops, developed articles, and sent mailings about the site and its use to more than 550 Federal, state and local government officials, coastal managers, and emergency personnel.

The site has become an important tool for coastal communities. John Baroni, emergency



The winter storm Web site at http://nywinterstorm.org gives coastal managers a variety of tools to help them better deal with northeasters.

manager from East Rockaway Village, says, "We were surprised at how well the site worked during the past northeasters. It is being put to good use."

Three fire district battalions covering the entire south shore of Nassau County, six villages, and representatives of the emergency amateur radio operators association tasked by the Department of Homeland Security for assisting the Red Cross in emergencies now incorporate information from the Web site into emergency response plans.

Two municipalities used information from the site to obtain \$1 million for storm damage restoration and mitigation projects.

Learn about East Coast winter storm forecasting & management at http://nywinterstorm.org

This project meets the performance measures of Sea Grant's Hazard Resilience in Coastal Communities focus area. Sea Grant Extension administration is located at 112 Rice Hall, Cornell University, Ithaca, NY 14853. This project summary was written by Jay Tanski, Coastal Processes & Facilities Specialist, 631-632-8730, jjt3@cornell.edu, www.nyseagrant.org.



New Yorkers Take 2010 Discover Clean & Safe Boating Pledge

A New York Sea Grant (NYSG) survey on boating expenditures indicated that learning about environmentally sound boating practices was important to nearly 90 percent of respondents. In response to this need for boater BMPs (Best Management Practices), NYSG initiated a pilot effort in 2008 called "Discover Clean & Safe Boating."

A successful debut at the Boating Industry Association (BIA)-sponsored Central New York Boat Show (upstate NY's

largest boat show) as a static display led to the development of a full educational effort in 2010 addressing clean and safe boating practices. BIA, as a key industry partner in this effort, provided funding as well as direct linkage to the marine industry throughout upstate NY.

In 2010, Marathon Boat Group provided an 18-foot "made in New York" Grumman pontoon boat equipped with two electric motors (a \$15,000 value) for the summer Discover Clean & Safe Boating tour. For the "tour," the boat was outfitted with all the required and recommended



gear for safe and clean boating on NY waters. The boat was equipped with PFDs (personal flotation devices, including life vests), safety flares, chartbook, paddle, green cleaning products, bilge sock,



NYSG Recreation and Tourism Specialist Dave White aboard the 2010 Discover Clean & Safe Boating vessel. Photos: Kara Lynn Dunn, NYSG

fuel nozzle bib, and other gear labeled and on display. Two of New York's marine supply wholesalers — Morgan Recreational Supply and Taylor Made Products — donated all of the displayed material.

More than 1,400 boaters who pledged to be "clean and safe" were invited to spin a wheel for boat safety or cleaning products, e.g., a bilge sock, PFD, or chart book, and received a "Boater Bag" of clean and safe information. Residents from across upstate NY signed the pledge, with thousands more exposed to good boating practices through the 2,500-plus mile campaign at 11 events in two states.

Partners donating prizes included the Sailboat Shop, Skaneateles NY; the New York State (NYS) Office of Parks, Recreation & Historic Preservation, NYS Environmental Facilities Corporation; and the Great Lakes Seaway Trail (a National Recreation Trail).

 This project meets the performance measures of Sea Grant's Sustainable Coastal Development focus area.

 New York Sea Grant Extension administration is located at 112 Rice Hall, Cornell University, Ithaca, NY 14853.

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