

Laguna Hue Central Wastewater Treatment Plant

Thua Thien - Hue Province

The Laguna Hue Resort is being developed by Banyan Tree Capital in Thua Thien-Hue Province, Vietnam as a world class resort complex. The project was developed in multiple phases on a 280 hectare beachfront location. Overall, this project will include seven hotels, spas, a golf course, villas, a convention centre, and a town centre with retail and recreational facilities. The first phase of the project has been completed, which consists of the Banyan Tree Hue Resort and Angsana Hue Resort.

HydroScience was retained to prepare a Wastewater Master Plan for the project. The master plan developed water discharge criteria for using recycled water for all landscape irrigation purposes and irrigation of the golf course. HydroScience also developed discharge criteria for discharge to surface water to control nutrient discharges. HydroScience recommended construction of a single central wastewater treatment plant to treat water from all of the various resorts at one location for economy of scale and minimization of odors. The effluent is treated for reuse and then pumped back to recycled water storage tanks in the project site. Recycled water is withdrawn from the storage tanks by the various resorts for landscape irrigation with seasonal excess water discharged to the golf course holding pond. From the holding pond the water is used by the golf course for irrigation.

HydroScience was subsequently retained by Banyan Tree Capital to provide Engineering, Procurement, and Construction (EPC) services for the various components of the central WWTP concept. These components included three raw sewage lift stations, a 500 m³ below-ground concrete recycled water storage tank, 1,800 m of sewage forcemain, 900 m of recycled water pipeline, and a 1,000 m³/day wastewater treatment plant. The wastewater treatment plant is an immersed membrane bioreactor (MBR) to produce high quality effluent for all on-site reuse applications. The WWTP also includes a centrifuge sludge dewatering system and an operations building. The plant is designed for expansion to 2,000 m³/day with an ultimate expansion capacity of 6,000 m³/day at a single site.

Client

Banyan Tree Capital

Services Provided

- Planning
- Design
- Procurement
- Construction
- Commissioning
- Start-up

Highlights

- 1,000 m³/day MBR
- 500m³ recycled water storage tank
- Recycled water for irrigation
- Expandable to 2,000 m³/day

Time frame

July 2011 – March 2013

