

How High Desert Milk and Hydrite Reduced Water, Energy, Chemistry Use, and Cleaning Time Through Continuous Improvement



Background

In July 2024, Hydrite began partnering with High Desert Milk at its facility in Burley, ID. Hydrite's service expertise in the food and dairy manufacturing industry spans nearly 100 years, and many of our customers rely on that expertise to help them advance their operational goals and sustainability initiatives.

From the start of our partnership, it was clear that High Desert Milk took these initiatives to heart. The HDM team worked right alongside the Hydrite team to help drive and complete numerous projects since 2024.



The best sustainability improvements are the ones that also make us a better operation. Our partnership with Hydrite has helped us identify practical opportunities to reduce water, energy, and chemical use while improving the efficiency of our processes. That combination creates real, lasting value for High Desert Milk and the community we operate in.

Jordan Oakes, Plant Manager
High Desert Milk

Value Created

The partnership delivered positive impacts across various categories at the Burley facility in its first two years. Hydrite and High Desert Milk have turned technical collaboration into measurable operating, financial, and sustainability results, with a documented pipeline of additional opportunities still ahead.

12,481,800

Gallons of water reduced

113,346

kWh of electricity reduced

127,000,000

BTUs of natural gas reduced

16,197

Minutes of clean-in-place
time saved

53,040

Miles of transportation
reduced

5,220

Gallons of chemistry
reduced

Success Story Highlights

UF Rinse Optimization

THE CHALLENGE

The ultrafiltration (UF) membrane wash was using more rinse water than the process required. On a high-volume filtration system, a little extra rinse water on each cycle adds up quickly in water, energy, and cleaning time.

WHAT WE DID

Hydrite reviewed the UF wash sequence alongside the HDM team to optimize hydraulics across all loops and supply pressures to effectively rinse and displace solids improving CIP times, cleaning performance and efficiency.

RESULTS

7,231,680
gallons of water saved annually

11,664
minutes of cleaning time saved annually

Hot Cream Cheese Line Rinse Reduction

THE CHALLENGE

The post-rinse steps that follow the caustic and acid cleaning cycles were running longer than the process required, using extra water and adding time to every clean.

WHAT WE DID

Hydrite fine-tuned the rinse time removing a total of 5 minutes of rinse between the caustic and acid chemical post-rinses — a small adjustment that pays off every time the system is cleaned.

RESULTS

97,500
gallons of water saved annually

780
minutes saved annually

Cream Cheese Transfer Line Post-Rinse

THE CHALLENGE

On the cream cheese line, the caustic post-rinse ran a full 23 minutes even though the rinse water reached neutral pH with about 14 minutes still left on the clock. In other words, the line kept rinsing well past the point of clean.

WHAT WE DID

Hydrite used pH as the true endpoint to optimize the caustic post-rinse from 23 minutes to 9 minutes, while maintaining cleaning and food-safety standards while cutting the excess water and time.

RESULTS

65,520
gallons of water saved annually

2,184
minutes saved annually

Packaging Tank Rinse Reduction

THE CHALLENGE

The packaging tank rinse was set to 30 minutes by default, which was longer than the tank needed to reach a verified-clean condition.

WHAT WE DID

Hydrite confirmed the tank could be reliably and safely rinsed in 20 minutes and adjusted the program, freeing up both time and water on every single cycle.

RESULTS

124,800
gallons of water saved annually

1,569
minutes saved annually

Looking Ahead

Every optimization completed at High Desert Milk creates a foundation for future improvements. Hydrite's technical team continues to evaluate cleaning systems, water use, process controls, and CIP performance to identify additional opportunities for resource reduction and operational efficiency.

Through monthly reviews and ongoing collaboration, Hydrite and High Desert Milk prioritize projects based on operational impact, sustainability objectives, and long-term value creation.

The Hydrite Advantage

Expertise That Identifies Opportunities

The sustainability gains achieved at High Desert Milk stemmed from a collaborative process of observation, measurement, and continuous improvement.

Hydrite's Food Program Managers worked directly with plant personnel to evaluate cleaning programs, review operating data, validate sanitation performance, and identify opportunities to improve efficiency without compromising quality. Drawing on experience across dairy facilities throughout North America, Hydrite helps customers uncover resource-saving opportunities that often go unnoticed, **turning everyday operations into measurable improvements.**

Commitment to Sustainable Progress

Sustainability is most effective when it is Pristine, Routine, and By Design with operational performance. The Hydrite team worked in conjunction with High Desert Milk to reduce water consumption, energy use, chemical usage, and waste through practical, data-driven improvements that deliver lasting results.

This **shared commitment to responsible resource stewardship** sets the foundation for a partnership that drives measurable improvements. By choosing a partner that prioritizes sustainable solutions, High Desert Milk can make meaningful progress for the business and the environment.



One of the traits we see at successful customer locations is people that genuinely care about what they do. The team at HDM understands that how they manage natural resources affects not only their efficiency as a dairy manufacturer, but also the environment and community in which they operate and live.

Paul Smith, Director of Strategic Accounts
Hydrite

Sustainable Progress, Together

As good stewards of the southern Idaho community, High Desert Milk considers the impact of everything they do. From milk protein concentrate to butter and cream cheese, every drop of water and every use-point of energy is handled with care. Hydrite values the emphasis High Desert Milk places on becoming ever more efficient — as a dairy processor and as a responsible business in our shared community.



Providing Creative Solutions

FOR MORE INFORMATION:
HYDRITE
17385 GOLF PARKWAY
BROOKFIELD, WI 53045

WWW.HYDRITE.COM
262-792-1450
INFO@HYDRITE.COM