

By MARK LESLIE

## Check out everything that plugs in

Superintendents and general managers across North America should check out a number of things on their golf courses for compliance to Year 2000 (Y2K).

Major among them are:

- **Computers.**

"Many PCs [personal computers] will experience problems at the hardware level," reported Michael Hyatt in his book, *The Millennium Bug*.

Every PC has a "BIOS chip" (BIOS stands for Basic Input Output System) which handles the low-level interaction of the hardware itself, including maintaining the system clock. Some of these BIOS chips are not Y2K compliant.

"Seventy-nine percent of pre-1997 BIOS chips cannot roll over from 1999 to 2000, and 14 percent do not know that the year 2000 is a leap year," Hyatt said.

Computer Weekly even said that in 1998 some computer manufacturers reportedly were still shipping machines that were not Y2K ready.

To check a PC for compliance, Hyatt suggested downloading a copy of TEST2000.ZIP from the Internet at <<http://www.righttime.com>>. This program will determine if the machine is compliant and whether it can be made compliant. Computer vendors can also supply a "Y2K flash BIOS patch," which will upgrade

hardware.

Meanwhile, millions of computers are still running on DOS software, the nongraphical disk operating system that predated Windows. And DOS is not Y2K compliant. (See sidebar on testing DOS.)

Macintosh operating systems reportedly are fully Y2K compliant. Microsoft had reported the same for Windows 95 and 97. But that may not be the case.

While saying Rain Bird has no date-dependent central control products and therefore they are not affected by Y2K, Pat Loper, the product manager for central computer control systems, warned: "However, hardware is a different story. On the hardware side, a lot of computers, even Windows 95, are not Y2K compliant. There are some issues with BIOS in older computers. Some customers, after asking us, have changed their computer clock to test it out and some have had problems.

"Microsoft told me [in mid-December] there were also some issues with Windows 98," added Loper.

The Internet contains a couple of Y2K sites that have freeware (free for the taking) programs that people can download. Once it is downloaded, the user can boot



up the computer and the program will inform them what passes and what doesn't pass.

- **Software programs they operate.**

"Any computer or program earlier than 1997 [is a concern]," said Dominic Van Ness, director of the Information Services Department at Pebble Beach.

If a superintendent is running major applications from major vendors, they can likely make your system compliant by simply ordering an upgrade from the vendor.

- **PC-based point-of-sale systems.**

"A lot of smaller golf courses have these systems," said Van Ness. "A lot of times they're not buying brand-name equipment. Rather, Joe's Computer Shop fixed it up for them. Those are the PCs that you would need to run a program on to make sure the hardware is Y2K compliant. And then you need to get a letter from your software providers stating they are, indeed, compliant. About all you do is put that paper in a file, and hopefully your vendor is trustworthy."

- **Weather stations.**

The older, mechanical version is not a problem, said ClubCorp's Johnson. "But some of the computer, solid-state units

could be."

- **Petroleum products.**

These could be affected if valves don't open when they are supposed to. "We could have leaks," Johnson acknowledged.

- **Accounting, payroll and maintenance software and inventory programs.**

- **Pump stations and irrigation systems.**

- **Reservation and tee-time programs.**

- **Mowers with computer diagnostics or other chips**

- **Sprayers operated with computers.**

- **Gasoline pumps.**

- **Golf carts that use Global Positioning Systems.**

- **Televisions and VCRs.**

- **Alarm systems.**

- **Calculators.**

- **Gate clearance equipment.**

"If everything in the external world is working and we have problems internally, then we have enough ingenuity, hopefully, to overcome it," said Van Ness. "You don't need a lot of computer stuff to get a golfer on the golf course. And you probably have a few days to get your irrigation systems and that sort of thing working right. But it's not like an airplane. We're not that mission-critical."

## Advice from various corners for colleagues

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While superintendents and general managers usually cannot control fallout from Year 2000 (Y2K) failures outside their properties, they can take a number of actions to minimize their effects in-house.

Following is some advice to follow:

- **Contact your vendors.**

Some manufacturers will have made their products Y2K ready. Others, perhaps many others, will not.

ClubCorp is having its properties list everything that is computer-driven. "From that point in time, they have been calling manufacturers, etc. to see if anything at all might be affected," said Dave Johnson, South Central regional director of agronomy for ClubCorp.

Get a written document from the vendors confirming their Y2K compliance.

- **Sign a service/support contract with your vendors.**

"If you don't have a support contract, I recommend you get one so that if something does happen on Jan. 1 you can get some service," said Dominic Van Ness, director of the Information Services Department at Pebble Beach Co. "Or I guarantee they won't even talk to you. They'll have to first talk to customers who do have contracts."

- **Consider buying a generator or generators in case of power outages.**

"Some of the bigger courses already have generators," said Johnson. "Pinehurst has emergency equipment to generate power, as does the The Homestead (in Hot Springs, Va.)."

"We have generators for all our primary sites," said Van Ness. "But that won't extend to the golf shops. The main computer systems will not fall over and die, but they wouldn't be able to use them at the shops, because the shops themselves wouldn't have any power."

On the single-course scale, Ron Andrews said at Grand Harbor Golf Course in Vero Beach, Fla.: "We have a few small generators. I can supply



what limited power it would take to operate my mechanic's shop. We could provide 110 power to our irrigation system...

"Utility companies expect intermittent and rolling problems, not full-scale losses."

- **Upgrade computers and software programs.**

Oftentimes, you can make your system compliant by obtaining an updated version.

- **Be wary in buying new equipment.**

"When you get into new sprayers, there are some that are going to have a problem," said Johnson. "We've gone back to the mechanical ones."

- **Pre-test all equipment, if possible.**

- **Gasoline pumps, pump and irrigation stations.**

In the case of the irrigation system, Pat Loper of Rain Bird suggests to superintendents: "When it's raining and you're not going to irrigate, run the clock to Dec. 31, 1999, and come in the next morning and see if anything dramatic happened — if the computer locked up, or the software program crashed. If it works, bring it back to the current day and don't be concerned."

- **Stock inventory.**

"Stock a little more inventory. Do, not find yourself in the situation where you need something in the first month," said Andrews.

"I won't horde, but will be careful I don't need something in the first two weeks of January that has to come across the country. I'm a little nervous about shipping."

- **Replace what is feasible.**

"If it is not going to work, you probably ought to replace it," said Brad Kocher, director of maintenance at Pinehurst Resort and Country Club. "If everyone waits, everyone will be out there buying at once."

- **Read.**

A number of books and Internet sites address Y2K issues.

### GOVERNMENT LIARS

Last Nov. 28 it was revealed that the Defense Special Weapons Agency, which manages the nation's nuclear weapons stockpile, falsified documents claiming it was Year 2000 (Y2K) compliant.

The agency told the Pentagon last summer that it had no Y2K bugs in three of its most important computer systems. But auditors say those systems were never independently tested, and nobody could verify whether key systems could withstand the Y2K problems. Only 25 percent of the agency's "mission critical" defense computer systems actually had been tested.



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