

Stream Team Keeps Things Flowing

Catskill streams are the capillary system of our water supply network: the health of the whole reservoir system depending upon a properly functioning capillary—or stream—system. Streams are long, linear ecosystems that are home to countless organisms and the more diverse the biological inhabitants, the better job a stream can do in cleaning up pollutants. Streams are dynamic features of landscapes, swelling in rainstorms and shrinking during drought. And, of course, they are the source of recreation and aesthetic enjoyment, serving as shelter and spawning areas for fish and wildlife, which leads to economic benefits for communities through which they pass.

DEP helps keep streams healthy and functioning by working side-by-side with communities and with local watershed partners such as county Soil



and Water Conservation Districts and Cornell Cooperative Extension to provide technical assistance to landowners who need help managing streams and floodplains on their property and for their cleanup after events such as Hurricane Irene. If done improperly, stream cleanups

(Continued on reverse side)

Spotlight on Safety

Routinely Check Detection Equipment

Confined spaces can contain hazardous or oxygen depleting atmospheres without warning! Employees whose duties involve entering potentially hazardous environments—where reduced oxygen content, other gases, or asphyxiants are present that cannot be detected by smell or vision—depend on reliable and accurate detection equipment to warn them of potential hazards.

It is vitally important that detection systems be optimized for peak performance and are operating within regulatory compliance guidelines.

Employees should take the time to ensure that equipment routinely used to detect gases and monitor other key environmental conditions, including but not limited to emergency response and confined space entry situations, are operating properly. Routine checks and calibration are critical to ensuring that gas detection equipment is doing its job!

Safety-critical environments depend on the alarms from detection equipment. Failed or inaccurate readings can lead to a situation where toxic gases can kill or seriously injure an employee. If one of your job tasks involves using portable gas detectors, take a few moments to read the manufacturer's manual and ensure that your current check and calibration schedule and practice are consistent with recommended practices. OEHS will be issuing written guidance on calibrations and field "bump tests." Be on the lookout for it, or ask your EHS representative for more information. If your portable gas detector has gone through any unusual circumstances (excessive moisture, dropped, prolonged exposure to conditions eliciting an alarm condition), it should be re-calibrated.


Put safety first—Routinely check the reliability of your detection equipment.

Commissioner's Corner



Treating 1.3 billion gallons a day of wastewater that New Yorkers produce in an environmentally friendly way is no easy task. But the fact that our harbor is cleaner today than at any time in the last 100 years shows that our BWT employees are more than up to the challenge. To see some of the amazing work they do first hand, last Tuesday I toured the Tallman Island Wastewater Treatment Plant, where I met with Deputy Superintendents **Tom Clarson** and **Joe Morante**, and the neighboring Collection Facilities North Tallman Island Crew quarters. At the plant, they showed me the main sewage pump engines that help bring in the up to 160 million gallons per day of wastewater that the facility handles from Northeast Queens, and the aeration tanks that have been retrofitted for biological nitrogen removal—part of our ongoing efforts to reduce nitrogen loading into our surrounding waterways in order to provide ecological benefits. I also stopped by a training class, where staff were learning to operate the upgraded gravity thickeners. At Collections, I met with Deputy Superintendent **Mike McGregor**, one of roughly 30 employees in the crew, and saw the mobile pumps and generators that the crew used for its field operations. This equipment is used to convey sewage if one of DEP's 95 pumping stations goes down or if there is a restriction within the collections system. Earlier this year, the Collections crews were hard at work using our Vactor trucks to clean out the interceptors in the drainage area.

Several months have passed since Hurricane Irene and Tropical Storm Lee visited our region, but the results are still being felt throughout the watershed and surrounding areas. While there is immediate reconstruction work and emergency relief being provided by the Federal government, the state, local communities and DEP, there is also a need for long-term planning to help communities better mitigate hazards from future events of this nature. To support local decision making, DEP has recently committed \$7 million to improving flood studies and maps in the West-of-Hudson watersheds through a contract with FEMA. Updating these maps, some of which are more than 25 years old, is a critical tool in helping communities identify flooding hotspots and determine where to allocate resources in order to mitigate known issues. Without a doubt, the unprecedented flooding experienced this past summer plus the potential weather-related effects of climate change underline the need for the most up-to-date and accurate surveys in order to protect communities in these areas. The DEP contract with FEMA will provide hundreds of miles of detailed studies. DEP also separately paid for the cost of LIDAR-based high resolution topographic data, digital aerial photography and newly mapped stream alignments to be used by FEMA in these flood studies—with a value of between \$1 to 2 million. The surveys will cover Ulster, Sullivan, Schoharie and Delaware counties and should all be complete by 2013. The Watershed Post took note of the work here [\[link\]](#).

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. 

Focus on the Field



Douglas DeKoskie joined DEP in 2010 as an Associate Project Manager for the Stream Management Program where he oversees river engineering within the bureau's upstate stream management program. In this capacity, Doug leads a team of four engineers at the county-based stream management programs in the Ashokan, Delaware, Schoharie and Rondout/Neversink watersheds, and manages an engineering services contract to the program.

An engineer by trade, Doug provided critical design and technical review services for over 40 upstate stream restoration and stabilization projects last year. Headquartered in DEP's West-of-Hudson watershed, Doug spends much of his time collaborating with his colleagues interpreting

the underlying causes of stream instability with his county partners and proposing engineering solutions that address erosion, flooding, threats to infrastructure and environmental concerns.

Today Doug finds himself working with DEP's local partners more than ever before. The damage caused to the communities within DEP's upstate watersheds by Hurricane Irene and Tropical Storm Lee is well known. For the last four months, Doug has been directly involved with DEP's flood response and recovery actions. The morning after the first storm hit, Doug was out in the field working alongside local authorities while he and his team of contractors and DEP engineers provided inspections and technical guidance for damaged bridges, road repair, and stream management projects.

As a resident of Ulster Park, Doug was able to experience the strength of each storm first hand. But after months of emergency response work, Doug and his team are finally able to turn their attention to longer term projects. As things begin to return to normal, Doug plans to take advantage by making up for lost time with his two daughters and hitting the slopes of the nearest ski resort.

Ask Carter

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Q. While I am clear that NYC tap water is a secret ingredient in great bagels and pizza, is the water "soft" or "hard"? And what does that mean? My friend's parents would spat over the benefits of "soft" water to the skin and in shampooing. Who was right?

A. The hardness of water is related to its mineral content. Hardness is a measure of dissolved calcium and magnesium. "Hard" water contains larger amounts of dissolved calcium and magnesium whereas "soft" water contains smaller amounts. New York City's water is predominantly "soft" with a hardness of 1.0 grain/gallon calcium carbonate (CaCO₃) for the Catskill/Delaware system.

"Soft" water promotes a better lather and rinses cleaner than "hard" water, which helps leave the skin softer. Also, there are fewer minerals in "soft" water which can irritate the skin. With "hard" water, soap is less effective due to its reaction to the magnesium and calcium. The soap solution in "hard" water forms a film, instead of producing lather, that's more difficult to wash away.

23rd Annual New York Cares Coat Drive

Now is the time to clean out your closets and help our fellow New Yorkers stay warm during the severe winter months. The drop off location for the coats is by the vending machines on the third floor of the high-rise building at Lefrak. Donations of gently used winter coats for men, women and children may be made up until December 31.

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can lead to long-term water quality impacts. Since the storm, DEP's Stream Management Program has been out in the field consulting with DEC and local officials to guide stream work.

The magnitude of the flood event precipitated by Hurricane Irene was unprecedented in the West-of-Hudson watershed; for many of the communities this flood event was the flood of record and far surpassed the inundation levels and damages of past record floods.

Flooding brings massive slugs of sediment into the system that can cause problems. The Stream Management Program was well positioned to respond effectively because of the strength of its 15 year-long partnership with the watershed's Soil and Water Conservation Districts. The partnership enabled DEP to bring a considerable force of expertise to address extensive debris jams that compromised the rural mountainous road network and the hydraulic capacity of bridges and culverts.

When rain falls or snow melts, water that doesn't seep into the ground becomes runoff. This runoff drains into a network of streams, brooks, creeks and rivers, which ultimately reach the reservoirs—such as the Schoharie Creek, which drains into the Schoharie Reservoir and the East Branch of the Delaware, which drains into the Pepacton Reservoir. Along this network, stream channels shape themselves to carry the high water of spring snow melt. Flows that exceed the stream channel's capacity become floods, which can range from minor events to raging torrents that carve new channels.

"We had learned from past flood events that post-flood channel dredging and channelization can undermine infrastructure such as bridge abutments and streambanks and roadbanks and contribute to landslides—all of which degrades water quality," said **Beth Reichheld**,



Program Manager of the Stream Management Program. "Therefore, the main focus of the stream management program in the weeks following the flood was to prevent this overzealous stream work and instead get out in front of it and guide it. Our teams provided proper stream channel dimension and alignments to the National Guard, highway departments and private contractors throughout the watershed, preventing channelization and berming that would exacerbate future erosion and flooding."

In the ongoing recovery period of about one to two years, the stream management program and its partners will continue providing professional engineering services and funding to help the watershed communities leverage federal and state funding for flood hazard mitigation projects that will also provide a water quality benefit.

Through its local partners, the program provides technical assistance to landowners regarding strategies that reduce stream bank erosion and improve habitat for fish and other wildlife. DEP staff meet with landowners to discuss their individual problems and explore options that address their concerns.

Since 2002 the program has completed comprehensive plans for most West-of-Hudson rivers, created a network of more than 25 restoration projects, and established local field offices to help landowners and communities solve stream-related problems. The team and its partners are working to build a proactive stream stewardship ethic among those living and working in the watershed.

DEP Blood Drive: Sutton Park, 2nd floor: 12/15, 8:30am to 2:30pm; Downsville Fire Department: 12/21, 9:00am to 2:00pm; Kingston, 51 Albany Avenue: 12/8, 1:00pm to 6:00pm; Grahamsville Parking Lot: 12/29, 10am to 3pm. Please [click here](#) to see the email from the Commissioner, and [here](#) for the list of blood captains.

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