PLAYA VENAO PROPERTIES INC.

Playa Venao Wastewater Treatment & Reuse

Azuero Coast, Panama

Courtesy Playa Venao

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Rather than polluting the costal waters, this eco-friendly resort treats, stores and reuses wasterwater to irrigate and enhance the local landscape.

The resort community of Playa Venao, which includes 205 units of houses and condos, three hotels, four restaurants, and eight retail shops, is located on one of Panama's finest surfing beaches. In addition to the resort's beautiful beaches, a river winds through the property. Envisioned as a unique, eco-friendly destination, Playa Venao was planned with the green design philosophy: "use nature, don't fight it."

A frequent challenge when working with resort communities is protecting the off-shore ecology and the water quality of rivers and streams in the resort property. The solution Biohabitats typically uses is to avoid any discharge of wastewater into the ocean, streams or rivers. In this particular project, we collect wastewater from the resort buildings and pump it to a wastewater treatment site where the water is treated to U.S. Advanced Wastewater Treatment Standards. After disinfection with an UV disinfection system, the reclaimed water is used for irrigation and as a supply for water closets and urinals. This reuse minimizes the total potable water demand.

The wastewater treatment system consists of trickling filters, subsurface flow constructed wetlands, and recirculating sand filters. This treatment is followed by mechanical filtration and UV disinfection. This level of treatment exceeds local standards, but the most significant factor in protecting the beaches and river is the reuse of reclaimed water and the remaining nutrients to enhance the landscape.

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