

FAQ - Requirements for All Systems, Sampling Spigots, Well pits, and Backflow

Ohio Administrative Code (OAC) 3701-28-08

December 2012

Cross-connection and Backflow Device Requirements

Question:

1. What is a cross-connection?

Answer:

A cross-connection is any physical connection between a possible source of contamination and any drinking water system piping supplied by a public or private water system. Physical cross connection between public (Ohio EPA, OAC 3745-95) and private water systems (ODH and local health departments, OAC rule 3701-28-08) are prohibited. When the well is no longer the primary source of water due the connection to a public water supply, the plumbing must be physically disconnected and demonstration of the backflow prevention requirements of rule 3745-95 of the Administrative Code is required.

Question:

2. What is backflow and how does it occur?

Answer:

Backflow is the undesirable reversal of flow of nonpotable water or other substances through a cross-connection and into the potable water system. Backflow includes back pressure backflow and backsiphonage.

Question:

3. What is backpressure backflow?

Answer:

Backpressure backflow is caused by a downstream pressure that is greater than the upstream or supply pressure in a potable water system. Backpressure can result from

an increase in downstream pressure, a reduction in the potable water supply pressure, or a combination of both.

Question:

4. What is backsiphonage?

Answer:

Backsiphonage is backflow caused by a negative pressure in a potable water system. Backsiphonage can occur when there is a stoppage of water supply due to a break in the water line.

Question:

5. What is a backflow preventer?

Answer:

A backflow preventer is a means or mechanism used to prevent backflow in the potable water supply. The basic means for preventing backflow is an air gap, which either eliminates a cross-connection or provides a barrier to backflow. The basic mechanism for preventing backflow is a mechanical backflow preventer, which provides a physical barrier to backflow.

Question:

6. What is an RPZ backflow prevention device?

Answer:

An RPZ (reverse pressure zone) backflow prevention device consists of two spring-loaded check valves operating in series and a spring-loaded/diaphragm-activated differential pressure relief valve located in the zone between the check valves. Two closing shutoff valves and four test cocks complete the assembly. These devices will indicate leakage through one or both check valves or the relief valve by the discharge of water from the relief valve. These devices prevent the flow from a possible source of contamination from entering into the drinking water system piping through a cross connection. Check with your water supplier as to which RPZ devices are acceptable.

An acceptable RPZ device has been certified to one of the standards listed in Ohio Administrative Code (OAC) 3745-95-06.

Question:

7. How much does a RPZ backflow prevention device cost and what is involved with maintenance?

Answer:

Cost can vary. The cost will be approximately \$500 and up. However, there are different manufacturers of RPZ assemblies, and they have different costs associated with purchase and installation.

In addition, Ohio Plumbing Code requires an expansion tank to be installed on the cold water supply line to the hot water heater. An RPZ assembly can not be installed in a pit, and requires an inspection and test of its effectiveness at an interval not to exceed 12 months. Inspection costs are paid by the homeowner. Inspection costs may start around \$100. Failure to comply with these requirements may result in the water supplier terminating your water service. The public water supplier may have additional requirements.

Question:

8. Is backflow prevention required for service connections after the pressure tank, which is located within the foundation of the dwelling?

Answer:

Yes, but these requirements fall under the jurisdiction of the Ohio Plumbing Code and are enforced by the Residential Plumbing Inspector for the City or County. If that service connection extends to another dwelling or building and a backflow prevention device was not installed as per the Ohio Plumbing Code requirements, then a backflow prevention device would be required, under the jurisdiction of the Private Water Systems rules, once the service line enters the foundation of the other dwelling or building.

Question:

9. Is backflow prevention required for service connections after the pressure tank, which is located outside the foundation of the dwelling?

Answer:

Yes. This is within the jurisdiction of the private water systems rules as per OAC rule 3701-28-01(PPP). The installation of the backflow prevention device must meet the requirements in OAC rule 3701-28-08(M).

Question:

10. Is a backflow prevention device required when adding a service connection to an additional dwelling on the same or adjacent property?

Answer:

Yes. If the private water system is serving 2 or less dwellings on the same property or an adjacent property the rules require an ASSE standard 1024, 1013 or 1015 backflow prevention device to be used. If the private water system is serving more than 2 dwellings, only the ASSE standard 1013 or 1015 shall be installed to protect the private water system source.

Yard Hydrants

Question:

11. Is a backflow prevention device required when adding a yard hydrant to the private water system?

Answer:

Yes. All service connections, including those for frost-free yard hydrants, must have a backflow prevention device installed immediately after the service connection to the main or subsequent service lines and before the hydrant. A service connection supplying water to a sanitary yard hydrant, meeting ASSE standard 1057, does not require the installation of a backflow prevention device prior to the hydrant.

Question:

12. Is a backflow device required on the hose bibb of an ASSE standard 1057 sanitary hydrant?

Answer:

Sanitary hydrants meeting the ASSE standard 1057 shall be freeze resistant, provide protection from ground water contamination, and prevent backflow. In addition to the standard, some manufacturers may recommend the use of a backflow prevention device on the hose bibb. The private water systems rules allows each local health district to evaluate and determine whether the sanitary hydrant's intended use justifies the need for an additional backflow prevention device on the hose bibb.

Question

13. A well has a frost –free hydrant with a weep hole at a Y in the water service line and the contractor buried an ASSE 1024 that was installed prior to the hydrant. Is that satisfactory because the code says it has to be accessible for inspection and maintenance?

Answer:

This scenario is not acceptable. The backflow device has to be in an accessible vault that can be inspected if necessary. Digging it up is not considered accessible. The 1024 is not designed to be buried.

OAC 3701-28-08 states:

“(L) All service connections to the main service line shall have an approved backflow prevention device installed prior to or immediately after the connection to the main service line. The backflow prevention device shall be easily accessible within a vault, equipment storage pit or the foundation of the home or building for the purposes of inspection and maintenance.” (This applies to all)

(N) Service line connections supplying water to a yard hydrant meeting ASSE standard 1057 or as approved by the department shall not be required to have a backflow prevention device installed prior to the yard hydrant. For yard hydrants meeting this standard, the department may require a backflow prevention device, meeting ASSE standard 1024, on the hose bibb to prevent backflow or backsiphonage. All other yard hydrant service line connections shall meet the requirements in paragraph (K) of this rule.