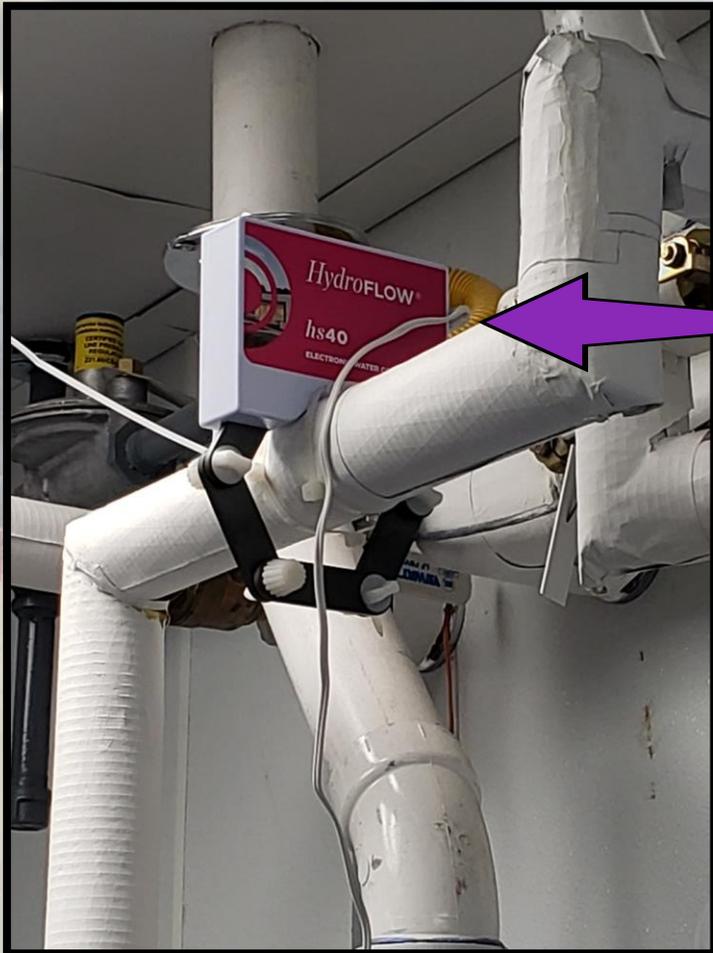


# HydroFLOW Case Study



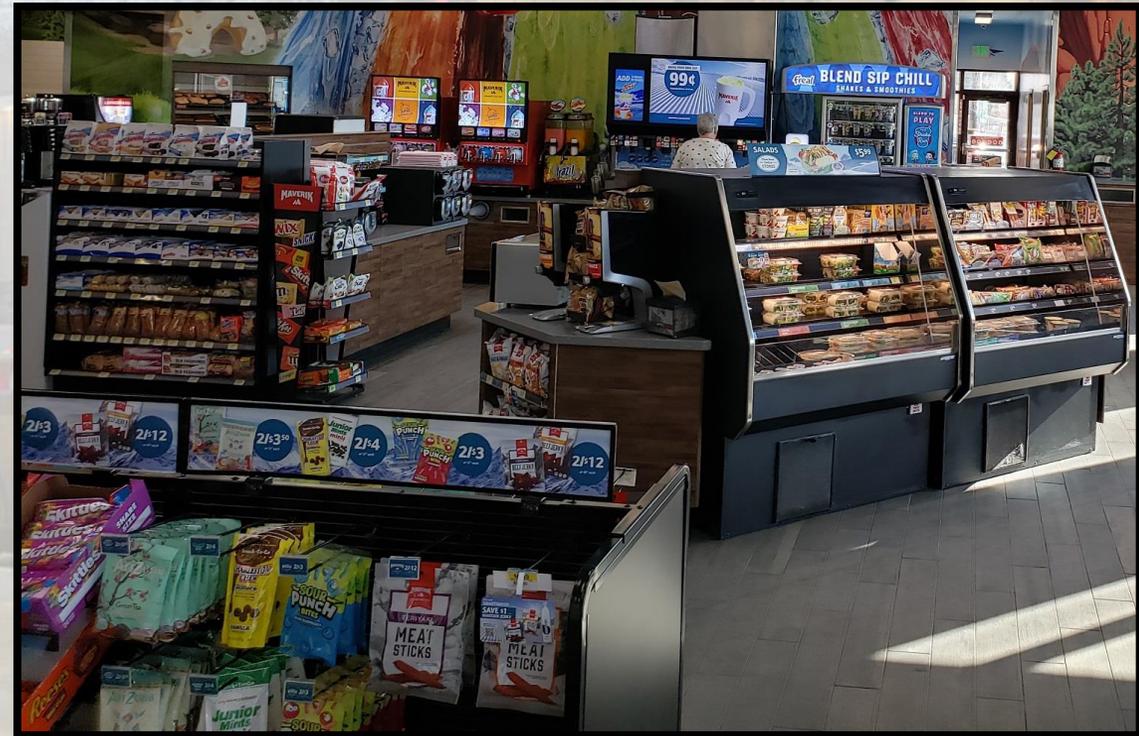
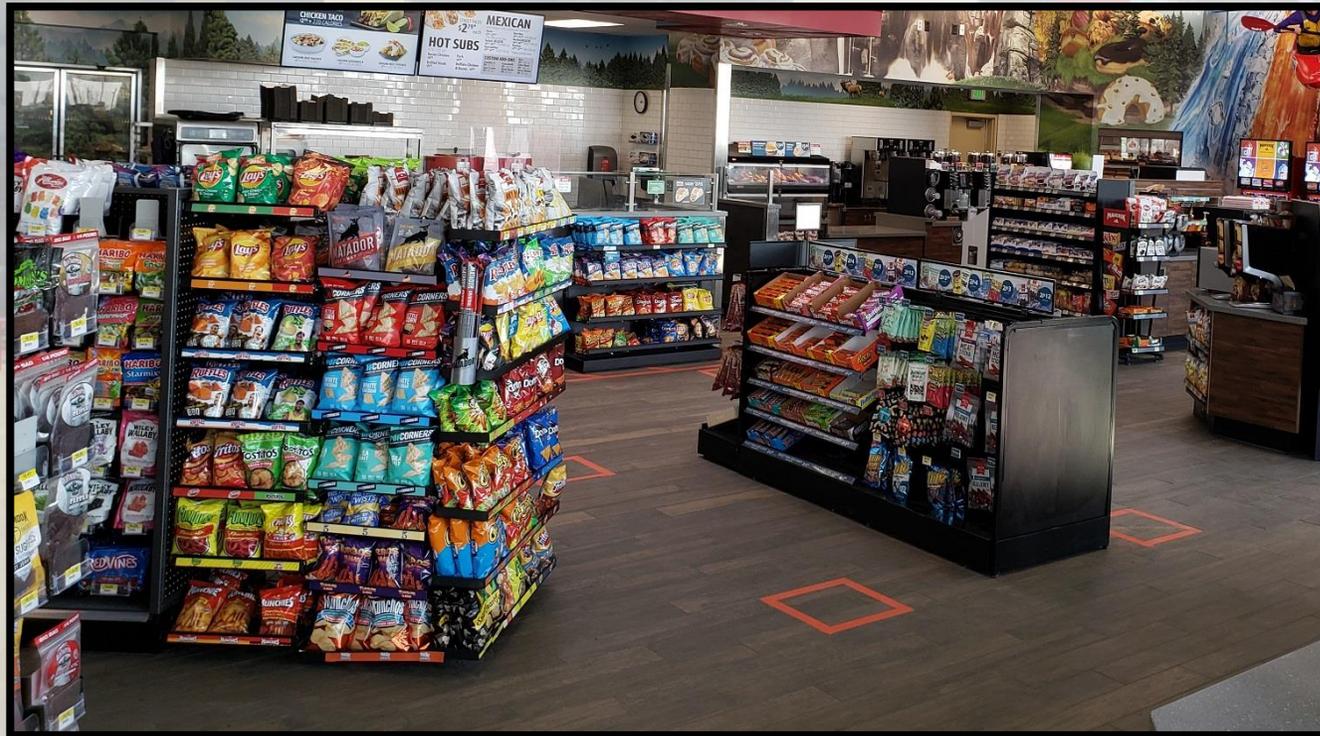
## Scale Reduction - Gas Station and Convenience Store Chain United States

Last Updated in February 2023  
Updates on slides 3, 4, 6, 11, 12, and 13



# The Customer

This gas station and convenience store chain has over 400 locations across 12 states. The stores sell fresh-made food items such as burritos, sandwiches, pizzas, toasted subs, cookies and coffee. Looking to reduce scale buildup and maintenance costs, the customer chose to utilize *HydroFLOW s38* and *hs40* devices to treat coffee makers, food warmers, ice machines, water heaters and fixtures.



# HydroFLOW Water Conditioners

Hydropath technology powers the *HydroFLOW* devices which are highly efficient, non-intrusive electronic descalers that are installed on the water pipe entering your home or business. *HydroFLOW* treats fluids by inducing a robust yet harmless signal of 150kHz throughout plumbing systems made of any material, including PEX and PVC.



The *hs38* fits pipes up to 1" outer diameter.



The *s38* fits pipes up to 1.5" outer diameter.



The *hs40* fits pipes up to 2.5" outer diameter.



The new Pearl Plus that fits pipes up to 1.5" outer diameter.

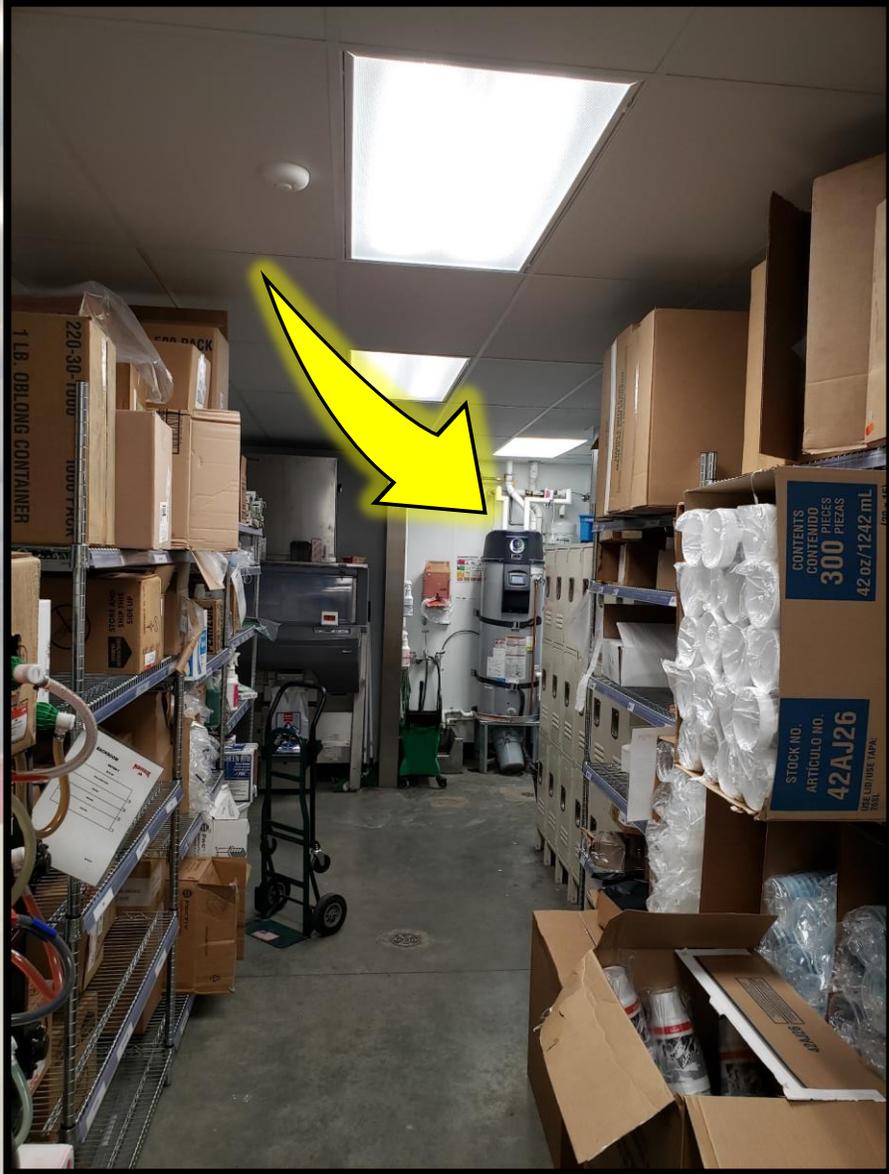
# Water Heater Install Point - Older Stores



Older stores have a  $\frac{3}{4}$  inch cold water pipe entering the water heater. These stores require an s38 (now Pearl Plus) device.



# Water Heater Install Point - Newer Stores



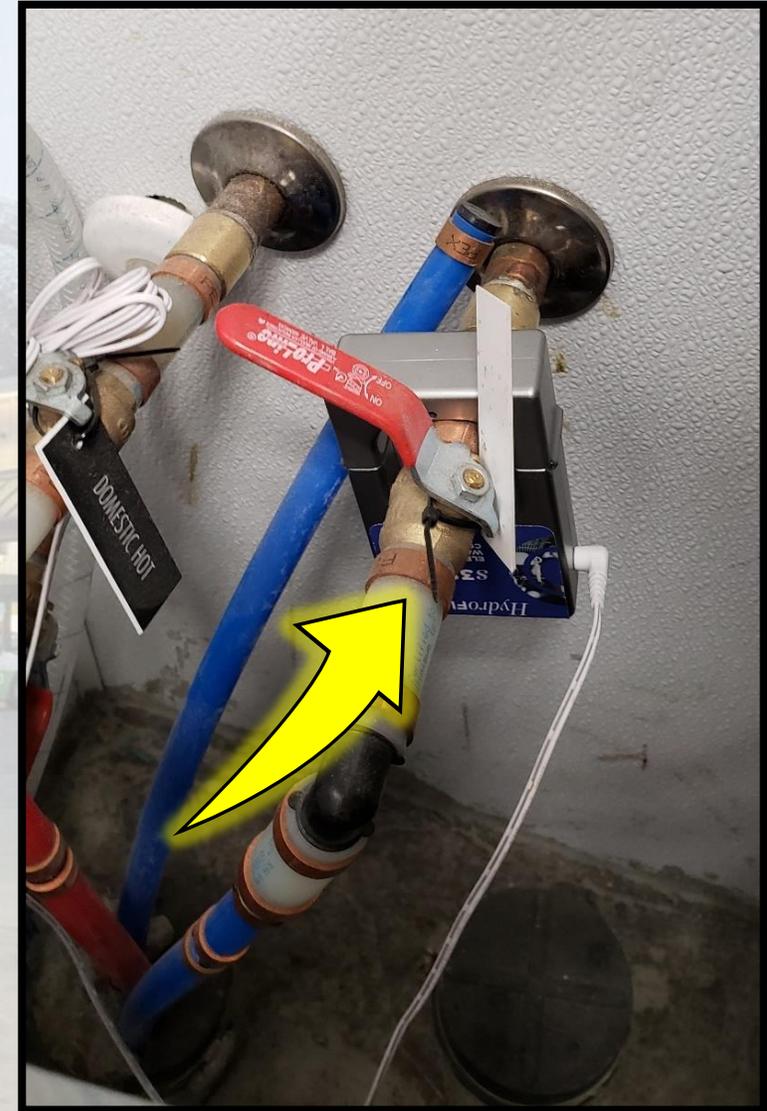
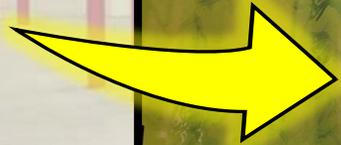
Newer stores have a 1 ¼ inch cold water pipe entering the water heater. These stores require an *hs40* device.



# Ice Machine Install Point - All Stores

All stores have a  $\frac{3}{4}$  inch cold water pipe entering the ice machine.

Each ice machine requires an s38 (now Pearl Plus) device.



# Results - Fixtures

**Before**



**3 Months After**



**Note scale  
removal without  
manual cleaning**

**Loose scale released  
from piping**



# Results - Fixtures

**Before**



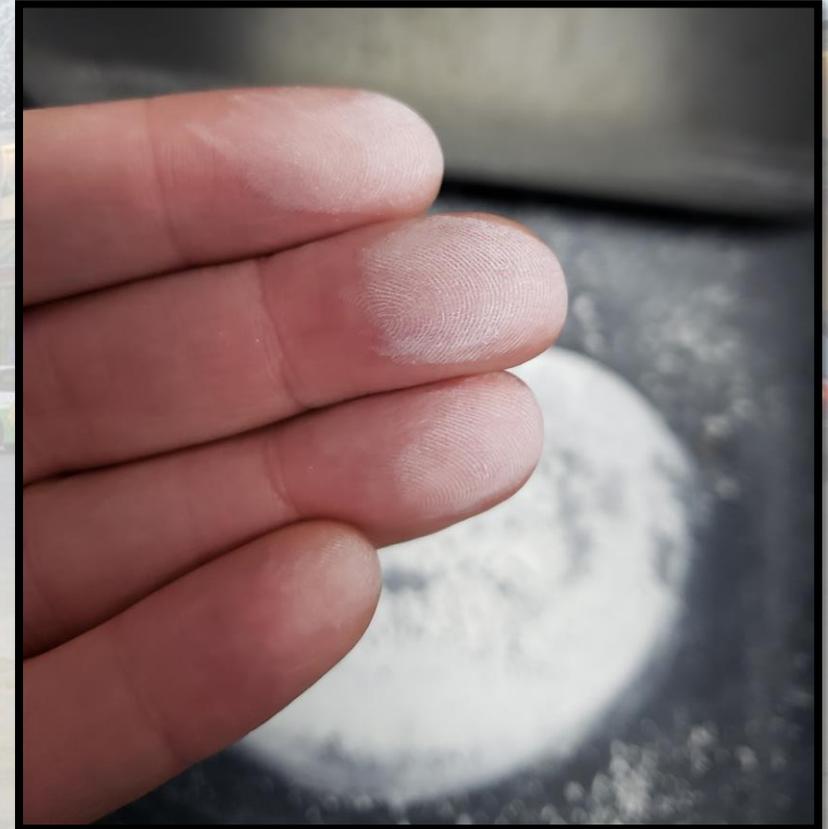
**Note scale  
removal without  
manual cleaning**

**3 Months After**



# Results - Food Warmer

***Store manager: "After a few days of using HydroFLOW, we noticed hard scale is not sticking to the heating plate; the residue is powdery and easy to clean."***



# Results - Coffee Makers

Before



3 Months After



Note scale  
removal without  
manual cleaning

# Summary

- The *HydroFLOW s38* and *hs40* devices visibly reduced hard scale accumulation in key areas around the stores.
- The heating elements of the water heaters are noticeably cleaner.
- The units are positively impacting the ice machines by reducing scale and biofilm accumulation.
- Maintenance associated with cleaning sinks, food warmers, fixtures, cooking areas and coffee makers has greatly reduced.
- The estimated return on investment for a typical store is between 6 to 12 months.
- The customer is in the process of installing *HydroFLOW* devices in other stores that suffer from scale related problems. To date, over 30 locations are protected from the harmful effects of scale and biofilm.

# 2023 Updates

The water heaters in the stores equipped with *HydroFLOW* for over 6 months have descaled and are running at higher efficiency, while requiring less frequent servicing.



Half a pound of purged scale from a store's water heater.

Acid cleaning damages the seals and voids the manufacturer's warranty of the food warmers. With *HydroFLOW* there is no need to acid clean them. In addition, daily maintenance is less labor intensive and keeps the warranty valid.



Loose scale powder collects in the bottom and rinses out easily.



# 2023 Updates

The ice machines in the *HydroFLOW* equipped stores are on a quarterly maintenance schedule and have NOT required a technician to take them down for cleaning over the last year. In the past, cleaning was quarterly.

The smoothie machines had not been a priority during initial testing, but after a year it was noticed that the stores with *HydroFLOW* did not have to call in a service tech to clean out the hot water lines in the machines. Before *HydroFLOW*, these machines would clog-up with scale every few months requiring a \$150 service call.

