



Global Multi-Sports Events, Rio de Janeiro, Brazil

Prominent Brazilian Sports Complexes, Courses, Parks & Stadiums Choose Rain Bird

In Rio de Janeiro, the city government created a public company called "Rio Mais 2016" to oversee massive preparations for two multi-week global sporting events. These preparations included the construction of: 31 high-rise apartment complexes to house athletes, the third largest urban park and green space in Rio, and dozens of competition-level arenas.

THE CHALLENGE:

The new housing complex, the stadiums, the equestrian cross-country course, as well as an urban park and green space all came with unique irrigation system requirements and challenges ranging from deterring vandalism to achieving perfect pitch conditions. Given the large size of these projects, both the design and installation processes were complex.

THE SOLUTION:

Rain Bird's comprehensive line of commercial irrigation solutions addressed the unique challenges of all projects. Rain Bird Brazil's industry renowned sales and technical teams worked alongside a strong network of experienced distributors and contractors to ensure each project was completed to the highest standard.



Core Products Used:

- [XFS Subsurface Dripline](#)
- [1800® Series Spray Heads](#)
- [RD1800™ Series Spray Heads](#)
- [R-VAN Adjustable Rotary Nozzles](#)
- [HE-VAN High Efficiency Variable Arc Nozzles](#)
- [5000 Series Rotors](#)
- [5000 SAM PRS Series Rotors](#)
- [Falcon® 6504 Series Rotors](#)
- [8005 Series Rotors](#)
- [EAGLE™ 900/950 Series](#)
- [ESP-LXME Series Controllers](#)
- [ESP-LXD Series Two-Wire Decoder Controllers](#)
- [WS-PRO LT Weather Station](#)
- [PGA Series Valves](#)
- [PESB Series Valves](#)

KEY OBJECTIVES

- ✓ **Minimize Maintenance**
- ✓ **Maximize Flexibility**
- ✓ **Improve Water Efficiency**
- ✓ **Overcome Spatial Challenges**



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Barra Athletes Housing Complex

CHALLENGE:

The 31 high-rise buildings that tower over the common areas have created several micro-climates where the landscaping either spends much of the day in the shade or exposed to intense sunlight.

SOLUTION:

Install ESP-LXD controllers with 200 stations to accommodate many different zones and watering schedules. Connect a flow sensor or Flow Smart Module so the controllers learn the flow rate of each zone and optimize the sequence of irrigation schedules based on the total flow capacity of the system.



Barra Sports Park Complex

CHALLENGE:

Thousands of people will be visiting the venue and many will be looking for any possible “souvenir” from the game—including spray heads and nozzles.

SOLUTION:

Install dripline below the surface of the ground, keeping the irrigation both out of sight and out of mind. As an added bonus, because the XFS delivers water right to the root zone, water loss due to evaporation and wind drift will also be minimized.



Field Hockey Pitches at ILHA Do Fundao and Deodoro Stadiums

CHALLENGE:

The field hockey game is played on wet, artificial turf. The system needs to apply large amounts of water to quickly wet the field before the competition and during intermissions.

SOLUTION:

Use Underhill Mirage rain guns in combination with Rain Bird EAGLE rotors. The Mirage will provide the long throw for the outlying field and apply the large amount of water needed in a short period of time while the EAGLE will provide the close-in watering.

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“ For a project of this size and complexity we wanted to standardize the selection of high-efficiency adjustable nozzles, utilize flow management to schedule all watering when most of the public is not there to reduce vandalism, use a decoder control system to give us flexibility to easily add more valves, and automate the operation of the pump at variable flow rates so that it could provide water to both the irrigation system, rest rooms, and other facilities.”

EDUARDO SCHNABLE AND ARNALDO SANTOS
DIMENSIONAL ENGENHARA, MADUREIRA PARK



WATER SAVINGS

XFS installed at the Barra Athletes Housing and Sports Complexes is estimated to have reduced water usage by at least 30%.

Cross-Country Course at the National Equestrian Center

CHALLENGE:

The turf on the course needs to be kept at a certain moisture level to avoid compaction of the soil but the length and dimensions of the course make it difficult to achieve uniform coverage.

SOLUTION:

Install Falcon® 6504 series rotors with Rain Curtain™ nozzle technology, which have three ports for long-range, mid-range and close-in watering. This will create distribution uniformity throughout the entire throw radius.

Rugby Pitches at ILHA Do Fundao, Deodoro, & Air Force Base Stadiums

CHALLENGE:

Pitch requirements for rugby are similar to those of soccer, and the irrigation system must provide superior coverage as well as gentle, close-in watering around the stem to ensure that the sports turf is healthy and uniform throughout.

SOLUTION:

Use 2" and 3" rain guns which can provide well over a 100-foot throw radius as well as Rain Bird's 8005 rotors which have a radius that can be adjusted from 39' to 81'.

Madureira Park

CHALLENGE:

Madureira Park—the third largest urban green space in Rio—showcases sustainable design and low energy and water use. The harvested rainwater used for some of the irrigation puts extra strain on the system.

SOLUTION:

To ensure quality system performance, use filtration to remove debris from the harvested well water. Choose RD1800 spray heads which are specially designed for lasting performance in dirty or gritty water applications. Use high-efficiency R-VAN adjustable rotary nozzles to reduce runoff and provide even coverage at a low precipitation rate. On large turf areas, opt for the 5004 rotor with SAM and PRS for optimal performance and water savings.