## PEACE AND PLENTY BEACH RESORT Peace and Plenty Beach Resort Natural Wastewater Treatment

Great Exuma, Bahamas



from top: Subsurface flow constructed wetland immediately after planting; Bioballs and gravel wetland treatment media

Energy-efficient natural wastewater treatment system serves seaside resort while filtering nutrients to protect the sensitive ecological integrity and water quality of the bay.

eace and Plenty Beach Resort, located on Great Exuma, Bahamas, is a small, 16-room beach resort with 10 employees that has a 36-seat restaurant with bar and a laundry. There was an existing septic tank treatment system that relied on an injection well for disposal of wastewater. At 100% occupancy, the estimated wastewater flow is approximately 3,000 gallons/ day. Biohabitats provided engineering design support to John Todd Ecological Design for a natural wastewater treatment system consisting

of a primary treatment tank, subsurface flow constructed wetland planted with native vegetation, recirculating sand filter, and subsurface land application. The system protects groundwater and marine water quality by discharging only high quality effluent with low levels of nitrogen and phosphorus, while providing an aesthetic amenity to the resort.

## SERVICES

Planning Green Infrastructure Design

conservation planning ecological restoration **regenerative design** 



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