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### **HELP PREVENT BACKFLOWS**

Most water customers assume that water from the City's mainline will only move in one direction – from the mainline to the building. However; under certain conditions, such as when a fire hydrant is opened or a water mainline break has occurred, water can flow backwards. This reverse flow, or backflow, can actually create a vacuum, and can be dangerous if there is a cross connection exists. A cross connection is a connection, either permanent or temporary, between the water piping system and a source of potentially contaminated water.

Mixing chemicals or other items with a garden hose in a bucket seems a normal thing to do, but it can create a hazard not only to your family but also to your neighbors if you make a simple mistake. Dropping a hose into the bucket so that the end is below the liquid surface creates a cross connection. Contaminants can be pulled into the water main without warning, just like drinking through a straw.

The best protection is to make sure there is always a gap between the source of water, such as a garden hose or faucet, and any source of potentially contaminated water. Commercial and industrial water users in Arkansas are required to install, test, and maintain backflow prevention devices consistent with the level of hazard they present to the water system.

One simple backflow device for residential water users is the hose bib vacuum breaker. They are readily available inexpensive devices that install between the faucet and garden hose. When the water supply is interrupted, the device vents to atmosphere, thus protecting against anything being siphoned back into the hose.

The following tips may help to reduce the potential for backflow:

- DO NOT submerge hoses in buckets, pools, tubs, or sinks.
- DO NOT use a garden hose to clear a sewer stoppage.
- DO NOT use spray attachments without a backflow prevention device.
- DO keep the end of the hose clear of possible contaminants.
- DO install vacuum breakers on all water faucets on your property.

**DO NOT PUT A HOSE IN ANYTHING THAT YOU WOULD NOT WANT TO DRINK.**

The Van Buren Municipal Utilities is dedicated to providing safe drinking water to our customers. Please do your part to help protect yourself, your family, and others.

VAN BUREN MUNICIPAL UTILITIES 24 HOUR TELEPHONE NUMBER 479-474-5067

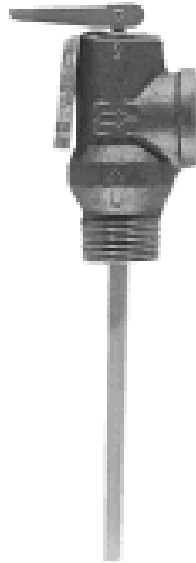
## THERMAL EXPANSION

Water heaters are installed with a **temperature and pressure relief valve (T&P)**, which is designed to relieve excessive water temperature or pressure. Also aiding in the control of excessive temperature and pressure is a condition known as **thermal expansion**, which allows hot water to backflow into water main lines through the water meter, mixing with cold water and displacing the heat. However, some homes/buildings may have a backflow prevention device, check valve, pressure regulator or other device installed on the water service line. In this case, the water cannot backflow into the water system. This leaves the T&P valve as the only escape route for the overheated water.

If a water heater thermostat becomes defective, allows the water temperature to increase to more than 212 degrees F, and the T&P valve fails, your domestic water can become "superheated." Super heated water can cause water heaters to explode or can allow scalding steam to be released from faucets upon personal use. This condition is rare because the water heater and the T&P valve must malfunction simultaneously. However, with the backflow prevention device, check valve, pressure regulator or other device in place on the water service line, the potential hazard does exist.

**Periodic inspection of the T&P valve is strongly recommended.** The lever can be lifted momentarily to ensure that the unit is not stuck due to chemical deposits around the seat, if the unit does not reseat then it is defective and should be replaced. **A professional plumber can inspect, repair or replace your T&P valve to ensure your safety.**

Several water service lines in Van Buren may have a check valve installed at the water meter. Some customer's water service lines may have a pressure reduction valve installed on the customer's side of the water meter. Thermal expansion chambers, devices and cock assemblies can provide additional protection. Call a professional plumber for more information.



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