Cross Connection Control Program

Overview

The City of West Bend Water Utility system delivers safe, high-quality drinking water every day. To continue to protect the public health and keep the water system safe from contaminants and pollutants we are required by the Wisconsin Department of Natural Resources, Wisconsin Department of Commerce, and the City of West Bend Municipal Code to maintain a cross connection control program.

The City of West Bend Water Utility has contracted with Hydro Designs, Inc. (HDI), of Troy, Michigan, and Brookfield, Wisconsin to manage our program. HDI is an environmental services firm that specializes in backflow prevention and cross connection control. They currently manage program services for over 80 municipalities and water utilities in Michigan and Wisconsin.

Over the next three years representatives from HDI will perform the initial inspections of all commercial and industrial buildings throughout the city to detect actual & potential cross connections and make recommendations for the installation of backflow prevention devices or assemblies where necessary. This will help ensure that contaminated or polluted water cannot backflow into clean drinking water.

What Is a Cross Connection Control Program?

This is a combined cooperative effort between plumbing and health officials, municipalities, and property owners to establish and administer guidelines for controlling cross connections and ensure their enforcement so that the public drinking water supply is protected both in the city water distribution system and within buildings to the point of use.

Our program consists of the following components:

- ♦ **Public Education Program**—We will inform our water customers with newsletters, brochures, public awareness meetings, cable access channel programming, and access to informational videos. Visit the following web sites for more information and resources:
 - City of West Bend, Water Department: www.ci.west-bend.wi.us
 - o Hydro Designs, Inc.: www.hydrodesignsinc.com
- ♦ Cross Connection Survey—All industrial, commercial, and institutional facilities' plumbing systems will be inspected to determine if cross connections exist.
- Installation of Protective Devices—Backflow prevention devices or assemblies will need to be installed where known unprotected cross connections exist.
- Annual testing—All backflow prevention assemblies will be tested once a year by certified testers.

What Is a Cross Connection?

A cross connection is a direct or potential connection between any part of the public water supply system and a source of contamination or pollution. The most common form of cross connection is a garden hose, which is easily connected to the public water supply system and can be used to apply a variety of potentially dangerous substances, including chemicals and fertilizer. Other common cross connections include dishwashers, toilets, pressure washers, boilers, pools, and lawn sprinkler systems.

How Does Contamination Occur?

Water normally flows in one direction, from the public water system through the customer's cold or hot water plumbing system to a faucet or other plumbing fixture. Under certain conditions, water can flow in the reverse direction. This is known as **backflow**, and it occurs when backsiphonage or backpressure is created in a water line.

Backsiponage may occur when there is a drop in the supply pressure of the water distribution system. This can be caused by a water line break, water main repair, or during a rapid withdrawal of water from a fire

hydrant. This creates a vacuum, which may pull or siphon contaminants or pollutants into the drinking water supply.

Backpressure may be created when a source of pressure, such as a pump, boiler, or other building creates a pressure greater than that supplied from the water distribution system; this may force water to reverse direction.

What is a Cross Connection Survey?

The cross connection survey is the first step in our program. Wisconsin Department of Natural Resources Regulations (NR 811.09) recommends that all industrial, commercial, and institutional facilities be surveyed for cross connections regularly (every two to six years depending on the degree of hazard within the facility).

A survey is a walk-through of the water-system piping in a building or property, starting at the water meter and ending at the last free-flowing tap. Survey time varies depending upon the facility being surveyed. Large, complex facilities will be required to prove that they have an internal program to protect the potable water system. At the end of the survey HDI will produce a report describing any violations or discrepancies found, as well as a time frame for compliance.

Surveys of existing facilities will be scheduled based on the degree of hazard that they present to the water system. The first round of inspections will include city-owned buildings, public school facilities, hospitals/medical facilities, car washes, industrial/manufacturing facilities, and mortuaries. Inspection notices will be mailed to water customers approximately two weeks before the scheduled inspection date. A building representative should be available during the inspection to answer questions and provide access to areas within the facility.

Questions?

Cross connection control program questions can be directed to Jim Kell, City of West Bend Water Utility Superintendent at (262) 335-5040 or Hydro Designs, Inc. at (800) 690-6651, press "1."