



## CASE STUDY

Industry: Golf  
Application: Build up in the irrigation system

### BACKGROUND

The Club at Olde Cypress in Naples, FL experienced a flow restriction in the irrigation system. A build up had formed inside the PVC piping and severely limited the water flow (shown below). Fairway areas of the golf course which traditionally had 10 to 12 sprinkler heads operating at one time had now been reduced to 2 or 3 heads because of the limited flow. Olde Cypress inquired about the water conditioner technology as a solution to eliminating the build up in their system.

### TECHNICAL APPROACH

The build up was analyzed and it was determined that the deposits were predominantly Calcium based. Water conditioners have been used successfully in the residential market for decades for calcium. A trial was set up to treat approximately 3 holes of the golf course with a water conditioner. Evaluations would be made on this section of pipe to determine if the treatment was successful.

A four (4) inch water conditioner was fitted on one of the lateral irrigation lines. This section of piping would flow to approximately 3 fairways on the golf course. On this piping network, there is a mitigation area so that water and sediment could be purged from the system. The unit was fitted with a 10mA power regulator.



*Cross sectional view of build up inside pipe*

### RESULTS

After 8 weeks of continuous treatment, the flow to this section of the golf course returned to normal. During this period, build up was purged from the system. There was no adverse effect on the irrigation piping, sprinkler heads or control valves.

At the completion of this trial, the club purchased an 8 inch water conditioner to handle flows of 1800 gpm. It was fitted to the discharge side of the irrigation pump station and now treats the water for the entire golf course.

### RETURN ON INVESTMENT

The Club faced a unique challenge with the pipe build up issue. Build up could have been removed with a chemical wash, but ultimately that chemical would have to be collected and disposed of because of environmental concerns. Secondly, the irrigation piping could have been replaced. These options would have involved risk to the environment and disruption to the golf course. The club chose the water conditioner as the preferred method of treatment. Final cost was \$40,000.

### CONCLUSION

The water conditioner has provided a solution to control build up in irrigation piping. The unit was installed in January 2007.