

Revised 2009 Extension Impact Statements

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Connecting Shoreline to Online

Recreational fishing has been declining for several years, and this trend continues to cause several small businesses to close their doors. On Long Island, reduced sportfishing participation has detrimental effects on coastal economies, and this impact is exacerbated under the economic recession when combined with new fisheries management policies such as the introduction of a new saltwater fishing license. Under the present economic climate, charter fishing businesses must be willing to adopt new strategies if they hope to remain competitive and survive these challenging times.

In 2008 New York Sea Grant (NYSG) initiated a program to educate charter fishing businesses about collaborative marketing. As part of the program, new avenues were developed to connect “at risk” businesses with established tourism-oriented ventures, as a way to attract an entirely new group of anglers and preserve the sportfishing heritage that is associated with Long Island.

NYSG worked with several charter fishing businesses to advance the collective interest in collaborative marketing one step further, by coordinating a new marketing partnership with Travelocity®.

NYSG extended direct assistance to charter fishing operators and Travelocity® to develop an agreement to include sportfishing as an outdoor activity being marketed to travelers across the globe. Participants in the pilot program completed the application package and were introduced to basic marketing strategies being used in the international travel industry.



*Small charter boat businesses who market their service with Travelocity® can connect with the global travel industry.
Photo: Lin-Mar Travel Associates, Inc.;
Travelocity® gnome used with permission*

Under this agreement, recreational fishing became listed on the website of an internationally-acclaimed internet travel portal for the first time. Participating vessels can each sell up to eight tickets for each trip and travelers who visit Long Island are now able to purchase fishing trips for head boats and private charters that operate from three ports: Sheepshead Bay, Freeport and Captree.

Anglers can also purchase tickets for seasonal trips such as whale watching and deep sea fishing in the Atlantic Ocean.

Via this program, Long Island is being promoted as a major fishing destination to travelers across the globe.

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 Antoinette Clemetson, Marine Fisheries Specialist,
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Bringing Shoreline Science to New York's Teachers & Students

By making science/environmental education a priority issue, New York Sea Grant (NYSG) is ensuring a scientifically and environmentally informed citizenry for the future. NYSG's educational programming meets the goals and strategies outlined in its Healthy New York Coastal Ecosystems focus area.

In 2009, New York Sea Grant directly worked with 13,500 students and 1,065 teachers. Using a "teach the teacher" approach, NYSG reached an additional 26,625 students, making the statewide total more than 40,000 students who have learned about critical environmental issues such as water quality and invasive species.

Utilizing innovative approaches and fourth year funding for the Centers for Ocean Sciences Education Excellence (COSEE) Great Lakes, NYSG conducted four teachers' workshops, a week-long teachers' training on Tropical Marine Ecology, and several presentations at national education and scientific conferences.

The mission of COSEE Great Lakes is to foster lasting relationships through networks that link Great Lakes educators with ongoing science research in the region and connections between freshwater science and its marine equivalents.

COSEE Great Lakes is co-funded by the National Science Foundation, the National Oceanic and Atmospheric Administration and the National Sea Grant College Program.



New York Sea Grant coastal education programming often includes hands-on, shipboard training programs, such as this teacher training on Lake Erie in 2009. Photo: Helen Domske, NYSG

Other successful NYSG-coordinated Great Lakes educational programs in 2009:

- **Science Exploration Day**
800 high school students and teachers gathered at the University at Buffalo to learn from scientists on topics ranging from invasive species to environmental engineering
- **Lake Erie Workshop for Teachers**
NYSG assisted with the coordination of a week-long COSEE GL workshop along Lake Erie for 15 educators with more than 16 scientists
- **NYSG Distance Learning Program**
... introduced 1,100 4th grade students and their teachers to the impacts of invasive species through the Authentic Learning program at the Buffalo Museum of Science.

For a sampling of NYSG coastal education materials, go online to <http://www.seagrantsunysb.edu/article.asp?ArticleID=51>.

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

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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 prosper, this industry must use science-based 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 2009, more than 1,000 individuals from seafood companies and state or federal regulatory agencies participated in food safety training programs conducted or managed by New York Sea Grant.

Internet-based Training

In 2009, nearly 750 individuals enrolled in the Internet-based course that enables them to meet the training requirement of the FDA's seafood HACCP (Hazard Analysis Critical Control Point, <http://seafoodhaccp.cornell.edu>) regulation. The online Good Manufacturing Practices course (<http://gmprtraining.aem.cornell.edu>) taught 150 individuals basic food safety practices for food processors, wholesalers and warehouses.

Since these two courses were created, more than 4,500 people have received instruction.

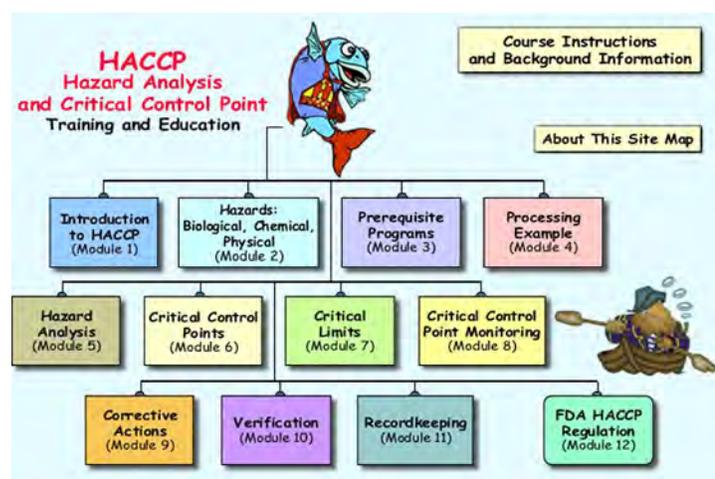
NYSG has created in-person and online training in science-based preventative systems, such as HACCP (Hazard Analysis Critical Control Point), to help the seafood industry produce safer products.

Training Workshops

In 2009, NYSG conducted six training workshops in NY on seafood safety requirements for approximately 115 individuals from seafood firms and federal and state food safety inspectors. More than 650 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 U.S. 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 2009, NYSG was among key members of a national team that developed a new training manual and teaching modules. NYSG also helped conduct a train-the-trainer course for 25 food safety inspectors from 14 different states that will qualify them to conduct Seafood HACCP training in their state or region.



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.

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Keeping Pharmaceuticals Out of New York Waters

When pharmaceuticals are flushed down the toilet or sink, the chemicals in these substances may pass through wastewater treatment facilities and end up in fresh and marine waters, negatively impacting wildlife.

Residents are being told not to flush or pour unwanted pharmaceuticals down their drains and, instead, to dispose of these items in the trash or at a collection event. Some residents are concerned that disposing of unwanted pharmaceuticals in the trash will lead to misuse or delayed environmental effects. Most do not know where to find out about upcoming collection events. Others are unaware of the harmful effects of flushing unwanted pharmaceuticals.

Creating a Local Solution

Stony Brook Medical Center contacted New York Sea Grant (NYSG) in response to a letter from Suffolk County Legislator Lynne Nowick asking local hospitals to organize collection events for unwanted medicines.

NYSG's Long Island Sound Study Outreach Coordinator contacted representatives of Stony Brook University, Legislator Nowick's office, the Suffolk County Health Department, Suffolk County Police Department Narcotics Unit, and Triumvirate Environmental Inc. Together, these groups organized an event to collect unwanted pharmaceuticals from residents.

The collection event was held in April 2009. Almost 500 pounds of unwanted pharmaceuticals were collected from 140 residents. In total, more than 90,000 pills were returned, including 2,059 containers of non-controlled substances and 147 containers of controlled substances.



Above: Pharmacists from Stony Brook Medical Center volunteered to sort and record the nearly 500 pounds of pharmaceuticals (right) collected during the April 2009 event that New York Sea Grant helped to organize and sponsor. Photos: Barbara Branca, NYSG



The collected items were sent to a hazardous waste incinerator that destroyed 99% of the chemicals in the pharmaceuticals.

After the event, NYSG and the event committee members compiled a "How To" guide to assist other New York-based agencies and community groups interested in holding a collection event. This guide is available online at <http://www.seagrant.sunysb.edu/article.asp?ArticleID=362>.

NYSG posts upcoming collection events online and is creating additional educational materials to distribute to community members.

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

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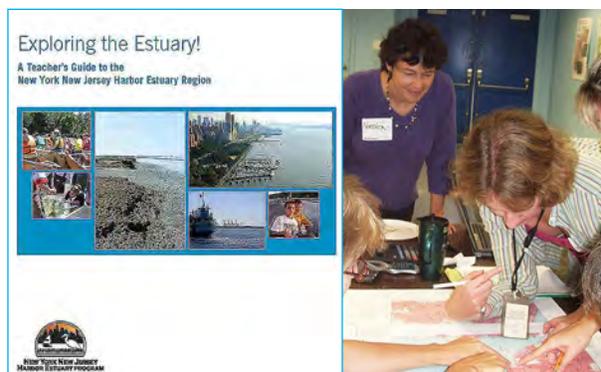
This project summary was written by Larissa Graham, Long Island Sound Study Outreach Coordinator,

Exploring the Estuary! NYSG Publishes Teacher Guide to New York—New Jersey Harbor Estuary Region

More than 1 million students attend public schools in New York City. The region's teachers are increasingly recognizing and using New York's major urban estuary as a living classroom. In partnership with the US EPA New York-New Jersey Harbor Estuary Program (HEP), New York Sea Grant has prepared a comprehensive guide to metropolitan New York's coastal education resources to help K-12 educators prepare New York's next generation of coastal leaders.

The *Exploring the Estuary!* guide introduces educators to the premier environmental education organizations focused on the region's significant waterways and more than 1,000 miles of shoreline from the lower Hudson River through the New York-NJ Harbor to the western end of Long Island Sound.

The 100-plus page networking guide includes introductory estuary fact sheets plus profiles of more than 50 education organizations and water and estuary-related Internet resources. The profiles include each organization's contact information and details regarding availability of



Above left: the new *Exploring the Estuary!* guide for teachers; right: NYSG Hudson Estuary Specialist Nordica Holochuck with teachers at a NY Aquarium Harbor Estuary-sponsored workshop. Photos: NYSG; M. Kafka Wildlife Conservation Society

estuary-related curriculum, field trip opportunities and classroom programs. The guide also features 16 sample estuary lesson plans contributed by participating organizations.

Approximately 2,000 hard copies of the guide have been distributed to teachers through New York Sea Grant (NYSG) professional development workshops and conferences.

It was the long-standing partnership between NYSG and HEP, a National Estuary Program, and a positive response to estuary stewardship workshops delivered by the NYSG-HEP collaboration that identified the need to update and revise HEP's educational directory in 2009.

The new guide is primarily available via the New York-New Jersey Harbor-Estuary website at www.harborestuary.org. The publication is posted in its entirety and is promoted on both the NYSG and HEP program websites from which educators can download content free of charge ([www.http://www.seagrantsunysb.edu/hriver/pdfs/HEP-EstuaryTeachersGuide.pdf](http://www.seagrantsunysb.edu/hriver/pdfs/HEP-EstuaryTeachersGuide.pdf)).

Left: New York's urban estuary. Photo: Nordica Holochuck, NYSG

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.

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

Despite unprecedented threats to the world's ocean and water resources, thanks to video games and dancing celebrities, NY residents have never been farther removed from their own nearby marine environment. In densely populated Long Island and New York City (NYC), many people do not even realize that there is literally an ocean next door. To address this problem, I FISH NY, a joint program of the New York State Department of Environmental Conservation and New York Sea Grant, encourages participants to develop a personal stake in NY's aquatic resources through fishing.

I FISH NY New York City

In 2009, I FISH NY began a concerted outreach effort to outdoor educators. That effort resulted in an ongoing commitment from I FISH NY to train New York City Urban Park Rangers to conduct fishing outreach events of their own and teach the Rangers about the ecology of local fishes. To date, the program has trained more than 80 Rangers, with many more programs planned for 2010. The arrangement also led to collaboration on three major and successful fishing outreach events in 2009.

This new effort complements a move towards increased program flexibility, which, in 2009,



NYC Urban Park Rangers learn the dropper loop knot from I FISH NY Program Aide Darin Alberry at Inwood Hill Park, NYC. Photo: James MacDonald, NYSG



Three Girl Scouts enjoy themselves during an I Fish NY fishing clinic at Camp Edie Lake, Town of Bayport, Suffolk County, NY. Photo: Ann TeNyenhuis, NYSG

introduced the I FISH NY program to new audiences including non-English speakers.

I FISH NY Long Island

To assist educators, in 2009, I FISH NY lesson plans became web-accessible. With the assistance of New York Sea Grant's Communications Department, a "For Teachers" page on the I FISH NY website was created, which features in and out-of-classroom lesson plans. I FISH NY lesson plans come equipped with background information, vocabulary definitions, accompanying handouts, and additional resources.

Along with in-class visits to schools on Long Island, I FISH NY specialists created teacher packages to accompany complementary activities and games to be used prior to or post I FISH NY programs.

Complementing existing efforts to produce more "do it yourself" anglers, a series of instructional videos are in development and projected to be available in 2010.

This project meets the performance measures of Sea Grant's Coastal and Ocean Literacy focus area.

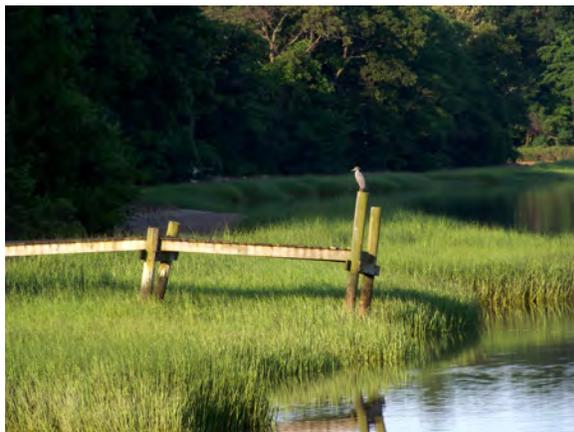
New York Sea Grant Extension administration is located at 112 Rice Hall, Cornell University, Ithaca, NY 14853. This summary was written by James MacDonald, Recreational Fisheries Specialist, 718-484-4940, jam635@cornell.edu, 1/10 and Ann TeNyenhuis, Program Aide, 631-444-0238, amt237@cornell.edu, www.nyseagrant.org.

Ensuring Healthy Long Island Estuaries

Impacts to Long Island's valuable coastal resources have grown as development has escalated and polluted runoff has increased. Public health concerns have caused bathing and shellfishing restrictions. Degradation of the Island's estuaries has affected fishing, tourism, and recreational revenues, and has impaired the quality of life previously enjoyed by Long Islanders.

To address these issues, New York Sea Grant Nonpoint Education for Municipal Officials (NYSG NEMO) has assisted the Island's localities in meeting the significant financial and technical challenges they face in complying with requirements mandated by 2003 federal and state Phase II stormwater regulations. In 2008 New York's regulations increased significantly in scope and complexity; further requirements are scheduled to come into effect in 2010.

In 2009, while reaching more than 100 municipalities Island-wide, NYSG NEMO worked closely with east end municipalities, many of which recently became newly designated for Phase II regulation. In-depth consultations were provided to the Towns of Shelter Island, East Hampton, Southold, and Southampton.



Municipal Stormwater Programs protect Long Island's estuaries (Stony Brook Harbor). Photos: Eileen Keenan, NYSG NEMO

NYSG NEMO assisted east end municipalities in planning their stormwater programs, and in establishing measurable goals for public education, illicit discharge detection, construction oversight, and pollution prevention programs.

While building understanding of the regulations, NYSG NEMO also provided examples of successful programs, delivered technical resources, and served as liaison between municipalities to promote leveraged experience and expertise.

NYSG NEMO continued to serve as Co-Chair of the Peconic Estuary Program's Inter-Municipal Stormwater Workgroup. As a result, east end municipalities have begun implementing joint stormwater projects, including sharing of equipment, GIS data, and stormsewer mapping protocols.

Looking forward, formal establishment of a Peconic Inter-Municipal Stormwater Consortium has advanced and efforts to initiate an inter-municipal agreement and first year work plan are underway. These important steps will solidify long-term cooperation, funding, and operational frameworks.

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.

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Educating and Exciting Youth about Ocean Engineering

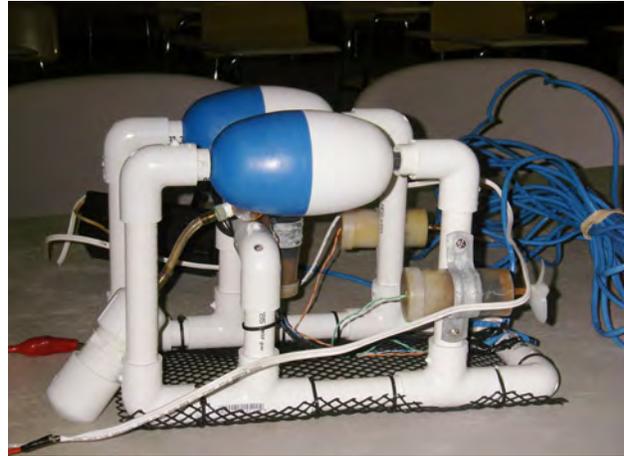
In 2009, New York Sea Grant (NYSG) partnered with the Massachusetts Institute of Technology (MIT) to create excitement about ocean engineering among young students on Long Island.

Engineering as a career seems to be waning among many students in the United States. Such a decline raises economic and security issues for the nation in that we will fall behind other countries in the development of technologies to build a new economy and security systems.

To address the issue, the MIT Sea Grant program began “Sea Perch,” a program designed to introduce young students to ocean engineering and to help them understand that engineering can be fun and exciting.

Sea Perch students learn basic engineering concepts to solve some basic engineering design issues. They build a submersible remotely-controlled water quality sensing device that photographs conditions under water, collects data about water quality, and transmits that data to a computer on land.

In 2009, in the spirit of the nationwide network of Sea Grant programs which work together to address national issues, New York Sea Grant invited MIT Sea Grant to come to Long Island to conduct a Sea Perch program with a group of 40 middle school students from Westhampton Beach Middle School. The program was supported in part by the Allan Overton Endowment at Cornell University, which supports Sea Grant’s youth education efforts on Long Island.



Students “engineered” and launched a “sea perch” that they operated remotely into a local bay. The sea perch sent back pictures from the bottom of the bay and collected several water quality parameters. Photo: Mark Cappellino, Cornell Cooperative Extension Suffolk County

After the event, the students wrote their thoughts about the program, some of which are highlighted here:

- *“Your program gave me a better outlook on the world of science, and it made me interested in pursuing a career in marine engineering.”*
- *“I found the topic very interesting and I am thinking about looking into marine science for future years. It was an honor to be taught by such accomplished people, and this experience sparked an interest in a topic that I have not seen before.”*
- *“I’ve always been interested in robotics. Now I’m thinking about a job that has do with remotely operated vehicles. So, thank you for the opportunity to explore more jobs in the science field.”*

This project meets the performance measures of Sea Grant’s Coastal Citizens’ Awareness & Understanding focus area. Sea Grant Extension administration is located at 112 Rice Hall, Cornell University, Ithaca, NY 14853. This project summary was written by Robert Kent, NYSG Interim Associate Director/Marine Program Coordinator,

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Sea Grant/NOAA Networking for Climate Change Extension

New York Sea Grant (NYSG) is an active participant in the National Sea Grant Network effort that is compiling scientific information on climate change impacts and developing climate change outreach strategies for communities in the Great Lakes and marine coastal states.

In 2009, with leadership provided by the National Sea Grant Climate Change specialist and the National Sea Grant office, NYSG co-organized and moderated workshop sessions in Charleston, South Carolina, with more than 90 Sea Grant specialists, communicators, program leaders and NOAA staff on communicating the impacts of climate change to communities, engaging stakeholder communities, and communicating potential impacts of climate change.

As a direct result of these workshop sessions, communities in Hawaii, Maryland, Alaska, South Carolina and Louisiana were assigned a Sea Grant specialists team to assess site specific information needs relating to potential climate change impacts in their communities. These efforts in 2010 are creating the baseline for a continuing project that will assist community leaders, planning agencies and coastal businesses with adaptive planning for climate change.

NYSG has also developed an extensive literature compilation that was disseminated to climate change specialists in the National Office and Sea Grant extension counterparts in the Northeast, Mid-Atlantic, Gulf Coast and Pacific Sea Grant Networks, including Alaska and Hawaii.



*This image of the Great Lakes covered in snow and ice in February is among the images created by MODIS - the Moderate Resolution Imaging Spectroradiometer - that assists climate change study.
Photo: MODIS, <http://modis.gsfc.nasa.gov/gallery/>*

For New York state, the benefits of taking a proactive approach will develop resources for dealing with such issues as flooding, erosion and storm surge. New York Sea Grant has worked with Cornell University and NOAA's Northeast Regional Climate Center to develop the East Coast Winter Storms Climatological and Forecasting Web site at <http://nywinterstorm.org>.

***New York Sea Grant
is currently the only Sea Grant program
in the U.S. 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,
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Partnership Creates International Success Story for Design & Use of Trawling Technology

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 is monitored using fish community indices from trawling operations. Czech scientists, however, have experienced difficulties trawling in inshore areas of large inland reservoirs. This situation provided a unique opportunity for the New York and Rhode Island Sea Grant programs and the Memorial University of Newfoundland (MUN) to organize a joint workshop to bring trawling technology to inland trawlers in the Great Lakes and European Union.

During fall 2008, the three collaborating organizations conducted a three-day trawling gear design workshop for freshwater users. The workshop featured presentations on trawl designs and vessel demonstrations of variable trawl designs on fish catches, and participation aboard a research trawler along the Atlantic Coast.

Among those attending the workshop was Dr. Tomas Juza from the Hydrobiology Institute at Cseka Budejovice. Juza represented the interests of 14 countries. To facilitate his learning, New York Sea Grant organized meetings and participation on trawl sampling with fisheries assessment staff from Lakes Erie and Ontario. Juza took photos and detailed calculations on a variety of design aspects of the trawling vessels he was aboard.

After completing his stay in the U.S., Juza said, "This has been a perfect learning experience for me. My country will use what I and colleagues from Russia and Finland have learned to design and build a trawling vessel for use in assessing



*Above: This new trawling-vessel combination was designed after EU nations sent a representative to a Sea Grant workshop and field tours.
Photo: Hydrobiology Institute at Cseka Budejovice*

adult fish populations in Czech reservoirs that are stocked for recreational fishing."

As a direct result of the workshop, researchers in the Czech Republic developed a new trawl-vessel combination fabricated in Norway and a revised sampling protocol that allows them to successfully trawl in nearshore areas. The gear and sampling program have been successfully used in a government-supported water quality monitoring program in two drinking water reservoirs in the Czech Republic and in Austrian lakes. The reservoirs supply more than 100,000 people with drinking water.

In 2009, Juza reported to New York Sea Grant staff, "This year was a breakthrough in adult trawling in the Czech Republic. According to the new trawl plan, we successfully caught dominant species (here) and in Austrian lakes. With special thanks to NY Sea Grant...the trawling project in the Czech Republic is developing very well."

This project meets the performance measures of Sea Grant's Healthy New York Coastal Ecosystems 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,
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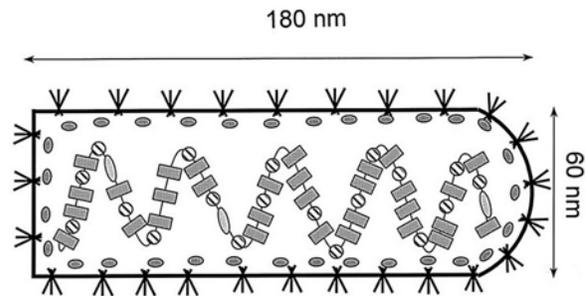
Preventing & Containing VHS in Aquaculture Operations

VHS, viral hemorrhagic septicemia, is a threat to sustainable global fisheries and aquaculture. The potential impacts of VHS in fish rearing facilities are especially worrisome, since little information concerning the containment of the virus and disease was available prior to 2009. New York Sea Grant (NYGS) is taking steps to inform fish health professionals and hatchery operators about viral spread and containment policy in an effort to protect wild fish stocks and maintain the viability of aquaculture in the Northeast States.

Internationally renowned fish disease experts Dr. Paul R. Bowser, a professor of aquatic animal medicine, and virologist Dr. James W. Casey of the Cornell University College of Veterinary Medicine Fish Diagnostic Laboratory have refined the molecular technique used to diagnose the disease in fish and generated the key research information necessary for operators of fish-rearing facilities to prevent and/or contain the virus.

Project outreach led by NYSG has facilitated delivery of the results of the researchers' work to stakeholder groups.

With funding from the Northeast Regional Aquaculture Center, the Cornell Fish Diagnostic Lab developed a containment and prevention protocol for VHSv, the viral pathogen for VHS. During December 2009, NYSG coordinated the outreach component of the project with Lake Champlain and Pennsylvania Sea Grant programs.



Above: Diagram of a single VHSv specimen showing approximate dimensions. Units are in nanometers (1 nm = 1 billionth of a meter). The size equivalent of placing a single VHS virus next to a flea is a human being standing at the base of a mountain twice the size of Mount Everest. Science-based research on the virus now supports prevention and containment protocols. Photo: Lorenzen et al, 1999

Two regional workshops - one in New York and one in Pennsylvania - were conducted to summarize the disinfection and containment protocol developed by the Cornell University researchers.

Based on workshop evaluations, 100% of workshop attendees indicated that they would utilize these guidelines in their own fish rearing facilities and share the information with other aquaculture practitioners.

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

New Water Levels Update Assists Lake Ontario Stakeholders

Fluctuations of Lake Ontario's water levels affect coastal resource decision makers such as shoreline landowners, boaters, marina operators, environmentalists... Accurate and timely information on recent, current, and forecasted lake levels, based upon the most accurate scientific information available, can assist these stakeholders in making better-informed coastal resource use decisions.

New York Sea Grant (NYSG) has developed a Lake Ontario Water Levels Update that is now available in PDF format via the NYSG website (http://www.seagrantsunysb.edu/glcoastal/WaterLevels-LOnt/Lake_Level_Update.pdf). While much of the information in the Update is available on the Web from other sources, very few stakeholders are aware of where to find it and may not understand the data fully enough to draw accurate conclusions. The NYSG-designed Update is a user-friendly, accurate, clear report on Lake Ontario water levels.

Components of the Update include a graph showing the current and previous 24 months of lake level data (20th/21st Century long-term average levels, historical monthly highs and lows, recorded daily levels, and the high, low and average inflow water level forecasts extending about five months forward). Graphs also show daily mean deviations from long-term mean daily levels, daily inflows and weekly

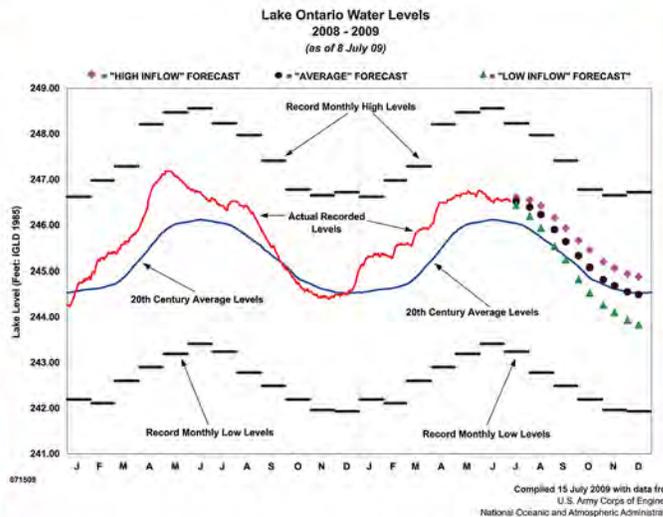
average outflows, and long-term water levels for 1988 through 2009.

The report is prepared monthly during the ice-free months of the year and bi-monthly during the winter. NYSG also provides the report to NYSG stakeholders via our "Great Lakes Splash" electronic newsletter.

Additional features, possibly including a lake level question & answer section, will be added in 2010.

In preparing the report, NYSG draws upon its extensive network of university and agency-based information sources such as the National Oceanic and Atmospheric Administration, the US Army Corps of Engineers, and the International St. Lawrence River Board of Control.

Sea Grant audience members who have used the new online tool report that it is very useful as a coastal development decision-making tool.



Lake Ontario Water Levels Update

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 Charles R. O'Neill, Jr., Sr. Extension Associate, 585-395-2638, cro4@cornell.edu, www.nyseagrant.org.

Stewardship Blog Informs New Audiences about Eastern Lake Ontario Dunes and Salmon River Ecosystems

In 2009, New York Sea Grant created the Eastern Lake Ontario Dune and Salmon River Stewardship blog to reach new audiences. The Eastern Lake Ontario Dune and Salmon River Stewards posted content weekly. Postings included information about the stewards' educational, habitat restoration, and conservation efforts paired with vibrant photos.



(Left) Eastern Lake Ontario Dune Stewards repair protective dune fencing; (right) Salmon River Stewards encourage public use of NYSDEC invasive species disposal stations. Photos: Elizabeth Wolff, Emily Freeman, Eastern Lake Ontario Dune and Salmon River Steward Program

From June through mid-November 2009, the total number of e-visitors to the blog was 1,329.

"Using this new technology has reached a new audience, and repackaged our already successful program," Eastern Lake Ontario Dune and Salmon River Steward Program Coordinator Mary Penney says. "This online outreach has effectively communicated the stewardship message and proved to be a fantastic educational tool for both the steward bloggers and our newfound e-audience."

Chief Steward Greg Chapman says, "My weekly blog contributions had me actively identifying aspects of the resource area that might be overlooked or misunderstood by the public (e.g., the difference between beachgrass and lawn grass), or that could be of interest to those not yet familiar with the areas."

What say the public users of the new blog at www.elodsrstewardprogram.blogspot.com?

- Kavin Bahler, from Williamsville, NY, wrote, "The blog... gives great information that always keeps me coming back for more."
- Sarah Howey, Waverly, NY, responded, "... an informative and interesting peek into the efforts of the stewards to educate the public and to protect this unique part of the world."
- Kyle Teufel, from Syracuse, NY, commented, "... a great way to inform someone... about life at the River and the River community... very cool how the bloggers wrote about the children and educational programs... great to see that [the stewards and the kids] are able to get outdoors and learn."

The Eastern Lake Ontario Dune Steward & Salmon River Steward Program is managed by New York Sea Grant in partnership with the New York State Department of Environmental Conservation, New York State Parks, and The Nature Conservancy.



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, Eastern Lake Ontario Dune/Salmon River Steward

NYSG Facilitates Regional Sediment Management

Regional Sediment Management (RSM) is a growing trend in coastal management that recognizes coastal sediments are a valuable resource and proper management of sediment is essential to protect and enhance natural resources while allowing economic and recreational uses of the shoreline. The U.S. Climate Change Science Program determined RSM practices will have to be implemented on the local, regional, and national level to protect the environment and reduce existing coastal risks and future challenges associated with climate change. When the U.S. Army Corps of Engineers decided to employ RSM on Long Island's ocean coast, they sought New York Sea Grant's assistance in gaining state and local stakeholder input.



Regional Sediment Management brings local, state and federal partners together to conserve coastal sediments, an important resource, and to transport processes to protect the environment and mitigate the impacts of erosion and sea level rise on New York's coast. Photo: J. Tanski, NYSG, based on NASA Visible Earth Satellite imagery

New York Sea Grant (NYSG) and a researcher from Stony Brook University established a team of representatives of local, state and federal agencies and organized regular meetings to provide input and guidance on RSM needs in New York. With support from the Corps, they organized and held a two-day technical workshop that brought experts from the U.S. and Canada together with New York coastal managers to address concerns associated with the use of offshore sand resources in erosion management projects. They also brought 35 stakeholders and decision makers together for an informational meeting and workshop to introduce them to the Corps RSM initiative and get their input on priority dredging and erosion management problems.

At the technical workshop, previously contentious groups reached a consensus on several key issues associated with the use of offshore sands for beach nourishment. Agencies actually began developing a proposal for a monitoring program that would allow a proposed multimillion dollar project to move forward. The stakeholder meeting resulted in the Corps reprioritizing RSM objectives and the formation of a stakeholder workgroup to provide ongoing input to this \$5 million Corps project.

Through efforts like these, NYSG ensures regional management needs are recognized and addressed.

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.

Shipwrecks Project Wins National Byway Award

A 1999 NYSG-funded study identified diving's \$108-plus million impact on NY's Great Lakes region's economy, showing opportunity to interpret and market the region to divers. The interest of non-diving history buffs and three project awards are a bonus for the "Shipwrecks of the Great Lakes Seaway Trail Project." New York Sea Grant (NYSG) Recreation and Tourism staff serve as advisor to the multi-faceted effort that spotlights the maritime heritage resources of the 518-mile coastal region of the St. Lawrence River, Lake Ontario, Niagara River and Lake Erie in New York and Pennsylvania.

In August 2009, at the National Scenic Byways conference in Denver, the Federal Highway Administration, America's Byways Resource Center, and American Association of State Highway Transportation Officials presented the Great Lakes Seaway Trail, NYSG, and the New York State Department of Transportation Scenic Byways Program with an award recognizing the "Shipwrecks" project for partnerships, public outreach, community involvement, and innovation.

The project combined:

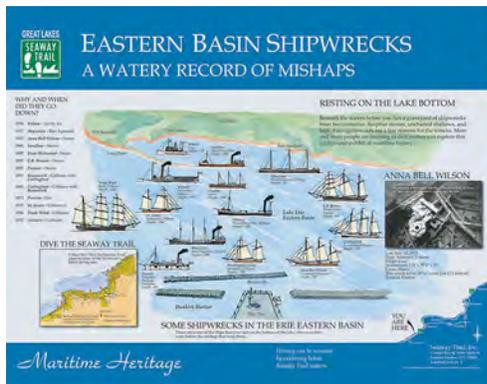
- underwater and land-based maritime heritage resources exhibitry



- an expert speakers series
- new Great Lakes Seaway Trail maritime-theme "outdoor storyteller" signage
- the Dive the Seaway Trail project
- online resources, and
- dovetailing with NYSG's annual Great Lakes Underwater conference and the New York State Blueway Trail linking submerged heritage preserves with local recreation, attractions, greenways and byways.

NYSG staff coordinate Dive the Seaway Trail's community-based stewardship of dive sites and underwater landscapes accessible from the series of roads that form an America's Byway and a National Recreation Trail.

The "Shipwrecks" project received Upstate History Alliance and New York Governor's Adventure Tourism awards in 2008. Media attention to the project included an Associated Press feature story.



Above: A diver explores The Islander near Alexandria Bay, NY; photo: Philip R. Church; far left: A Great Lakes Seaway Trail "outdoor storyteller" interpretive sign; left: diver & Oswego Maritime Foundation Submerged Cultural Resources Director Philip R. Church details diving gear for a "Shipwrecks of the Great Lakes Seaway Trail" program audience

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 Dave White, Coastal Recreation & Tourism Specialist,

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