

# Wireless Weather Station Irrigation Control System

## What is this Technology?

This technology uses data collected from an on-site weather station to wirelessly control an automated lawn irrigation system, eliminating the need for facility operators to make regular scheduling adjustments because the “smart” controller adjusts the schedule automatically as weather changes.

## Why is GSA Interested?

Unlike traditional irrigation strategies, this system accounts for day-to-day, site-specific changes in weather conditions, vegetation-specific irrigation needs, and microclimate conditions. This technology promises to significantly reduce irrigation water use.



**WATER CONSERVATION** Case studies on weather-based irrigation controllers have demonstrated average water savings between 10% and 25% depending on climate and the vegetation’s irrigation needs.



**COST EFFECTIVENESS** Potential for water savings will be the greatest for sites with large irrigation needs, and payback shortest in climates with high water tariffs.



**OPERATIONS & MAINTENANCE** This technology promises to provide a turnkey, fully automated package that minimizes operator input that would otherwise be required by the incumbent technology. The technology also supports integration with an on-site Building Automation System (BAS). If such integration is pursued, additional data can be collected and interpreted by the building operator, and incorporated into even more sophisticated irrigation reduction strategies.



**DEPLOYMENT POTENTIAL** In addition to validating this technology’s real-world performance, a key component of this assessment will be to develop a checklist of site requirements and utility rates needed to prioritize its potential for deployment by GSA, should its performance prove out. These requirements will include location and climate, landscape area, average irrigation zone size, water utility rate, and the efficiency of the existing irrigation system.

*Adapted from a report by the National Renewable Energy Laboratory. The Green Proving Ground program, in association with a federal laboratory, is subjecting the wireless weather station irrigation control system to real-world measurement and verification in GSA buildings. Findings from that investigation will be available in late 2013 or early 2014.*