

Little Changes, Big Rewards

Water wisdom from the Irrigation Association

By Paul J. Roche



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It's no secret that golf courses have endured some tough times over the last few years. However, the situation seems to be improving, with more courses now investing in much-needed renovations and updates.

Out of the approximately 15,500 golf courses in the U.S., around 2,700 were built during the golf course building boom of the 1990s. Now that these courses are 15 to 20 years old, their aging irrigation systems are breaking down more often and consuming more water. Since these courses were built, water-efficiency standards have become more stringent, and it's difficult to meet those standards without integrating today's more sophisticated irrigation technology.

While responding to environmental and societal pressures to use less water is certainly important, so is the need to stay profitable. Higher water rates are affecting courses across the country, further impacting the need to use less water in the pursuit of a playable and aesthetically pleasing golf course.

However, while some courses are taking the plunge and spending the money to renovate or replace their outdated irrigation systems, many others simply don't have the resources. Likely, the superintendents at those courses are trying to figure out how to irrigate more efficiently without spending money they simply don't have.

For those courses and their superintendents, the key to greater water efficiency lies in making smaller, more fiscally manageable changes. Here are a few water-saving practices and technologies that can help courses on tight budgets.

Implement and adhere to a comprehensive irrigation system maintenance program. One of the best ways to save water is simply by ensuring that the current irrigation system is operating as it should be. This includes checking to see that sprinklers are level, nozzles are clean and free of debris, and rotors are set to the appropriate arc.

Save with minor upgrades

Look into smaller irrigation system upgrades. Updating a course's irrigation system doesn't have to be an all-or-nothing proposition. Some new irrigation technologies and products can be integrated into existing systems slowly, one portion of the course at a time or as budgets allow. Here are a few examples:

Full and part-circle rotors.

Rotors that offer both full-circle and part-circle operation allow for easy arc adjustments, whether courses need to ramp up watering during fertigation or conserve water in response to water restrictions.

Integrated control technology.

When it comes to more streamlined control and scheduling, integrated control technology can be an efficient choice. This type of system integrates control modules into individual rotors, allowing the central control to communicate directly with the rotor without the need for satellite controllers or decoders on the course.

Soil-sensing systems.

Many courses are increasing efficiency by installing soil-sensing systems that help superintendents better manage site conditions. These systems provide accurate, real-time measurements of moisture, salinity and temperature, saving time, water and other inputs while maximizing turf health.

Sensors.

Incorporating shut-off devices that measure rainfall and suspend irrigation during precipitation events is an easy, low-cost way to reduce water consumption.

Of course, there are other changes superintendents can implement to reduce water use. Proper aeration, thatch removal and the application of soil wetting agents help improve water infiltration and provide a healthier plant-soil-water balance.

More courses are also replacing some manicured turf with grasses that are native to the region, which in some cases also means more drought-tolerant, adding a unique texture to the course's overall design. And the turfgrass industry continues to breed new turf selections that require less water and less maintenance.

Using less water is certainly an achievable goal, even for courses on a tight budget. Many options exist that can help drastically reduce a course's water consumption. However, the quest for water efficiency is a marathon, not a sprint.

Irrigation technology continues to evolve, as do the expectations placed upon the golf course industry. It's important to regularly evaluate each course and determine if there's more that can be done to conserve this precious resource.

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