Pump Problems? No Problem at All

A Texas course needed a new pump system to beat the summer heat – and fit into an existing pump house

Industrialist Henry Kaiser once said trouble is only opportunity in work clothes. He could easily have been speaking about superintendents who need creative solutions when replacing or installing new pumping systems. The Four Seasons Resort Tournament Players Club in Las Colinas, Texas, which hosts the GTE Byron Nelson PGA Tour Classic, found its opportunity when troubles arose with its aging pump system.

Problem

Since The Four Seasons Resort Tournament Players Club was built in the late 1970s, the pump system was not sufficient to meet the needs of hot Texas afternoons.

Solution

Upgrade the system to the Flowtronex PSI Silent Storm system, with a pumping capacity of 4,000 gallons per minute.

The problem

Because the course was originally designed in the late 1970s, there was concern about its aging pumping system failing during a hot Texas summer. A new system would have to fit an existing wet well, slab and pump house.
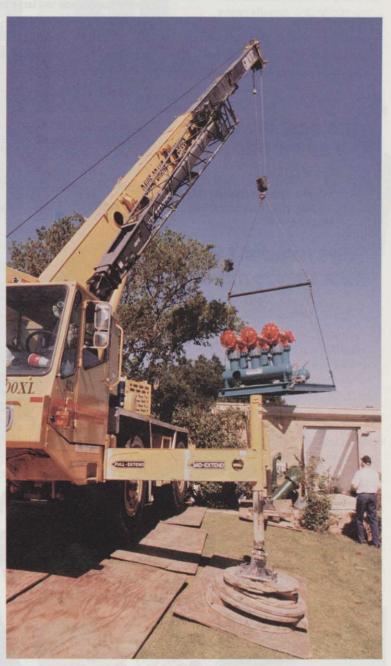
Filtration would also prove an important consideration since the water source contained silt, algae, Asiatic clams and other debris.

Finally, installing the system posed challenges as well. How do you protect turf from heavy equipment and machinery required to install the system?

The solution

According to Willie Slingerland, of Flowtronex PSI, careful analysis and consultation led course officials to a Flowtronex PSI Silent Storm station with a capacity of 4,000 gallons per minute.

Scott Miller, Four Seasons resort director of golf and landscape operations, said: "We evaluated our old system and found that we needed to replace the old pump station. The logical

A crane, resting on the plywood road constructed to protect the landscape at Las Colinas Tournament Players Club, lowers the Flowtronex PSI pumping system in through the top of the existing pump house.

decision was to choose a system with variable frequency drive to increase our efficiency and with increased filtration to handle a variety of sediment."

Three Amiad SAF filters were chosen to complete the system.

This design offered both the output and water-quality protection the course demanded.

Implementation

To install the system, the team worked around a settling building slab that had dropped 6 to 12 inches. To keep the station level, a new steel frame was constructed on top of the existing slab.

The team also had a tight squeeze, as the new station was too large to fit through the pump house door.

Generally, a pump station will be brought into the building in pieces and reassembled once inside, Slingerland said. Club managers, however, decided that since the roof was already beginning to show signs of weakness and leaking in spots, they would remove the roof and bring the system in from above. A new roof would then be constructed once the system was set into the structure.

Two options were considered to protect turf:

Option one was to set the station with a helicopter. Unfortunately, the helicopter required to lift the massive weight was tied up on another project.

In addition to the energy savings the course has seen, the new pump system has been virtually maintenance free.

Option two — the one selected — was to construct a plywood road on which a crane and the truck containing the station could be driven to the site with minimal damage to the turf.

Outcome

Today, officials at the Four Seasons Resort TPC at Las Colinas and Flowtronex engineers look back on the two-day, 24-hour installation process during a hot spell in June with pride, since the new pump station has performed flawlessly. "In addition to the energy savings we have seen, the system has been almost maintenance free," Miller says.

The old station was reaching the point where it was beyond repair, Slingerland said. Now officials can rest assured that the pump station is reliable and concentrate on keeping the championship course, which was remodeled in 1984, in top condition. ∎