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WHEN THE WELL RUNS DRY

Seventeenth century English church leader, author and historian Thomas Fuller warned his fellow countrymen about the value and power of water. "We never know the worth of water till the well is dry," Fuller observed.

Looking at the water economy nearly 400 years later, one can conclude that little has changed.

For golf course owners, operators and superintendents, the accessibility, quality and price of water has become critical to success.

"After location, access to water is one of the foundation elements in community master planning," says Jim Wyffels, the golf course superintendent at Fyre Lake Golf Club in Sherrard, Ill. Wyffels, who helped develop 27 courses across the U.S. during his years at Pulte Homes, has seen local permitting authorities use access to water as a tool to control entitlements and housing density.

Courses generally receive water from three means: their own water sources – where they own the rights and distribution system, public or private municipal water providers, and wastewater treatment plants that deliver effluent. Some courses have access to a combination of these sources.

Water quality has steadily declined in most areas as pH levels – hydrogen ion concentration – increase. Golf course water quality, which is progressively increasing in pH overall, has followed this trend and is adding to the stress of many varieties of turf.

The overuse and/or over mixing of effluent water indicate a compounding and unfavorable trend for golf courses. It's an issue many facilities around the country struggle to address.

As water access becomes more difficult and its quality steadily declines, its cost is increasing. Significant increases in cost have become among the most pressing economic issue in the golf business.

What will happen to the price and availability of water for golf course irrigation in the next five to ten years? Matt Payne of WestWater Research in Boise, Idaho, isn't optimistic.

"Water prices will increase significantly, and availability will decline," Payne says. "Particularly for golf courses that are customers of municipal water providers.

"Effluent prices are also rising as diverse uses of the supply become more socially acceptable," he adds.

Courses that receive service from wastewater treatment plants and municipal water providers could see water rates double in five to 10 years, Payne predicts, adding that supply interruptions may become more frequent as droughts and community growth place a greater strain on supply.

"Golf courses developing their own sources by acquiring water rights will see prices increase of 25 percent or more in the near future," Payne says. "While reliable water rights may attract premium market prices, developing water supply indepen-

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dence may be less expensive than continuing to receive water service from municipal providers."

Wyffels, who notes that the golf industry already is "extremely efficient and diligent" in its water use, says golf courses must continue to be good stewards.

Although water accessibility, quality and price are not totally in their control, Payne advises courses to take preemptive action to help ensure their futures.

"View water as an asset, not a cost," Payne says of understanding this resource. "Understand how water rights markets are developing in your area, and recognize that water rights are generally appreciating in value. Also, invest in your own rights/entitlements to achieve supply independence."

Payne also suggests developing supply redundancy into a facility's water management strategy.

"Many golf courses in the Phoenix area, for example, receive effluent under long-term supply contracts with surrounding municipalities," he says.

"However, several of these Phoenix-area courses also maintain ownership of portfolios of ground-water rights that provide supplemental and backup supplies in case effluent deliveries are interrupted," he adds.

The proverbial well may not be dry yet, but as golf struggles with accessibility, quality and cost challenges, the golf course industry certainly has developed an appreciation for the wisdom of Thomas Fuller. **GCI**