

The New York Recovery Network: E-Bulletin

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Headlines

The Billion Oyster Project: Restoring New York's coastline

Student volunteers are playing a big role in the Billion Oyster Project, an initiative to grow and return oysters to the coast of New York over the next 20 years. Along with other projects, restoring oysters will help protect the shoreline against flooding, wave damage and erosion from storms like Hurricane Sandy.

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Measuring Recovery: Web-based tool being developed

Researchers at the University of North Carolina Coastal Hazards Center are working with the New York Sandy Recovery Field Office to build the Disaster Recovery Tracking Tool, a web-based tool that focuses on long-term progress over time.

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Navigating the federal grant application process

This article is based on information from *Finding and Applying for Federal Grants*, a workshop presented in June 2014, highlighting resources for finding grant opportunities and detailing how to prepare a strong application.

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Crain's New York Business, June 27, 2014

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American Planning Association, June 25, 2014

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The Wall Street Journal, June 25, 2014

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The Billion Oyster Project: Restoring New York's Coastline

Shi Fan grimaced at the smell, but she wasn't dissuaded. She was there for a purpose.

The 19-year-old from East Los Angeles and other volunteers from Parsons School of Design spent a day in mid-June on Governors Island enduring the scent of 2.5 tons of shucked oyster and clam shells and learning about ecosystems. They were helping to re-establish oyster reefs in New York's estuaries.

Student volunteers play a big role in the [Billion Oyster Project](#), an initiative to grow and return oysters to the coast of New York over the next 20 years. The project will help protect the shoreline against flooding, wave damage and erosion from storms like Hurricane Sandy. Stationed at the Harbor School on Governors Island, project organizers are also teaching young people about the ecology and economy of their local marine environment.

The project gained attention after SCAPE/Landscape Architecture was awarded a \$60 million grant through the Rebuild by Design competition. SCAPE's winning proposal leverages the work by the Billion Oyster Project to build breakwaters along the south shore of Staten Island to buffer against wave damage, flooding and erosion. Termed "[Living Breakwaters](#)," architects, scientists and volunteers like Fan will help create a "reef street," hosting finfish, shellfish and lobsters to help protect surrounding communities.

The winning designers have done their research and are confident the breakwaters can help restore maritime ecosystems off the New York coast.

"While much remains to be developed, we believe that oysters can play a critical role in building resiliency in [the] New York Harbor as they filter water, create habitat and form wave-attenuating reef structures with the potential to adapt to sea level rise," said Gena Wirth of SCAPE/Landscape Architecture.

The Problem

Oyster reefs once covered 220,000 acres of estuary in and around the New York Harbor. By the late 1800s, the wild oyster population was decimated by pollution as hundreds of millions of gallons of raw sewage poured into the harbor. The reefs had helped reduce strong wave action, which now provide little resistance to rolling waters. The demise of the oyster reefs also destroyed natural water filtration: one single adult oyster can filter about 50 gallons of water a day.

Thanks to the efforts of environmentalists and the passage of the Clean Water Act of 1972, the waters are now clean enough to host a wide variety of marine life. While some organisms are returning naturally to New York's shores, oysters require some help.

Growing Oysters for the New York Harbor

The Harbor School hosts a hatchery where millions of oysters are spawned each year inside large tanks of filtered water. The baby oysters, or larvae, float up to find something to attach themselves to, just like in the wild. Three weeks after spawning and fertilization, the free swimming larvae develop a [foot](#) and search for oyster shells to attach to so they can develop shells of their own. After a year or two, when they

are large enough, the oysters are transferred to reef structures and placed on the sea bottom at different sites around the harbor.

Green Infrastructure

“I think it’s pretty cool,” said Fan of the Billion Oyster Project. “I like how they’re collecting shells that would have gone into a landfill.”

The Billion Oyster Project is set to reintroduce oysters and provide support to allow them to reproduce in the wild. By 2030, the project hopes to distribute one billion live oysters across 100 acres of reefs.

Along with the newly funded Living Breakwaters project and [similar plans](#) in nearby areas, the effort may help restore the coast’s natural defenses against storms and flooding.

Side Bar:

Volunteers at The Harbor School provide vital support

Without the help of students and support from volunteers, the Billion Oyster Project couldn’t succeed. Volunteers help by preparing the recycled shells for seeding, making habitat for larvae. They can also adopt and monitor an oyster garden, host special events or fundraisers, or partner with companies to have customized work parties on Governor’s Island.

“It’s good for them to see how hard this is,” said Stephanie Bardin, Lower Manhattan Cultural Council artist in residence. “These kids are going to be architects and designers.”

The Harbor School is training young people, using volunteer labor, taking contributions of shells and used cooking oil from area restaurants to create oyster habitat. Their actions will enhance the ecological system and replace natural protective barriers that make the coast more resilient.

Its 432 students, grades 9-12, are admitted through a lottery system. Student volunteers gain experience in aquaculture and running an environmental entrepreneurial project. 11th graders are learning to configure and calibrate a water quality remote sensor to measure chlorophyll- essential to growing oysters. A group of tenth grade researchers are currently working on a project comparing the genetic code of three eastern oyster groups. The project aims to determine the genetic similarities and differences between Muscungus Bay, Fishers Island and wild oysters from Soundview Park, Bronx. It will reveal the most adaptable to the Hudson River Estuary.

Derek Thompson came home from college and is spending part of his summer vacation working on the project. The 19-year-old is a 2012 graduate of The Harbor School, which clearly made an impression on him.

“I want to work somewhere in education where I can set policy,” he said. “I want to help build more schools like this one.”

Measuring Recovery: Web-based tool being developed

How do you know when a community has recovered? What does it mean to recover? Who gets to decide?

Researchers, community leaders and elected officials across the country are trying to measure recovery after a disaster strikes. Being able to understand the extent and dimensions of disaster impacts can help communities define a reliable recovery end state.

Until now, a standard set of indicators to assess long-term recovery has not been available. There are significant [studies and analyses](#) on the topic, but no definitive answers.

Researchers at the University of North Carolina Coastal Hazards Center are working with the New York Sandy Recovery Field Office (NYSRFO) to build the Disaster Recovery Tracking Tool. The web-based tool is being designed to focus on long-term progress over time and not an arbitrary metric.

The tool allows communities to set parameters, establish timelines and track the start and completion of projects, allowing the user to customize reports and analyze all-hazard scenarios.

“A pilot test of the closed beta version is being conducted in three or four communities affected by Hurricane Sandy in partnership with the FEMA New York Sandy Recovery Office. This version of the tool is currently restricted to users who are part of this pilot test,” said Jennifer Horney, research assistant professor at UNC Chapel Hill, department of Epidemiology and Institute for the Environment.

An open beta version of the tool will be available by October 2014. However, challenges abound. The program needs baseline data. For example, communities will need to input current unemployment figures and the total number of businesses prior to the incident, and continue to track progress.

The project involves assessing the level of recovery from a “whole community” perspective. It is designed to document recovery indicators, measuring progress along the road to recovery. The software is being developed to allow communities to tailor datasets, prioritize recovery goals and activities and create a timetable showing progress.

“It will define high-quality disaster recovery,” said FEMA’s Alison Lorence, Health and Human Services Recovery Support Function deputy field coordinator at the NYSRFO. “The next major disaster, it can be used.”

The web-based Disaster Recovery Tracking Tool helps track 79 metrics, which are organized into themes including financial, process, public sector and social. These metrics have been aggregated from more than 650 potential indicators which were identified during a literature review and through focus studies with two dozen informants working in Sandy recovery.

Planners, emergency managers and long-term recovery committees can use this tool to compare pre- and post-disaster status using baseline and current data.

“Reports generated by this tool can provide end users with a useful means of prioritizing recovery goals and activities,” Horney said. “It can also provide a more systematic way of measuring the disaster recovery process across events and over time to improve planning for, and recovering from disasters.”

Navigating the federal grant application process

Organizations looking for federal grants should prepare well in advance to successfully receive funding.

This article is based on information from *Finding and Applying for Federal Grants*, a workshop presented in June 2014 by Barbara Andrews and Joan Gibson from the U.S. Department of Health and Human Services and Earleene Sealy from the U.S. Department of Housing and Urban Development.

Central grant application portal

To apply for a federal grant, applicants and/or organizations must register with [Grants.gov](https://www.grants.gov). Registration can take between three and five business days, or more if all steps are not completed in a timely manner.

Grant research

Once the federal budget is approved, funds for grant projects become available and are announced in the Federal Register throughout the year. Grant opportunities that have been announced will appear in the Catalog of Federal Domestic Assistance (CFDA). The CFDA is a listing of grant and assistance programs administered by 57 federal agencies.

Applicants can conduct simple keyword searches or more advanced searches that index categories such as “agency” and “grant type” on Grants.gov. The website also allows users to save searches and create email alerts of grant opportunities as they are posted.

Preparing a strong application

Meeting the application requirements for a federal grant will require time. Each grant program will have specific goals, program and eligibility requirements. In many cases, more than one federal agency or more than one division within an agency may award grants for similar purposes.

Complete pre-application steps in advance (e.g., get a [Data Universal Numbering System](https://www.data.gov) number and register with Grants.gov).

When a new funding announcement is issued, read it carefully. Establish a plan for what needs to be accomplished, by whom and when. Assign a person to request and coordinate letters of commitment and support. These letters must be recent and specific about any resources that are being committed to the project.

Developing collaborations that can help implement the project and meet cost-sharing requirements could make a stronger application. Collaborations can help applicants assess organizational strengths and address any capacity building needs that might prevent organizations from successfully competing for funds.

Applicants can research federal agency clearinghouses for successful methods and tools (protocols, forms, position descriptions, etc.) that are being used in similar projects. Requesting copies of successful proposals under the Freedom of Information Act can help applicants build strong applications.

Application requirements

Make sure to include information on all review criteria. Each section of the criteria has a designated point value and is scored separately. Include **specific objectives, the tasks required to accomplish the objective, the timeline, who will do the work, who is the target population, why you choose this approach and how you will evaluate the accomplishments**. If you don't understand the criteria, call the program contact and ask questions.

Explain any omissions rather than leave anything blank. If the funding announcement asks for something that you are unable to provide, explain why it is not included. Unexplained omissions can cost you points in the review process.

Make a reasonable funding request and match the budget to the scope of work. The budget request must clearly fit the project. Be specific. Justify each item requested including staff, consultants, travel, equipment and anything else that might appear unusual to reviewers.

Additionally, follow instructions regarding the format of your submission, including page limits and font size. If there is a suggested outline for organizing the narrative content, use the same order and section headings.

If you have any questions, don't hesitate to request technical assistance and advice from program contacts. Be sure to sign up for agency workshops, conference calls or webinars that are scheduled to assist applicants. The more you know, the more likely you are to receive federal funding for your project.

Making you stronger

Even if you don't get a federal grant, applying for one can improve your ability to compete in future funding cycles. It also makes it easier to apply for private funding. Ask the federal agency for feedback on the grant proposal you submitted. This feedback will vary depending on the funding agency. Some will offer to meet you to discuss your proposal, while others will provide you with a summary of the reviewers' comments. Use this information to improve your grant proposal and submit the revised version when new funding is announced.