Saluting solutions

Gainey Ranch's effluent plant gets an 'A'

By Lyn Tilott

When Gainey Ranch of Scottsdale, one of 93 golf courses in the Phoenix, Ariz., area, sought permission to build its 27-hole complex in the mid-1980s, the city fathers responded, "Sure, but if you want water you'll have to build an efficient treatment plant." So they did, then donated it to the city.

"The plant cost $4 million," said George Corthouts, superintendent of the semi-private course. "Scottsdale owns and operates the plant, and delivers the water we need at 46 percent of the cost of potable water rates in this area. That currently translates to 62 cents per thousand gallons, compared with $1.38 for other users.

The treated water flows at 15,000 gallons per minute over a massive waterfall on the 9th hole of the Lakes nine, then meanders through the rest of the lakes. At the lowest point on the complex, the water is drawn out for irrigation, or recycled through the waterfall. In this desert state, a waterfall is an added attraction for visitors, and helps Gainey Ranch continue its support for one more year of two seasons, or recycled through the water treatment plant.

"There are a lot of golf courses in the area, but in the winter we're all hooked," said Corthouts. "Even with 93 courses to choose from, our semi-private course reservation is not unusual during the winter months. Summer play is less intense, but it still makes watering schedules a challenge.

Gainey Ranch uses 100 percent of the water treated by the plant, which is situated next door to the maintenance complex. "In the winter it could support four or five courses, but during the four months of summer we need all of the water," Corthouts said.

He noted that the local water provided by the Florida Keys aqueduct which brings treated water from the Biscayne Aquifer.

The reason for the desalination is simple economics. Potable water from the aqueduct costs.

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Kozelnicky garners coveted Georgia honors

By Verne Putney

AUGUSTA, Ga. — Never, in his wildest dreams, did George M. Kozelnicky think he would be sharing golf's center stage with the "King of Golf," nor that he would be congratulated on his achievements by the legendary Arnold Palmer.

Twenty-four hours after being inducted in the Georgia Golf Hall of Fame for service to the game, it hit home. The impact was staggering.

"It's the biggest thing that ever happened to me," said the retired instructor of agronomy and plant pathology at the University of Georgia.

"That this honor occurred in front of 800 of the most renowned names in golf and among my friends," said Kozelnicky, "is overwhelming."

A self-described "avid hacker" who took up golf at age 43, Kozelnicky is enthralled alongside distinguished competitive company. The Hall, launched in 1989, now has 25 members. All but "Old Koz" have sparkling playing credentials.

Yet Kozelnicky has earned equal stature for game contributions. Kozelnicky took a circuitous route to the Golf Hall of Fame. The 73-year-old Akron, Ohio, native as a teenager mowed bluegrass tees. After serving in World War II as an aerial gunner and later as instructor, he attended the University of Georgia, where he obtained both bachelor's and master's degrees in less than four years. He became a faculty member in 1951.

While pursuing a doctorate at Purdue University from 1958 to 1961, he discovered the specialized...
Desalination plant was the answer for Key West facility

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$5.18 per thousand gallons for the first 12,000 gallons and then jumps to $6.18 per thousand. The desalination plant can provide water for approximately $3.00 per thousand gallons.

It's not cheap, compared to the rates in Boca Raton — $0.85 per thousand gallons — but it certainly is more economical than irrigating with the potable water coming from the aqueduct.

For several years, Ray Hansen was the golf course superintendent at Ocean Reef Club. Today, Hansen is the superintendent at Delaire Country Club in Delray Beach.

"Straight salt water contains 35,000 parts per million of salt," Hansen says, "while the brackish water that is desalinated is 3,500 parts per million. If you take this brackish water, and put it through a new, well-maintained reverse osmosis plant, it comes out at 350 parts per million. If you treat it according to health department requirements, it can be potable water.

However, this is the best-case scenario. "As the plant gets older, the membranes within the reverse osmosis system have a tendency to clog up, and they need continual maintenance. Eventually, they become less and less effective and they have to be replaced."

Hansen says that five years ago, new equipment was installed in the desalination plant at Ocean Reef Club. This $700,000 project upgraded the equipment and the membranes within the plant. The membranes have a five-year lifespan, he says, and they should be replaced shortly. The remaining equipment will be functional for another five years.

Although the desalination plant provides the club with the much-needed irrigation water, some precautions are needed when using this type of water.

"As the membranes get older," Hansen says, "the salt content in the water slowly rises. The soil index must be constantly monitored. A salt ratio of 1,000 parts per million or less is acceptable for the turfgrass. Anything above that can cause problems.

When this salt content reaches 1,000 parts per million, then the membranes in the reverse osmosis plant must be cleaned, or if they are older, replaced."

Hansen says that in the future, Ocean Reef Club may begin using effluent in combination with the desalinated water from the reverse osmosis plant.

This combination would reduce the cost of the irrigation water. However, he adds, availability and cost will be the final determining factor in using a combination of desalinated water and effluent on the Ocean Reef Club courses.

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