



Focus on:

REP-Regulatory & Engineering Programs

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Engineers Doing Engineering Things

Engineers doing Engineering things! That is what is happening in the Wastewater Treatment Programs section of Regulatory and Engineering Programs (REP) within the Watershed Protection Programs directorate. The Wastewater Treatment Programs Section is comprised of five different groups; the WWTP



Left to right: Sissy DeLaOssa, Andrew Stor, Yuliy Shugol, Daniel Shedlo, David Alderisio

Regulatory Compliance and Inspection Group (WWTP RCI) - Supervised by Andrew Stor; EOH Project Review - Supervised by Daniel Shedlo, P.E.; WOH Project Review - Supervised by Christopher Costello, P.E.; WOH SSTS Regulatory Compliance and Inspection (SSTS RCI) - Supervised by Steven Boek, P.E.; and the WOH SSTS Project Review - Supervised by George Baxter, P.E.. The Section Chief overseeing the five groups is Deborah DeGraw, P.E. Each group has a dedicated function in regards to protecting the water quality in the New York City Watershed and in regards to review and enforcement of the Watershed Rules and Regulations.

Review of a new, modified, or repaired SSTS or WWTP project may include a request for Pre-Application Conference by the applicant, at which time soils investigation on the site may be completed. This would normally be followed by a design submission from a licensed NYS Professional Engineer. DEP would then issue a determination on the design. If approved, the design would be constructed, and an as-built should follow from the design Engineer which would lead to issuance of a certification of construction by DEP, finalized by

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closure of the project.

The WWTP RCI Group is responsible for reviewing designs for upgraded WWTPs in the watershed, inspection of new and existing plants including NYC owned, town, and privately owned plants, and enforcement of plants not in compliance with Federal, State, and Local standards. This group completes, minimally, quarterly inspections for as many as 120 facilities located East and West of the Hudson River. Inspections include troubleshooting of facility issues, performance testing, and facility walkthroughs which note operational and safety issues, and paperwork reviews for proper permits.

The EOH Project Review Group is responsible for inspection of soils tests for new, modified, and repaired SSTs and WWTP projects; design review and issuance of correspondence for those projects proposed; construction inspection; and enforcement of failures and violations to septic systems in the EOH watershed for all types of

septic systems. In Westchester and Putnam counties a portion of this work is delegated to the counties, for which they are reimbursed through an ongoing contract. Project descriptions range from simple individual residential systems to 100,000 gallon per day WWTPs.

WOH are three groups which perform SSTs and WWTP reviews. The WOH Project Review Group reviews, approves, inspects, and enforces all SSTs and WWTP projects other than Individual Residential SSTs proposals. For the Individual Residential Projects the duties are split between two groups. The WOH SSTs RCI Group first meets with applicants to inspect new SSTs and modified or failing SSTs. The information gained on-site is then utilized by the WOH SSTs Project Review Group for review of the individual residential design proposals submitted by Engineers in the Watershed. The WOH SSTs Project Review Group will issue design determinations and construction certifications. The SSTs RCI group will take back the project when a design has been

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Left to right: Mike Terrill, Rob Kristiansen, Dennis Covello, Joe Fabiano, Alysia Whitmarsh, Chris Costello, Carla Paltridge, Greg Squires, Hisashi Omichi, Kathy Steen, Trude Holm-Sullivan, MaryEllen Cariseo, Ken Cox, Paul LaFian-dra, Steven Boek, Brian Bloodgood, George Baxter, Deb DeGraw



HELP is on the Way!

In their efforts to be closer to the work they do and the people they provide service to, the REP staff are dispersed across five locations in the upstate watersheds, including Valhalla, Kingston, Grahamsville, Schoharie and Downsville. Among their many activities, the REP staff are primarily responsible for administering the City's Watershed Regulations. This includes a responsibility for timely processing of septic system applications, monitoring wastewater treatment plants, and reviewing stormwater pollution prevention plans throughout the entire watershed.

For someone new to this department, one of the first realizations that come to mind is:

"We're going to need some help with this!"

Well, never fear, help is on the way..... enter the Administrative Assistants of REP! Within REP are five people located across the watershed whose knowledge, dedication, and support are vital to the

smooth operation of REP. These are the Administrative Assistants of REP:

Kathy Steen began working with DEP in 1994 for the Environmental Programs Group at City House #3 in Shokan. Since 1994, Environmental Programs

has come a long way, including two other locations, before settling in Kingston as the current Regulatory and Engineering Programs, and Kathy has been there every step of the way. Although she is very much involved with entering new development

projects into the WaLIS database, Kathy is also well known for her ability to collect, condense, and collate FAD reports with seemingly no trouble at all. Kathy wears several different hats, quite literally as she is the Fire Marshall for the engineering section of the building, and she is also a timekeeper. Kathy lives with her husband in Phoenicia, where they raised their two sons, now 27 and 21.

Jo Ann Bielinski began working for DEP Operations on February 1, 1993. She started working for retired District Engineer Joseph Boek, P.E., and then later was transferred to the Regulatory Review and Engineering group when the Department moved to Kingston. In Regulatory and Engineering Programs now, Jo Ann works for Joseph's son, Steven Boek, P.E., in the SSTS Regulatory Compliance group. If you ask JoAnn who was better to work for, natu-



Left to right: Kathy Steen and JoAnn Bielinski



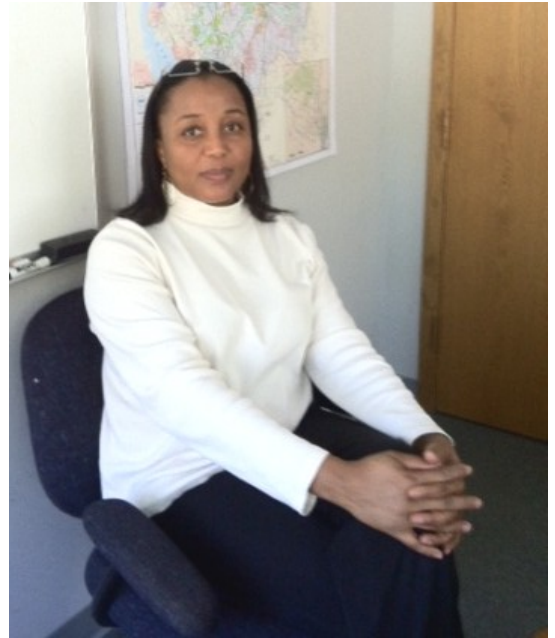
Above: Patricia Antich in Sutton Park



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rally Jo Ann will say "They were both good to work for!" One activity Jo Ann is widely known for in WPP is the tracking of vehicles in the vehicle pool. She tracks and schedules vehicle maintenance and tabulates mileage and reminds everyone to "Bring in your mileage sheets!" Jo Ann lives in Saugerties with her dog Bo.

Patricia Antich has been working for DEP since May 2007 primarily in the Stormwater Programs group, but now is assisting with all REP functions. Whether it is handling the hundreds of pieces of mail that go in and out of REP from applicants, or entering new projects into the WaLIS database, Patricia is always quick to offer assistance when she can. Patricia has also been involved with archiving the hundreds of records that have come into REP since the early 90s and are stored in various locations throughout Sutton Park. Patricia lives in Marlboro, NY with her daughter who is in grade school.



Cargill Murphy has seen a lot of changes, as she has been working for DEP going on 21 years since she started in Lefrak in June 1990. Cargill transferred to the Manor House in Valhalla in November 1992 and then to Sutton Park in the Spring of 1993. Currently Cargill works in the SEQRA Compliance Section, where she maintains the database of SEQRA projects that have come into DEP and assists the tracking of those projects. Cargill is also involved with processing procurements needed for REP. If you ask Cargill who her favorite Commissioner is she says without hesitation "The current Commissioner is my favorite". Cargill has 2 sons ages 18 and 21 and resides in Rockland County.



If you happen to be in *Grahamsville*, stop in to the new DEP office building where you may see Trude Holm-Sullivan as you enter the building. Trude works in the reception area at *Grahamsville*, and has been with Regulatory and Engineering Programs since she started with DEP in 2004. She is primarily involved with supporting the SSTS Project Review Group in handling the many applications and correspondence related to septic system applications in the WOH district. The SSTS Group moved to *Downsville* for a period in 2007, and then moved back to *Grahamsville*, which Trude found to be a much better commute since she lives in *Grahamsville*. Trude has raised 2 kids, the youngest who will graduate from High School this year, and 2 Labradors in *Grahamsville* and says it's a great place to live.

Top right: Cargill Murphy

Bottom left: Trude Holm -Sullivan

Thank You to the Administrative Assistants in Regulatory and Engineering Programs. Your hard work and dedication to the program is very much appreciated!



The Peach Lake Environmental Center

Overview of a regulated project review, construction and operation

Any project proposed which consists of a regulated activity located within the NYC Watershed that is new, to be modified, altered or remediated requires a DEP review and approval from the REP staff. The Watershed Regulations consist of sixteen regulated activities. The majority of the projects reviewed by REP staff consist of these popular regulated activities: subsurface sewage treatment systems (SSTS); wastewater treatment plants (WWTP); sewer collection systems; impervious surfaces; and runoff from construction activities. Many of the larger projects will require several approvals, such as SSTS and a Stormwater Pollution Prevention Plan (SWPPP). All projects requiring a DEP approval must also have a State Environmental Quality Review Act (SEQRA) review and determination of non-significance and receive a negative declaration before the regulated approvals can be issued.

SEQRA reviews are divided into three action types: Type I, Type II and Unlisted Action. Type I projects are usually larger projects that exceed the thresholds listed in the SEQRA law. Type II are projects which do not require a SEQRA review due to small size of the project such

as the SSTS for an individual residential house. The Unlisted Actions are those projects not on the Type I or Type II list. The Type I or Unlisted Actions are either a coordinated or an uncoordinated SEQRA review with other involved agencies.

The Peach Lake Environmental Center is a proposed WWTP located in a lake front community with individual SSTSs located within the Croton watershed. The Peach Lake community consists of approximately 480 homes started as summer cabins in the 1920s and has developed into year round residences which have put on additions and added bedrooms over the years. The Peach Lake community is located in the Towns of Southeast in Putnam County and North Salem in Westchester County. The WWTP and the



Jean Marc Roche worked on review of the Peach Lake (WWTP) Environmental Center.

sewer collection system project was determined to be a Type I coordinated SEQRA review by the lead agency with the involved agencies consisting of the Towns of North Salem and Southeast; Westchester and Putnam Counties; DEP; NYS-DOH; NYSDOT; and many other agencies for funding and other required approvals.

REP SEQRA team coordinated this environmental review for DEP with the SEQRA Tech Team consisting of: REP and Ecological Research and Assessment (ERA) of WPP, DEP Legal, New York City Law Department and Bureau of Environmental Planning & Analysis (BEPA). The REP SEQRA Coordination Section staff coordinates these SEQRA reviews for regulated activities which are non DEP sponsored projects within DEP. Cynthia Garcia of the SEQRA Coordination Section performs the DEP coordination, coordinates with the lead Agency, receives comments from the SEQRA Tech Team and issues the response letters for all the SEQRA reviews for the REP regulated activities under the Supervision of George Collins, P.E., Compliance and Administration Manager. The SEQRA review began in December 2007 and was completed in May 2008.

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Low Impact Development

Developed by the Prince George's County Department of Environmental Resources, Maryland, the use of Low Impact Development (LID) techniques nationally to meet stormwater regulations has slowly gained ground. Rural and urban communities are incorporating LID concepts into local laws and zoning ordinances.

The complete LID design process is beyond the scope of this article. However, the key principal to LID is maintaining the site's pre-construction hydrologic condition when development is complete.

Conventional stormwater plans consider site-wide watersheds in determining the pre/post flows at specific design points. With LID, the design points are moved up nearer to the source of runoff resulting in much smaller watersheds; which results in capturing a much smaller volume of stormwater. An example of this for a residential subdivision is roof tops and proportions of driveways being captured in rain gardens on each individual lot.

A typical rain garden is approximately 100-200 ft² and excavated to approximately 2-feet. The excavation is backfilled with a bottom stone layer and amended soils. In some instances, the excavated material can be modified to meet the desired specification for the amended soils. In other cases, amended soils will need to be imported.

If planned properly, the end result is a system that matches the pre-construction hydrologic condition of a site and will not typically require large, expensive basin type systems. Even areas where the native soils are not conducive to infiltration, the amended soils and vegetation in a rain garden are able to absorb and transpire a significant amount of water and experience zero discharge for the majority of storms.



Above: Volunteers installing a rain garden at the Saugerties Senior Citizen Center next to the Town's Cantine Memorial Field with money they received from a grant.

Jon Hairabedian, James Watkins and Joe Damrath assisted in the installation and gave some pointers.

Below: Finished outcome





The Peach Lake WWTP required five regulated activity approvals: the WWTP in the Town of Southeast, the sewer collections systems for both Town of Southeast and North Salem; SWPPP for the WWTP and sewer collection system, and variances from two sections of the Watershed Regulations. The two variances are for a new WWTP located within a phosphorus restricted basin and the WWTP discharge to a wetland.

This project was to receive Federal stimulus monies, which put the whole project review, including the SEQRA and permit approvals, under significant pressure to complete, and have the project construction ready by December 31, 2009.

Per Sonning, P.E., began the initial review of the WWTP in February 2008 and the sewer collection systems in July 2008. The WWTP approval was issued by Per Sonning on August 13, 2009. DEP began the review of two separate sewer collection systems, one for each town, in July 2009. Yuliy Shugol, P.E., was brought into the project review of the sewer collection system prior to Per's retirement in September 2009. Yuliy was able to complete the sewer collection system reviews and issue the approvals in October 2009.

The SWPPP for the WWTP

site and the soil disturbance for the two sewer collection systems, one for each town was reviewed and approved by Jean Marc Roche. The SWPPP review began in February 2009. There were many emails, letters and several meetings to discuss the SWPPP with the design engineer resulting in an SWPPP approval on October 5, 2009. Jean Marc also coordinated with Eve Fox of the ERA Group of WPP for the wetland mitigation required for the WWTP discharge to a wetland variance.

The variance review included the full reviewing team mentioned above for Peach Lake, plus DEP Legal and New York City Law Department and was ultimately approved by Steve Lawitts, Acting Commissioner. The variance review process began in June 2009 with the final variance approval granted in August 2009. All final variance determinations are issued by the DEP Commissioner or the Deputy Commissioner.

Due to the Stimulus Funding requirements, the project review was performed in a much expedited time frame with extensive coordination between the many people involved in the review and five approvals required. Much of this coordination between the several REP groups and the variance was

performed by Brenda Drake, P.E.

The WWTP is currently under construction. The REP staff work is not completed until a construction approval is granted. Currently, Gail Piranio performs weekly stormwater inspections of the WWTP site and the installation of the two sewer collection system. If additional inspections are required, they are performed by Gail. Gail has brought stormwater construction deficiencies to the attention of the contractors and her Supervisor, Joseph Ziminsky for resolution. If such resolutions cannot be achieved, REP staff will bring enforcement actions until deficiencies are resolved. The construction inspections of the WWTP components are currently being performed by George Reitwiesner to insure the WWTP is constructed in accordance with the approved plans. The WWTP is a sequencing batch reactor treatment followed by microfiltration. When the WWTP is constructed and operational, George will perform the regulatory inspections and compliance for the Peach Lake Environmental Center.

Thank you everyone for their outstanding effort to allow the project to meet its deadlines and be a very beneficial project.



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approved in order to inspect the construction and provide assurance that it has been built in accordance with applicable regulations. The SSTS RCI group is unique in that there are field staff scattered throughout the watershed in Downsville, Gramhamsville, Schoharie, and Kingston. The sheer magnitude of management of enforcement on projects ranging from 200-400 systems per year brings much complexity to this group.

What tools do these groups utilize to do their day to day activities? In a nutshell, they may first meet an applicant or Design Engineer on-site to discuss the project, assess the situation, and utilize their engineering knowledge to inspect soils via deep tests pits, witness of soils percolation tests, utilize topographic maps, and soils maps. The reviewers and engineers do not generally leave home without a measuring tape, level, inclinometer, and a camera. Occasionally tracer dye is introduced into a septic system to document a septic system failure.

Some of the difficulties of the job include working with new Engineers and applicants who need assistance understanding the WRRs. Different Engineers bring varying skills and technology allowing for inconsistent management of reviews and ever changing comments from DEP staff. Finally, DEP strives to coordinate with all other regulatory agencies which occasionally pro-logs the time frame for project resolution, leaving applicants frustrated.

Some of the highlights of the job include meeting new people, seeing different parts of this beautiful watershed and having a great split of time between office and field. The reviewers have a chance to better understand and witness technological advances and follow through with the effectiveness of the changing technologies over the years.

Thank you to these dedicated staff for providing continued oversight and protection from the contamination and degradation of the New York City Water Supply.



Back Row – Richard De Vito, Nick Kille, Bryan Sims, Kelly Hamlin
Front Row - Jennifer Sheldon, Joseph Panioli, Mack Doig