

# Environmental PROTECTION

## HRSD, Ostara Partner to Recover Nutrients and Make Fertilizer

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Hampton Roads Sanitation District (HRSD) and Ostara Nutrient Recovery Technologies, Inc. on May 27 officially unveiled the first facility in the Chesapeake Bay Watershed to benefit from a new technology that recovers nutrients, including phosphorus and nitrogen, from wastewater and transforms them into an environmentally friendly, commercial fertilizer.

HRSD incorporates Ostara's Pearl® Nutrient Recovery Process at its Nansemond Treatment Plant in Suffolk, Va.

The process increases plant capacity and production efficiencies, while creating a premium fertilizer byproduct from waste, according to the company. The commercial fertilizer, Crystal Green®, uses a slow-release formula to ensure that nutrients are absorbed by plants and thereby reduces fertilizer runoff from reaching and polluting the Bay's fragile ecosystem.

The Nansemond plant tested the technology from October 2006 to March 2007 in a pilot-scale facility, where it recovered more than 85 percent of the phosphorus and 40 percent of the ammonia from the liquid it processed. The demonstration project led to full-scale commercial implementation.

The Nansemond Treatment Plant is designed to treat up to 30 million gallons of wastewater per day (mgd). It is one of 13 plants owned and operated by HRSD, a public utility that serves 1.6 million people in an area of more than 3,100 square miles. The Nansemond facility discharges treated effluent to the James River, a tributary of the Chesapeake Bay. Excessive nutrients, including phosphorus and nitrogen, have been identified by the Chesapeake Bay Foundation as one of the most serious water quality problems affecting the Bay.

Ted Henifin, HRSD's general manager, explained, "The benefit of Ostara's Pearl system is gaining the ability to recover nutrients that were a maintenance problem in our plant and turning them into a commercially viable fertilizer product with basically no additional costs to HRSD."

Clean Water Services' Durham Advanced Wastewater Treatment facility outside Portland, Ore., which was the world's first to implement a commercial operation using Ostara's nutrient recovery technology, has been operational for more than one year. In that time, the process has exceeded expectations with respect to the operational cost savings it has delivered and produced more than 500,000 pounds of Crystal Green fertilizer.

The Nansemond Struvite Recovery Facility is projected to remove more than 85 percent of the phosphorus from solids recycle streams and has the capacity to produce more than 1 million pounds of Crystal Green fertilizer annually.

Numerous other commercial applications of the Ostara technology are in pilot stages, including the third facility in Europe and the first in Asia, with the next commercial facility to launch in York, Pa. later this year.

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