

## Plumbing Code

The Federal “Safe Water Drinking Act” requires water systems to provide clean safe drinking water to all their customers. To help us accomplish this task, the State of Utah set up the Cross Connection Control Program. This requires us to protect all services from backflow.

All new construction must abide by the latest edition of the Plumbing Code and all older residences must be brought into compliance of this code.

## Backflow

Backflow is whenever water reverses its current direction of flow. It can be caused by siphonage. This occurs when a vacuum causes water to flow in the reverse direction. This can be created by a shutdown of the city main water lines, or differences in pressure between irrigation and culinary lines. When water reverses its flow, undesirable substances can be sucked into the city water supply or into your home. Some chemicals that can or have entered water supply lines are:

- Household cleaners (bleach, etc.)
- Antifreeze
- Herbicides/Pesticides (from hoses or lawn sprinkler systems)
- Bacteria (from wading pools, animal troughs, etc.)
- Other (from boiler systems)

The basic principle to backflow prevention is whenever the safe drinking water leaves the piping it must be protected by an air gap or a backflow prevention device, as is required by the plumbing code.



## Water Service Entrance

Daniel Town currently installs a backflow prevention device at the water meter whenever a leak is repaired or during water main replacement projects. The way they work is simple. When water is flowing into the home the check valve is open. When the water is shut off, they close. This will prevent water from being siphoned from your home if the water main is shut down.

**At the time of installation, the homeowner will need to install a thermal expansion device!**

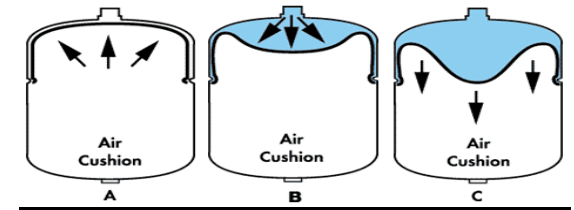


## Thermal Expansion

Thermal expansion occurs when water is heated during non-use periods. As water heats it expands and increases in volume. A typical 40 gallon water heater can increase by over a gallon of water! Prior to the installation of a backflow device at the water meter, this increase of water was absorbed by open-ended supply lines dumping it back into the City water mains. With the installation of a dual-check valve on the water service line, a “closed” system is created which will not allow the water to flow backwards into City lines. Current plumbing codes require an expansion tank or similar device to be installed on “closed” water systems.

Unregulated thermal expansion can be damaging, dangerous and costly. Its effects include damage to the water heater, pumps on washing machines and dishwashers, leaky faucets, and noisy water hammer. The installation of this device is the responsibility of the homeowner.

## How Expansion Tanks Work



**A.** When the system is first filled with cold water, the tanks pre-charged pressure, which is equal to the fill pressure, keeps the diaphragm flush against the tank.

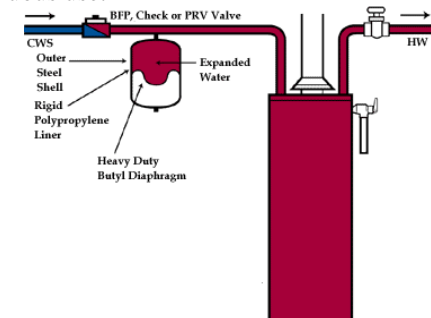
**B.** As the system water temperature increases, the expanded water is received by the tank.

**C.** As the system water temperature reaches its maximum, the diaphragm flexes against the air cushion to allow for the increased water expansion.

When a water heating cycle ends, or when any fixture is opened, the impact of thermal expansion is reduced and the water drains back into the system. No water is ever wasted, saving you money.

## Water Heater

All water heaters must have a T & P safety relief valve. This ensures if the temperature or pressure builds up to unsafe levels within the tank, the valve opens and water “spills” into a drain or onto the floor. However, these valves are not designed for continuous use.



## WATER COSTS MONEY – DON'T WASTE IT!

### Water Conservation Tips:

## “Water We Doing For You”



\*Daniel Town has over 200 water meters.

\*We are currently converting all meters to a radio-read system in the Town. This enables us to read meters every month, year round with better accuracy and more frequent billing than with manually read meters. This also helps the homeowner with better monitoring of water use.

\* Daniel Town has part-time meter readers and hires additional persons in summer months to assist in reading and to change water meters.

\*Our personnel routinely check for leaks and other water related problems at customer request. Don't hesitate to call us if you see or hear a water leak. We will gladly come check it for you.

Questions on thermal expansion, billing problems or water leak related questions?

Please call Gary Walton at 654-3694

Make sure your faucets turn off completely. Even a slow drip can use as much as 5,000 gallons of water per month. A steady stream can lose up to 21,000 gallons per month.

A toilet that runs continuously can use as much as 4,000 gallons of water per day! Even a slow, silent leak can add gallons to your bill. To check for a toilet leak, put a few drops of food coloring in the tank and see if it seeps into the bowl. If it does, replace the flapper valve and/or the rubber gasket at the bottom of the tank.

Sprinkler system deep valves are another common water leak. If they are not completely on or completely off, they are designed to “bleed” water. The pipe it is enclosed in should be DRY. It is a good idea to check them periodically, especially a few days after turning it on and off each season.

Turn off water while shaving or brushing teeth and only run washing machines and dishwashers when fully loaded.

Don't water lawn during the heat of the day and determine the needs of your lawn for watering frequency and duration.

Water information is located at the following links:

<http://www.conservewater.utah.gov/>

<http://www.rwau.net/>

<http://extension.usu.edu/>

- Plumbing Code
- Backflow Prevention
- Thermal Expansion
- Conservation/leak tips
- Helpful Links & Websites

Drinking water is a most precious resource. As your water supplier, we make every effort to provide you with clean, pure, fresh tasting water. However, once the water enters your home, it is your responsibility to help keep it clean and safe for your family and the rest of the community.

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### Daniel Town Water Department

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**www.danielutah.org**