

Wastewater not wasted - Partnership allows industry to reuse treated water

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YORK -- In three months, the Hampton Roads Sanitation District's treatment plant along the York River has pumped more than 27 million gallons of treated wastewater to Giant Industries' refinery in Seaford.

That's enough water to fill a 63-foot-deep swimming pool the size of a football field - end zones included.

Businesses nationwide have found ways to use treated wastewater for decades. But the agreement between Giant and the sanitation district is the first time that government and industry in Virginia have partnered to reuse wastewater, said Bruce Husselbee, project manager.

"It's a good industrial application," said Andy Nelson, treatment-plant manager, "and in turn, Giant doesn't have to use, and get charged for, potable water."

Giant began to receive treated wastewater from the plant about three months ago through a half-mile-long pipe that can route up to 500,000 gallons a day to the refinery.

American Oil Co., or Amoco, built the refinery in 1956. Giant Industries bought the refinery for \$170 million earlier this year.

The treated wastewater that Giant receives is used to cool machinery, clean floors and put out fires, said John Stokes, Giant's senior vice president for refining.

Giant pays the sanitation district \$1.50 for every 1,000 gallons of water. All that money is used to repay a state loan that paid for the project, which includes the pipeline. The sanitation district has agreed never to charge Giant more than half the rate for drinking water, which is now \$3.25 for every 1,000 gallons.

"We're not into it to make a profit," Nelson said. "The only thing we're looking to do is recoup the project cost and the construction cost."

Treated wastewater has nitrogen, phosphorus and other nutrients. The wastewater that goes to Giant will not pollute the York River. And it means that Newport News Waterworks, which sells drinking water to about 400,000 homes and businesses on the Peninsula, has more water when reservoirs are at record-low levels.

"So it's cheaper and environmentally better all around," Stokes said.

Brian Ramaley, director of Newport News Waterworks, said the project had little effect on the area's water supply. For the past two months, Giant has used about 250,000 gallons of treated wastewater a day, while Waterworks customers use about 47 million gallons a day.

Still, Ramaley said, the project is a good way to reuse wastewater. For many industries, a similar project might not be feasible. Using treated wastewater works for Giant because it uses a lot of water and the refinery is close to the sanitation district's treatment plant.

"In terms of nonpotable-reuse projects, this is probably one of the largest potential applications on the entire Peninsula," Ramaley said.

For the project, the sanitation district erected a building in which treated wastewater is refiltered before it goes to the refinery. Storage tanks to hold water and remove more ammonia are being built.

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