

Residential Plumbing Cross Connection Survey

Help us keep Lincoln's drinking water safe by eliminating unprotected cross connections! One way to do this is by completing the Residential Cross Connection Plumbing Survey.

This brochure will help guide you in how to answer the questions on your Residential Cross Connection Plumbing Survey. The numbers in the brochure correspond with the numbers on the survey.



Scan the QR code to complete the survey online. If you'd prefer to print the survey and mail it in, visit lincoln.ne.gov/backflow.

What is a cross connection and why is it important to me?

A cross connection is defined as an actual or potential connection between the public water supply and a source of possible contamination or pollution. All homes have potential cross connections. The water pipes and plumbing fixtures that make up cross connections can be the link for contamination to get into the drinking water supply. Water pressure can suddenly drop because of heavy usage, a water main break or fire in the area. When that happens, contaminated water (backflow) could be siphoned back into your plumbing system from an unprotected cross connection within your home. Even though Lincoln has a very reliable water distribution system, these pressure drops occur somewhere in the city almost every day. The result of back siphonage is that chemicals, poisons, and bacteria might find their way back into the water you drink if you are not proactive to avoid or protect your cross connections.

Cross Connection Control Program

Lincoln Water System is required by Nebraska Department of Environment and Energy to conduct a cross connection control program using the specific components below:

- **A survey and inspection every five years of each home and building connected to the public water supply.** Inspections of the plumbing system by the property owner or tenant are required to determine if backflow hazards or cross connections exist. Water customers should report any cross connections to Lincoln Water System by completing the Residential Plumbing Cross Connection Survey.
- **A public education program to inform water customers of the potential harm that plumbing cross connections can cause to the public water supply.** To learn more, visit lincoln.ne.gov/backflow.
- **Installation of backflow protection devices.** Installing backflow protection on cross connections safeguards the public water supply.
- **Annual testing of backflow preventers.** Testing backflow devices, by a certified tester, ensures proper operation and is required yearly.

Contact Us

Not sure if you need a backflow device? Need more information on what type of backflow prevention devices you may need?

Call our office 402-441-5912 between 7:30 a.m. and 4 p.m. to speak with a Cross Connection Technician or call your local licensed plumber.



Lincoln Water System
2021 North 27th Street
Lincoln, NE 68503

RESIDENTIAL PLUMBING CROSS CONNECTIONS

HOW TO DETERMINE IF YOU HAVE A RESIDENTIAL CROSS CONNECTION



Residential Cross Connection Types

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1. Lawn Irrigation Systems

Underground irrigation systems are a direct cross connection. A suitable backflow device, typically located on the side or back of your home, must be used to protect the public water supply. Surface water can be siphoned back into your plumbing system through an automated lawn irrigation system unless a proper backflow device is attached. If the system uses a pump or has fertilizer or chemical injection, additional backflow protection and testing is required.



2. Private Wells and Secondary Water Sources

A well or secondary water source on a property is a potential cross connection. Wells or secondary water sources are prohibited from being connected to the Lincoln Water System. A backflow preventer on the public water supply is always required at the meter when secondary sources of water are present on a customer's property.

3. Swimming Pool or Hot Tubs

Pools and hot tubs that are permanently connected to the home plumbing systems are direct cross connections and must be protected with a suitable backflow device. An unprotected cross connection could draw pool water and chemicals back into your household plumbing system and public water supply. When filling a pool or hot tub with a hose, never submerge the end, as this is another cross connection. Always leave an air gap when filling pools, hot tubs, sinks or containers.

4. Home Medical, Dental or Dialysis Equipment

Similar to equipment found in medical offices, these devices are sometimes used in the home. When connected to the water supply, these cross connections must be protected with a suitable backflow device to prevent contamination of the home plumbing system and public water supply.



Example of a backflow device that can be used on a swimming pool and/or boiler.

5. Boiler Systems for Heating

These systems are not common but do exist, normally in larger homes. Water is used to replenish the boiler, which may also have chemicals. This cross connection must be protected with a reduced pressure principle backflow device to prevent contamination of the home plumbing system and public water supply.

6. Other Suspected Cross Connections

A garden hose is the most common cross connection. A garden hose submerged in water in a sink or container with chemicals or fertilizer is a serious cross connection. A sudden drop in water pressure from a water main break or from water being used to fight a fire can siphon water back into your home plumbing system or the public water supply. A vacuum breaker is a simple and inexpensive device that can be installed on the faucet or hose to prevent contamination. Never leave the end of a hose submerged in a tub, sink, pool or container.

Most bathtubs and sinks have an air gap as backflow prevention. This space between the highest water level in the fixture and the outlet of the water is the best form of backflow protection.

Home use of photographic chemicals, process chemicals, biological lab supplies, and other chemicals can cause contamination due to an unprotected cross connection. Residential fire protection systems, in-home water treatment systems, car washes, solar heating, soaking tubs and decorative ponds are other possible cross connections.

