

Finding the Way to Make the Bay a Good Place to Stay

For thousands of years, Jamaica Bay and its watershed have served as an important ecological resource for flora and fauna, including 91 species of fish, 325 bird species (of which 62 are confirmed to breed locally) and many species of reptiles, amphibians and mammals. Jamaica Bay is a nationally and internationally renowned birding location as well. Although transformed over the years by development and population pressures, an ecologically diverse ecosystem still remains today. However, in spite of these significant changes, it remains an invaluable ecological hotspot and natural resources powerhouse not only for the region, but also internationally.

While there are many daunting challenges in restoring urban ecological communities, DEP and other local professionals have not been deterred to help jumpstart the ecological process



by using restoration ecology—the renewal of degraded ecosystems through active human intervention. DEP has been piloting several projects to improve the water quality and the environment of Jamaica Bay, including the feasibility of reintroducing eelgrass, oysters and engineering ribbed mussel habitat to the Jamaica Bay ecosystem to renew the bay's habitat for aquatic species. If successful, the projects will assist with water filtra-

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Spotlight on Safety

Some Don't Like It Hot!

The summer is upon us and this is a good time to remind all employees and their supervisors, especially those working outside to take extra care against heat related illness, especially heat stress and exhaustion. Some tips for staying safe in the heat:

- Hydrate! Drink plenty of water. Caffeinated beverages should be avoided.
- Wear loose fitting, light clothing.
- Ventilate the work area (where feasible) to provide a flow of air.

If you notice any of the following symptoms of your co-workers or employees, they may be suffering from heat exhaustion:

- Dizziness or mood changes (including irritability and confusion).
- Nausea, vomiting or bad headaches.
- Muscle cramps.

You should move the employee to a cool shaded area and allow them to sit or lie down. Loosen or remove heavy clothing and have the employee drink cool water (about a cup every 15 minutes) unless they are nauseous. Fan, or spray the employee with a cool mist or apply a damp cloth. If the employee does not feel better in a few minutes, call 911.

To read DEP's Exposure to Extreme Heat EHS Guidance click here

For the full article, click here

At DEP, everyone is responsible for safety. If you or anyone on your team is concerned about your working conditions, it's okay to ask your supervisor or your bureau's EHS liaison how they can help. If you've still got questions, you can call the EHS Employee Concerns Hotline. It's DEP's responsibility to acknowledge and fix unsafe situations, procedures, and practices. With your help, we'll not only get the job done, we'll make it safer for ourselves, our coworkers, our families, and our city.

CALL (800) 897-9677 OR SEND A MESSAGE THROUGH PIPELINE. HELP IS ON THE WAY.

Commissioner's Corner

Creating world-class parks in a dense urban area like New York City presents unique challenges that **Mayor Bloomberg** has turned into opportunities to reclaim parts of the city that many had written off. Brooklyn Bridge Park, the High Line, and Governors Island are among the most prominent examples of the administration's efforts to turn deserted waterfront and abandoned rail-lines into fertile recreation spaces and economic engines. This track record is probably a main reason why Secretary of the Interior **Ken Salazar** challenged the Mayor to help him develop the "next generation of great urban parks" here in New York City as part of **President Obama's** America's Great Outdoors Initiative (AGO), which will develop a master plan for 21st century conservation and recreation .

Yesterday, the Mayor and Secretary Salazar hosted a group of committed stakeholders including Congress Members **Nadler, Meeks** and **Towns**, numerous city and state agency heads, and others to develop an actionable plan to make New York Harbor the model of a great urban park for the 21st century. We focused particularly on Jamaica Bay and Gateway National Park, and the Secretary and the Mayor emphasized that the plan must be comprehensive—addressing not just open green space, but water quality, air quality, and climate change too. We have to present recommendations to the Mayor and the Secretary within 60 days, and **Angela Licata, Carter Strickland, John McLaughlin** and the sustainability team have a particularly important role in the effort.

Last week we announced the first-ever Green Infrastructure Community Grant winners, fulfilling a commitment Mayor Bloomberg made in his 2011 State of the City address. Our NYC Green Infrastructure Plan will invest \$1.5 billion in public projects over the next 20 years to reduce combined sewer overflows, and these grants enable us to partner with community organizations, businesses and not-for-profits to address stormwater runoff from private property. Like our highly-successful Rain Barrel Give-away Program, community grants are a way for New Yorkers to do their part to protect our harbor. We received 52 high-quality applications, and selected 15 projects to fund with a total



value of \$3.8 million . Among the winners: a green roof on Park Avenue that will absorb 274,000 gallons of stormwater per year; a bioswale installed at the Bowne House Historical Society in Queens that will also be a place for environmental and sustainability education programs; and a 40,000-square-foot commercial rooftop farm at the Brooklyn Navy Yard that will create opportunities for urban agriculture jobs and training. Deputy Mayor **Stephen Goldsmith** noted that the winners "exemplify how city government can partner with our communities to advance the goals of PlaNYC." We will be working closely with the grant winners in the coming months to get these projects in the ground in less than a year, and I want to congratulate everyone who applied for making the selection process so tough—every proposal had merit.

With temperatures topping 90 degrees last week, summer made an early appearance. Staying cool is obviously a priority when the thermometer shoots up, but opening fire hydrants illegally is not the answer. A hydrant running at full capacity not only reduces water pressure needed to fight fires; the water stream can literally knock someone into oncoming traffic. Our BWSO team kicked it into high gear, turning off more than 1,500 hydrants over two days last week. We set up two command posts—at West 155th Street in Manhattan and at Grand Concourse and 156th Street in the Bronx—staffed by BWSO and DEP Police. Special thanks to everyone involved, particularly BWSO head of Emergency Management **Paul Villella**, and ECC Supervisor **Robert Giddens**, who helped coordinate and manage DEP's response. Remember, to beat the heat safely, stop by your local firehouse to request a free spray cap—and if you see a hydrant running, call 311.



Although research scientist **Robert Will** has never come across an alligator in the sewer, he has encountered more than a few seals while doing field work for DEP's Office of Ecological Services. The seals look for flounder that thrive in local waterways. It's no surprise that Robert knows New York's water bodies well, because during 34 years at the Army Corps of Engineers with his work on the Hudson Raritan Estuary Plan, he would travel as far south as Sandy Hook, and as far north as the Tappan Zee Bridge.

For the last two years since joining the Bureau of Environmental Planning & Analysis, Robert has put his experience and

master's degree in marine biology to good use in restoration ecology. He works on ecological pilot projects like eelgrass and ribbed mussel and oyster restoration, which are outlined in the Jamaica Bay Watershed Protection Plan. The plan seeks to improve the bay's water quality and ecological integrity by evaluating threats to the bay and developing environmental remediation and protection efforts. Robert says he is "grateful to help restore the health of Jamaica Bay."

Robert is also involved in green infrastructure and stormwater enhancement projects including swales and detention basins as well as other innovative initiatives like a wave attenuator pilot study near a salt marsh in Jamaica Bay. This study will determine if the attenuator, or barrier, would be a cost-effective method to slow the rate of wetland loss and accumulate marsh building sediments.

Robert's love of the outdoors extends into his spare time activities as well, and includes fishing, enjoying the beach, and being with his grandchildren.

Event Calendar

DEP JUNE BLOOD DRIVE: Lefrak, 6th floor training room: 6/15-6/16, 8:00 am to 1:30 pm; Sutton Park, 2nd floor: 6/16, 8:30 am to 2:30 pm. Please click here [to see the memo from Commissioner Holloway](#).

Kudos Corner

A REAL WATERSHED RESOURCE: An email from Watershed Agricultural Council (WAC) Communications Director **Tara Collins** noted that BWS Section Chief **John Schwartz** is "an invaluable resource to me and Board Chairman **Fred Huneke**," in his role as DEP liaison for WAC-DEP coordinated farm-forest tours. "He shares the messages of clean water and land conservation proudly and is a wonderful spokesperson for DEP."

This year, DEP celebrated the 25th Annual Water Resources Art and Poetry Contest Award Ceremony on June 7, 2011 at Brooklyn Technical High School. Proud students—with family members, teachers and principals—arrived in their best attire to be recognized for their outstanding work and to celebrate the significance of New York City's water resources. Commissioner Holloway hosted the ceremony and awarded special certificates to over 20 student Citywide Winners. For more on the event, click here [to see the memo from Commissioner Holloway](#).

Q. I live in Windsor Terrace, Brooklyn. How long did it take the rain-drop in the Catskills to get to my faucet this morning—and how long will it take that same drop of water that went down the drain of my sink to go out into Gowanus Bay (after getting treated at Owls Head)?

A. The short answer is that water in the upstate reservoirs can take as little as several days (e.g. Kensico) to as long as several months (e.g. Schoharie) to get to the tap. This "travel time" depends on the distance of the reservoir from the distribution system, the amount of time the water resides in the reservoirs and variations in the operation of the system. For example, Cannonsville Reservoir is one of the farthest from distribution. The travel time to the tap from Cannonsville can vary from 72 days during full flow to over 100 days at partial flow.

The trip from your drain to the receiving waters is considerably shorter—11 hours. The water travels 2.1 hours from Windsor Terrace to the Owls Head plant (4.2 miles) and then spends 8.9 hours in the four stages of the treatment process—primary, aeration, final, and disinfection.

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tion to improve water quality and increase biodiversity.

Much like trees function on land, eelgrass stabilizes sediments, reduces erosion, and naturally removes nitrogen from the water. These submerged aquatic vegetation beds are important for a number of fish and shellfish species. Since 2009, DEP has installed about 5,500 plantings. While the plantings have not yet resulted in the sustainable establishment of eelgrass in the bay, they have provided DEP with valuable information and the opportunity to determine appropriate planting depths, timing of plantings and the effects of currents and sediment movement. For example, we have learned that excessive sediment movement may be one factor preventing the establishment of eelgrass.

Oysters, known as a "keystone species" and "ecosystem engineers," have the ability to modify their environment. A single mature oyster can filter approximately 2.5 gallons of water per hour and can remove approximately 20% of the nitrogen it takes in. DEP is a partner with several environmental organizations and government agencies in the Oyster Restoration and Research Project, which has constructed six small pilot reefs throughout the harbor to study

the effect of planting oysters in the bay. Initial results show that the oyster spat, or larvae, that were placed on the pilot reefs have survived and grown. However, it remains to be seen whether the oysters will reproduce and thrive as a self-sustaining species and whether climatic and environmental conditions within the bay are suitable for oyster growth and reproduction. The project will also study how effective oysters are at filtering various pollutants within the bay, such as nitrogen. If the pilot beds are successful, the oysters could not only help regenerate the natural environment of the bay, but also provide additional water quality benefits.

Like oysters, ribbed mussels are bivalves that filter nutrients and other pollutants from the water. In late June, several A-frame structures will be installed in Jamaica Bay to evaluate ribbed mussel growth and measure the effectiveness of these species in removing nutrients and particulate organic matter from the water.

Improving the quality of New York City's harbor waters is a long-term effort that will not only revitalize our city's aquatic ecosystems, but will also offer millions of New Yorkers the opportunity to access areas that have been off limits to recreational use for decades.

We welcome your feedback! To submit an announcement or suggestion, please email us at: newsletter@dep.nyc.gov [📧](#)