

Biofouling Prevention Technology Drives Car Wash Cost Savings & Quality

MILL VALLEY, Calif. – Car wash operations manager Eric Traband recently demonstrated to his boss why he had been named a national Car Wash Manager of the Year in 2000. Traband, an 11-year veteran of the industry, seized an opportunity to help trim his carwash operation's spiraling water costs and, at the same time, deliver better, more efficient service to his growing roster of customers.

Traband oversees five car wash locations in California and Nevada, but his main base of operations is at the Mill Valley Carwash, in Mill Valley, Calif. The business serves a decidedly upscale clientele with a brushless, hand-washing process that allows customers to remain in their vehicles as they are drawn through a tunnel for a three-cycle wash. It's a popular concept: in just six years, Mill Valley has doubled its business.

High Costs & Odors.

But as the operation grew, so did its water consumption, and Traband saw his bills for fresh water skyrocketing. In a state where water has become a precious commodity, excessive use can be both costly and considered environmentally insensitive.



This Northern California carwash couldn't use its reclaim water system due to excessive odors and muddy buildup on tunnel walls.

Most car wash operations are able to combat this expense by installing and using reclaim water systems, a mechanical process that enables the re-use of water by filtering and partially cleaning the runoff after it drains from the carwash tunnel floor and into a series of underground tanks. After passing through a centrifugal separator and other filtering devices, the water is pumped back up into the carwash hoses and re-used for high-pressure prep guns, undercarriage rinse and pre-rinse. The end result can be a dramatic reduction in costs and fresh water consumption.



Installation of a Zeta Rod system eliminated tunnel odors and grime, and, by enabling use of the reclaim system, helped to significantly reduce per-vehicle wash costs.

At Mill Valley, however, this solution wasn't so simple. "Our goal had always been to use reclaimed water as much as possible in our system," Traband noted, "but the bacteria and odors that went along with using it were a big problem. I wanted to get rid of them for my customers." In addition, he said, the lower tunnel walls were collecting a muddy film that was next to impossible to keep clean. Prep gun nozzle clogging and other mechanical issues added to the problems. So the obvious question Traband posed to himself and his team was: how could they maintain the quality of their operation and cut their costly water bills?

Zeta Technology to the Rescue. Enter Zeta Corporation. Traband's boss, Richard Mills, agreed to give the successful Tucson, Ariz.-based water and fluids treatment company a shot at cleaning up their reclaimed water sufficiently to enable them to use their system again. They knew that Zeta had successfully treated water and industrial fluids using its patented, Zeta Rod®



2045 NORTH FORBES BOULEVARD • SUITE 102 • TUCSON, ARIZONA • 85745 • USA

Tel: 888.785.9660 | Fax: 520.903.9910 | Email: info@zetacorp.com | www.zetacorp.com

systems in several different, large-scale applications— industrial cooling towers, metalworking fluids machinery and HVAC equipment, to name a few—but this was something else entirely.

Traband worked with Zeta Corporation engineers to set up a 60-day evaluation of the capacitor-based Zeta system, which electronically prevents bacteria from accumulating in piping or other wetted surfaces. In mid-January, after Traband gathered baseline data against which to compare results, a Zeta Rod system was installed in the reclaimed water outflow. Minor piping modifications were made to plumb the reclaimed water to the prep guns, undercarriage rinse, and the first rinse station in the tunnel. During the initial evaluation period, a total of 13,175 cars were washed.

Solid Preliminary Results. After just one week, Traband said he started to see results. "The bad odors were simply not present," he reported. "Also, the wash tunnel itself appeared much cleaner. The thick film that usually accumulated along the lower walls was nearly gone." But ultimately, Traband said, it would be the water bill that would truly measure the evaluation's success.

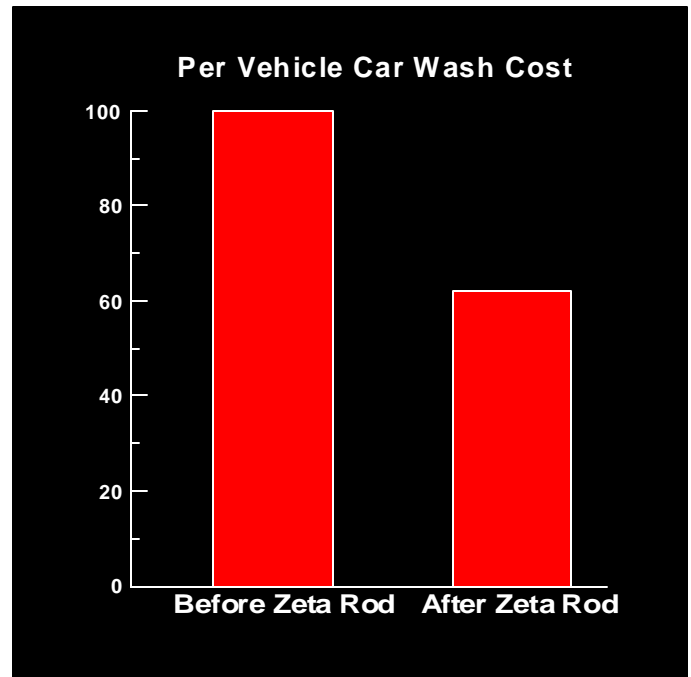
An Impressive Outcome. With the continuation of the improvements noted above, the arrival of the water bill after 60 days positively confirmed the results. Using Zeta-treated reclaimed water resulted in:

- **Reduced water consumption per vehicle from 48.75 gallons per car (gpc) to 35.51 gpc, a net reduction of 27 percent per vehicle.**
- **Water savings of 235,000 gallons since Zeta System installation**
- **Over 38 percent drop in the total per-vehicle washing cost.**



Zeta Corporation offers a range of rod and power supply sizes for every application. The systems are easy to install and virtually maintenance-free.

With these impressive results, Mill Valley Car Wash has made the obvious decision to retain the Zeta Rod system. And, since the end of the evaluation, the quality and savings trend has continued. Most recently, Traband reported that his water consumption costs have dropped nearly 30 percent since pre-Zeta days. And his per-vehicle washing cost has continued to trend downward. "I'm sold on this [Zeta] system," Traband noted. "What I have now is an odor-free and bacteria-controlled environment, I'm using a lot less water, and cutting my overall costs. This system is a winner."



Using a Zeta Rod on a reclaim water system resulted in a 38.1 % reduction in per-vehicle wash costs.

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