Using a control system with flow sensors allows accurate blending of recycled and lake water, helping to save money and improve water quality.

FLOW SENSOR TECHNOLOGY

IMPROVES WATER QUALITY AND REDUCES COSTS

The Moorings Country Club | Naples, Fla. 34103

Dale Walters, CGCS, superintendent

ISSUE

The Moorings Country Club utilizes both recycled and onsite lake water for irrigation. The lake water is less costly and has a higher quality than the recycled water but there is a limited supply. The recycled water is a valuable resource, especially during times of drought, but it is more costly and has a higher salt content than lake water. Superintendent Dale Walters, CGCS, found that applying a blend of both water sources during dry periods delivered better results at a lower cost than relying exclusively on recycled water.

Walters was using a manual valve system to control the amount of recycled water being used for irrigation, but this system was imprecise and did not allow for efficient timing. An automatic system would blend

the water from both sources in a precise ratio and allow for the system to run in off-peak hours, reducing operation costs and improving water quality when recycled water is needed.

ACTION

Working with their pump station maintenance company, The Moorings installed a flow sensor that regulates the desired flow of recycled and lake water. This allowed them to irrigate with a precise blend of both water sources and to plan how each source would be used. The recycled water arrives pressurized from the municipality so it is used primarily during the daytime – when pumping costs for the lake water are high – and to keep the system pressurized. The lake water pump is set to run only during off-peak hours to save on electricity costs.

RESULTS

The new sensor system helped The Moorings reduce recycled water use by 30 percent. At a cost of $0.49 per 1000 gallons, the reduction amounted to a savings of nearly $4,000 per year. Energy savings of approximately $3,000 per year have also been realized by utilizing the lake water only during off-peak hours when pumping costs are lower. The cost for the flow sensor was around $4,500, so the investment paid for itself in less than a year.

Blending both water sources has also improved irrigation water quality during dry times, when recycled water is needed. Using a higher percentage of lake water is better for turf health because it has a lower salt content than the recycled water. However, with a limited supply of lake water it is important to use it carefully. The new sensor system allows for the most precise use of the lake water possible.

Walters has not had any problems with the new sensor system and feels that it is a great tool for any facility that can use water from multiple sources for irrigation.