

RR Donnelley Case Study

Reducing Chemical and Water Costs in Cooling Tower Operations

At a glance

Culligan's advanced softening system helped RR Donnelley reduce operating costs, conserve resources, and improve system performance. By addressing plumbing imbalances and integrating intelligent control, Culligan delivered a long-term, cost-effective water treatment solution that supports both efficiency and sustainability.



CHALLENGES



RR Donnelley was experiencing intermittent hard water breakthrough in their cooling tower system due to low water flow and an unbalanced plumbing configuration. These issues resulted in:

- **Higher chemical usage** to combat scale formation caused by hard water.
- **Increased water consumption and operational inefficiencies.**
- **Elevated treatment costs** that prompted the need for a more reliable and efficient water softening solution.

The facility's primary goal was to reduce chemical costs and minimize water waste while ensuring a consistent flow of softened water to the cooling tower.

SOLUTIONS



Culligan installed a metered triplex softener system with progressive flow control and a balanced plumbing configuration:

- **Progressive Flow Control:** Allowed only one softening vessel to be used during low water demand, preventing channeling and premature hardness breakthrough.
- As cooling system water demands increased, additional units were automatically brought online to meet the higher flow requirements—maintaining a consistent, fully treated water supply.
- The system was equipped with a **GBE Smart Controller**, providing valuable insights into performance and system efficiency.

Equipment Installed:

- **Triplex Progressive Flow Metered Softening System**

Superior service with every order.

Every customer is important. And every customer is different. With a partner like Culligan® Commercial, you can expect a water treatment plan as original as you are. And like you and your business, we pride ourselves on supporting our solutions with ongoing expert service.

RESULTS



The Culligan solution produced immediate, measurable benefits:

- **37% Reduction in Salt Usage:** Monthly salt consumption dropped significantly, leading to a cost savings that translated to a 27-month payback period based on salt alone.
- **35% Reduction in Chemical Usage:** Reliable softening helped decrease the amount of chemicals needed to protect the cooling tower system.
- **Improved System Insight:** The GBE Smart Controller provided actionable diagnostics, helping operators better understand and optimize the performance of the cooling tower.



THE RESULTS:



Reduced Salt Consumption



Improved Water Quality



Reduced Chemical Usage



Improved Insights

THE CULLIGAN ADVANTAGE



1

Industry-Leading Technology

Products with patented technology, designed to outperform the competition.

2

Expert Trained Technicians

In-house, expertly trained service technicians with years of experience with these systems.

3

Certified Quality

Regularly scheduled water quality and system performance checks ensuring water quality meets the EPA, FDA, USDA and state guidelines.

4

The Culligan Guarantee

Trusted name for clear, clean and delicious water that customers depend on, appreciate and even avidly promote due to their overall satisfaction.



For over 80 years, Culligan® has made better water. Our global network, comprised of 800+ dealers and international licensees in over 90 countries, is dedicated to addressing your water-related problems. As a worldwide leader in water treatment, our sales representatives and service technicians are familiar with the local water conditions in your area. Being global and local position us to deliver customized solutions to commercial and industrial water issues that affect your business and your bottom line.