



## **Clean Water Services to Add Second Ostara Nutrient Recovery Facility at Rock Creek Wastewater Plant**

- Addition of second Ostara system will result in largest facility of its kind, reducing costs and further protecting the Tualatin Watershed

**HILLSBORO, OREGON and VANCOUVER, CANADA – March 1, 2011** – Clean Water Services and Ostara Nutrient Recovery Technologies Inc. have partnered to install an innovative nutrient recovery facility at Clean Water Services' Rock Creek Advanced Wastewater Treatment Facility in Hillsboro, OR. This will be Ostara's second installation of a commercial Pearl® Nutrient Recovery System at a Clean Water Services' facility. Upon completion, the Rock Creek facility will be the largest Pearl facility in the world. Ostara's first commercial Pearl Nutrient Recovery System began operating at Clean Water Services' Durham Advanced Wastewater Treatment Plant in June 2009.

The Rock Creek facility will commence construction this summer as part of the plant's expansion, and is expected to be fully operational by fall 2011. The facility will feature two Pearl 2000 fluidized bed reactors, significantly larger than the systems currently installed at the Durham facility in Tigard, and in Ostara's other commercial facilities in York, PA and Suffolk, VA. Clean Water Services' Rock Creek Advanced Wastewater Treatment Facility cleans 39 million gallons of wastewater a day from the municipalities of Hillsboro, Beaverton, Forest Grove, Cornelius, North Plains, Banks and Gaston as well as Aloha, Bethany, Cedar Mill, and Rock Creek.

“Our continued partnership with Ostara is a testament to the success of our first nutrient recovery system at the Durham facility,” says Bill Gaffi, General Manager of Clean Water Services. “This technology provides benefits to our ratepayers and the environment by extracting valuable nutrients - which would otherwise clog our pipes - to create an environmentally safe, revenue producing commercial fertilizer.”

A common challenge for wastewater treatment facilities such as Rock Creek is the over-accumulation of phosphorus in the equipment 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 will help Clean Water Services overcome these challenges at Rock Creek with the recovery of up to 95 per cent of the phosphorus and 20 per cent of ammonia from the liquid wastewater stream at the Rock Creek facility, which will then be transformed - through a chemical reaction in Ostara's proprietary fluidized bed reactors (Pearl 2000) - into an environmentally friendly, slow-release fertilizer marketed as Crystal Green®.

The Pearl 2000 reactors at Rock Creek will have the capacity to produce 1200 tons of Crystal Green fertilizer every year. Combined with the Durham facility, which has an annual capacity of 500 tons, Clean Water Services will become the largest producer of Crystal Green in the world.

With the Ostara process, phosphorus and other essential nutrients are recovered and transformed into Crystal Green which can be used locally by nurseries and other businesses within Washington County. Crystal Green provides a key environmental benefit – the protection of the Oregon waterways - as the fertilizer has limited runoff due to its unique slow release properties.

“Clean Water Services has always been a leader in adopting progressive solutions in wastewater management,” said Phillip Abrary, Ostara's president and CEO. “We view Clean Water Services as a partner in reaching cost-effective and environmentally sound goals to recover nutrients for the highest beneficial re-use, and we are looking forward to our continued partnership with Clean Water Services on this state-of-the-art Pearl 2000 deployment at their Rock Creek facility.”

The production of Crystal Green is significantly less carbon-intensive compared to fertilizers produced from mined phosphorus. Further, once the recovered nutrients are transformed into Crystal Green, the fertilizer is dried using energy derived from the digestion of wastewater solids, further optimizing the economic and environmental efficiency of the project.

As the world's first environmentally safe, slow-release fertilizer made from recovered nutrients, Crystal Green is ideally suited for the nursery, turf and specialty agriculture markets. It is sold through national and regional commercial fertilizer blenders across North America. A single

application of Crystal Green on turf can replace multiple applications of phosphorus from other fertilizer blends, potentially reducing costs.

“Phosphorus, a key building block of life, is mined today in a limited number of areas but used globally as an essential agricultural input,” added 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. By bringing the process full circle, we are truly creating value from waste.”

### **About Clean Water Services and Rock Creek Advanced Wastewater Treatment Plant (WWTP)**

Clean Water Services is a water resources management utility for more than 520,000 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 flood management and water quality projects, and manages flow in the Tualatin River to improve water quality and protect fish habitat. Although Clean Water Services maintains a close working relationship with Washington County government, it is a separately managed and financed public utility. The Rock Creek Advanced Wastewater Treatment Facility, located at 3235 SW River Road in Hillsboro, Oregon, won the Environmental Protection Agency (EPA) 2006 National Clean Water Act Recognition Award for operations and maintenance excellence in large facilities with advanced treatment. The facility cleans 39 million gallons of wastewater on an average day, discharging water so clean it improves Tualatin River water quality. The utility’s Durham Facility won the award in 2005, for back to back top national honors.

### **About Ostara Nutrient Recovery Technologies Inc.**

Ostara Nutrient Recovery Technologies Inc. designs, builds and sells a new generation of water treatment systems – a nutrient recovery solution that creates value from waste by removing nutrients from wastewater and transforming them into revenue-generating, environmentally friendly commercial fertilizer, called Crystal Green®. Ostara is backed by VantagePoint Venture Partners in the U.S. and Frog Capital in the UK. In September 2010, Ostara was named a 2011 Technology Pioneer by the World Economic Forum. In 2009 and 2010 Ostara was named one

of the Top 100 Global CleanTech Companies by The Cleantech Group & The Guardian, a London-based media group. For more information: visit [www.ostara.com](http://www.ostara.com) and [www.crystalgreen.com](http://www.crystalgreen.com).

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