



Two Rivers Utilities

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## City of Two Rivers Cross Connection Control Program

### Overview

The City of Two Rivers Water Utility 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 (WDNR), Wisconsin Department of Commerce, and the City of Two Rivers Municipal Code 11-3-10 to maintain a Cross Connection Control Program. Since 2012, the City of Two Rivers contracted **Hydro Corp** company who is specially trained in cross connection control and will perform the inspections (**at no cost to the property owner**) for all residential and commercial buildings throughout the city. Hydro Corp will detect actual and potential cross connections and make recommendations for the installation of backflow devices or assemblies where necessary. This program will ensure that contaminated or polluted water cannot backflow into clean drinking water.

### 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 a 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 fertilizers. 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 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 back siphonage or backpressure is created in a water line.

1. **Back Siphonage:** 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, during a rapid withdrawal of water from a fire hydrant or other situation that creates a vacuum, which may pull or siphon contaminants or pollutants into the drinking water supply.
2. **Backpressure:** May be created when a source of pressure, such as a pump, boiler, other use creates a pressure greater than that supplied from the water distribution system; this may force water to reverse in direction.

### What is a Cross Connection Control Program?

According to the WDNR Administrative Code NR810.15 it defines a Cross Connection Control Program as: The supplier of water for every municipal water system shall develop and implement a comprehensive control program for the elimination of all existing cross connections and prevention of all future cross connections. A record of the cross connection control program shall be kept current and available for annual review by the WDNR.

- **Public Education**  
 The City of Two Rivers will inform our water customers with newsletters, brochures, press releases, and the use of websites. Please visit the following websites for more information and resources: [www.two-rivers.org](http://www.two-rivers.org).
- **Notice to Owners**  
 The City of Two Rivers will notify the building owner of a scheduled inspection and any required corrective action.
- **Cross Connection Survey**  
 All residential, commercial, institutional, and industrial facilities' plumbing systems which are connected to the public water supply will be inspected to determine if cross connections exist as required by the WDNR Administrative Code NR810.15.
- **Installation of Protective Devices**  
 Hydro Corp will provide backflow prevention devices (hose bibs for spigots and utility sinks) at no cost to the homeowner where known unprotected cross connections exist as required by the Department of Commerce Chapter Comm. 82.41.
 
  - ***Note: If cross connection hazard exceeds standard backflow prevention devices, such as hose bibs, the property owner will need to install at their expense.***
- **Non-Residential/Commercial Properties**  
 All non-residential customers are required to have their plumbing inspected for cross connection compliance. Frequency of the inspections are either every 1, 2, 6, or 10 years based upon review of hazard. Inspection will include but not limited to outside spigots, boilers, utility sinks, irrigation, furnace air gaps, dehumidifiers, etc. Properties that are on a 1-year frequency schedule they must have a State of Wisconsin certified tester of choice and required testing devices come with certification tags showing when install and last tested.
- **Residential Properties**  
 All residential (dwellings with less than 3 units) customers are required to have their plumbing inspected for cross connection compliance. Frequency of these inspections are every 20 years. Inspection will include but not limited to outside spigots, boilers, utility sinks, irrigation, furnace air gaps, dehumidifiers, etc.

**What is a Cross Connection Survey?**

The 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. At the end of the survey, a survey report will describe any violations or discrepancies found, as well as a time frame for compliance will be left with the building owner. The first round of inspections will include any city owned buildings, public school facilities, hospitals/medical facilities, car washes, industrial/manufacturing facilities, and mortuaries. These inspections will be followed by residential home inspections. Inspection notices will be mailed to water customers approximately two weeks before the scheduled inspection date. A household representative should be available during the inspection to answer any questions and provide access.

**Why Now?**

The program has been a requirement in Wisconsin for nearly 40 years. It has not been until the last few years that the WDNR started actively requiring documentation of the program from the local water suppliers. With the cooperation of the community, 2012 was the first organized implementation of the program for the City of Two Rivers Water Utility.

**Questions?**

Cross Connection Control Program questions can be directed to Andrew Sukowaty, Water Utility Director at (920) 793-5558.



## INSIGHTS TO PROTECT YOUR DRINKING WATER

### Do...

- Keep the ends of hoses clear of all possible contaminants.
- Ensure that lawn irrigation systems have proper backflow protection.
- Verify and install a simple hose bibb vacuum breaker on all threaded faucets around your home.
- Make sure water treatment devices such as water softeners have the proper “air gap”, which is a minimum of one inch above any drain.

### DON'T...

- Submerge hoses in buckets, pools, tubs, sinks or ponds.
- Use spray attachments without a backflow prevention device.
- Connect waste pipes from water softeners or other treatment systems directly to the sewer or submerged drain pipe. Always be sure there is a one-inch “air gap” separation.



### DID YOU KNOW...

Your water can become contaminated if connections to your plumbing system are not properly protected! The purpose of the local Cross-Connection Control Program is to ensure that everyone in the community has safe, clean drinking water.

### PUBLIC HEALTH & SAFETY....

To avoid contamination, backflow preventers are required by state plumbing codes wherever there is an actual or potential hazard for a cross-connection. The Wisconsin Department of Natural Resources (DNR) requires all public water suppliers to maintain an on-going Cross-Connection Control Program involving public education, onsite inspections, and if required, corrective actions by building and home owners.

*For more detailed information about cross-connection control and backflow prevention in Wisconsin, please visit [www.hydrocorpinc.com/residential](http://www.hydrocorpinc.com/residential) [www.hydrocorpinc.com/wi](http://www.hydrocorpinc.com/wi)*

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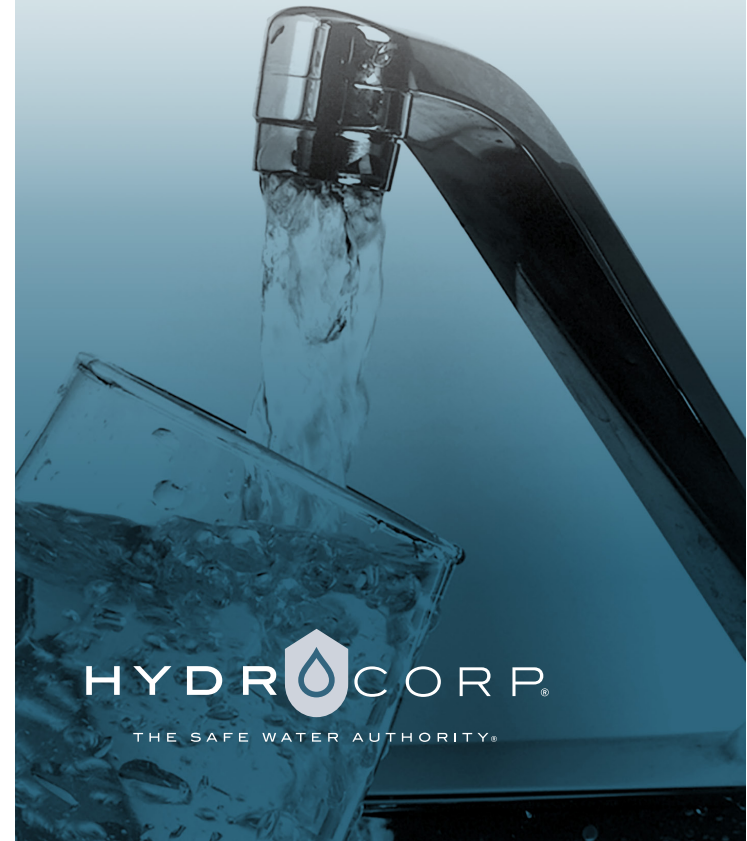
[www.hydrocorpinc.com](http://www.hydrocorpinc.com)



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## PROTECTING THE SAFETY OF YOUR HOME'S DRINKING WATER

From the Hazards of Cross-Connections and Backflow



## What is a Cross Connection?

A cross-connection is an actual or potential connection between the safe drinking water (potable) supply and a source of contamination or pollution. State plumbing codes require approved backflow prevention methods to be installed at every point of potable water connection and use. Cross-Connections must be properly protected or eliminated.

### BACKSIPHONAGE

May occur due to a loss of pressure in the municipal water system during a fire fighting emergency, a water main break or system repair. This creates a siphon in your plumbing system which can draw water out of a sink or bucket and back into your water or the public water system.

### BACKPRESSURE

May be created when a source of pressure (such as a boiler) creates a pressure greater than the pressure supplied from the public water system. This may cause contaminated water to be pushed into your plumbing system through an unprotected cross-connection.

Water normally flows in one direction. However, under certain conditions, water can actually flow backwards; this is known as Backflow. There are two situations that can cause water to flow backward: backsiphonage and backpressure.

### HOW DOES CONTAMINATION OCCUR?

When you turn on your faucet, you expect the water to be as safe as when it left the treatment plant. However, certain hydraulic conditions left unprotected within your plumbing system may allow hazardous substances to contaminate your own drinking water or even the public water supply.

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### BATHTUB & SHOWER FIXTURES

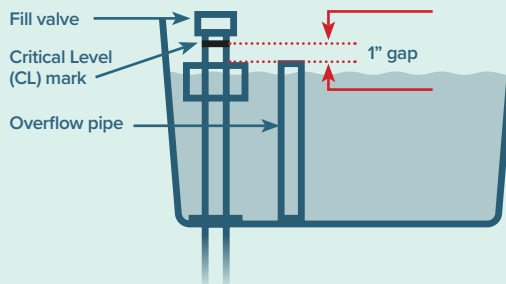
A hand-held shower fixture is compliant if:

- When shower head is hanging freely, it is at least 1" above top of the flood level rim of the bathtub
- Complies with ASSE#1014
- Has the ASME code A112.18.1 stamped on the handle

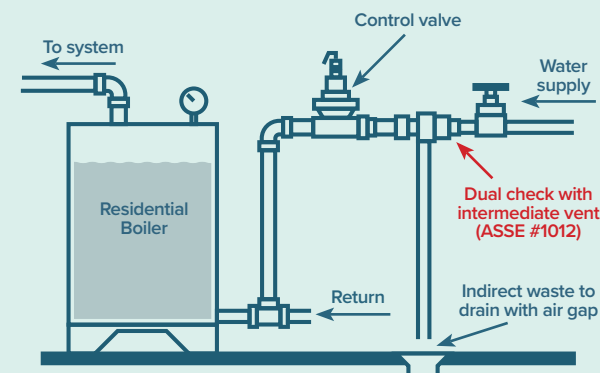
### TOILET TANKS

There are many unapproved toilet tank fill valve products sold at common retailers which do not meet the state plumbing code requirements for backflow prevention.

- Look for the ASSE #1002 Standard symbol on the device and packaging.
- Replace any unapproved devices with an ASSE #1002 approved anti-siphon fill valve device.
- Verify overflow tube is one inch below critical level (CL) marking on the fill valve.



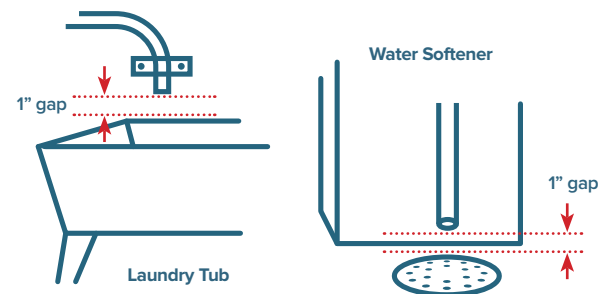
### BOILERS



Boilers with chemical additives require an ASSE #1013 – Reduced Pressure Principle Backflow Prevention Assembly.

### ELSEWHERE IN THE HOME

Always maintain an air gap of at least 1 inch between the end of drain hoses and the highest potential water level.



### HOME EXTERIOR

Verify all outside faucets are protected with a hose bibb vacuum breaker of the ASSE-certified types shown below.

ASSE #1011



ASSE #1011 Frost-Free



ASSE #1019

