

3D TRASAR™ FOR CIP

A Solution Story

Ecolab's 3D TRASAR Technology for CIP helped Umpqua Dairy achieve consistent cleaning performance while saving time, energy and water.

↓ WATER & CLEANING
CHEMISTRY CONSUMPTION
SAVED >\$112,000/YR

THE CHALLENGE

Umpqua Dairy is the largest family owned dairy in South Oregon, producing fresh ice-cream, fluid milk, sour cream, butter, cottage cheese and other dairy products since 1931. Driven by a mission to consistently produce the most flavorful, nutritious dairy products, high food safety standards have been an integral part of Umpqua's heritage for more than eight decades. Its focus on excellence led to the Umpqua brand being recognized internationally for high product quality standards.

Umpqua uses clean-in-place (CIP) systems to effectively clean and sanitize dairy processing equipment and protect against microbial contamination. Cleaning and sanitizing in a facility with such a diverse product mix can gradually increase pressure on existing CIP systems.

Like other dairies, Umpqua relied on periodic manual sampling and extensive review of electronic and system

generated paper records to

gauge CIP performance. However, traditional monitoring methods were unable to provide comprehensive visibility into each one of their cleaning procedures. They were looking for proactive ways to deliver consistent cleans using sophisticated wash data analysis.

Umpqua partnered with Ecolab in 2018 to further improve wash quality by identifying CIP improvement opportunities, while driving operational efficiency and productivity improvements.



THE SOLUTION

Ecolab recommended and installed the 3D TRASAR Technology for CIP at Umpqua Dairy, an important step in Umpqua's journey to achieve consistently high levels of CIP performance and product quality.

3D TRASAR Technology for CIP was setup to provide round-the-clock monitoring of both the plant's existing controls and Ecolab's advanced chemical sensors to monitor cleaning and sanitizing performance. The data was collected from Umpqua's Programmable Logic Controller (PLC) via an Ecolab Smart Box, which sent the data to a secure server. Ecolab's System Assurance Center distilled the server data into conformance reports. Ecolab's on-site Account Manager then accessed the conformance reports through a web dashboard and

periodically translated it into recommended corrective actions for the plant, in collaboration with the plant management, with their approval.

3D TRASAR Technology for CIP enabled Umpqua for the first time ever to "see" the volume of chemicals and water used across every single wash. This insight enabled them to compare and examine washes for cleaner sanitizer concentration variations and identify and prioritize opportunities for improvement.

THE RESULTS

By implementing 3D TRASAR for CIP, Umpqua Dairy was able to have full visibility into their CIP operations allowing them to increase productivity, reduce costs and identify areas of water over usage.



PRODUCTIVITY

Eliminated the need to go through **900 CIP CHARTS** generated monthly by plant's CIP system to identify wash quality deviations



FOOD SAFETY

Increased CIP wash conformance from **35% TO 94% ON AVERAGE**



COSTS

Reduced water and cleaning chemistry consumption for each wash, reducing **FROM \$64.18 TO \$59.85 (AVERAGE COST/WASH)**

Overall, annual cleaning time and chemical cost savings due to these optimization efforts amounted to more than **\$112,000**



WATER

REDUCED RINSE TIME AND WATER USAGE by identifying areas of water over usage and adjusting wash parameter programming

"It's now a much more consistent program", says John Harvey, Umpqua Plant Manager.