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CASE STUDY

Best Management Practices
Resource Management

# New Irrigation System Provides Significant Water Savings

**The Ford Plantation** **Richmond Hill, Ga. 31324**
**Nelson Caron, director of golf course maintenance**

## Issue

The 30-year-old irrigation system at The Ford Plantation was past its useful life. As a result, the golf course management staff was constantly repairing irrigation breakages, sometimes as many as four in a single week. Deferred irrigation maintenance had finally hit a point of no return.

Between the years of 2008 and 2012, the irrigation system cost between $75,000 and $100,000 in repairs and associated labor each year. There was also the hidden cost of everything that was not getting done because time and resources were being focused on the irrigation system. When an irrigation system is failing, some maintenance on the rest of the golf course must be deferred. If primary playing areas receive less attention because the staff is busy repairing the irrigation system, golfer dissatisfaction can quickly develop. It was clear that The Ford Plantation needed a new irrigation system.

## Action

A new irrigation system was designed with the help of a professional irrigation designer. The new system would contain nearly double the number of irrigation heads, improving coverage and efficiency. The new system would also allow the maintenance team to apply water with greater precision and enable them to measure accurately how much water was being used. In-ground sensors that measure soil moisture, temperature and salinity were also included with the system. This information is relayed back to the central computer where the staff can use it to make irrigation and agronomic decisions.

## Results

The golfers at The Ford Plantation are the ones that benefit the most from the new irrigation system. The maintenance team now can irrigate with much greater precision, meaning the golf course plays much firmer. It may seem counterintuitive, but adding extra sprinklers actually helps golf courses use less water.

Since installing the new irrigation system, water usage has been reduced by approximately 30 percent from 50 million gallons to 35 million gallons per year. This demonstrates the value of modern irrigation technology and the ineffectiveness of the old system. These savings are achieved because the new system allows the maintenance team to water only the areas that need it. The staff observes the turf, measures soil moisture and waters accordingly.

The only adjustment suggested would be to install more in-ground sensors and an additional weather station to further improve measurement capabilities. The information that comes from these instruments helps the maintenance team make informed decisions.

*A new irrigation system makes it possible to water with greater precision by using site-specific sprinklers and sensor technology.*