

# Watershed Currents



## Spotlight On:

West of Hudson SSTS

Compliance and Inspection Group

For many rural areas of the NYC Water Supply watershed, subsurface sewage treatment systems (SSTS, or septic systems) are the only available method of sewage disposal for individual residences and small businesses. It is not feasible for these sparsely populated regions to have community wastewater collection or treatment facilities. Approximately 22,000 septic systems are in use in the West of Hudson watershed region, with more being designed and constructed each year, plus another several hundred requiring repair or replacement each year as well. New York City's "Watershed Rules and Regulations" require that each of these new, repair or replacement septic systems be designed and constructed with the approval and oversight of NYCDEP technical staff. This technical staff is known as the *SSTS Compliance and Inspection Group*, and in the West-of-Hudson watershed the group is managed by Steven Boek, P.E. in Kingston, N.Y. The technical staff is comprised of eleven Project Managers, each assigned a specific region of the watershed for which they are responsible for all septic system construction inspection duties, whether it be for a new residence, a replacement system, or a system in need of repair. One Supervisor, Jennifer Sheldon, P.E., from her office in Downsville, N.Y., assists Steven with managing the group. The inspectors are stationed at four separate outposts across the watershed, making their offices at city-owned facilities where they are better able

[Continued on page 2](#)



Ginna Holmes

## Ginna Holmes's Public Service Career Inspires Colleagues

Sitting in a lovely garden, in the Columbia County town of Hudson, Ginna Holmes Moore reflected on her 30 years of service to the City of New York and its Water Supply System. Prior to her retirement on June 2 of this year, Ginna was the member of the WPP Senior staff responsible for Public Outreach, including writing and designing this newsletter. She was also responsible for the printed materials that this directorate disseminates to the public.

At Ginna's retirement Luncheon, her dedication to public service was emphasized and when she addressed the assembled group she reiterated the importance of public service and inspired all in attendance to continue to strive for excellence in performing the work that the public entrusts to us.

Ginna started her public career as a teacher in Harlem in 1970. She spent several years in the private sector but returned to public service to work for Comptroller Goldin during the fiscal crisis of the mid 70s and later in the decade for the Brooklyn Borough President's office. By the mid 80s she was on the staff of Deputy Commissioner Holstein, working in the Office of Public and Intergovernmental Affairs as the Director of Publications. There she wrote speeches and testimony for Commissioner Schulz and wrote and produced a variety of other materials for the public. Among her favorites are three special calendars, one celebrating our water supply called *The Water Calendar*, and another, *DEP at Work*, featuring employees on the job. Ginna also enjoyed working with the author and illustrator of *Miss Frizzle* and the *Magic School Bus* series on a special New York City edition of the Bus's visit to the Waterworks, aided by Water Supply's Deputy Director Schaefer.

In 1991 Ginna transferred to the Bureau of Water Supply and Wastewater Collection and was responsible for coordinating the City's first Filtration Wavier Request in late 1991, which consisted of 11 volumes of information and documentation. This was the first step toward developing the Filtration Avoidance Program. This program was re-

*(Continued on page 4)*

# Watershed Currents

October 2009

Page 2

to address the needs of the residents in regions they are responsible for. The four outpost locations include: Downsville - Cannonsville and Pepacton basins, Grahamsville - Rondout and Neversink basins, Ashokan - Ashokan basin, Schoharie - Schoharie basin.

For an area nearly 1600 sq. miles or roughly the size of the State of Rhode Island, it's an extensive amount of ground to cover for the 11 Project Managers. The watershed extends from its westernmost point in the Town of Deposit, Delaware County to the Town of Catskill in Greene County at the east; and, from the Town of Jefferson, Schoharie County at the north to the southernmost tip in the Town of Fallsburgh, Sullivan County. Because of the vast amount of area to cover and the nature of the job, the Project Managers are in the field on average 80-90% of their time... and this will include rain, sleet or snow conditions.



**Grahamsville and Downsville Offices: Front L to R: Jennifer Sheldon, Joe Panioli, Mack Doig. Back L to R: Richard DeVito, Nick Kille, Bryan Sims, Kelly Hamlin.**

The Group's primary responsibility is to ensure that the construction of all residential septic systems within the West of Hudson watershed meets the City's stringent Watershed Rules and Regulations. This involves walking properties and assessing their proximity to watercourses or wetlands, observing percolation tests as they are performed by the design engineer, and eventually inspecting the septic system construction per the approved design. In addition, any residential septic system found to be in failure requires the SSTS Group to ensure the septic system is properly repaired or replaced.

Because of their vast coverage areas, the Compliance and Inspection group is often relied upon as the eyes and ears of Regulatory Review and Engineering division and may be called upon to assist with other important tasks or events as they occur. The staff members are generally out in the watershed everyday and may be able to observe an event or collect important data that would otherwise take many hours to obtain for someone based in the central offices. Recent examples include travelling to view extensive property damages caused by erosion immediately following a significant storm event in the watershed. The group also contributes to the "snow survey", the weekly assessment of the volume of snow pack in the watershed which involves weekly measurements of snow depth and density at various remote locations in the watershed. Without the SSTS Group's involvement in this important task, real-time calculations of stored water in the watershed cannot be performed.

## BEYOND POLLUTION PREVENTION - Invasive Species

For many years the focus of keeping the New York City Water Supply clean has been by preventing degradation due to pollution. Pollution comes in many forms, discarding trash into the street, oil down the storm drain, winter salt, chemicals in fertilizer, pesticides, farm related runoff, and Canada geese to name a few. But did you know the water supply is threatened by another source of degradation, which in the end could be more devastating than all types of pollution put together? This threat is from *invasive species*. How, you ask, can an invasive species threaten the water supply? As you know, an invasive species is something that is not native to the area and therefore may not have any natural enemies. Some of these non-native species are of particular concern as they can cause costly ecological



and economic effects on water supply lands, infrastructure and water quality. For these and other reasons, Watershed Protection and Planning has formed an Invasive Species Working Group which is chaired by Barbara Dibeler. The purpose of this group is to bring together people in DEP with the knowledge and experience to form a coordinating body to develop and make recommendations for an invasive species plan and policy for the Bureau of Water Supply. The first meeting of the group was held in November 2008. One immediate focus for the group has been the Asian Long-horned Beetle, a non-native species from East Asia that is of great concern due to its ability to totally devastate the hardwood forests that protect our water supply.

The Asian Longhorned Beetle (*Anoplophora glabripennis*, ALB) is an invasive wood-boring insect native to China, Korea and Taiwan. It is suspected that the ALB came into the United States hidden in solid wood packing material—pallets and crates that are used to ship products around the world. It was first detected in 1996 in street trees in Brooklyn, NY where an unsuspecting resident reported that someone was drilling holes in the trees! Infestations now exist in parts of New York City, Nassau and Suffolk counties, Middlesex and Union counties in New Jersey and most recently Worcester, Massachusetts. During the week of 9/18/09, a new batch of beetle-infested trees were found in West Boylston, Mass.



The ALB is a serious threat to our forests and landscape trees because it is able to feed on many different species of deciduous trees. It has no known predators or diseases within the United States, hence no natural controls. It has the potential to do more damage than the gypsy moth, Dutch elm disease, and chestnut blight combined by destroying millions of acres of hardwood forest. The forests of the NYC watersheds are a high priority for protection from ALB. These forests are predominantly hardwoods, and serve as a natural filtration system for the NYC water supply, which serves over 9 million people with unfiltered drinking water. The Asian Longhorned beetle threatens to devastate not only the hardwoods of the NYC watershed, but the entire eastern forest—approximately 48 million acres - that stretches from New England to beyond the Great Lakes.

The key to ensuring that the ALB is controlled and eradicated is to make the public aware of not only the existence of this invasive species but how to stop its spread. Early detection and rapid response are of the utmost importance in preventing and minimizing the spread of ALB. Part of the on-going effort to protect the NYC water supply from this pest includes survey for signs of ALB, and outreach to campgrounds to spread the word about the risk associated with moving firewood. Through outreach and education we can control this invasive species and ensure a healthy forest and high quality water supply. One major way we can all help with this is to learn how to identify this beetle and report any possible sightings to the proper authorities. But more important than identification, DO NOT MOVE FIREWOOD! This is the single most important action we can take to prevent the spread of ALB. If you are visiting another area and have a need for firewood, buy it locally. Transporting wood risks carrying ALB infested wood. If you suspect that you may have



## Natural Gas Drilling in the Watershed

By Kimberlee Kane

In early 2008, we were starting to see a surge of interest in natural gas drilling in southeastern New York State, including the NYC watershed area. The target formation is the Marcellus Shale located many 1000s of feet underground and extending over several Mid-Atlantic States. Given the advances in drilling technology and the desire for "greener" fuels, there is mounting pressure to tap into this natural resource. Oil companies started leasing mineral rights from landowners and as the price of natural gas peaked in July 2008 the lease rates topped \$2000/acre for some key parcels.

As a matter of general policy, DEP supports economic development in the watershed and green alternatives for energy production as long as those activities do not adversely impact the water supply. Unfortunately, natural gas exploration and production can potentially have serious water quality, water quantity and environmental impacts. These impacts include but are not limited to: contamination of surface and groundwater from drilling fluids, site runoff and land disposal of drilling wastes. The impacts can occur during both the construction and production phases, and can be acute and temporary or chronic and long-lived. The NYC watershed *IS* a working watershed that supports multiple uses, and the risk from watershed activities will never be zero. However, DEP has an affirmative obligation to protect the water supply of nearly 9 million people not only now but well into the future.

The issue of natural gas drilling is of great interest in the watershed. Environmental groups and some residents perceive natural gas drilling as a serious threat to the water supply and cite many natural gas related problems in other states. Other stakeholders view this as a much needed economic boon that will benefit the upstate economy. DEP decided that it needed a balanced, objective assessment that carefully evaluated realistic impacts to water quality, water quantity, water supply infrastructure and the environment. An independent assessment would also increase the credibility of any resulting decisions. DEP followed an expedited process to identify prospective firms, ascertain their interest, request proposals and select the best candidate. In January 2009 a one year contract was initiated with a joint venture of Hazen & Sawyer/Leggette, Brashears & Graham. The project has been going very well and the initial results were presented to the Water Board on September 25<sup>th</sup>. Stay tuned for more of the technical details at the WPP Fall Meeting!

*(Continued from page 1) - Ginna Holmes*

quired by the Federal Safe Drinking Water Act, which stated that all surface drinking water supplies were to be filtered, unless they could be adequately protected over the long term. Ginna said that she was honored to work with Deputy Commissioner Conway and Assistant Commissioner Scheader and all of the engineers involved with this project.

As the Chief of Strategic Planning and Development, she was responsible for a staff of 11 people and was charged with the preparation of the 1993 Filtration Avoidance Determination (FAD). Ginna said that she enjoyed all of the work she performed in her career but this was her favorite assignment. She found it to be professionally challenging to manage this staff and to be involved in such an essential task. The City continues to be granted Filtration Avoidance Determinations.

Ginna transferred upstate in 1994 for family reasons, and continued to work in communications and develop outreach programs and materials that presented the different FAD programs to the public in lay terms. "Everyone's working life has its challenges and unexpected turns, but one of the very best experiences for me was to finish my career working for Dave Warne, who was the last person I hired for our Strategic Planning Unit in Lefrak."

*(Continued from page 3) - Invasive Species*

seen an ALB or infested tree, please make a report to the experts. Note the date, time and place of sighting and what you observed. If you can, capture the creature and put it in a jar or bottle and put it in the freezer overnight to kill it. If you see a beetle and are not sure if it might be ALB, catch it and let the experts take a look. The majority of ALB detections have been made by the general public.

If you do find a suspected ALB on or near City land, send the sighting information along with the jarred frozen beetle to Barbara Dibeler, Invasive Species Coordinator, Bureau of Water Supply, Kingston Office. She can be reached at (845) 340-7856 or through e-mail at [bdibeler@dep.nyc.gov](mailto:bdibeler@dep.nyc.gov). For reports on non-city land you can notify one of the following: USDA Animal and Plant Health Inspection Service: 1-877-STOP-ALB (1-877-786-7252); NYSDEC Lands & Forest Region 3 (New Paltz) 845-256-3000, Region 3 (Stamford) 607-652-7365; Cornell Cooperative Extension County Offices: Delaware: 607-865-6531, Greene: 518-622-9820, Schoharie: 518-234-4303, Sullivan: 845-292-6180, Ulster: 845-340-3990, Dutchess: 845-677-9223, Putnam: 845-278-6738, Westchester: 914-285-4620

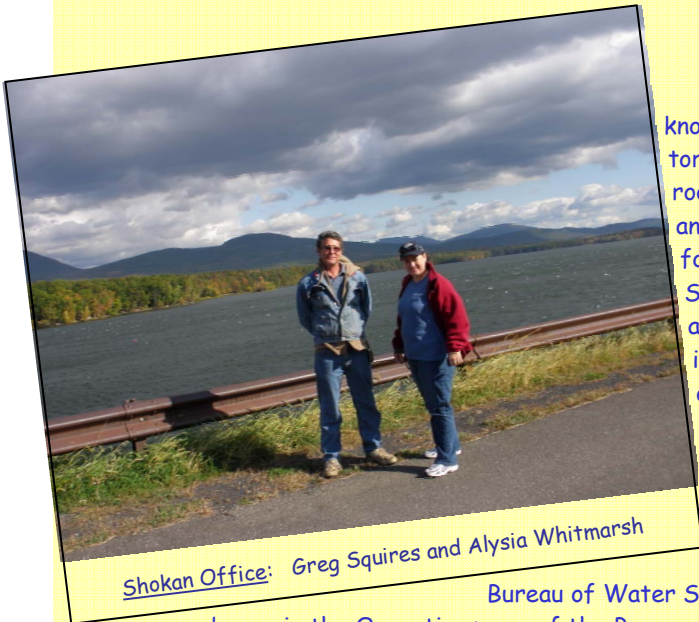


# Watershed Currents

October 2009

Page 5

(Continued from page 2) - Spotlight On



Shokan Office: Greg Squires and Alysia Whitmarsh

Clearly, these inspectors take their job very seriously and their knowledge of the watershed region is evident. For many of the inspectors, working for NYCDEP and protecting the watershed is a tradition rooted deep within their family lines. Most of the inspectors were born and raised in the Catskills region and had family members who worked for the Bureau of Water Supply or helped build part of the City Water Supply's system of reservoirs and tunnels. Bryan Sims is from Liberty and his father worked on the tunnel construction. Joe Panioli grew up in Downsville and has worked for NYCDEP for 17 years. Joe's father also worked for NYCDEP for 20 years. Nick Kille, also from Downsville, knows the water supply well: both his father and grandfather worked for NYCDEP.

It seems any of the members of the group will be quick to share a story of the way things were in the past or explain how the Bureau of Water Supply has evolved over the years. Most of the group's experience began in the Operations arm of the Bureau, so they are familiar with the efforts at protection in the past, and most all conclude that the evolution has been for the better. For example, this group was once required to wear uniforms and carry a badge for their position, prompting many local residents to refer to them as the "septic police". Most agree that their appearance as uniformed officers no doubt raised the anxiety among watershed residents and also contributed to some of the animosity towards the NYCDEP. Uniforms are no longer standard issue and without them the Group feels the contractors and homeowners in the watershed are more comfortable working in the presence NYCDEP, which translates into improved results in the end.

The combined experience of the members of the Group is truly a great asset to the Bureau of Water Supply. Aside from the average years of service with NYCDEP at around 10 years for the field staff, each staff brings their own hands-on appropriate experience to the table when it comes to subsurface sewage disposal systems. As an example, Kelly Hamlin came to NYCDEP formerly as a partner with a construction company doing SSTs work in the watershed. Bryan Sims was employed as an engineering technician by an engineering firm designing septic systems, and he is now currently studying for his Professional Engineering license exam. Similarly, Mack Doig and Rich Devito also have resumes which includes many years of construction experience, and that is most helpful when it comes to ensuring the installations will be built to last.

With the current slowdown in the economy, the numbers of new septic system applications has significantly decreased. However, the Group's workload has not fallen off, rather they believe it may have increased as a result of the number of New York City funded septic system repairs and replacements being proposed. Since the promulgation of the Watershed Rules and Regulations in 1997, the City has funded the repair or replacement costs for failed septic systems that meet certain criteria. The owners of primary residences or second homes are eligible for this funding program. It is believed the increase in replacements is driven by the push from private contractors notifying and urging homeowners to take part in this important program. For contractors needing to keep their work forces busy, the momentary reduction in new home construction has resulted in contractors promoting New York City's funding programs. Repairing a failed septic system may be one of the most discernible methods of protecting water quality in the



Schoharie Office: (L to R) Mike Terrill, Ken Cox, Brian Bloodgood

(Continued on page 6)

## WELCOME TO . . .

Since January 2009, WPP has had the pleasure of welcoming five new employees to the Directorate. If you haven't already, please welcome Keith White, Mark Newman, John Staby, George Collins, and Jennifer Sheldon. In case you are wondering:

Keith joined the Watershed Protection and Planning Directorate in January 2009 and is assigned to the Planning Division. He comes to us with over twenty years of project management experience involving the management of multiple various types of construction projects. Keith is charged with making facility field visits and inspections to develop projects, confirm scope and scales, complete Project Development forms and draft Facilities Reports. Keith is located in the Kingston office.

Mark has been employed with the Bureau of Water Supply for the past nine years. He came to us with a wealth of knowledge involving Emergency Management & Response. This includes firematic, law enforcement, haz-mat, and emergency medical service. Since joining the Bureau, Mark has worked with the Water Quality and the Eastern Operations Divisions. Mark is currently assigned to the Planning Division, Emergency Planning Section where he is charged with coordinating with the various Directorates to ensure that Emergency Action Plans, and New York State Department of Health Emergency Response Plans are written, maintained, and operationalized. Mark is located in the Kingston office.

John came to the Bureau of Water Supply in 1993, joining the Protection Section. Since this time, he has been involved with Land Stewardship, in the West of Hudson Watershed where his main responsibilities have been conducting inspections of lands for various purposes including land acquisition and conservation easement. John is currently assigned to the Natural Resource Management Section of the Watershed Lands & Community Planning Division where he remains highly involved with the land stewardship program. John is located in the Kingston office.

George joined the Bureau of Water Supply in July as the Compliance and Administration Manager for the Regulatory Review & Engineering Division. For the past 12 years he has worked in private consulting and construction management. George was previously employed with BWS in the mid 90s working in WOH Regulatory Compliance Inspection within the engineering section. George's principle tasks will be handling administrative duties, including budgets and procurement, internal compliance related matters and all EH&S matters, in addition to special projects for Regulatory Review and Engineering. George is a licensed Professional Engineer and is assigned to the Kingston office.

Jenne joined the Bureau of Water Supply, Regulatory Review & Engineering Subsurface Sewage Treatment System Compliance Program unit in August. Jenne is a licensed Professional Engineer and comes to us with several years of experience involving site planning of commercial sites, septic design, architectural design and subdivision/lot line changes. She also served as Town Planning Board Engineer. Jenne's assignment includes supervising the residential septic system inspection staff working out of the Downsville and Grahamsville offices responsible for construction inspections and compliance and enforcement related activities. Jenne is located in the Downsville office.

*(Continued from page 5) - Spotlight On*

eyes of the public.

All of the members do agree on one thing: the quality of the septic system designs and installations has improved greatly since the new regulations were put into effect. All septic systems are now required to be designed by a licensed engineer, and most importantly, the engineer must certify the construction was performed according to plan. For the most part, the engineers are familiar with the NYC requirements, and the contractors likewise know that their work will undergo close scrutiny by the SSTS Compliance and Inspection staff during installation. "It's getting much easier now", says Bryan Sims. "We deal directly with the engineers instead of the homeowners and it's a more professional relationship. Also, the contractors know the level of work we expect to see, so they aren't trying to take shortcuts." Clearly, this group's involvement has had a major effect on the quality of workmanship in the overall constructions of septic systems in the watershed to the point of even reducing the number of contractors who venture into the region just to try to "make a quick buck". This is a trend the group feels can be attributed to their new working relationship with installers and engineers in the watershed.