

## The Suffolk News-Herald



photo by [Tracy Agnew](#)

Ceremonial ribbon: Officials from Ostara, Hampton Roads Sanitation District and the city of Suffolk cut a ceremonial ribbon for the new Ostara Pearl process recently installed at Hampton Roads Sanitation District's Nansemond wastewater treatment facility in Suffolk.

## Wastewater into fertilizer

Nansemond treatment plant unveils recycling process

By [Tracy Agnew \(Contact\)](#) | Suffolk News-Herald

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Residents in Suffolk and surrounding communities now are able to help manufacture fertilizer simply by flushing the toilet.

The Hampton Roads Sanitation District and Ostara on Thursday unveiled a new process at HRSD's Nansemond treatment plant in Suffolk that will extract nutrients from wastewater and convert them into a slow-release fertilizer. Environmental attorney Robert F. Kennedy Jr. was the keynote speaker at the event.

"This will help to reduce the human impact on the environment while we work to reduce our ecological footprint," Mayor Linda T. Johnson said at the event. "We have welcomed the \$38 million investment in upgrades to the plant."

The investments included about \$5.3 million to install Ostara's innovative technology that extracts phosphorus and ammonia from wastewater before fluid is discharged into the James River. The nutrients then are manufactured into tiny beads of fertilizer called Crystal Green, which is sold to offset the costs associated with the project.

The process helps keep excess phosphorus and ammonia out of the James River — where they could choke wildlife by depleting the waters of oxygen — while at the same time cutting down on maintenance needs at the treatment facility, said plant manager William Balzer. The slow-release fertilizer also produces less runoff into the region's waterways than traditional fertilizer, he said.

"It's a matter of recovering that material and being able to reuse it," Balzer said.

The Nansemond plant was originally built in 1983 and was expanded in 1997. It treats up to 30 million gallons of wastewater from parts of Suffolk, Smithfield, Isle of Wight County, Portsmouth and Chesapeake every day. The plant is tucked away off College Drive, mere yards from the Monitor-Merrimac Memorial Bridge Tunnel.

Kennedy applauded the installation of Ostara's process in Hampton Roads, noting that he typically makes his living suing sewage treatment plants for abuse of the environment.

"Nobody has a right to use [the waterways] in a way that would diminish the enjoyment of others," he said, recounting the story of how he helped a group of citizen activists sue companies up and down New York's Hudson River that were releasing toxins into the river. "Today, as a result of their work, the Hudson is a model ecosystem," he said.

To ensure the project would be beneficial to the Hampton Roads region, HRSD tested the system in 2007. In the test, about 85 percent of the phosphorus and 40 percent of the ammonia that would have been wasted was recovered and used to manufacture the fertilizer.

By implementing the Ostara Pearl process, the Nansemond plant becomes one of the first in the country to recycle its wastewater into fertilizer.

The process helps reduce operational and capital costs, because it removes the substances that cause

buildup inside pipes and valves at the facility. Such buildup reduces treatment capacity, it is expensive to remove, and damage from it is expensive to repair, Balzer said.

“It’s a cost-neutral project that helps us solve our nutrient challenges with an environmental benefit,” Balzer said.

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