

Prince William windmill cuts electric, water bill

By Joseph Gambatese

Billy Dillon got the idea from farmers in Purcellville, Va., where he was golf professional at Loudon Golf & Country Club. Many of them irrigate their farm with water pumped from a well by a windmill.

Why not, Dillon thought, use the same method to water the public golf course he and Charles Staples had just leased in Nokesville, Va., some 40 miles from Washington? Staples' reaction: Why not?

That is why today, in its second year of operation, a 28-foot windmill over a well behind the 18th tee of Prince William Public Golf Course pumps as much as 15 gallons of water a minute through two four-inch pipes into two small storage lakes in front of the tee.

From these lakes, water is pumped 800 yards through another four-inch pipe to a larger lake which comes to play as a hazard on the fourth, fifth and 13th holes.

A watering system from this lake is nearing completion. It now carries water to sprinkler heads on all 18 tees and 10 greens. The remaining eight greens will soon be tied into the system.



The 28-foot windmill (above) with an 8-foot blade can pump as much as 15 gallons of water per minute into the two lakes in front of the 18th tee of the Prince William Public Golf Course. At left, Billy Dillon (on left) and Charles Staples gave up club golf professional jobs two years ago to lease and operate a public course. They have since been retained to operate another public course and a private course.



"The previous owners watered the course from the two small lakes," Staples recalled. "They barely provided enough water under normal weather conditions. During a recent drought, they went dry. The big lake had water but there was no way to use it. All the greens were lost. We don't want that to happen to us.

Staples was golf professional at the prestigious Aronimink Golf Club, near Philadelphia, site of the 1977 U.S. Amateur and 1962 PGA championships, when he and Dillon decided to go into business together. They had known each other when Staples was at International Town & C.C., Fairfax, Va., before going to Aronimink.

Leasing the golf course from Prince William County was their first venture. The previous owners, Greenwich C.C., were going through bankruptcy when the county bought the 150-acre property. The course was rundown, naturally, and needed a lot of work. Staples and Dillon have done such an impressive job of management that they have since been retained to manage two other northern Virginia courses, Evergreen, a private club 16 miles away, and Goose Creek, a public course another 16 miles beyond Evergreen.

Their first objective was to assure an adequate water supply needed to put and maintain the Prince William course in top condition. They got the 250-foot well dug for \$1,500. They built concrete footings on which they mounted a 28-foot Dempster windmill with eight-foot wheel and tail, which cost another \$1,500 and had to be assembled.

Besides providing adequate water, the windmill saves money in electrical as well as water bills.

"We don't have a program for watering," Staples says. "When and how much we water depends on the weather and the needs of the grass. If there is no rain, we might water every night, or every other night, or during the day to cool down the greens."

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Superintendent Ron Barley points to the flail mower he likes to mow ditches, banks, roughs and around lakes with.



Barley stands with part of the equipment at Prince William. From left: a Toro diesel Parkmaster fairway mower, a Massey Ferguson tractor with spreader, a Yanmar diesel tractor with front-end scraper, and a post-hole auger.

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Once they had the water problem solved, their overall objective was one of keeping the golf course green and cut. Staples says there are four essential elements in a successful course maintenance program.

1. A good mechanic. "He's indispensable," says Staples of his mechanic, Ottie Ralls, retired from Ford Motor Co. He's in charge of all equipment and does all the mechanical work for both the Prince William and Evergreen courses.

"He can take a motor apart and put it back together again in 20 minutes," according to Staples. "When some equipment goes wrong, he knows immediately what the trouble is and usually can fix it on the spot."

2. Have good equipment available when needed. Staples is able to interchange equipment between the three golf courses he and Dillon manage, keeping down time to a minimum when a breakdown occurs.

"Down time is what kills most superintendents," says Staples. "Golf courses today are almost totally dependent on modern equipment. They used to use all manpower, with 15 or more men working on a course. Today

you can get by with as few as four or five if you have good equipment."

A machine Staples is particularly proud of is a flail mower, which is especially adapted to trimming lakes, ditches and banks as well as rough.

Also his aerifying and topdressing equipment which enables his staff to aerate all 18 greens in 24 hours instead of the two weeks it previously took.

3. Spend more time with your personnel. Motivate them and keep them around longer. "Pay them a little more if you have to," Staples advises. "It usually is well worth the effort."

4. Bulk purchasing of materials. "We buy fertilizer and chemicals about once a year and ask for bids," Staples points out. "As a result, we get a much better price. The first year we bought fertilizer, there was \$8,000 difference between the highest and lowest bidder. If you just buy when you need something, you will usually pay twice as much.

"We recently bought \$12,000 of chemicals for the three golf courses we manage. The highest bid was \$15,500. The same chemicals would have cost over \$19,000 if we had bought them only when needed."

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