

Oysters Improve Water Quality for 'Shellfish' Reasons

When we think of oysters, we do not typically think of them as helping to improve water quality. But that is just what DEP is doing with oysters in Jamaica Bay, where they are known as "ecosystem engineers." Reintroducing this native species to New York's waterways is part of an effort to help provide a habitat for juvenile fish and other marine life, while helping to filter nutrients from the water. Geometric changes in and around Jamaica Bay such as dredging, filling, and water flow restrictions have played a major role in compromising the bay's fragile ecosystem.

Oysters filter the water and take in tiny plankton. Once these organisms pass through the oysters, a



Reef balls with newly set oysters, prior to placement in Gerritsen Creek and Jamaica Bay

large portion of the nutrients are removed from the water. With too much plankton and algae, other organisms cannot live. High levels of nutrients can also cluster in water and block sunlight. When nutrient density becomes too

(Continued on reverse side)

Spotlight on Safety

Power Outages – What do I do?



During the summer months, demand for electrical power peaks and it is not unusual to experience power disruptions. The scope and timing of power outages are unpredictable and hamper the very systems that we rely on for effective communication, making it a challenging emergency situation.

The recent partial power outage at Lefrak is a good opportunity to remind ourselves what we can do to be of assistance during these types of emergencies. While utility disruptions can present potential hazards, the impacts can be averted or diminished when proper precautions are taken:

- Disconnecting or turning off appliances that will turn on automatically when service is restored. The startup of several appliances at once can overload

electrical circuits.

- Check on employees with special needs, particularly those dependent upon medical devices requiring electricity, or who may require additional assistance for evacuations.
- Keep refrigerator doors closed to slow food spoilage, and place perishables in the freezer compartment.
- Be proactive - during the hot humid days, try to conserve energy as much as possible to avoid brownouts and other electrical disruptions.

If you have questions, contact your EHS representative or your Bureau Administrator. Visit OEM's Power Outages  and Utilities Disruption  websites for even more information.

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

Joe Singleton, Deputy Commissioner, is guest commentator this week.

As Deputy Commissioner for the Bureau of Customer Services, I would like to congratulate everyone at DEP for the substantive completion of our Automated Meter Reading (AMR) network. Put simply, AMR has singlehandedly transformed the way we do business and our ability to serve our customers.

When this project began in 2009, anywhere from 15 to 17% of the three million bills we issued each year were estimated. That meant that a meter reader was unable to physically gain access to the meter. Today, AMR gives us four readings each day via a low-power radio transmitter.

What does this mean? It means that customers do not have to wait before discovering they have a costly leak. It also allows us to issue fewer estimated bills, reduces the number of billing disputes, and improves our collection rate to lower the size of future rate increases. But most importantly, it gives customers the information they need to take control of their water and sewer bill. We have replaced over 430,000 meters and installed more than 814,000 AMR devices throughout the five boroughs, making the gray "AMR boxes" attached to buildings and homes a ubiquitous part of the city's landscape.

This has also saved our customers money. In 2011, DEP launched a Leak Notification Program to proactively contact customers when our AMR network detected a pattern of unusually high consumption. Water can leak out of pipes or fixtures at an alarming rate; a



simple toilet leak can cost customers over \$70 a day. Without AMR, these leaks often went unnoticed until the next bill. Our system monitors each customer's consumption to see if they meet the leak criteria of tripled consumption for five consecutive days. Using this system to contact customers as soon as a leak has been detected, we have saved our customers more than \$12 million since the program began.

More information allows property owners to make more informed decisions about the water they use and how they should be billed for it. Thousands of flat-rate customers have used AMR to make the decision to switch to metered billing, saving customers money and incentivizing conservation in the future. What makes this system so powerful is that we provide the information directly to our customers via the DEP website. More than 221,000 customers have registered for our *My DEP Account* site to monitor their water consumption. The site contains graphs of daily, monthly, and yearly consumption readings that allow customers to easily understand how much water they use and more importantly, what it costs.

AMR is also an essential part of our own system-wide conservation efforts in preparation for the repair of the Delaware Aqueduct. This data has allowed DEP to identify opportunities for low-cost conservation measures that reduce city-wide use while keeping rates low.

I am proud to have been a part of the fantastic team that helped make this all possible, and I look forward to realizing the full potential of AMR in the months and years ahead.



Focus on the Field

Did you know that DEP not only provides clean water and treats wastewater, but also fights acid rain? **Manoj (Manny) Oza**, Director of the Air Compliance Section in the Bureau of Environmental Compliance, is part of the team responsible for analyzing oil samples from boilers to determine their levels of sulfur. As part of the Clean Heat Initiative launched in 2011, all buildings in New York City must convert from heavy forms of heating oil to cleaner fuels. Buildings that were burning No. 6 fuel must switch to low sulfur No. 2 oil or natural gas this year.

After graduating from the City University of New York with a degree in electromechanical engineering, Manny has spent the last twenty years at DEP working on a range of projects, including air pollution studies at both the North River Wastewater Treatment Plant and Croton Water Filtration Plant.

"We all need to breathe, and I've had the opportunity to make sure that the air New Yorkers take in every day is the cleanest that it could be," Manny said. "I am very proud



that I was part of the team that helped make that happen."

In his current role as Director of the Air Compliance Section, Manny is responsible for sampling the fuel oil from boilers to make sure it falls within certain parameters. "Being able to test the samples on-site speeds up the testing process and eliminates many chain-of-custody issues," Manny said.

Manny's work hits close to home, literally. His wife, **Pallavi Oza**, works just a few hundred feet away in BWS's Water Quality Laboratory. When away from the office the two enjoy cheering on their daughter at her Little Neck League softball games.

Press Box



"There's nothing like on-the-job training to teach new workers who are charged with maintaining the city's water system at the Department of Environmental Protection... The Bureau of Water and Sewer Operations Training Facility, located in Jamaica, was designed for both new employees and long-time workers looking for a refresher course." — New York Daily News, Tuesday, August 14

Did You Know



Photo by Saebaryo

...there are currently 1,970 water fountains in New York City, with nearly a third of the fountains (32.5% or 640 fountains) located in Brooklyn. Queens clocks in second with 537 water fountains, followed by Manhattan with 351.

(Oysters Improve Water Quality for 'Shellfish' Reasons... continued)



Surface of Dubos Point, Jamaica Bay oyster reef at low tide

great, even the algae and plankton begin to die and decompose in the water. DEP began this oyster demonstration project to help understand how to reduce nutrients and increase dissolved oxygen levels for a healthier Jamaica Bay. By eating plankton, oysters increase light penetration to the bay floor, which makes for a healthier ecosystem.

DEP has two oyster demonstration projects in Jamaica Bay at Dubos Point and Gerritsen Creek. These were chosen because they can both support oyster survival and growth, and allow us to demonstrate their performance in different parts of the bay to help to determine what specific conditions are ideal for their survival. In both locations, the oysters have grown very well over the last two years. A majority of the baby oysters,

known as spat, are still alive and filtering bay water as adults. On average, these adult oysters have grown to more than 3-inches long, and some have even grown to almost five inches. This project will enable us to expand oyster projects in the future, and the size of the oysters is already a good sign.

Bob Will, a marine biologist at the Office of Ecological Services, and the oyster demonstration Project Manager, describes this project as the "first step toward establishing a self-sustaining population of oysters in New York Harbor, which has been lost now for a century." As generation after generation of oysters filter Jamaica Bay, the hope is that long-term water quality will continue to improve, and that oysters will once again be abundant in these waters

We welcome your feedback! To submit an announcement or suggestion, please email us at: newsletter@dep.nyc.gov