Limescale and the effects of heating water above 60°C

When rain falls it becomes enriched with carbon dioxide (CO_2) which becomes trapped within its molecular structure. The rain falls to earth then percolates through the ground ending up in streams, rivers and our reservoirs, if the rain water happens to flow through ground containing limestone the carbon dioxide in the water causes small amounts of limestone to dissolve which the becomes suspended in the water as flows into the rivers and reservoirs. This limestone can again be released from its dissolved state in the water through turbulence and also heating the water above 60°C By heating the water above 60°C inhibits the carbon dioxide in the water molecules from keeping the limestone in a dissolved condition. The limestone then reforms in the water back to a solid state and shows in the form of limescale appearing in the form of limescale around showers, taps and kettles etc as the as the water eventually evaporates. The limescale can also remain unseen in pipes eventually furring up the inside of pipework drastically reducing the efficient flow rate of water through the pipe.

To conclude by heating water to below 60c prevents the carbon dioxide escaping and thus the dissolved limestone reforming as limescale around spouts and in pipework.