



**Fluid Dynamics**  
Hard water solutions since 1973

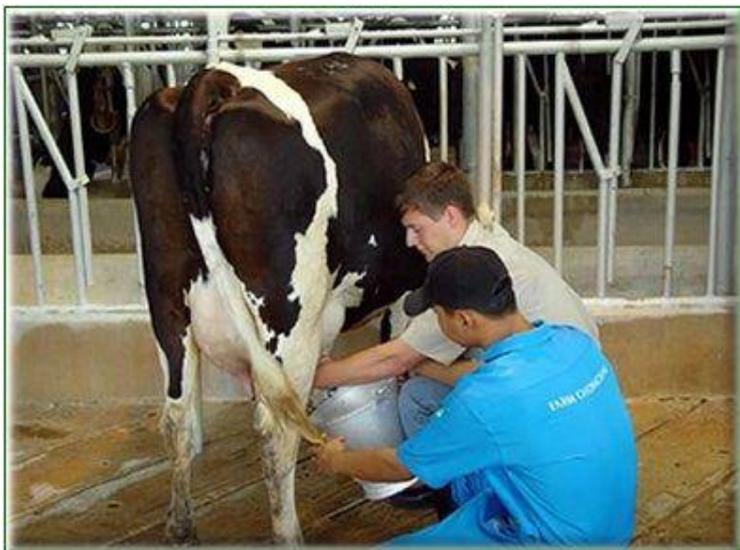
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CLEAN, CLEAR & NUTRITIONAL WATER



## The Dairy Industry





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## Scale and Milk Stone in Dairies.

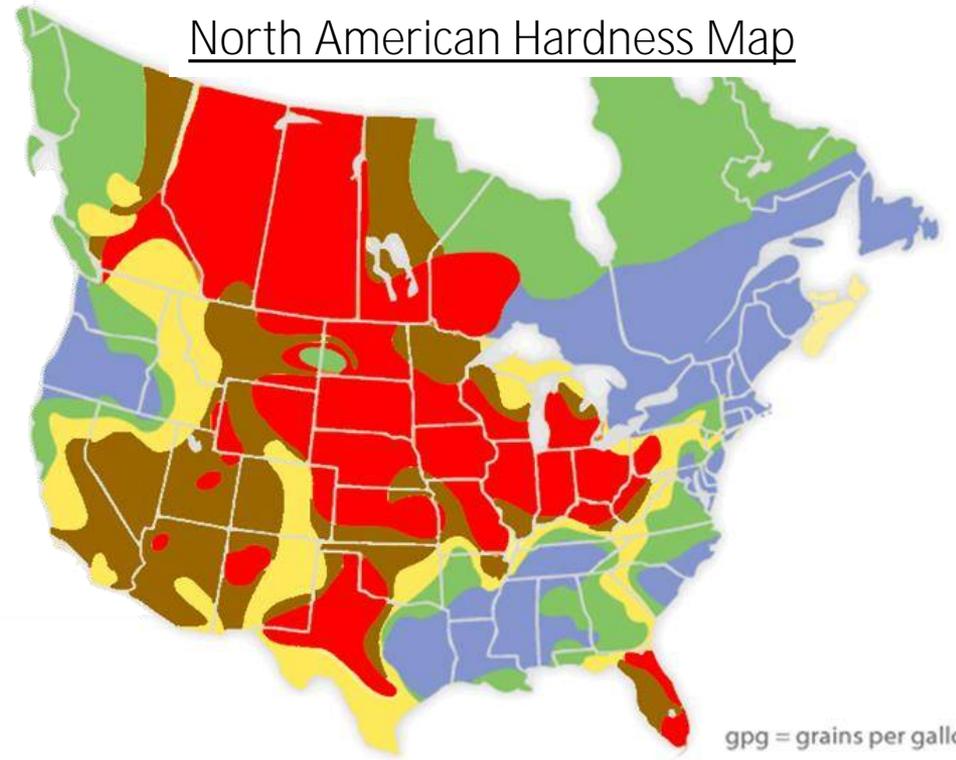
Many dairy farmers have had to deal with excess amounts of calcium in their water for generations.

Water with high calcium content is referred to as "hard water".

Calcium is an essential mineral for animals, but it causes many problems for farmers and their milk processing equipment.



## North American Hardness Map



gpg = grains per gallon

According to the United States Geological Survey, 89.3% of US homes have hard water.

Over 85% of Canada has a hard water problem.

- less than 3 gpg  Slightly Hard
- 3 to 7 gpg  Moderately Hard
- 7 to 10 gpg  Hard
- 10 to 14 gpg  Very Hard
- over 14 gpg  Extremely Hard





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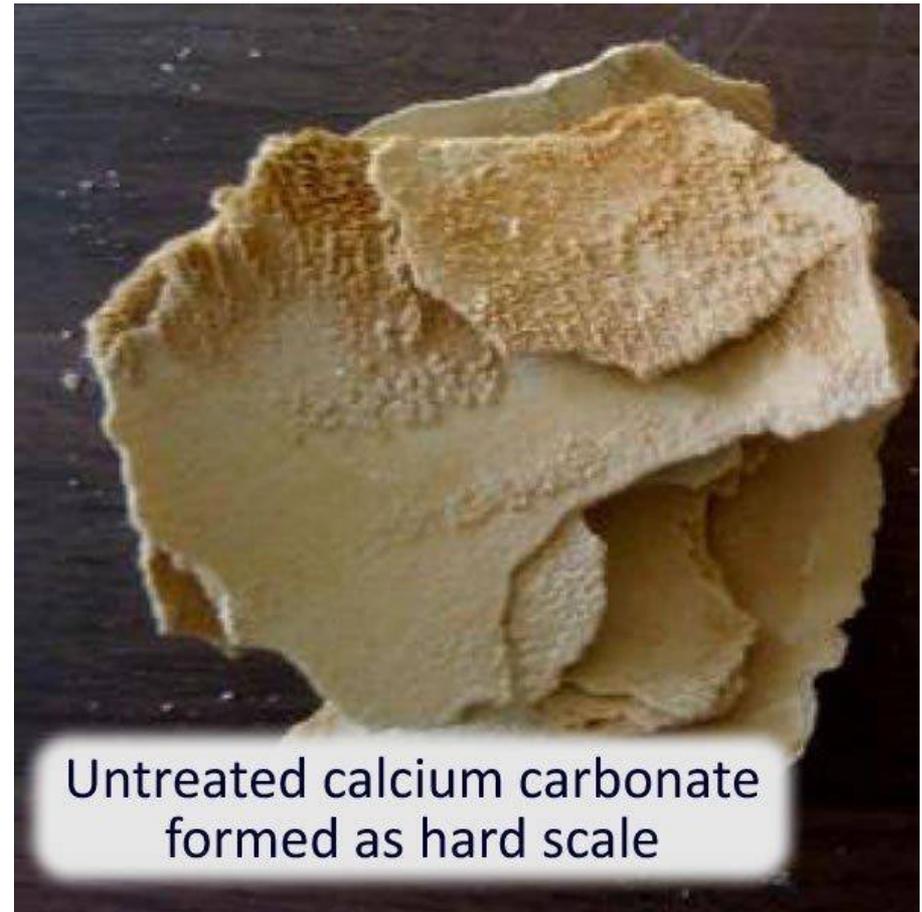
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## Hard Water Scale

Calcium carbonate deposits form on pipes and surfaces. Once the scale forms, it creates a medium for algae and bacteria growth. This is one of the first items a dairy inspector looks for.



Untreated calcium carbonate formed as hard scale





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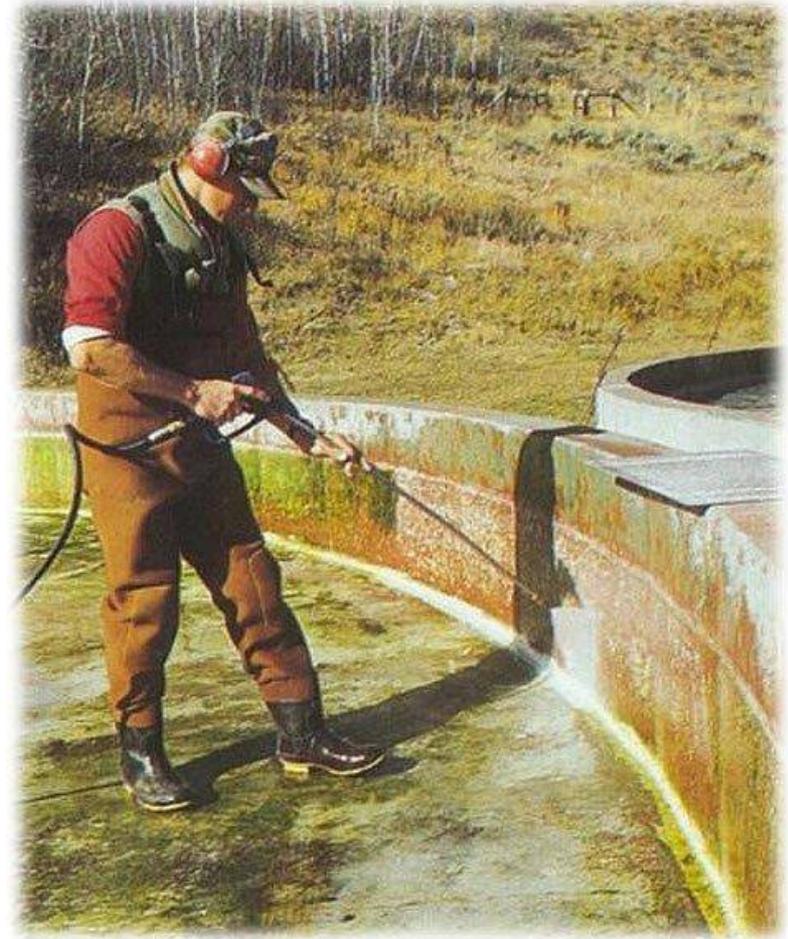


## Hard water scale causes billions of dollars of energy to be wasted every year

The insulating effect of scale and its accumulation in systems leads to increased energy use for the heating and circulation of liquids.

Milk Stone accumulation leaves many dairy farmers with no choice but to dismantle and clean their equipment on a regular basis. Often harsh chemicals have to be used to remove the scale and milk stone accumulation.

The cost in time and chemicals is considerable and the chemicals used are damaging to the environment.





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## The Objective

By identifying the locations where scale build up occurs, a simple chemical free solution can be installed to eliminate scale and milk stone. This will greatly decrease the presence of bacteria growth that can form on scale deposits.

Shown to the right is an actual storage tank that is now scale free and virtually maintenance free due to our chemical free solution.





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## A Chemical Free Solution

Dairy Farms do not have to endure the damaging and costly effects of scale.

There is a proven way to easily eliminate scale and milk stone in your Dairy.

The Scaleton from Fluid Dynamics is THE best option





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## The Environment

Calcium is actually a metallic element .  
When bonded with carbon to form calcium carbonate in its calcite state it adheres to surfaces.

Quite often harsh chemicals must be used to clean dairy equipment.

These chemicals are damaging our environment.





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## The Easy to Install Scaletron from Fluid Dynamics:

- Does not use chemicals, electricity or magnets
- Does not waste any water
- Is a Totally Green Solution
- Saves energy by keeping equipment scale free
- Extends the life of equipment
- Saves labor due to a large reduction in maintenance requirements
- Minimizes disruption in core business due to shut downs from equipment failure, cleaning and maintenance
- Is a low cost hard water treatment that lasts for many years



*The Scaletron is the perfect solution to eliminate hard water scale and milk stone in your Dairy*





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## The Scaleton Protects Equipment



Milk stone can damage and clog equipment on a regular basis. A Scaleton can provide many benefits including extending the life of pumps and other equipment.





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## Increased Production

During the clean out phase production is stopped.

The Scaleton will eliminate the need to stop production due to absence of scale and milk stone build-up.

The Scaleton will pay for itself in a few months in most cases. The Scaleton comes with a ten year warranty.

## Testimonials

We take the guess work out of the equation with the following testimonials from LaLu Farms and Cedar Spring Farm.





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LaLu Farms  
David and Linda LaFever  
805 Taft Church Rd.  
Sparta, TN 38583

## Testimonial # 1

Dear Mr. James,

David is the 2nd generation on this farm. It is located on the Upper Cumberland Plateau in Tennessee. Our farm is diversified and we run a dairy and have beef cattle and hay. The water supply for the dairy barn is from a well with very high calcium (400 ppm), thus contributing to large amounts of milk stone buildup in our milk tank from the scale left behind by the hard water. Our herd produces high protein milk. Combining the high protein milk and the high calcium water just gave us fits in keeping our equipment clean. When we wash down the equipment the calcium scale sticks to the stainless steel pipes, valves and tanks, then the protein or milk stone would start to build up the scale. The only way prior to installing the Scaleton to remedy milk stone was to use huge amounts of chemical, tons of man-hours thus costing us considerable amounts of money.

We installed the Scaleton in March of this year (2010). It has now been in place for 6 months, and the milk stone buildup has not been a problem since. The reduction of milk stone in our tank has reduced the amount of time and money spent in keeping our equipment clean and milk stone free. Attached are before and after photos of the equipment.

Thank you for bringing this product to our attention and we look forward to sharing this product with our fellow farmers.

Sincerely,

David and Linda LaFever





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## Testimonial # 2

### **Cedar Springs Farm**

13382 Kennedy Road  
Stouffville, Ontario  
L4A 7X5

In May 2011 we had Treatwater Canada install a "Fluid Dynamics" solution in our barn to replace our existing water softener system. By removing the water softener we no longer need to purchase salt, we're using less water and we need no hydro to operate it - reduced costs! Our wash cycle is much more efficient as the tank fills faster and as a result the water stays hotter. In the past we have had Insufficient TCIP alarms on our Dairy Cheq system, but since installing we have not had any alarms (something the milk inspector noticed). In the winter, this will be especially beneficial as the wash cycle starts faster and the water will remain hot.

Previously, service technicians have had difficulty working on our water pump, but by removing the water softener we have freed up a lot of space, making access to everything easier. Using the Fluid Dynamics System we have found that the water is as soft, but has no bitter taste as with water softeners. Brush cleaning (the tanks and sinks) is actually easier and there is absolutely no maintenance!

We would highly recommend this product to other dairy barns.

Best regards, Dennis and Lorrie Bolender Cedar Springs Farm





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## Everything to Gain

With a no risk guarantee, easy installation, a multitude of benefits and a proven track record, it only makes sense to install the Scaleton in your dairy.

Thank you for your time.

