



# The Red Sea Nursery Program, Umluj, Saudi Arabia

## Nursery Partners with Rain Bird® to Assist with Mission to Provide 25 Million Plants by 2030

The Red Sea Nursery Program is a truly historic undertaking. The massive, 100-hectare project, located in one of the most remote regions of the world, has been created to propagate native plants and trees for nearby islands, resorts, and landscape projects. The hope is that these plants will be adapted to local climate and soil conditions, thus more likely to survive when planted locally. Without any naturally occurring fresh water onsite, a desalination plant has been established nearby to supply water for the nursery's irrigation efforts.

### THE CHALLENGE:

Located directly on the Red Sea, the desert environment presents challenging environmental conditions and high levels of evapotranspiration (ET). Young plants are sensitive and the property is home to a large variety of species of groundcovers, shrubs, trees, and palms—each with unique needs. A versatile, durable irrigation system will be critical to the success of the Red Sea Nursery Program as it evolves and expands.

### THE SOLUTION:

Install an intelligent Rain Bird system that can provide 24/7 remote access, weather-based automations, and customization for each of the four 31,320 m<sup>2</sup> shade houses. Lean on industry-leading technology for a comprehensive system that's efficient, scalable, and compatible with reclaimed water.



ESP-LXD Series Two-Wire Decoder Controllers

### KEY OBJECTIVES:

- ✓ Maximize Plant Health
- ✓ Utilize Reclaimed Water
- ✓ Increase Efficiency
- ✓ Improve Reporting

### Core Products Used:

- [ESP-LXD Series Two-Wire Decoder Controllers](#)
- [WS-PRO2 Weather Station](#)
- [IQ Central Control](#)
- [LF2400 Low Flow Sprinkler](#)
- [PESB-R Series Valves](#)
- [LFX600 Low Flow Sprinkler](#)



**APPROACH:**

## Install ESP-LXD Two-Wire Decoder Controllers

The ESP-LXD controller can manage up to 50 stations and can easily be expanded to accommodate up to 200 stations. Not only does this allow the system to grow with the project, but the two-wire feature is advantageous, as wireless signals are still evolving in this remote area.

## Implement IQ Central Control

The IQ system will aid in the management of 10 controllers and 640 valves, while making it easy to modify irrigation schedules and operating durations from one central location, instead of at each individual controller. It will also interpret data from weather stations in the field and save a significant amount of water by adjusting irrigation according to current conditions.



**PESB-R Series Valves**

## Rely on PESB-R Valves

PESB-R Series valves are reliable, chlorine-resistant valves designed for reclaimed water irrigation applications. Constructed of heavy-duty, glass-filled nylon, these valves resist clogging and feature an innovative scrubber to actively fight dirt, algae, and other particles from blocking the pilot flow.

## Choose LF™ Series Sprinklers

These high-performance, low-flow sprinklers are built to withstand harsh conditions and deliver precise, uniform, and unrivaled water distribution. Their durability and 5-year warranty make this sprinkler ideal for use in harsh conditions.



**RESULTS:**

## Full Control, Thriving Plants, Superior Support

With a comprehensive Rain Bird system in place, the team now has full control over their irrigation, resulting in **lower operational costs, greater water savings, and a scalable, long-term solution.**

Programs are adjusted to the unique needs of different plants and The Red Sea Nursery Project is well on its way to achieving their mission of cultivating 25 million plants by 2030. As the nursery increases in size, the team will have no problem scaling their current irrigation system. Not only can new controllers be added with ease, but Rain Bird's Global Service Plans, Knowledge Center, and on-demand virtual training ensure that the Red Sea Nursery Project has all the resources it needs to onboard additional employees as it grows.

**“There are a lot of expats that have come here to build this project. Long after we leave this project, it’s important that the locals be trained and that we are providing them the tools and the knowledge needed to carry on. The online training is a fantastic tool that teaches you how to use, service, and install each of the products correctly,”** explains Dean Johnson, member of The Red Sea Development Company.



“ I’ve worked with Rain Bird for the past 20 years and they have some of the best, most reliable products in the industry, in addition to a support system of excellent employees.”

DEAN JOHNSON  
THE RED SEA DEVELOPMENT COMPANY

