

The RainSoft fully automatic ICS-640,000 grain single unit requires minimal space and provides 360,000 grains per day of softened water, which was ideal for one Maryland rehabilitation center.



Nursing and Rehabilitation Center Stops Escalating Plumbing Repair Costs

Putting an End to Hard Water

Glade Valley Nursing and Rehabilitation Center, Marriott Hotels, Starbucks and The White House may be vastly different with regard to the people who use and manage the facilities; yet when it was time to solve water quality problems, they all looked to the same resource: Kevin Britton, a RainSoft dealer at Quality Water of Maryland, located in Frederick, Md. (part of the Washington D.C. metro area).

Glade Valley, located in Walkersville, Md., is part of the vast Adventist Health

Care System. Like many companies and organizations in the area, Glade Valley had hard water problems. Britton, who has serviced the area since 1974, understands that no two businesses have the same problems and approaches each with extraordinary attention to detail. But most of all, Britton listens and applies more than three decades of water treatment expertise to facilities, large and small, throughout the nation.

When Duane D. Rinde, director of plant operations at Glade Valley from

1997 through 2001, contacted Britton in the spring of 2000, he was well aware of the problems that hard water was costing the facility. When the facility was constructed in 1997, Rinde recommended incorporating a water conditioning system, but the system was cut from the project because of last minute cost overruns.

“Plumbing fixture costs alone were running around \$800 per month,” Rinde remembers. “Valves and seals alike, you name it, we replaced it. We also replaced a boiler and had a \$10,000 repair bill for a steamer—and the facility was just three years old. We knew we needed to take action.”

Rinde had shopped around with various water treatment companies looking for a company that could answer his questions and understand his needs. “We received 12 contractor bids for this project,” Rinde remembers. “One suggested a complicated system with six pieces of equipment that would have taken up more space than we had available. And the service contracts were a nightmare. They seemed more concerned about the money they would make after the sale than solving our problems.”

“Britton, the dealer we selected, on the other hand, pointed out several

problems caused by hard water that even I didn’t know about,” Rinde continues. “Education was a huge factor in our decision to go with Britton. He asked a lot of questions and actually listened to our answers.”

What’s in the Water?

The first thing Britton did was test the hardness of the raw water, which came back at 20 grains per gallon (gpg). According to the Water Quality Association, most waters possess hardness minerals in amounts ranging from 3 to 50 gpg. Water that has more than 10.5 gpg is considered hard.¹ Generally, water containing 15 to 30 grains is very hard and difficult to use. At 20 gpg, Glade Valley had very hard water.

Hard water scale is one of the most serious problems caused by hardness mineral deposits. This byproduct of water hardness clogs hot water pipes and can reduce the heating efficiency of a boiler or water heater. When hard water is heated, scale is formed due to

- The breakdown of calcium and magnesium bicarbonates,
- Their reversion to a highly insoluble carbonate form,
- Their precipitation from the water, and

Quality Water of Maryland

Kevin Britton became a RainSoft dealer in 1974 when he purchased the company from the dealer that sold him a system for his own home. “I was so impressed with the results of having good quality water, I bought the dealership,” says Britton. Today he has four full-time technicians who help him service systems for thousands of organizations from the federal government and hospitality firms to healthcare and foodservice companies.

Hard water was destroying plumbing fixtures at Glade Valley Nursing and Rehabilitation Center in Walkersville, Md. Pipe replacement costs totaled thousands of dollars each year.



Just the Facts

Location: Glade Valley Nursing and Rehabilitation Center, Walkersville, Maryland.

Problem: Escalating plumbing repair costs due to hard water.

Solution: Rainsoft Fully Automatic ICS-640,000 grain single unit with 3-inch plumbing inlet and outlet.

Results: Plumbing repairs and replacement costs dropped, brighter linens and reduced chemical soap usage.

- Their concentration on the interior surfaces of the components.²

The scale deposits and sludges that may develop can lead to a sharp reduction in operating efficiency and cause serious difficulties in boilers, water heaters or any interior surface that comes into contact with the byproducts of hard water.


Britton calculated the water usage for the facility to be approximately 360,000 grains per day of softened water. "Each company has different needs," Britton states. "Some facilities with 24-hour water users such as hotels and hospitals need duplex systems to assure constant high quality water around the clock. However, Glade Valley had virtually no water usage after 11:00 p.m. As a result, I recommended a single system that best fit their needs."

Britton recommended a RainSoft Fully Automatic ICS-640,000 grain single unit with 3-inch plumbing inlet and outlet to complement the 3-inch copper plumbing that existed throughout the facility. "It was a well-engineered system for our facility," Rinde says. "There were only two pieces of equipment. They fit in the allotted space and we still had plenty of space left over for the salt."

Eliminated Hardness, Reduced Costs
According to Rinde, the RainSoft system paid for itself the first year. "Plumbing repairs and replacement costs dropped dramatically, to around \$100 per month," Rinde reports. "Even the linens are brighter, lasting one-third longer than before we had the system. In addition, we cut



Kevin Britton (pictured), Quality Water of Maryland, worked with Duane Rinde, Director of Plant Operations at Glade Valley, to identify the problem and find a cost-effective solution.



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chemical soap usage by 70 percent. It was amazing!"

Rinde, who moved to Florida in 2001 to work with a popular resort in Crystal River, says those considering new water treatment options should spend two or three months documenting plumbing

costs, chemical soap usage costs and replacement expenses, as well as keep track of water usage patterns. He also thinks that dealers should suggest that to clients. He recommends speaking with several companies before making a final decision, acknowledging that Britton's attention to details were

what made all the difference at Glade Valley.



References

- 1 Water Hardness, page 4-2, *Water Treatment Fundamentals*, Water Quality Association, 1983.
- 2 Water Hardness, page 4-3, *Water Treatment Fundamentals*, Water Quality Association, 1983.

For more information on this subject, write in 1010 on the reader service card.