

## Nature Conservancy, Suffolk's man-made wetland may reduce nitrogen levels

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By Emily C. Dooley [emily.dooley@newsday.com](mailto:emily.dooley@newsday.com)



Suffolk County Legis. William Spencer, left, stands atop a planned sewage treatment site with Nature Conservancy marine biologist Chris Clapp on Dec. 21, 2015. Photo Credit: Johnny Milano

Suffolk County and The Nature Conservancy of Long Island are joining together to create a mini man-made wetland in Cold Spring Harbor to treat wastewater and reduce nitrogen releases into groundwater.

The pilot project at the conservancy's Uplands Farm Sanctuary, which will cost about \$520,000, is the first of its kind on Long Island, officials said.

It involves installing sewage treatment tanks underground topped by native grasses and shrubs. The root systems of the plants and shrubs serve as a host for certain bacteria that eat up or filter out contaminants such as nitrogen, coliform and pharmaceutical byproducts.

The goal is to dramatically reduce the discharge of nitrogen, excessive levels of which can damage wetlands, hurt clam stocks, lead to algal blooms and harm water quality.

"There are so many impacts that nitrogen has that can potentially threaten our beautiful Long Island, and this is a major step in the right direction," said Suffolk County Legis. William Spencer (D-Centerport), who helped secure a \$220,000 grant from the county.

The Nature Conservancy is funding the rest of the project, which should be operating by the summer or fall.

The man-made wetlands and treatment system will cover a 20-foot-by-40-foot area and will replace four on-site cesspools that currently treat wastewater. The Nature Conservancy will test for nitrogen, pharmaceuticals, volatile organic chemicals and other contaminants, said Chris Clapp, a marine scientist with the conservancy.

"Part of the goal is to really get this scaled down to something everyone can use," Clapp said.



Test results will be made public and signs will tell sanctuary visitors about the man-made wetlands and how they are used.

“The bottom line is that this new technology brings one more solution to our battle against pollution,” said Adrienne Esposito, executive director of Farmingdale-based Citizens Campaign for the Environment.

While the county funding covers three years, The Nature Conservancy will monitor the system for the long term, over many years, Clapp said.

The project will help the county evaluate new ways to remove nitrogen, Suffolk’s planning director Sarah Lansdale said.

“If our water is threatened, it can threaten our very society and this is not acceptable ...” Spencer said. “It will give us a blueprint for how we move forward with other similar projects.”

In May, the county released its Comprehensive Water Resources Management Plan and declared nitrogen “public enemy No. 1,” placing much of the blame on outdated septic systems.

Seventy-four percent of county homes are not connected to sewage treatment plants. Of the 360,000 septic systems in Suffolk, more than 250,000 were installed before 1972 when tanks were not required.

This year, the county began testing alternative septic systems at 19 different residential sites, with a focus on nitrogen removal.

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