

Dubai Silicon Oasis (DSO)



SITE NAME:

Silicon Oasis

COMPLETION DATE:

Phase 1 completed, other phases ongoing implementation plan

RAIN BIRD PRODUCTS:

XFS Subsurface drip line, Rain Bird PGA/PEB Valves, Rain Bird Maxicom System

PROJECT LEADS:

Vice-President, Operations & Facilities at DSOA: Eng. Khalil Shalan

Associate Director:

Eng. Khalid Shiaban

Associate Manager-Landscape & Irrigation:

Eng. Ameer Ahmed Manyar

IRRIGATION CONTRACTOR: Proscap

RAIN BIRD: Omar Shams

PROJECT OVERVIEW

Established in 2004, Dubai Silicon Oasis is a high-tech free zone that offers an integrated living and working community environment for residents and tenants. Dubai Silicon Oasis (DSO) is wholly owned by the government of Dubai and provides free trade zone incentives and benefits to companies operating within its vast 7.2 square kilometers area. Dubai Silicon Oasis Authority, the regulatory arm of DSO, has made significant investments in infrastructure to cater to the needs of high tech industries in the Middle East that are keen to base their operations out of the destination.

Among the key advantages that DSO offers are an advanced telecommunications ecosystem, a fiber optic network, tier 3 data center, and a high-tech utility infrastructure with eight power stations. In addition, as part of its sustainability mandate DSO has made investments in a state-of-the-art irrigation system that leverages the latest in irrigation and water saving technology.

CHALLENGES

Among DSO's primary challenges in its journey to sustainability is the task of saving irrigation water in addition to curbing complaints of excess water being sprayed on the hardscapes of the community. With the integrated free zone technology hub always expanding, the landscaping area which along with the hot weather conditions in the UAE, was leading to a high monthly operating costs for irrigation.

SOLUTION

The irrigation team at DSO began its research on possible energy and water saving measures, looking at the water usage and distribution uniformity of several irrigation products. Using different test plots on-site, the team developed a series of tests that included monitoring the water usage over several seasons. This initiative of Rain Bird XFS subsurface drip subsequently revealed promising results and water savings that helped DSO management make informed decisions on investments into such technologies.

In addition to introducing XFS sub surface drip irrigation throughout the project, DSOA took the initiative and introduced several irrigation water saving devices including: 1800 SAM PRS series spray heads, MPR nozzles, VAN series, 5000 series rotors, ESP-ME & ESP-LXME controllers, PEB/PESB series valves, EFB-CP series valves. The site is managed using a LEED qualified Maxicom Central Control System with a weather station for management using the ET rate.



COST AND WATER SAVINGS

"Dubai Silicon Oasis Authority aims to articulate the vision of the government of Dubai to transform all conventional systems into smart systems. Through a pilot study undertaken at DSO, efforts have been made to ensure that operational costs can be reduced by at least 30 to 40% from the current irrigation water consumption levels."

Eng. Khalil Shalan , Vice President, Operations & Facilities at DSOA