

SHANGRI LA NATURE CENTER & BOTANIC GARDENS

Orange, Texas



Photo courtesy of MESA

Shangri La Botanical Gardens and Nature Center occupies 252 acres of land filled with geographic and regional natural beauty that holds diverse native flora and fauna. This world-class facility connects and educates individuals, school groups and families about the ecology and natural environment of the area.

The project has several different amenities including an extensive botanical garden, children's interactive garden, plant research facilities, two cafes, and demonstration gardens. The landscape development within the Nature Center complex utilizes either plants irrigated solely by collected rainwater and nature's rainfall, or non-irrigated indigenous plant species.



The irrigation consultant/engineer was involved in schematic design through construction document phases for the irrigation system for the nature center. Extensive coordination with the landscape architect, civil engineer, and building architect was required to ensure that the rainwater collection system was properly designed and sized. The system utilizes high-efficiency spray equipment and in-line drip irrigation tubing. Emitters within the tubing have internal check valves and pressure compensating devices to minimize water waste.



Photo courtesy of MESA

This equipment is coupled with an energy efficient variable speed pumping plant. This system effectively utilizes only harvested water collected into multiple, above-ground holding tanks from the buildings standing-seam metal roof complex. Collected and filtered rainwater is stored in multiple above-ground galvanized tanks. An underground gravity-fed piping system connects these tanks with the irrigation pumping plant used to pressurize the system.



Shangri La is one of 50 facilities in the world, and the first facility in the state of Texas, that have achieved LEED® Platinum status as of 2008.

Aqua Engineering Inc.
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