Irrigation systems must have an RPZ installed when an on-site sewage facility exists.

Texas Commission on Environmental Quality (TCEQ) rules, 30 TAC Chapter 344, requires a Reduced Pressure Zone backflow prevention assembly (RPZ), be installed on all irrigation systems where there is an on-site sewage facility (OSSF). This means if you have an aerobic or septic system and an irrigation system, you must have an RPZ properly installed and tested by a person licensed by the State of Texas. Because irrigation systems are connected to the public water system, there is a potential for contamination to backflow into the water system. Commercial and residential lawn sprinkler systems typically have recessed sprinkler heads, which can become inundated with water. Water from the lawn is frequently exposed to fertilizers, chemicals, and animal feces. These contaminants can be siphoned through leaking valves back into the potable water system. An RPZ installed on the irrigation system feed line will protect the public water system and will prevent back siphonage of these contaminants into the household on the property.

An RPZ must be inspected upon installation and then annually by a person holding a Backflow Prevention Assembly Testers (BPAT) license. Contact your local water system for additional information to comply with this law and for information about their requirements for annual testing.

Common cross-connections can cause contamination to your drinking water.

Most people are unaware of the potential problems that can be caused by their normal everyday activities. For example; laying the end of a water hose in any type of container, swimming pool, spa, water trough, dog bowl, a bucket you’re using to wash your vehicle, or even a mud puddle. How many times have you left a hose-end sprayer connected to the end of your water hose while it was not being used? Perhaps you left it to grab a bite to eat, take a phone call, or to take a break. Another very common cross-connection is an improperly-designed and/or installed fill-valve (ballcock) assembly in your toilet tank.

Let’s begin with the water supply in your house. When the water hose is not under pressure and the faucet is unprotected, simply turning on the water inside your house can pull the water the hose is in, back into your house and you end up drinking it. Scary?? Think about that hose-end sprayer with fertilizer connected to the end of your water hose. Yes, that too can be back-siphoned or drawn back into your drinking water. The improperly-designed or improperly installed fill-valve assembly in your toilet tank can also siphon the water in tank back into your drinking water. Ever have colored ice cubes? Hmmmm might be something to consider.

Now let’s talk about your public water system. All of these conditions can also cause contaminated water to back-siphon into the public water system. How many times have you been filling your swimming pool and submerged the end of the water hose in the pool water? If the water system were to have a main line break it could back-siphon all of the water in your swimming pool back into the water system’s main lines. Not only is that putting contaminated water into the water system, you would also have to refill your swimming pool and that could get quite costly.
Here are some solutions. Place hose bib vacuum breakers on all outside faucets. This ensures water will not backflow into your household or the public water system. To test the operation of the hose bib vacuum breakers, connect a handheld shut-off nozzle on the end of a water hose connected to the faucet and turn the water on and turn off using the nozzle handle. If the hose bib vacuum breaker is properly functioning, water will spew from it as if it were not tightened well enough. You should never submerge a water hose. An air gap or physical separation is the best method to prevent backflow.

If you have fill valves for automatic watering devices for animals, be sure to use an “Anti-Siphoning Fill Valve”. This has the necessary air gap or vacuum breaker between the fill point and the water in the container, keeping the fill point from being submerged and breaking any siphon which might occur.

Be sure to install a properly designed fill-valve assembly in your toilets. Proper installation requires the integrated vacuum breaker section to be at least one inch above the top of the overflow pipe.

Contact College Mound WSC for additional information to keep your drinking water safe and free from contamination. 972.563.1355