

What You Can Do to PREVENT CONTAMINATION

- Keep the ends of hoses clear of all possible contaminants.
- Buy and install hose bib type vacuum breakers (available at hardware or plumbing stores) on all threaded faucets in and around your home, if not already equipped with a built-in vacuum breaker.
- Install an approved backflow prevention assembly on all underground lawn irrigation systems. (An irrigation permit is needed from the Volusia County Health Dept.)
- ✗ **Don't** submerge hoses in buckets, pools, tubs, sinks, ponds, etc.
- ✗ **Don't** use spray attachments (like lawn fertilizers or herbicides/pesticides) without a backflow protection device.
- ✗ **Don't** connect waste pipes from water softeners or other treatment systems to the sewer, submerged drain pipe, etc.
- ✗ **Don't** use a hose to unplug blocked toilets, sewers, etc.
- ✗ **Don't** connect reuse lines to drinking water supply.



**Never leave a hose submerged
in a bucket** of non-potable water.



**For more information
about backflow
prevention or
if you have questions
about your drinking
water, please call the
"Ask Curt" Water
Quality hotline at
(386) 424-1384.**

Help Protect Our Drinking Water from Contamination



**ABOUT BACKFLOW
AND CROSS
CONTAMINATION**

Sources of information:
American Water Works Association
Gainesville Regional Utilities
Florida Dept. of Environmental Protection
UCNSB Senior Chemist &
Compliance Specialist Curt McKenzie



UCNSB has a Cross Connection Program to help ensure that water from outside sources does not enter the distribution system. Our Backflow Technician works full-time to inspect, test, and mitigate cross connections as needed through such tools as backflow preventers.

What is a CROSS CONNECTION?

A cross connection is a point in a plumbing system where the potable (drinking) water supply is connected to a non-potable source. Pollutants or contaminants can enter the drinking water system through uncontrolled cross connections when backflow occurs.

Cross connections are found in all plumbing systems. It is important that each cross connection be identified and evaluated as to the type of backflow protection required to protect the drinking water. Some common cross connections include:

- Wash basins and sinks
- Hose bibs
- Irrigation sprinkler systems
- Swimming pools
- Reuse water lines

What is BACKFLOW?

It's just what it sounds like: the water is flowing in the opposite direction from its normal flow. With the direction of flow reversed, due to a change in pressures, backflow can allow contaminants to enter our drinking water system through cross-connections.

There are two types of backflow: backsiphonage and backpressure. **Backsiphonage** is caused by a negative pressure in the supply line to a facility or plumbing fixture. A few ways backsiphonage may occur are during waterline breaks, when repairs are made to the waterlines, and when shutting off the water supply.

Backpressure can occur when the potable water supply is connected to another system operated at a higher pressure or has the ability to create pressure, etc. Principal causes are booster pumps, pressure vessels, and elevated plumbing.

Of particular concern are homes on our system that also have private wells, customers with reuse water hook-ups, or from yard irrigation systems through backflow or back-siphonage. Interconnection through plumbing errors is sometimes found to be a cause of cross-connection.



Another way to prevent backflow contamination: **don't leave a hose submerged in a swimming pool.**



One way to prevent backflow contamination: **don't leave a hose laying on the ground.**

THE RISK: When the hose is on, the end of the hose can become submerged in a puddle. If water pressure fluctuates, contaminants from the puddle can enter the water supply. The longer the hose is left in the puddle or submerged in non-potable water, the greater the possible risk.

Installing a hose bib vacuum breaker ▶ on all spigots will help prevent this and similar types of cross contamination. These devices are easy to install and available at hardware or plumbing stores.



Why Should I Be CONCERNED?

Backflow can cause contaminants to enter our drinking water system. The Florida Dept. of Environmental Protection categorizes possible contamination hazards as either high or low:

HIGH HAZARDS: any substance that, if introduced to the public water system, could cause illness, death, or spread diseases. Examples include industrial fluids or waste.

LOW HAZARDS: any substance that, if introduced to the public water system, would not be a health hazard but would constitute a nuisance or be aesthetically objectionable. Examples include pollutants which would affect the color or odor of the water.

Neither of these type of hazards are wanted in our community drinking water, making backflow prevention necessary.