

Don't let your irrigation system fall behind

By BRUCE SHANK

Irrigation systems used to be something superintendents chose to live with rather than improve. Dating back to the days of the night waterman, superintendents delegated responsibility for the performance of their irrigation systems to a staff specialist or assistant superintendent. That person's job was

Bruce Shank is with Irricom, the communications arm of the Irrigation Association

to prevent budget-busting blow-outs, wet and dry spots, and pump station breakdowns.

Those days are over in most parts of the country. Superintendents understand that tweaking a golf course's irrigation system can make dramatic improvements in budget, turf quality, and reputation. Overlooking irrigation performance is an invitation for disaster in today's competitive world of golf.

One important reason to stay informed about irrigation is the

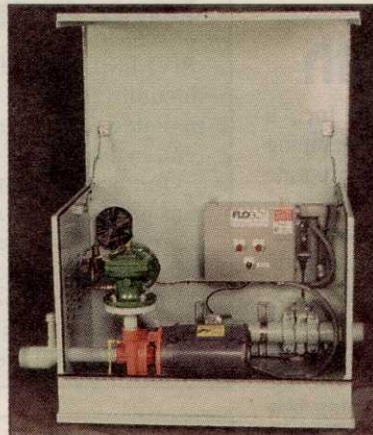
fast-paced introduction and significant cost of the latest heads, controls and weather stations. Doing nothing is going backwards and can ultimately cost your course more money than staying reasonably current with irrigation technology.

Irrigation isn't just about supplying moisture for plants anymore. It's about fertigation, pest management, recycled water, water and energy conservation, soil conditions that provide prof-

Continued on page 30



Overlooking irrigation performance is an invitation for disaster in today's competitive world of golf. (Photo courtesy of Rain Bird)



The new Flowtronex Floboy S

FLOWTRONEX EXPANDS, ANNOUNCES FLOBOY S

DALLAS—Flowtronex PSI has teamed up with Flowtronex Europe Ltd, a sister firm designed to provide pumping systems and service to courses throughout the United Kingdom and Europe (see *GCN* July).

The company also recently unveiled its new series of lower gallonage

Continued on page 29

Toro/Watertronics team on new testing facility

By MICHAEL LEVANS

HARTLAND, Wis./RIVERSIDE, Calif. — Watertronics has completed the first phase in the construction of a priority pump station for a new testing facility at Toro's irrigation plant in Riverside.

The project is part of Toro's renovation work at the Riverside facility.

"When Toro acquired the Hardie line it didn't have a lot of history of testing that product,"

said Rick Reinders, vice president of Watertronics. "So they redid their entire test lab and put in a number of new testing stations."

The new testing area is based around an "Olympic-sized swimming pool" with an overlying steel deck on which the new test fixtures are housed.

"We're supplying a pump and a VFD in their 75-125hp pump that is dedicated to each test fixture," said Reinders. "They put

their components in a test fixture, they go to the PC back in the lab and they can program their tests. For example, Toro will be able to test fixture #9, testing the valves for a month, cycle them on and off so many times a second and monitor all that information."

The new Watertronics system handles all the testing information, conducts the tests, puts it in a file and graphs it out for easy test reporting.

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Continued from page 27

itable play, and golfer satisfaction. Rather than trying to work around irrigation, superintendents today are realizing they need to do their job most effectively.

STAYING COMPETITIVE

New course development and old course improvement have never been greater. Golf course

architects, consultants and management companies are busier than they have ever been. The United States Golf Association makes twice as many technical visits to golf courses than they make in the 1970s. Superintendents also move from course to course faster than they did before. It's all because of competition for the golf dollar.

Being a scratch golfer and good salesman don't provide enough job security for superintendents today. Golfers have a greater understanding of what makes certain courses better than others. They appreciate more and more the role of construction and maintenance in quality of play. They expect superintendents to be current in their knowledge and competitive in what they deliver to the course. That includes irrigation.

KNOWING WHEN TO UPGRADE

Perhaps the greatest advantage of superintendents having strong irrigation knowledge is being able to recognize when an improvement is justifiable and when it isn't. Do you purchase every upgrade of every computer program you have? Some upgrades are more productive than others. The same goes for irrigation.

Manufacturers improve central

and satellite control options each year to stay ahead of their competition and serve their customers better. Most irrigation advancement lately has centered around programming for central controllers. Important recent changes include incorporating digital as-built information with the aid of GIS (Global Information System) technology and mapping; balancing pump station output with irrigation schedule demand; improving system responsiveness related to evapotranspiration and weather; providing more stations to improve microclimate accuracy; and detecting unusual flow and pressure caused by malfunctions and breaks.

Programs for central irrigation controllers now do much more than control irrigation. They can track chemical inventory, equipment maintenance, insect and disease potential and labor. Rather than adding irrigation options to a business program, superintendents can add business options to an irrigation program.

In areas where high temperature and low precipitation increase a golf course's dependency on irrigation, software is important, but hardware is what carries the water. Not computer hardware, but nozzles, gear-drive mechanisms, and pump stations. Head rotation speed, water distribution uniformity from nozzles, and proper zoning and spacing for site conditions make or break turf quality in hot weather.

The Center for Irrigation Technology is recommending a measurement called Schedule Coefficient (SC) be used to gauge uniformity instead of Distribution Uniformity (DU) or Coefficient of Uniformity (CU). SC more accurately considers overirrigation caused by dry spot resulting from poor uniformity. Pressure below design specification, high variability in pressure at sprinkler heads, wind and poor spacing can cause factory-installed nozzles to perform unsatisfactorily. The goal today is to have a SC between 1.2 and 1.0. This translates into DUs and CUs above 90 percent.

Many distribution problems can be solved either by replacing factory nozzles with custom versions or upgrading the internal body of gear-drive heads. Once uniformity problems are solved, overirrigation can be greatly reduced without a drop in turf quality.

Irrigation is one of those areas where a good consultant can save literally thousands of dollars for you each year. Picking the right system initially is very important. Keeping it efficient through regular upgrades is equally important. Your entire agronomic program hinges on the success of your irrigation program.

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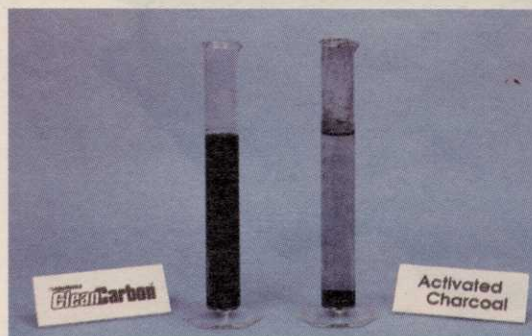
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