



Thermal Expansion

Marion County
OREGON

BROOKS COMMUNITY SERVICE DISTRICT

All customers who have a Backflow Prevention Assembly on the water service line to your home or place of business need to be aware of thermal expansion.

Water heaters are installed with a **temperature and pressure valve (T&P)** which is designed to relieve excessive water temperature or pressure. Also aiding in the control of excessive heat and pressure is a condition known as thermal expansion which allows extremely hot water to backflow through the water meter into the water main line, mixing with the cold water and dissipating the heat.

However, when a backflow prevention assembly is installed on a water service line, the water cannot go back out into the water system. This leaves the T&P valve as the only release route for the overheated water.

If the water heater thermostat becomes defective allowing the water temperature to increase to more than 212 degrees and the T&P valve fails, the water can become "superheated". Superheated water can cause water heaters to explode or can allow scalding steam to be released from the faucets upon personal use.

This condition is rare, because the water heater thermostat and the T&P valve must both malfunction simultaneously. However, with the backflow prevention assembly in place, the potential hazard exists. **The Brooks Community Service District recommends that the T&P valve be inspected periodically.**

"A licensed plumber can inspect, repair, or replace the T&P and assist you with other methods of protection."

