

Innovative Water Conservation: Helping Save the Planet One Gallon at a Time

Water. It's what keeps us refreshed and hydrated after a workout. It's what splashes against our ankles as we walk across a beach. It's what we use to wash our clothes, our dishes and our cars. Many of us take water for granted, but the fact is--water truly is a precious resource. And no one knows that better than the people who work at our Ortho Biologics, LLC site in Manatí, Puerto Rico.

In Puerto Rico, residential demand for water, coupled by the demand from industry, creates a huge strain on the island's fresh water supply. It was just a few short years ago that Puerto Rico suffered one of its worst droughts in history. Taps were dry and residents there had to rig their own cisterns to catch rainwater for drinking, washing and doing laundry.

Today, Manatí employees remain dedicated to preserving water supplies on an island where fresh water is growing increasingly scarce. In fact, employees at our Manatí site have developed an innovative process that recycles wastewater. This wastewater is purified and reused to circulate through the site's cooling towers, thereby completely eliminating the need to use fresh water for this purpose.

While the Manatí site was already complying with Johnson & Johnson's Next Generation goals - including water conservation goals - employees saw an opportunity to use resources even more efficiently. The site was consuming a large amount of city and well water, which was treated at the company's wastewater pretreatment plant and then discharged to the public sewer. A reduction of city water usage and wastewater discharge would not only save the company money, but also create huge benefits for the environment.

The existing water reuse system had severe limitations and required a major overhaul. A team was assembled to devise a creative solution to the problem. The real challenge was innovation; not just coming up with a great idea, but applying that idea and turning it into a reality. The solution employees presented was truly innovative because it took various existing technologies and combined them in a unique way to form Ortho Biologics' new wastewater reuse system.

Multiple filters and pumps, along with a water softening system and a reverse osmosis system were combined to purify wastewater to a level where it was clean enough to be used in the plant's cooling towers. In addition, the wastewater pretreatment plant and the water reuse system are now run 24 hours a day, 7 days a week to increase efficiency and maximize results.

And the results are staggering! By the end of last year, 50,000 gallons of reused water were supplied to the cooling towers per day, meeting the system's original design goal. The reused wastewater has completely eliminated the need to use city or well water to supply the cooling towers, resulting in the conservation of precious natural resources. Since the implementation of the new system the amount of wastewater being discharged to public sewers has also been reduced significantly, easing the burden on the environment.

The benefits to the company have been tremendous. According to Mario Gonzalez, Operations Support Unit Director, GBSC Division of Ortho Biologics, LLC, Ortho Biologics has seen significant cost savings due to reduced water consumption and sewer bills. Gonzalez says, "It's a win-win situation when you have a project that gives you both environmental benefits and cost savings." Ortho Biologics has received positive press from *El Nuevo Dia*, a Manatí newspaper, and the San Juan Star newspaper. In addition, the Manatí site recently won an innovation award from the Puerto Rico Manufacturer's Association.

But most important are the benefits to our environment. Sandy Yee, Director, Worldwide Environmental, Health & Safety (Malvern) stated it best: "Areas that may have a lot of water today may someday be hit by a drought. With our planet's climate changes, we don't know what's coming in the future. It's important to be as efficient as possible with our resources." Manatí is also exploring innovative ways to capture and use rainwater in the future.

The new wastewater reuse system in Manatí is now on its way to becoming part of J&J's best practices. The same innovative technology is currently in the process of being applied to a similar water remediation project at Ortho Biologics' site in Gurabo. It's the kind of innovation that's making the world a better place.

Team members for the wastewater reuse project included:

Ramon Cases, Senior Specialist Environmental Affairs, GPSG Manati (Ortho Pharmaceutical, Division of Janssen Ortho)

Mario Gonzalez, Operations Support Unit Director, GBSC Division of Ortho Biologics, LLC

Charlotte Poullet Veguilla, Environmental Compliance Officer, GBSC Division of Ortho Biologics, LLC

Larry Rosario, Senior Manager Project Engineer, GPSG Puerto Rico

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