

City of Edmonds

Water Production and Distribution

Cross-Connection and Backflow

What is a Cross-Connection?

A cross connection is any actual or potential physical connection between a “potable water” line and any pipe, vessel, or machine containing non-potable fluid, solid or gas allowing possible entry to the water system by backflow. This would include, but is not limited to, sewers, drains, conduits, pools, storage reservoirs, plumbing fixtures, or any other device. The non-potable or unproved water supply system may contain contaminated liquids, solids, or gases, of unknown or unsafe quality. Bypass arrangements such as jumper connections, removable sections, swivel or changeover devices are considered to be a cross connection.

What is Backflow?

Backflow is a flow in reverse from the normal direction of flow in a piping system. It occurs due to a differential pressure existing between two different points within a continuous fluid system: a fluid of higher pressures flowing to a fluid of lower pressure. Backflow may occur due to either “backsiphonage” or “backpressure.”

Irrigation Systems

If you have or are planning on installing an irrigation system, you must first comply with Washington State Law (WAC 245-290), and the City of Edmonds Ordinance Chapter 7-20. These Laws require that **all irrigation systems have approved backflow protection**. A plumbing permit is also required when installing an irrigation system.

Without proper backflow protection, your irrigation system could endanger the health of your family, neighbors, and others in the community who are using the public water system.

The following state approved backflow assemblies are required to be installed per the City of Edmonds Standards, and must be tested by a Washington State Certified Backflow Assembly Tester upon installation, repairs, relocation, and annually thereafter:

- Pressure Vacuum Breaker Assemblies (PVBA)
- Double Check Valve Assemblies (DCVA)
- Reduced Pressure Backflow Assemblies (RPBA)

The atmospheric vacuum breaker is the only backflow prevention device that does not require annual testing.

Improper installations of a State Approved Backflow Prevention Assembly or failure to have the backflow prevention assembly tested are grounds for termination of the water service.

On-site water wells

If you have an on-site well and would like the City of Edmonds water service, you must first comply to Washington State Law (WAC 173-160 and WAC 246-290), and the City of Edmonds Ordinance (Chapter 7-20), before the city can install the water service.

- **Installation of a State Approved Reduced Pressure Backflow Assembly:** If you elect to keep your well, you will need to install a State Approved Reduced Pressure Principle Backflow Assembly (RPBA) per City of Edmonds Standards above must be completed before the water can be turned on.
- **Abandonment of Your Well:** If you elect to abandon your well, it must be properly abandoned using a licensed well driller. The licensed well driller will abandon the well per Washington State Law (WAC 173-160).

Capping the well or pulling the pump is NOT proper abandonment; therefore the installation of a State Approve Reduced Pressure Backflow Prevention Assembly is required.

Improper installation of the State Approved Backflow Prevention Assembly or the improper abandonment of the well is grounds for termination of the water service.

If you have any questions concerning backflow installations, certified testers, or approved backflow prevention assembly, please call the Public Works Department at 425-771-0235, extension 1644 or by email mcmurphy@ci.edmonds.wa.us .