

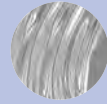


# El Paso Water Utilities' Cross-Connection Control Program

The purpose of El Paso Water Utilities' cross-connection control program is to protect El Paso's water system from contamination. A cross-connection is any type of actual or potential connection between El Paso's potable water distribution system and any non-potable liquid, water of unknown or questionable quality, solid, or gas that could contaminate the potable supply by backflow.

Backflow is the unwanted flow from a domestic, industrial, or commercial (private) piping system into the potable water distribution system. It can occur through either back-pressure or back-siphonage. Back-pressure occurs when private piping systems are pressurized by pumping, boilers or elevation to a pressure higher than the potable system. Back-siphonage is caused by an abnormal reduction in potable system pressure by maintenance activities, line breaks, or fire fighting.

To prevent backflow at the point of cross-connection, a backflow prevention assembly (BPA) must be installed. El Paso Water Utilities allows the installation of one of five



types of BPA devices, depending on the assessed hazard and type of installation: Air Gap; Reduced Pressure Principle Assembly; Reduced Pressure Principle Detector Assembly; Double Check Assembly; Pressure Vacuum Breaker. The installation of a BPA device must be performed by a licensed plumber.



Sample of a large backflow unit.

El Paso Water Utilities inspects all BPAs when they are installed. Once installed, all BPAs must be tested annually by a TCEQ licensed tester. An original of that report must be provided to El Paso Water Utilities.

In order to successfully protect El Paso Water Utilities' customers from harm, the Cross-Connection Control Program is a cooperative effort between El Paso Water Utilities, our customers, licensed plumbing professionals, licensed testers, and the Building Services department of the City of El Paso.

For more information contact  
El Paso Water Utilities at 594-5440.

To get instructions for  
finding certified testers, go to  
[www.epwu.org/water/tceq\\_instruction.pdf](http://www.epwu.org/water/tceq_instruction.pdf)

## Frequently asked Questions

### What is a cross-connection?

A cross-connection is a point in a plumbing system where the potable (drinkable) water supply is or can be connected to a non-potable (non-drinkable) source.

### What are we protecting the public water supply from?

The goal is to protect El Paso's drinking water supply from pollution or contamination by keeping water that has entered a facility from flowing back into the public water system.

### What causes water to flow backward?

Back-siphonage and back-pressure.

### What is back-siphonage?

Back-siphonage is the reverse flow of water caused by the supply pressure being less than the pressure in a private plumbing system.

### What causes back-siphonage?

Back-siphonage is created when there is a sudden drop in water pressure in the water distribution system due to main breaks or fire fighting.

### What causes back-pressure?

Heating systems, elevated tanks, and pressure-producing systems can create pressure in the customer's plumbing that exceeds the supply pressure. For example, commercial

boilers commonly operate at 100-150 lbs. of pressure. Since El Paso Water Utilities' pressure is usually substantially lower, back-pressure would be created.

### **What is a backflow prevention assembly (BPA)? What is its purpose? Where should it be installed?**

A BPA is a testable, mechanical device that uses valves to prevent contaminated water from flowing backwards. BPAs should be installed on customer plumbing as close as possible to the water meter.

### **Why can't I use check valves as a backflow prevention assembly?**

A check valve is not equipped with test connections to assure that the valve is preventing backflow.

### **Is it necessary for every water customer to install a BPA?**

No. Regulations exempt single-family homes used solely for residential purposes from assembly requirements. All other facilities need to be inspected to determine the type of water use and whether a BPA is required.

### **My building has internal BPAs - do I still need them at the service connection?**

Yes. Internal BPAs are primarily to isolate potential contamination sources within the building but do not protect the public water system. Even though plumbing code provisions may be rigidly enforced on new installations, our experience shows that "on-site" modifications of private plumbing are common. Possible hazards to the

public water supply can be created due to backflow from private plumbing. The only practical way to assure protection is to install a BPA at the point of service delivery. Accordingly, regardless of what happens inside the customer's property, the public water supply is protected.

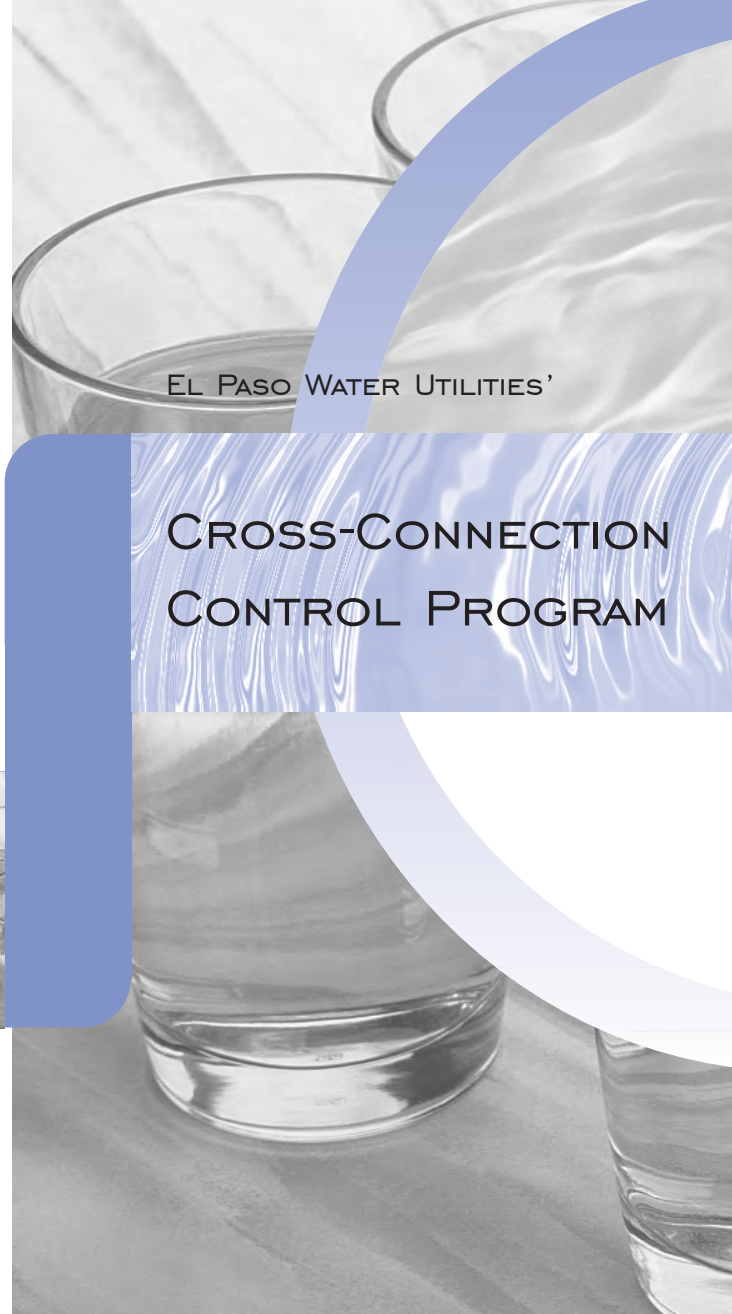
### **Who do I get to install a backflow prevention assembly?**

The customer works directly with the El Paso Water Utilities to get the process started. Backflow assemblies are installed according to the El Paso Water Utilities installation requirements by licensed plumbers. The final installation is inspected by the El Paso Water Utilities.

### **Why is annual testing required?**

#### **Who performs the annual test?**

A BPA, like any mechanical device, is subject to failure. Annual testing ensures that the devices are operating as designed. The State of Texas certifies professional BPA testers that may or may not be licensed plumbers.



## **CROSS-CONNECTION CONTROL PROGRAM**