University of Texas at Austin

TEEA 2017 Winner: Water Conservation

Interactive irrigation management creates a model of water conservation.

In 2008, the president of The University of Texas at Austin set a goal to reduce water use by 20 percent by 2020.

The majority of the university's water use is credited to the upkeep of the campus' beautiful landscape features; such as its lovely lawns, calming fountains, and stunning flowerbeds, so trimming that landscape water use was key to meeting the president's goal. An audit of the university's irrigation system revealed it lacked the ability to monitor and adjust water use during irrigation and at times of drought, which would significantly reduce the amount of water used on campus.

Armed with these audit findings, Markus Hogue, a licensed irrigator for the campus, spent the last six years redesigning and updating the university's central irrigation system. The new system includes a live weather feed, evapotranspiration data mechanisms, rain buckets, low precipitation nozzles, flow monitoring with the ability to regulate irrigation schedules, and leak detection that automatically shuts down leaks in the system.

The new irrigation system also collects and stores water data. This data can reveal trends or potential issues, which will help the university's irrigation team make additional adjustments to improve the system. Faculty and students also have access to the data, which is incorporated into university courses and student research.

In order to promote worldwide water conservation, the university created an online "Irrigation Dashboard." The dashboard gives the public access to water data and information about the challenges and successes of the program.

The new irrigation system has been a terrific success, boasting a 66 percent drop in water use over the last six years — saving more than 100 million of gallons per year! Under normal circumstances, water demands for the campus' landscape features and activities are substantial. The new irrigation system has helped to ease that demand, even during recent drought conditions, when conserving water is more important than ever.

Through this program, The University of Texas at Austin is decreasing the burden on water resources while serving as a model for other institutions around the world.