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CLEAN WATER SERVICES AND OSTARA NUTRIENT RECOVERY TECHNOLOGIES OPEN WORLD'S LARGEST MUNICIPAL NUTRIENT RECOVERY FACILITY

- Environmental advocate Robert F. Kennedy Jr. to deliver keynote at the Rock Creek Advanced Wastewater Treatment Facility
- Oregon State Treasurer Ted Wheeler and Clean Water Services Chairman, Andy Duyck, will officially open Facility

HILLSBORO, OR and VANCOUVER, CANADA – May 8, 2012 – A successful public/private partnership in sustainable technology continues between Clean Water Services and Ostara Nutrient Recovery Technologies Inc. with the unveiling of the world's largest municipal Nutrient Recovery Facility today, at the Rock Creek Advanced Wastewater Treatment Facility in Hillsboro, OR.

Clean Water Services' Rock Creek Nutrient Recovery Facility uses Ostara's Pearl® Nutrient Recovery Process to capture phosphorus and nitrogen from wastewater and transform them into Crystal Green®, an environmentally-friendly, slow release fertilizer, which is sold locally and throughout the country. Robert F. Kennedy Jr. will join Oregon State Treasurer Ted Wheeler and Clean Water Services Chairman Andy Duyck for today's 10:30 a.m. grand opening ceremony.

Ostara's Pearl process benefits Clean Water Services and its ratepayers by reducing operations and maintenance costs, increasing plant capacity and providing revenue from the sale of the fertilizer. The combination of cost savings and revenue are projected to pay off the \$4.475 million Rock Creek Nutrient Recovery Facility in six years. The recovery of phosphorus and nitrogen from the wastewater stream also helps Clean Water Services meet stringent nutrient limits (the Rock Creek Facility must not exceed 0.1 mg/L of total phosphorus discharge) and further protects the Tualatin Watershed. The project was also granted an Oregon Department of Energy Business Energy Tax Credit (BETC) of \$1.12 million which helped fund the facility's construction. The Rock Creek Nutrient Recovery Facility requires one seventh the amount of energy to create 1,200 tons of Crystal Green as it takes to create an equal amount of conventional fertilizer.





"Our partnership with Ostara is a natural progression of the work we do at Clean Water Services. Wastewater is a valuable resource that we can no longer afford to simply throw away," says Bill Gaffi, General Manager of Clean Water Services. "The cleaned water we produce at this facility is enhanced by the Ostara system and eliminates pollutants, providing life-giving flow to the Tualatin River. In addition, the Ostara system saves our ratepayers money by reducing our electrical and chemical usage, and through the shared revenue stream from the sale of Crystal Green."

Based on the successful operation of Ostara's nutrient recovery technology at Clean Water Services' Durham Advanced Wastewater Treatment Facility, installed in 2009, this second installation of the Pearl technology at Rock Creek features two Pearl 2000 fluidized bed reactors. Each reactor will provide four times the capacity of the Pearl 500 reactors installed at Durham. The Pearl 2000 system at Rock Creek will generate a combined capacity of 1,200 tons of Crystal Green fertilizer every year, compared with an annual capacity of 500 tons for the Durham facility. Clean Water Services is now the largest municipal producer of Crystal Green in the world. Crystal Green produced at the facility will be used in nurseries, lawn landscape, and turf applications throughout the Willamette Valley and the state of Oregon, as well as throughout North America.

"We are very excited to launch our new Pearl 2000 system with Clean Water Services. They have been a great partner in reaching cost effective and environmentally sound goals to recover nutrients for the highest beneficial re-use," says Phillip Abrary, President and CEO of Ostara, "Wastewater is no longer waste, but a valuable resource."

A common challenge for wastewater treatment facilities such as Rock Creek is the over-accumulation of phosphorus in the system resulting in the formation of struvite scale, a concrete-like mineral deposit which congests processing equipment, adding significantly to operating and maintenance costs and threatening plant reliability. Ostara's Pearl process helps Clean Water Services overcome these challenges at Rock Creek with the recovery of up to 90 per cent of the phosphorus and 20 per cent of the nitrogen from the wastewater stream, which is transformed through a chemical reaction in Ostara's Pearl process into an environmentally responsible source of phosphorus fertilizer.

"The amazing thing is that by helping wastewater treatment plants deal more efficiently with their nutrient overload problems, Ostara is also helping to address one of the earth's most significant environmental challenges - water pollution from the leaching and runoff of nutrients, such as phosphorus, which causes excessive algae growth and depletes waters of the oxygen necessary to support aquatic life," says keynote speaker Robert F. Kennedy Jr., environmental advocate and attorney, and Ostara Board Member. "Ostara's process takes these nutrients and turns them into a high value, slow release fertilizer that not only helps to preserve natural waterways by reducing runoff, but also makes good business sense as it offers operational cost savings and becomes a revenue source for the wastewater treatment plant implementing the technology."





One of the most valuable aspects of the Ostara process is the creation of a high value phosphorus fertilizer from a renewable resource – wastewater. It takes one seventh the amount of energy to create Crystal Green as it takes to create an equal amount of conventional fertilizer mined from finite phosphorus reserves.

"Phosphorus, a key building block to all life, is mined today in a limited number of areas but used globally as an essential agricultural input," says Abrary. "We're recovering phosphorus and other nutrients and transforming them into a useful premium fertilizer while reducing the carbon footprint in its manufacture and preventing runoff in its use."

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About Clean Water Services

Clean Water Services is a water resources management utility for more than 536,000 people in urban Washington County and small portions of Multnomah County, Clackamas County, Lake Oswego, and Portland. Clean Water Services operates four wastewater treatment facilities, constructs and maintains drainage management and water quality projects, and manages flow in the Tualatin River to improve water quality and protect fish habitat.

www.cleanwaterservices.org

About Ostara Nutrient Recovery Technologies Inc.

Ostara is a clean water company that provides phosphorus management solutions to municipalities, industry and farmers. The company was founded in 2005 when it licensed the nutrient recovery technology from the University of British Columbia to develop and market the wastewater treatment process and the revenue-generating fertilizer. The proprietary technology, called Pearl®, recovers otherwise polluting nutrients, phosphorus and nitrogen, from wastewater streams at treatment facilities, helping plants reduce costs and meet nutrient discharge limits. The nutrients harvested from these wastewaters are transformed into a fertilizer product marketed as Crystal Green®, the most environmentally responsible source of phosphorus fertilizer. www.ostara.com