

## CASE STUDY

## Pre-Membrane Treatment Quebec Canada



### OVERVIEW

**Solutions Limpides** (Granby QC) has been experimenting with **ScaleBuster**® conditioners as part of membranes (RO - Reverse Osmosis, UF – Ultra Filtration and now also NF – Nano Filtration) pre-treatment since 2014 for hard and very hard water.

### WATER SYSTEM CHALLENGES

In rural Quebec, most residential water supply comes from wells. When Hardness exceeds 13 grains/Gal (222 ppm) with high Fe levels as high as 0.5-4.0 ppm (standard is <0.3 ppm) and Mn levels up to 3.5 ppm (esthetic standard <0.05 ppm). Iron and manganese (Fe/Mn) are common contaminants in groundwater supplies, Iron is the more frequent of these two, but they often occur together. High levels of these contaminants can result in discolored water, stained plumbing fixtures, and an unpleasant metallic taste to the water.

### SOLUTION

For 1,200 gpd membrane systems - mostly NF, with production (permeate) 2 to 3 times higher and with 2 times less rejection vs. RO (but also with RO and UF applications) a 3/4" SB-20 **ScaleBuster**® conditioner has been installed as part of the pre-treatment of the membrane system.



### RESULTS

Testimony from **Solutions Limpides**: "With the **ScaleBuster** we prevent treatment equipment of prematurely clog-up, especially at the level of the upper basket and center riser of our Oxyfère, iron-manganese-SH reducing instruments. Nano filtration spiral wound membrane unit would last one to three years for residential applications. This represents (for an average household of 4-5 people) producing from 1,000m<sup>3</sup> to 2,000m<sup>3</sup> (250,000 to 500,000 US Gal.) of Nano-filtered water, before any cleaning or membrane replacement! After over 8 years of experience with **ScaleBuster**, **Solutions Limpides** have found out that installing a **ScaleBuster** conditioner (on many different applications) had proven to be effective in preventing fouling and scale buildup in all treatment equipment following the **ScaleBuster**."

### ABOUT THE TECHNOLOGY

The patented **ScaleBuster**® technology completely replaces traditional chemical treatment; providing control of scale and corrosion in various water process systems to create an exceptionally clean system. This dramatically reduces energy and water consumption, while reducing or, in certain cases, eliminating toxic water discharge to the environment.