

DEP Goes Off the Grid to Help Keep Lights On

This past July, New York City experienced a string of record temperatures: eleven 90° plus days, the hottest stretch occurring on July 22-23, with temperatures topping 100° for two straight days. These are the times when most of us crank up the air conditioning and keep the fans on high, but for operators at DEP's wastewater treatment plants, this heat wave was a time to reconfigure sources for powering equipment. As they are well aware, the hottest days of the summer are the days the electrical grid is most vulnerable to failure.

On July 22, around 3 pm, New York City's grid saw a new record peak load of 13,189 megawatts (MW), more than 45% over the typical summer peak of 9,000 MW. On hot days like this, the city demands more power than can be transmitted from outside power plants, requiring smaller and less often used "peaker" generation



plants in the city to come online. Even still, when these extreme peak load events occur, the lines and equipment that carry the electricity become strained and more likely to fail, creating conditions for a potential blackout.

During these times, communication and cooperation with the electrical utilities become key. Many pieces of equipment, such

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Spotlight on Safety

Office Ergonomics: Simple Solutions to Reduce Stress

Experiencing neck, shoulder and back pains, or headaches? These could be signs of repetitive stress or poor body alignment associated with improper posture. They can be minimized by using a few common sense practices to change and reorganize the workstation.

Many work surfaces are too tall for some employees. This means that these employees are working with arms elevated and stretched forward leading to overuse and constant activation of muscles. You should adjust your chair so that your arms are parallel to the floor and elbows are the same level as the workstation tabletop. Seat depth and height are other factors to consider. Properly sitting on the

chair and adjusting the height of the seat are simple remedies to alleviate lower back pain and other discomfort. Table tops and work surfaces should be at the same level as the elbows. Adjusting the height of chairs can accomplish this. If feet are not fully supported by touching the ground or resting on footrests, this will result in overworking the abdominal muscles. Screens on laptops are lower than desktop monitors. Ideally, the first line from the top of the computer screen should be at eye level.

It is important to understand that good ergonomic principles apply to all jobs and tasks, not just office tasks. To read 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

A month ago we announced a historic agreement between DEP and the State Department of Environmental Conservation (DEC) to adopt an adaptive management framework to combat CSOs, including relying on green infrastructure for the first time ever as part of a revised consent order. Last Wednesday, DEC held a public meeting in Long Island City to get feedback, and about 50 people attended. DEP estimates it will invest \$187 million in green infrastructure toward achieving the first milestone in 2015 to manage runoff from 1.5 percent of available impervious surfaces in combined sewer drainage areas. This is one part of the NYC Green Infrastructure Plan that will result in \$2.4 billion invested in green infrastructure by 2030. Regional Director **Venetia Lannon**, **Joe DiMura**, **Gary Kline**, and **Scott Crisafulli** attended for DEC and spoke about the process for amending the consent order. From DEP, Regulatory Planning Division Chief **Keith Mahoney** and Wet Weather Planning and Water Quality Policy Director **Julie Stein** presented on the city's plan and answered specific questions about the differences between the 2005 and 2011 consent orders. The last day to submit public comments is November 18. Finalization of the order will mean that DEP can focus on the ambitious construction program to meet the milestones, including various grant and other programs that will enlist the efforts of landowners and community groups. Several people were concerned that the comment period is the last opportunity for public involvement, but it is just the beginning; the new agreement sets forth a schedule for DEP to adopt Long-Term Control Plans (LTCP) for 10 water bodies plus one citywide plan between 2013 and 2017 to further reduce CSOs, and each LTCP will include robust public participation and review of detailed, draft watershed plans.

With preliminary approval to move forward with the NYC Green Infrastructure Plan, DEP is laying the groundwork for a larger construction program. This past week, we unveiled what one reporter referred to as "The Street of the Future" [👉](#). I, along with Commissioners **Janette Sadik-Khan** (DOT), **Adrian Benepe** (Parks) and **David Berney** (Design and Construction) visited four bio-



swales that were recently installed on Dean Street in Brooklyn. Each bioswale will help absorb more than 1,800 gallons of rain during a typical storm, helping reduce combined sewer overflows into the Gowanus Canal. We showed two of the bioswales at different stages of construction so one could see what goes into these innovative projects. Unlike a standard tree pit, bioswales include curb cuts to allow stormwater to enter, a sandy soil mix to facilitate infiltration, and a gravel underlayer to increase storage capacity. To ensure that these swales get the upkeep they need and continue to work optimally, DEP finalized a Memorandum of Understanding for Greenstreets crews to maintain green infrastructure built in streets and sidewalks.

One of the ways that DEP improves water quality is to use three vessels that operate seven days a week and transport up to 24 million gallons per week of sludge and centrate. We are the only utility in the country that uses motorized vessels to maximize our processing capability. Last Tuesday, I had the pleasure to be joined by Long-Term Planning and Sustainability Director **David Bragdon** and **Sandra Rothbard** from DOT on a tour of one of them, the M/V (Motor Vessel) North River that was built in 1974. We were welcomed aboard by Marine Section Chief **Kevin Byrnes** and Senior Port Engineer **Jim Aird**, and the ship was manned by Captain **Michael Jonas**, **Larry McGivney**, **Ibrahim Taha**, **Ricardo Tam**, **Bryan Wuthenow** and **Robert Clark**. The vessel had just loaded centrate at the Bowery Bay plant, where we embarked, and transported it to the North River plant. The centrate was then pumped out for processing before sludge is reloaded and transported to Wards Island for final processing at the dewatering facility. DEP is expecting three new vessels that were purchased with federal stimulus funding, and the first one should be delivered by the end of 2012.

Focus on the Field



Treating wastewater to keep our rivers and tributaries clean is energy intensive. Our 14 wastewater treatment plants are among the city's largest consumers of power. DEP spends more than \$60 million each year for electricity, natural gas and diesel fuel to run the various wastewater operations. **Jacob Felix Pierre** is responsible for analyzing power use to make sure that DEP's treatment plants, CSO retention facilities, and wastewater pumping stations are running as efficiently as possible.

Felix, as he is known, is an associate chemist in the Bureau of Wastewater Treatment who monitors energy consumed by equipment for aeration, sludge dewatering, digestion, and flow conveyance. Felix works closely

with plant operators to establish set points so that regulatory requirements are met with the least energy output. He also develops budgets with the Department of Citywide Administrative Services' energy management team, which can be challenging given fluctuations in fuel costs.

During this summer's sweltering heat wave, Felix was busy at work helping execute the agency's peak load management plan. During hours when the electrical grid was nearing capacity, certain wastewater treatment facilities were taken off the grid and temporarily powered by on-site generators. This helped New Yorkers to remain cool during those 100° days.

At home, Felix makes sure to practice what he preaches: "Conserving energy and water is of great concern to me personally and professionally. I do everything I can to conserve at work and at home."

During cooler months when Felix is able to find some time for himself, he enjoys reading about the latest scientific breakthroughs and brushing up on his Spanish to complement his fluent French.

Kudos Corner

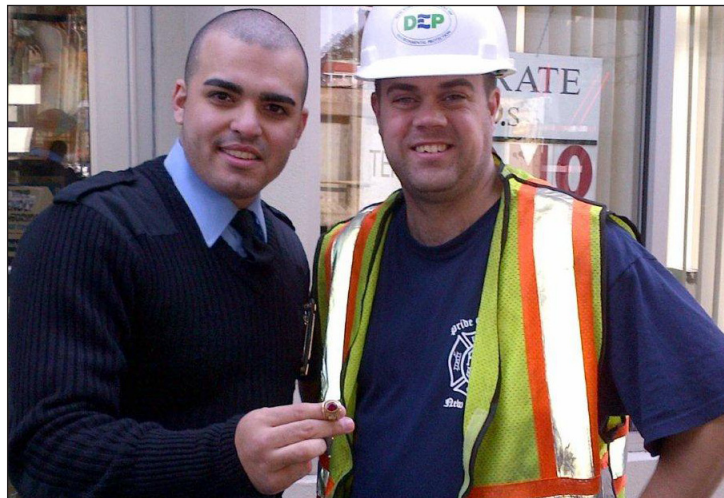


COMMUNITY THANKS: Jim Garin of BWSO and Lillie Farrell of BCIA are pictured with Ralph Branca, Staten Island Economic Development Corp. and Council Member James S. Oddo on November 7 at a staff appreciation event hosted by Council Member Oddo. Not pictured but also recognized were Matt Mahoney of BCIA and Dana Gumb and Steve Sforza of BWSO.

LET'S HELP THOSE IN NEED:

Wednesday, November 16, is the final day of the Thanksgiving Food Drive. There is still time to make a donation by bringing a food item to the coordinators at the following locations: Lefrak ☺, Downsville ☺, Grahamsville ☺, Shokan ☺, and East-of-Hudson ☺. Thank you.

Kodak Moment



LOST AND FOUND: On 10/31, DEP responded to a service request in the Bronx from a man whose bag—containing a wedding ring, graduation ring and cell phone—broke while he was being robbed on White Plains Road, its contents falling into a catch basin. DEP laborer **Frank Rizzo** and supervisor **Richard Snell** responded and were able to retrieve the graduation ring. The victim, **Emanuel Diaz**, appreciated the effort, saying he was glad it was not a total loss and was at least able to get his graduation ring back. Diaz and Rizzo are pictured with the ring.

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as the blowers that enable secondary treatment and biological nitrogen removal, draw such large amounts of electricity that running them can have a significant impact on the grid. Because of these impacts, DEP actively participates in the Peak Load Management (PLM) program run by the New York Power Authority. DEP and Con Ed also have open lines of communication during peak days as well. Under PLM, during periods of high electricity demand, some DEP facilities shed load. For example, the Owls Head and Coney Island plants would run much of their equipment on power from engines instead of from the grid. Owls Head plant superintendent **Bill Grandner** says, "It is exciting to have the opportunity to harness methane gas, a valued by-product of wastewater treatment, and turn it into kilowatts, whose energy can help the communities and citizens of this great city." Load-shedding reduces the burden on the grid, meaning DEP helps citizens keep cool on hot days.

The PLM program is one piece in DEP's energy management

toolbox. It is instrumental during these notable heat wave events, but there is more to be done to manage energy demand at the plants on a long term basis. DEP's Office of Energy Policy and Infrastructure works closely with the operations bureaus to tackle this issue. The team leads projects for implementing distributed generation at the treatment plants, including solar, wind, and cogeneration (creating heat and energy at the same time). Other efforts include investigating cost-effective ways to use energy more efficiently at the plants, pursuing solutions that would potentially give operators greater awareness and control over energy usage. Not only would these projects reduce the plants' energy demand, they have the promise of advancing DEP's energy goals of increasing power reliability, making use of clean generation technologies, and significantly decreasing greenhouse gas emissions

This year's peak summer days may be gone, but the work to shape DEP's energy future continues year-round.

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