What is a backflow preventer?
A: A backflow prevention device is used to protect potable water supplies from contamination or pollution due to backflow. In water supply systems, water is normally maintained at a significant pressure to enable water to flow from the tap, shower, or other fixture.

What are we protecting the public water from? How?
A: Our goal is to protect the drinking water supply from polluting or contamination. We do this by keeping water that has already entered a facility from flowing back into the public water system. Backflow prevention assemblies are the devices used for this purpose.

What is the difference between pollution and contamination?
A: Pollution of the water supply does not constitute an actual health hazard, but the water may taste, smell, or look undesirable. Contamination of the water supply constitutes an actual health hazard, with the consumer being subjected to potentially harmful water borne disease or chemicals.

What causes water to flow backwards?
A: Two things: backsiphonage and back-pressure.

What is backsiphonage?
A: The reverse flow of water due to negative pressure.

What causes backpressure?
A: Backsiphonage is created when there is a sudden drop in water pressure in water mains due to breaks or nearby firefighting efforts.

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Q: What causes backpressure?
A: Heating systems, elevated tanks, and pressure producing systems can create pressures in the customer’s plumbing which exceeds the supply pressure. An example would be a commercial boiler system operating at 100-150 lbs. of pressure. If the city’s water pressure is around 40-60 lbs. of pressure and water flows in the direction of least resistance, a back pressure would be created. The contaminated boiler water could flow into the drinking water supply.

Q: Why can’t I just use check valves as a backflow prevention assembly?
A: A check valve is not equipped with test connections to ensure that the valve is operating and preventing backflow. That’s why only approved assemblies are allowed.

Q: What is an approved assembly?
A: Any type of backflow prevention assembly or method approved by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research.

Q: Can anybody test backflow prevention assemblies in Redmond?
A: No, only people certified through an agency approved by the State of Washington Department of Health can test backflow assemblies. A copy of their certification must be on file with the City of Redmond’s Cross Connection Control Program office.

Q: Who is a certified tester?
A: Any person trained and certified to test a backflow prevention assembly. This person must pass a written and practical examination and have the certificate described above.

Q: Is it necessary for every water customer to install an assembly?
A: No. State regulations exempt single family homes used solely for residential purposes from assembly requirements unless they have an irrigation & fire system. All other service connections need to be inspected to determine the type of water used and whether an assembly is required. This is based on the degree of hazard.

Q: If my building was recently modified to meet city code requirements by installing backflow preventers internally, do I still need them at the service connection?
A: Even though plumbing code provisions may be rigidly enforced on new installations, experience has shown that “on-site” modifications and alterations of private plumbing are common. Possible hazards to the public water supply can be created due to backflow from private plumbing. These hazards may be caused by a submerged hose or a complex mechanical failure. In some cases, the only practical way to assure protection is to install a backflow preventer at the point of service (POC) delivery. That way, regardless of what happens inside the customer’s property or what changes were made to the private plumbing, the public water supply is protected.

Q: Where do I get a permit to install a backflow prevention assembly?
A: Permits are issued by the city’s Plumbing Permit Office located at City Hall 15670 NE 85th Street 2nd floor or for more information call (425) 556-2473. Note a separate permit is required for Fire Sprinkler Systems.

Q: What happens after I install the assembly?
A: It is your responsibility to have the assembly tested when it is installed and each year thereafter. A copy of the test report showing that the assembly passed will need to be forwarded to the Cross Connection Control Program Office. The state requires that water purveyors, testers and customers test records be kept for three years.

Q: What is an assembly test report and where can I get one?
A: It is a special report form approved by the City of Redmond used by certified backflow assembly testers to log test results. The tester you hire will supply the report form.