

## East Quogue Homeowners Get New Septic System Through County Wastewater Program

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Workers made their way to East Quogue last week to install a new state-of-the-art septic system, one of four new sewage treatment units now being tested across Suffolk County as part of a pilot program.

The nearly dozen workers with Wastewater Works Inc. in Riverhead began digging behind the gray, single-story house on Indian Run at around 8:30 a.m. on Thursday, November 12, as the first order of business was removing the home's antiquated cesspool—a traditional ring system that services most homes, and many businesses, across Long Island—and, in recent years, has been tagged as the main culprit behind rising nitrogen levels in local bays.

Once they reached the cesspool, workers immediately observed a series of tree roots that had infiltrated the ring, hindering the dispersion of wastewater that lay within. Several inches of dirty water lay at the bottom.

"Everything just went into this one spot," explained Joe Densieski, the owner of Wastewater Works. "The drainage was really poor here." The area where the old cesspool had been located was later filled in with dirt.

The new septic system, called Hydro-Action and manufactured by Septic Systems Inc. in Illinois, took crew members about six hours to install in the home's front yard. Unlike traditional cesspools, the new system—which costs approximately \$15,000 installed—is

supposed to discharge wastewater containing less than 10 milliliters of nitrogen per liter, or 50 percent less than the county standard for traditional cesspools.

The system features two septic tanks—one filters waste, while the second introduces microorganisms that consume nitrogen—and is supposed to last forever, assuming that it is properly maintained, according to the manufacturer.

The first tank filters the waste and makes it "somewhat clean," Mr. Densieski said. After that, the water gets pumped into the second tank, where a special clarifying cone aerates the wastewater and introduces microorganisms that consume the remaining waste.

As with the other test sites across the county, the tab for the new Hydro-Action septic system on Indian Run is being picked up by the county as part of Suffolk County Executive Steve Bellone's Reclaim Our Water initiative. The other septic systems now being tested are: Norweco, which is manufactured by Norwalk Wastewater Equipment Company Inc. in Ohio; Orenco, manufactured by Orenco Wastewater Solutions in Oregon; and Busse, manufactured by Green Technologies Inc. in Illinois.

The East Quogue homeowners—who declined a request for an interview—were one of 140 applicants across the county who sought to participate in the pilot program, explained John Digiuseppe, the associate sanitarian in the Suffolk County Department of Health Services who oversaw last Thursday's installation in East Quogue. Of the applicants, only 19 were chosen to participate. "There actually weren't a lot of applications here [in Southampton]," Mr. Digiuseppe noted.

He explained that the Indian Run house was picked because it met a certain number of county requirements, including having adequate space so the new system could be installed in the front yard and the ability to connect with a public water supply. County officials were also looking for homes that housed families, and not individuals, so the new units could be property tested by occupants.

The Hydro-Action system is also currently being tested at homes in East Patchogue, Dix Hills, Nesconset and Wheatley Heights.

Norweco, meanwhile, is testing two different systems, called Singulair Total Nitrogen Treatment and Hydro-Kinetic. Both utilize concrete tanks and decompose human waste before it reaches the cesspools. They are currently being tested at residences in Miller Place, Fort Salonga, Nesconset and Mattituck.

The Orenco system also has high promises for eliminating nitrogen from wastewater. The company says it will remove between 65 and 75 percent of nitrogen in wastewater through the introduction of microorganisms that consume the waste. It is unclear in what areas this system is being tested.

Lastly, the Busse system features a membrane bio-reactor that filters out harmful bacteria and chemicals in wastewater. The resulting water should be as clean as rain water, according to the company. This system is now being tested in Port Jefferson Station.

Though they operate differently, all of the systems, according to their respective manufacturers, promise to more efficiently treat wastewater and reduce the amount of nitrogen that is entering the groundwater.

"It's still early, but the systems, to our knowledge, are going as planned," said Pete Sabo, business development manager for Septic Systems Inc., regarding his company's Hydro-Action units.

As part of the Reclaim Our Water initiative, the county is going test another system at Meschutt Beach in Hampton Bays. County officials, who have not yet selected a manufacturer for the treatment system, previously stated that they want the new unit in place before the end of 2016. The county park, which overlooks the water, features an antiquated eight-ring cesspool system dating back to the 1970s. It failed this summer.

Officials later learned that the current system does not meet the county's own codes, noting that it lacks both septic tanks and grease traps. Those things were not required when the system was installed, Walter Hilbert, chief of the Office of Wastewater Management within the Suffolk County Department of Health Services, previously stated.

The new system will be more advanced than the current county standard, Peter Scully, a representative for Mr. Bellone, previously explained. Sarah Lansdale, Suffolk County's director of planning, said the county hopes to select a company for Meschutt Beach in December.

Another part of the pilot program examines how a vegetated constructed wetland employing reeds and grasses can be utilized to help capture harmful toxins before they reach local bays and tributaries. Sara Gordon, strategic director of the Sylvester Manor Educational Farm on Shelter Island, explained during a recent interview that vegetation employed in a

constructed wetland alternative wastewater treatment system can help filter nitrogen from effluent before it reenters the groundwater. To that end, the farm is now working on securing the necessary permits to build the constructed wetland, created by New Jersey-based Natural Systems Utilities, on Shelter Island by next year.

The county is also working on selecting homeowners who are interested in participating in another related pilot program, one that tests dispersal field treatments whose primary job is to slow down and deflect rainwater so it does not directly enter the bays. The county is partnering with Peconic Green Growth, a Riverhead nonprofit, to install these dispersal field treatments at eight locations in the county. The exact locations for the systems have not been selected yet.

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