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Tigard's pilot project turns pollutants into fertilizer

Sewage - The city's experiment with a fresh technology could lead to a new full-scale plant

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TIGARD -- The Clean Water Services treatment plant in Tigard is the second in the country to test a new technology that transforms sewage pollutants into fertilizer pellets.

Removing environmentally harmful pollutants from sewage, such as phosphorus and ammonia, can be costly, said Rob Baur, Clean Water operations analyst.

The new technology will help the agency clean sewage more effectively, Baur said. Clean Water could save operating costs and could delay spending millions of dollars on a new tank because pollutants are not recycled back into the treatment plants.

Clean Water is considering building a full-scale plant that uses the new technology, Baur said, depending on results from the pilot project that started earlier this month.

Usually, pollutants are removed from sewage and what's left is called sludge. Water squeezed from sludge is run through the treatment plant two to three times to extract the excess pollutants. But this process clogs pipes with a concretelike substance filled with pollutants.

Scientists at the University of British Columbia realized that the concretelike substance is rich with phosphorus, which makes good fertilizer. They found a way to strip the pollutants from the sewage and turn it into a slow-release fertilizer called Crystal Green, said Phillip Abrary, president of Ostara Nutrient Recovery Technologies in Vancouver, B.C., which developed the new technology.

"They realized the concretelike compound doesn't belong in pipes," Abrary said. "They belong in fertilizer bags."

Preliminary results of a pilot program have shown that more than 90 percent of phosphorus and 20 percent of the ammonia that would normally have to be recycled back into the plant has been removed, Abrary said.

About 900 municipalities in North America and Europe could benefit from the new technology, Abrary said.

Clean Water could have up to four full-scale units, each producing about 1,000 pounds of fertilizer per day, Baur said.

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