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Wastewater may quench thirst

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Four months after announcing a multimillion-dollar deal with the Chinese government, the owners of Dais Analytic have begun work on expanding that agreement.

Company officials are developing a way to use their membrane-based technology, now used in air conditioning, to purify drinking water.

To that end, Dais has struck a deal with Pasco County to use part of a mothballed sewage plant off State Road 54 in Odessa as a testing ground for its water-purification technology.

Company officials plan to set up a test lab that will strip reclaimed wastewater, now used for lawn irrigation, of the chlorine, nitrogen and phosphorous that make it undrinkable. The result should be thousands of gallons of drinking-quality water over the coming months.

A similar test lab will be set up in China, where the Pasco company is busy selling its ConSERV air filtration system. Rapid industrial growth in China has caused widespread pollution of air and water.

Dais CEO Tim Tangredi compared the Odessa project to a model home. If it works as expected - and can be certified effective - company officials will look at ways to shift to large-scale manufacturing.

Company officials see potential uses in everything from municipal sewage plants in the United States to small-scale treatment efforts in other countries.

"The question is, 'What is the right size that sells the best?'"

" Tangredi said this week.

Bruce Kennedy, Pasco's utilities chief, said the county is happy to help Dais with its project, but reserved judgment on the final results.

"They need to prove it up," Kennedy said.

It's unclear whether the technology can handle the county's need to provide 20 million gallons of drinking water a day, Kennedy said.

Dais is building its fortunes on a plastic membrane that company leaders invented more than a decade ago. They used a \$1.2 million subsidy from Pasco to get their air filtration product off the ground.

Dais now has 18 employees in increasingly crowded space at the West Pasco Industrial Park. Company officials are looking for a new home in Pasco as they begin to meet the demands of their \$200 million China contract. Tangredi has said the company would employ 1,000 people by 2014.

That announcement in the fall caught the attention of county leaders. A day after Tangredi asked commissioners to borrow their decommissioned sewage plant, company officials met with state Department of Environmental Protection Secretary Michael W. Sole.

That meeting let Tangredi pitch his product as a way for Florida to meet tighter federal standards for treated wastewater that gets returned to lakes and streams. Studies have found traces of prescription medicines in water downstream from sewage plants.

Dais' proposal draws water through a series of its membranes, which block everything but water molecules. What's left behind could be used as fertilizer.

Scott Ehrenberg, Dais' chief technology officer, sees the potential for water-strapped communities in the Southwest and Middle East to "close the loop" on their water supplies - effectively turning wastewater back into drinking water.

"There's enough water to drink in the world," Ehrenberg said, "just not enough that you can use it only once."