



PROJECT:
U.S. Embassy, Abu Dhabi, U.A.E.

Leading the way with sustainable solutions

LOCATION
Abu Dhabi, U.A.E.

PROJECT TYPE
LEED Building

WASTE TYPE
Domestic Wastewater

COMPLETION DATE
2004

DESIGN FLOW
49,735 Lpd

TREATMENT
Subsurface Flow Engineered Wetland with Forced Bed Aeration

NEED

Fresh water is a precious resource in the Arabian Gulf Region. The U.S. Embassy in Abu Dhabi, United Arab Emirates sought to reduce the demand on fresh water supplies for landscape irrigation through an innovative, natural and sustainable wastewater treatment and reuse system for Embassy building wastewater. The treatment and reuse system was required to:

- Fit within the embassy compound
- Treat an average daily wastewater flow of 49,735 litres per day
- Have no standing water at the land surface (to prevent mosquito breeding)
- Provide water for irrigation reuse

SOLUTION

A Subsurface Flow Engineered Wetland with Forced Bed Aeration was chosen as a cost-effective, low-energy, sustainable wastewater treatment system. Drip Irrigation was chosen for reuse/landscape irrigation of treated wastewater.

BENEFIT

The use of an engineered wetland results in a sustainable, low-impact treatment system which reduces the wastewater load on the municipal sewer system while providing up to 49,735 litres per day of water for landscape irrigation. The engineered wetland is a component of the U.S. Embassy's Leadership in Energy and Environmental Design (LEED) Certification.



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