Maintenance and Testing of Backflow Prevention Assemblies

The Water Quality Control Specialist will test all backflow prevention assemblies upon installation and annually at no charge to the consumer. This is to ensure every assembly has been properly installed, maintained, and has not been altered.

In the event an assembly fails a test, a Notification of Failure will be sent to the owner/responsible person. Any failed assembly will need to be repaired or replaced within thirty, (30), days of receiving Notification of Failure by a person certified by the State of Tennessee or TAUD as Competent in the area of Backflow Prevention, and at the owner/responsible person's expense. The failure to repair or replace any failed backflow prevention assembly will result in termination of water service.

Thermal Expansion

The installation of a backflow prevention assembly, dual check valve, swing or spring check valve, or pressure reducing valve will make a customer's plumbing system a 'closed system', thus preventing heated and expanded water from being pushed back into the public water system.

The water heater in your home/business goes through a 'recovery' process every time hot water is used. This process can occur several times over the course of a day, depending on how often hot water is demanded. As the hot water is used, it is replaced with cold water and the water heater begins heating the water to the desired temperature setting. This recovery process creates a condition known as 'Thermal Expansion'; as water heats it expands. Given that water is an uncompressible liquid, it must expand by any means available. This means is typically a T&P or 'pop-off' valve on your water heater. which are designed to relieve excessive pressure caused by temperature within the heater enclosure. This T&P or 'pop-off' valve is actually an emergency relief valve, and therefore not intended to compensate pressure increases created from thermal expansion.

Prior to the installation of a residential dual check valve or backflow prevention assembly, the public water system had provided a 'cushion' which absorbed the pressure build-up from thermal expansion due to your water heater. This reverse movement of flow, or Backflow from an unmonitored source, is prohibited by both State and Federal regulations, thus the need for a dual check valve to be installed on every new residential domestic connection and existing connection as scheduled or warranted.

Thermal Expansion can easily be contained by the use of a Thermal Expansion Tank, or other Thermal Expansion Relief Device. These products are available from most plumbing supply stores. Some of the more common manufacturers of these are Watts, FebCo, Wilkins, Amitrol, and Apollo. If you have difficulty in locating a supplier, please call a Water Quality Control Specialist for assistance.

Failure to address this problem within your private premises may result in serious damage to your water heater, plumbing fixtures, as well as any problem normally associated with water damage. Thermal Expansion can cause washer lines to leak as well. The City of Kingsport Water Technical Services Division Is Not Responsible for any damage to private property due to Thermal Expansion

Water Technical Services Division: (423)229-9454 www.publicworks.kingsporttn.gov/water-qc