

COBB COUNTY SCHOOL DISTRICT, ATLANTA, GA

EAST SIDE ELEMENTARY SCHOOL



Before



After

PROPERTY:

East Side Elementary
Harrison High School

IRRIGATION TECHNICIAN:

Steve McLendon

COBB COUNTY WATER SYSTEM:

Kathy Nguyen

RAIN BIRD PRODUCTS:

- RD1800™ PRS Sprays with Flow-Shield™ Technology
- HE-VAN Series Spray Nozzles
- 5000 Plus PRS Series Rotors
- Falcon® 6504 Rotors

“With Atlanta’s high water pressure, averaging 109 psi, using Rain Bird pressure-regulating sprays and rotors seemed like a good place to start proving out a concept and program that would help the Water System further their leadership position of finding ways to use water sustainably.”

— Kathy Nguyen,
Senior Project Manager, Cobb County Water System

PROJECT OVERVIEW:

Two schools in the Cobb County School District in Atlanta, Georgia, were retrofitted with RD1800™ PRS Sprays with Flow-Shield™ Technology with HE-VAN Nozzles, 5000 Plus PRS Rotors, and the Falcon® 6504 Rotor as proof of concept for a larger district-wide water saving initiative. Working in conjunction with the Cobb County School District and the Cobb County Water System, Rain Bird presented the retrofit opportunity as cost-effective solution to reduce their water use and operating costs.

CHALLENGE:

In recent years, drought conditions in Atlanta forced the community and Water System to find ways to reduce water use. “Potential affects from sustained drought conditions and pressure from surrounding states has put water conservation and sustainable practices in the spotlight,” said Kathy Nguyen, senior project manager for the Water System. For the School District, one of their largest bills is for water and finding cost effective ways to reduce water use could save the district money, as well as support Cobb County’s sustainability efforts.

PRESSURE REGULATION SAVES WATER AND IMPROVES PERFORMANCE

Atlanta’s high water pressure, over 100 psi, makes it an ideal place to install sprays and rotors that regulate water pressure at the individual head. As with indoor pressure-regulated devices, like shower heads, these products save water by reducing the pressure thereby reducing the flow of water. A Rain Bird spray or rotor that uses Flow Optimizer™ Technology to regulate pressure can save approximately one gallon of water a minute compared to a non-pressure-regulated device. At East Side Elementary School a mix of RD1800PRS Sprays and 5000 Plus PRS Series Rotors were installed to reduce water use and save money on the water bill.

Regulating pressure to optimal levels also improves the performance of the spray or rotor by eliminating misting and fogging. When misting occurs water is more likely to be carried away by wind, as well as evaporate more quickly. The visible misting seen in the “before” photo at the top of the page is eliminated after the RD1800PRS Spray with the HE-VAN nozzle has been installed, as seen in the “after” photo.

RD1800 SERVICE INDICATION STREAM HELPS IDENTIFY PROBLEMS AND SAVE WATER



Spray without Flow-Shield Technology (nozzle removed)



Spray with Flow-Shield Technology and service indication stream (nozzle removed)

For the school district's irrigation technician, Steve Mclendon, the RD1800PRS Spray provides another advantage. The service indication stream shoots a visible stream of water into the air when a nozzle is removed and Flow-Shield Technology reduces water loss by 90%. "With the indicator, it's pretty easy for people at the schools to spot the problem and report it back to me," said Steve. "I take care of over 80 schools so I don't get out to each individual school on a frequent basis. This feature helps save water until I get it fixed," said Mclendon.

HIGH EFFICIENCY SPRAY NOZZLE SHORTENS RUN TIMES

A high-efficiency spray nozzle, such as the HE-VAN, is one that provides a uniform wetting pattern. Better uniformity allows users to reduce run times because less time is needed to fully and evenly wet an area.

In independent testing at the Center for Irrigation Technology the HE-VAN nozzle scored high uniformity ratings*. The RD1800PRS Spray combined with the HE-VAN nozzle was used at East Side to provide efficient watering in less time, further reducing water use.

BETTER ROTOR AND NOZZLE PERFORMANCE

At Harrison High School athletic fields, water usage was reduced by installing the Falcon 6504 Rotor with efficient Rain Curtain Nozzle Technology. The Falcon was chosen because its throw matched the current irrigation design and it can efficiently operate at higher water pressure. Rain Curtain Technology which is featured on all Rain Bird rotors provides uniform coverage which uses less water to fully and evenly wet an area. One of the key benefits of this technology is visible in the "after" photo - larger water droplets replace the misting seen in the "before" photo.

HARRISON HIGH SCHOOL



Before

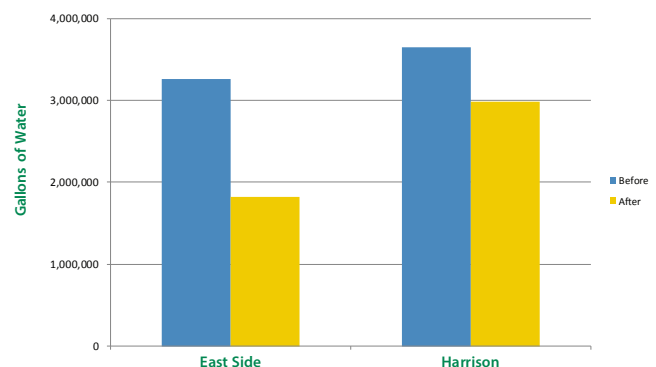


After installation of Falcon 6504 Rotor

PROJECTED WATER SAVINGS

At East Side Elementary School over 300 RD1800PRS Sprays and 5000 Plus PRS Rotors replaced non-pressure-regulating devices. By the end of 2014, the school is estimated to save 1.4 million gallons of water, reducing the school's water use by 44%. At Harrison High School, 37 Falcon 6504 Rotors were installed. Annual water savings is estimated at over 600,000 gallons, helping to reduce the school's water use by 18%.

WATER SAVINGS AT COBB COUNTY SCHOOLS



* CIT data on file at Rain Bird.