## The Science

Water is an extremely complex substance unlike any other. Due to the electrically polar nature of the water molecule, liquid water has a tendency to agglomerate into metastable structures which significantly reduce it's solubility to dissolved minerals.

Changes in temperature and pressure which are typical in a water flow will also alter it's solubility and cause a water solution to enter a supersaturated state whereby the dissolved minerals will 'come out' of the solution and deposit on the walls of it's container - this is how scale forms.

**CALCLEAR** works by using a complex electronic field to interact with the electric field of the water molecule to resonate the molecules and violently disrupt the metastable structures in liquid water dramatically increasing it's solubility. This effect is quite persistent and empirical observations show it's effectiveness long after the initial treatment. Water is effectively 'softened' even though the dissolved minerals may still be present. The solubility of the water is increased to such an extent that minerals already present in scale are enticed back out into solution and this is how scale that is already present is removed by the Calclear system.

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