

Wastewater reuse – a beautiful solution for Bermuda resort



As part of their Green Partnership Program, Fairmont Hotels & Resorts wanted to further reduce the cost and environmental impact of water use at the facility.

The Fairmont Southampton Bermuda Resort is a spectacular 596-room hotel surrounded by nearly 100 acres, ranging from sparkling pink sand beaches, to towering coconut trees and an exceptional golf course. The resort uses a large amount of water and electricity in order to maintain such a vast property and meet the needs of their guests. It is a very expensive commodity on the island, and the resort has installed a desalination plant to augment its infrastructure.

The on-site wastewater treatment

plant treats the hotel's wastewater and the effluent is reused by the golf course for irrigation. As part of their Green Partnership Program, Fairmont Hotels & Resorts wanted to further reduce the cost and environmental impact of water use at the facility. They sought out H2Flow's expertise to strategize a better solution.

The challenge

Seawater and desalinated water were the two water sources for toilet flushing at the facility. Seawater use caused infrastructure problems and upset the biologi-

cal wastewater treatment plant due to high salinity. Additionally, a lot of power was required to pump it to the resort, which is situated 180 feet above sea level. On the other hand, using desalinated water was a very expensive option that reduced their water supply during peak season and greatly increased operational costs.

The resort wanted to look at options for reusing effluent from the wastewater treatment plant to save on water. They needed to make sure the solution performed consistently as well as effectively.

The solution

Reusing effluent for non-potable water use was reviewed and considered because of its cost-effectiveness and environmental benefit. This involved filtering effluent from the wastewater treatment plant using a Dynasand filter, a pre-filter alum dosing system and a post-filter chlorination system. Filtered water is stored in a covered tank and from there it is pumped for distribution. A blue dye is injected to distinguish this non-potable water from potable water.

H2Flow provided all equipment for the effluent reuse system and provided training to the treatment plant operators on operating and maintaining the system. The result is a robust, environmentally sound system, saving the resort 30,200 m³ of fresh water per year.

For more information, visit www.h2flow.com



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