

## New York Sea Grant in New York City

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One of New York Sea Grant's main focus areas in the New York City region for research, extension and education efforts is the Hudson River, which flows through 315 miles of eastern New York from the Adirondack Mountains. The lower half of the Hudson is an estuary influenced by ocean tides and saltwater. Bordered by 15 New York State counties, the estuary is defined by the Federal Dam at Troy and the Verrazano Narrows in New York City.

Some New York Sea Grant research also takes place in and around the New York - New Jersey Harbor Estuary. The estuary opens into the New York Bight and Long Island Sound, the latter of which is also a main focus area for New York Sea Grant.

For more of New York Sea Grant's New York City-centric news, go to [www.nyseagrant.org/nyc](http://www.nyseagrant.org/nyc)

### Risk of Storm Surges in New York City (January 2012)

Whether "up" in the Bronx, the most northeasterly borough of New York City on the mainland or "down" on the Battery, at the southern tip of Manhattan Island, much of NYC and adjacent coastal Long Island to the east lies less than 15 feet above mean sea level.

"2-3 million people in the outer boroughs of southern Brooklyn and Queens are at risk for flooding due to storm surge, with little chance for escape," says Stony Brook University (SBU) Oceanography professor and storm surge expert **Malcolm Bowman**.

Bowman, located at SBU's School of Marine & Atmospheric Sciences, is also a member of The Stony Brook Storm Surge Research Group, which has been funded principally by New York Sea Grant (NYSG) since 2002 to work on storm surge science, coastal defense systems and policy issues related to regional protection of New York City and Long Island.

According to the Research Group, the New York Metropolitan region is vulnerable to coastal flooding and large-scale damage to city infrastructure from hurricanes and nor'easters. Much of this region - an area of about 100 square miles - lies less than three meters above mean sea level. Within this area lies critical infrastructure such as hospitals, airports, railroad and subway station entrances, highways, water treatment outfalls and combined sewer outfalls at or near sea level.

Photo courtesy of Battery Park Conservancy



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One of 32 university-based programs under the NOAA's National Sea Grant College Program, NYSG is a cooperative program of the State University of New York and Cornell University. NYSG is a statewide network of integrated research, education and extension services promoting the coastal economic vitality, environmental sustainability and citizen awareness about the State's marine and Great Lakes resources.

## 'Dose of Reality' Campaign in NYC (January 2012)

From late December 2011 through March 2012, Sea Grant and the American Veterinary Medical Association (AVMA) were informing audiences on the issue of safe medicine disposal on the CBS JumboTron "Super Screen" in New York City's Times Square. The 15-second public service announcement - which raises awareness on the importance of not flushing unused medicine - ran about 18 times a day or about every 80 minutes. Audiences were informed that medicines can contaminate lakes, rivers and drinking water, posing a threat to people, animals, and the environment.

Since 2010, Sea Grant programs in Pennsylvania, New York, Ohio, and Illinois and Indiana have been educating people about the problems associated with pharmaceuticals and personal care products. In Fall 2010, these Great Lakes Sea Grant program began distributing a 12-page educational publication, "Dose of Reality: Remedies to keep everyday chemicals out of waterways." In New York, the contact for this campaign is New York Sea Grant's Coastal Education Specialist **Helen Domske**.



Photo by Barbara A. Branca

## Heavy Metal in the Food Chain (Spring 2011)

A New York Sea Grant-funded research team from the College of Staten Island led by **Dr. William G. Wallace** and Sea Grant Scholar **Daisuke Goto** examine how metals move up the food chain and effect aquatic predator and prey species.

Cadmium, copper, lead, mercury, nickel, silver, zinc: all are metals that have a place in our industrialized world. But they also can be toxic to the living things of our air, land and sea ... particularly when they occur in concentrations typical of urban environments like New York City.



Photo courtesy of William G. Wallace

## Partners Make a Splash with Project WET's Discover the Hudson River Booklet (February 2010)

Produced in 2009 to commemorate the 400th anniversary of Henry Hudson's first exploration, this 16-page color booklet is designed for teachers and students in the upper elementary grades (5-6 grades). Through lively text, colors, games, maps and activities, the booklet provides information about the Hudson watershed, the variety of wildlife the river supports, and the many ways people influence and are influenced by the Hudson River.

"We're offering teachers an add-on to their science curriculum that's educational but not too cumbersome for kids," says NYSG Hudson Estuary Specialist **Nordica Holochuck**, of the visually-driven *Discover the Hudson River*. "The puzzles and games included in the booklet are interesting and fun. It represents another approach to engage young people in environmental education."

The booklet is a joint venture between Project WET, the New York State Department of Environmental Conservation, New York Sea Grant, the New York-New Jersey Harbor Estuary Program, the National Oceanic and Atmospheric Administration and Central Hudson Gas and Electric Corporation.

