

Preventive Maintenance On Wells Is Essential But Often Ignored

By Allen Anderson
Thein Well Co.

"When I turn on my irrigation system in the spring and the water comes out of the sprinklers, I know that my well and pump is working ok!"

"My flow meter tells me that my well is putting out 500 GPM which is what it has always done, so everything must be fine."

"I only use my well a little over half the year, it's not like a municipal well that is used all year long. Therefore, it doesn't require as much maintenance."

"There is a well company close by, they will drop everything else to get me back on line if I have a breakdown."

These are some of the comments I have heard while discussing wells and pumps used on golf courses. Superintendents work long, hard hours to provide their golfing members with the highest quality fairways and greens possible within the constraints of the budgets they are given. Unfortunately, fine tuning or regular preventive maintenance of an irrigation well and pump are sometimes ignored in favor of some of the other more visible golf course needs.

You may be using the latest and the best technology for seeding and fertilizing, aerating and weed control, but how much attention are you paying to your water source? If you are using the best techniques available to nurture the grasses on your course, shouldn't you also consider the needs of your water supply? It appears to me after visiting with some of the superintendents in our area, that regular well and pump maintenance programs are not given the priority necessary to insure a consistent source of water for their courses. Water is the key ingredient for all courses in the same way that engine oil and fuel are the key ingredients for the car you drive to and from work, or for the power equipment that you use on your course.

Every well system should have a flow meter as there is no other way to consistently monitor the output and efficiency of your well and pump. Accurate measurement of flow coupled with drawdown can give early indications of system deterioration. Have you recently checked your flow meter to determine if, in fact, you are putting out the volume for which your system was designed? Have you checked your meter to determine if it is accurately recording the actual flow of water? Sometimes a meter requires a good cleaning to continue to correctly measure your flow, particularly since it sits in a dry condition for a significant part of the year.

The thought of a well that can no longer produce the quantity of water needed to sustain a golf course is one that obviously should concern golf course superintendents. If you have only one well, how do you supply water during the time it takes to construct a new one? If you are currently

using 300 to 500 gallons of water per minute for a 6-8 hour period of irrigation per day (100,000 to 250,000 gallons), what can you get by with if you should have to find an alternative source? You should also factor in the time needed to construct a new well, as it may be that you will need a month or more to get a new well on line. In some areas, the necessary or unnecessary replacement of a well could also be the most expensive maintenance item with which a golf course may have to deal.

The measurement used to determine the general health of a well is called specific capacity. When a well is originally constructed, the relationship between the amount of water produced and the distance the well draws down during pumping indicates that well's efficiency. Over time, the efficiency of a well tends to deteriorate. The length of time to deteriorate is determined by the type of formation the well draws its water from, the quality of the water, the volume pumped and the velocity at which the water flows through the screen. A general rule of thumb should be that

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Woodhill Country Club Noted For Environmental Excellence

Woodhill Country Club in Wayzata, Minnesota has achieved designation as a "Certified Audubon Cooperative Sanctuary" by the Audubon Cooperative Sanctuary System, a program of the Audubon Society of New York and endorsed by the United States Golf Association. Woodhill Country Club is the fourth golf course in Minnesota and sixtieth in the nation to receive the honor.

Woodhill joined the program in 1993 which provides information and guidance to golf courses to help them preserve and enhance wildlife habitat and protect natural resources.

"Woodhill Country Club has shown a strong commitment to its environmental program. They are to be commended for their efforts to provide a sanctuary for wildlife on the golf course property," said Marla Briggs, staff ecologist for the Audubon Society of New York.

"To reach certification a club must demonstrate that they are maintaining a high degree of environmental quality in a number of areas," explained Briggs. These categories include Environmental Planning, Wildlife and Habitat Enhancement, Integrated Pest Management, Water Conservation and Water Quality Management.

"Our goal," says Golf Course Superintendent Rick

Fredericksen, "is to provide a golf course that has an abundance of natural habitat to provide food and cover for wildlife. Several areas on the golf course grounds have been converted to prairie grasses and flowers that will provide this type of natural habitat. The sanctuary program assists us in developing these natural areas and provides information on environmentally friendly maintenance procedures.

Preventive Maintenance—

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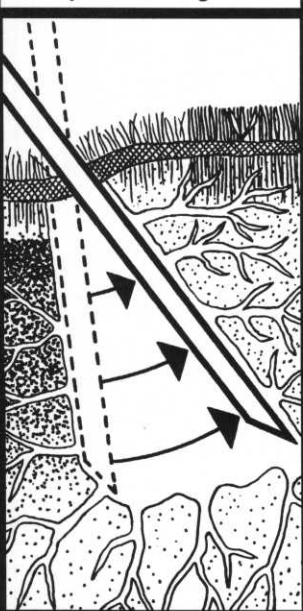
if your well efficiency has dropped 25%, from 40 to 30 for example from initial construction or from the latest well work, you should undertake some rehabilitation. If you let your efficiency deteriorate further, you run a significant risk of permanent damage to the well. As you can see, early recognition of a well that is losing efficiency is critical to returning that well to optimum production capacity at the least possible cost.

In the next issue of *Hole Notes*, I intend to discuss pump maintenance and what are some of the critical symptoms of a pump system that requires repair.

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