

Public Works Department Irrigation Season Reminder

With the onset of spring weather and start of the irrigation season homeowners are cautioned to pay particular attention to backflow prevention. To assure the safety and integrity of the City of Hailey water system, all irrigation systems are required to install an appropriate backflow protection device. An irrigation system permit is also required and can be obtained at City Hall or on our website at www.haileycityhall.org. There is no fee for the required permit and inspection. Appointments for inspections should be directed to our Public Works Department at 788-9830, ext. 17.

Backflow

Backflow is the reversal of water flow from its normal direction - the normal direction being from the source to the tap. This reverse flow can send a customer's contaminated water back into the public system's safe drinking water supply.

Backflow is normally caused by either *backpressure* or *backsiphonage*. Backflow will occur through any unprotected cross-connection whenever backpressure and backsiphonage conditions exist.

Backpressure occurs when the pressure within a plumbing system is greater than the pressure of the incoming water supply. This "within-the-system" pressure pushes contaminated water "back" toward the safe drinking water supply.

Causes: Backpressure can be caused by the installation of pumps that increase pressures above the pressure of the water system supply, thereby forcing undrinkable water in the opposite direction of normal flow and back into the safe water supply line.

Steam boilers can also cause backpressure (or other equipment that heats water causing thermal expansion and resulting in pressures in excess of the incoming water pressure).

Elevated piping or tanks can also cause backpressure.

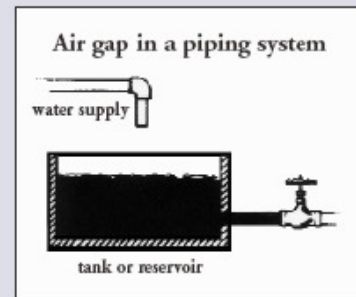
Backsiphonage is a backflow caused by a negative pressure (i.e., a vacuum or partial vacuum). This vacuum effect is similar to drinking water through a straw - water and possibly substances from a contaminated source are pulled back or sucked up into a potable (drinkable) water supply.

Causes: Backsiphonage (or a vacuum) can occur when there is a stoppage of water supply due to, for example, nearby fire fighting or a break in a water main. Simply flushing the water pipes to clean them may cause this phenomenon.

When this condition occurs, if you have an unprotected cross-connection (like an immersed hose filling a bucket of concentrated herbicide, or a garden hose submerged in a horse watering tank), the matter at the end of the hose will be sucked back into the public drinking water system, starting at the customer's house. ■

Preventing backflow

A backflow preventer is a means or mechanism to prevent backflow. The best and simplest means of preventing backflow is the air gap, which provides a physical separation between the end of a water supply outlet and the flood-level rim of a receiving vessel.



If an air gap is not possible, the next best mechanism for preventing backflow is a mechanical backflow preventer, which provides a physical barrier to backflow. Such devices or "assemblies" stop water from coming back into the safe drinking water supply system through spring loaded check valves thus preventing backpressure or backsiphonage. Of course, only use approved assemblies.