

Taking Responsibility For Golf Course Irrigation Systems

By Bruce F. Shank

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Everyone knows the buck stops at the superintendent's desk for all aspects of maintaining a golf course's physical plant. However, there are certain special areas that the superintendent is more conscious of than others to insure his future at his course — namely greens, tees and fairways. Even though irrigation plays a key role in the condition of the "big three," it often does not receive the same priority or level of interest in the superintendent's mind. It is looked upon as an important component of the physical plant, but not as intriguing as a living organism.

How can the superintendent handle public relations in the clubhouse when he is soaking wet? Is the assistant superintendent the appropriate person to keep a constant eye on the irrigation system? How about one of the crew foremen? There is a case against having any of these people making irrigation decisions on a daily basis.

Unique Team Member

The irrigation specialist needs to be as unique a member of the golf course "team" as the head mechanic. Smart superintendents know they can't micromanage the mechanic. By comparison, the same should be true for the irrigation specialist. Both deal with complex engineering. Both are responsible for hundreds of thousands of dollars in assets. Either person could shut down a golf course by not correctly performing his job. They are judged on how well they understand and manage machinery. Both are most concerned about equip-

ment performing to specifications. They seem to overlook things like getting wet or entering a pump house in 100-degree heat.

Management by Computer

The recent development of course management software for central irrigation controllers is challenging the engineering perspective superintendent's have of irrigation. This software requires input and decisions from the superintendent. To intelligently understand how decisions made on a central controller impact the irrigation system, the superintendent must have a reasonable knowledge of its operation.

When a new control system is installed, superintendents can be found working seven days a week and late into the night inputting data on microclimates, turfgrass types, maintenance regimes, and pest and weed problems recorded in the past. The irrigation specialist should be included in this information loading process.

The controller is really a computer, not an irrigation clock anymore. It can keep track of equipment maintenance hours, degree days for pest control, crew overtime, and water and energy consumption. These are areas only a superintendent or his assistant fully grasp.

This pulls the superintendent back into closer management of irrigation. It demands a total manager's input. Ultimately, it does not reduce the importance of assigning a specialist to "tune" and "sharpen" irrigation performance. A computer can't repair a faulty valve or head, just report it. A computer can't tell if runtimes are causing wilt symptoms on fairways, even when moisture sensors are there to prevent that from happening. A computer might detect a problem with slipping sprinkler uniformity, but it can't fix it.

Constant Attention

While Detroit now makes cars that don't need a tuneup for 100,000 miles, that's not how an irrigation system works. Two days of improper irrigation can destroy acres of turfgrass. You can't take people out of the irrigation management equation. Neither can you buy a piece of equipment to appreciate when bentgrass is reaching its stress tolerance point. A person who is familiar with the microclimates of the course, the history of problems, and the amount of traffic from day to day is essential to maintaining top playing quality.

So, before your next big tournament, call a meeting with your assistant(s) and irrigation supervisor to discuss just the subject of irrigation. Go over course condition, water and energy budgets and how irrigation impacts the success of the course. Bring in your local irrigation consultant, architect or distributor rep for their ideas.

Set goals. Meet regularly with your course irrigation "committee" to see if those goals are being reached. Always keep the irrigation specialist in the loop.

Growing in Importance

The cost and importance of water to golf in the future will dictate that all superintendents be knowledgeable about irrigation and the hardware and software that makes it work. That doesn't mean, however, that the superintendent or his assistants should have daily responsibility for irrigation system performance. Nor does it mean they should micromanage. Each individual should concentrate on his immediate set of responsibilities and delegate essential maintenance to those who are trained and focused on specific areas.

Irrigation is becoming the center piece of golf course operations because it is computerized. Chemigation, fertigation, recycled water and course management software, all bring attention back to irrigation. Weather data can be fed into the central controller with other sensor data to help correct for macro- and micro-climates.

The superintendent and his irrigation consultant or supplier can check system operations by calling the computer through a modem. Attention on all matters, not just

irrigation take on a much more informed status. Adjustments can be made any time from nearly anywhere.

Education is a Must

These things only emphasize the need for trained irrigation specialists in the golf course industry. While manufacturers and distributors offer training opportunities, the irrigation specialist depends largely on on-the-job training.

Because of this, his experience might be limited to one type or one manufacturer's system. His level of knowledge limits his capacity to handle new or retrofitted systems.

Golf course superintendents should encourage training for irrigation specialists and have their courses share training and necessary travel expenses. The number of irrigation classes offered at the Golf Course Superintendents Association of America Show has doubled.

The Irrigation Association now provides a golf course seminar during its annual conference. Toro, Legacy/Hunter, and Rain Bird have irrigation schools during the year. Both the IA and manufacturers offer regional training events hosted by irrigation distributors. The United States Golf Association Green Section also provides irrigation support during its regional seminars.

Even basic irrigation courses in electrical troubleshooting, irrigation auditing, and valves can provide important information useful to prevent or correct emergencies. Conversely, advanced courses on managing salinity, using recycled water and calculating evapotranspiration rates from local universities can round out the specialist's knowledge.

Look for more educational opportunities in irrigation to be available in the coming months and years. Explore web sites and search engines for training purposes. Many of these can be found through www.irrigate.com. This is a search engine devoted entirely to irrigation.

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