

**481—425.5(105) Backflow prevention with containment.** Cities with populations of 15,000 or greater as determined by the 2010 census or any subsequent regular or special census shall have a backflow prevention program with containment. The minimum requirements for a program are given in subrules 425.5(1) through 425.5(5). These requirements are in addition to the applicable requirements of Section 603 of the Uniform Plumbing Code, 2024 Edition.

**425.5(1) Definitions.** The following definitions are added to those in Chapter 2 and Section 603 of the Uniform Plumbing Code, 2024 Edition, or are modified from those definitions for the purposes of rule 481—425.5(105) only.

*a. Administrative authority.* The administrative authority for this rule is the city council and its designees or, with respect to private water utilities, the Iowa utilities board.

*b. Approved backflow prevention assembly for containment.* Approved backflow prevention assembly for containment means a backflow prevention assembly that is approved by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research. The approval listing shall include the limitations of use based on the degree of hazard. The backflow prevention assembly shall also be listed by the International Association of Plumbing and Mechanical Officials (IAPMO) or by the American Society of Sanitary Engineering (ASSE) as having met the requirements of one of the standards listed below.

Standard	Product Covered
ANSI <sup>□</sup> /ASSE* 1013-2009	Reduced Pressure Principle Backflow Preventers
ANSI <sup>□</sup> /ASSE* 1015-2009	Double Check Backflow Prevention Assembly
ANSI <sup>□</sup> /ASSE* 1047-2009	Reduced Pressure Detector Backflow Preventer
ANSI <sup>□</sup> /ASSE* 1048-2009	Double Check Detector Assembly Backflow Preventer
ANSI <sup>□</sup> /AWWA <sup>†</sup> C510-07	Double Check Valve Backflow Prevention Assembly
ANSI <sup>□</sup> /AWWA <sup>†</sup> C511-07	Reduced-Pressure Principle Backflow Prevention Assembly

<sup>□</sup>American National Standards Institute, 1899 L Street NW, 11th Floor, Washington, DC 20036

\*American Society of Sanitary Engineering, 18927 Hickory Creek Drive #220, Mokena, IL 60448

<sup>†</sup>American Water Works Association, 6666 West Quincy Avenue, Denver, CO 80235

*c. Approved backflow prevention assembly for containment in a fire protection system.* Approved backflow prevention assembly for containment in a fire protection system means a backflow prevention assembly to be used in a fire protection system that meets the requirements of Factory Mutual Research Corporation (FM) and Underwriters Laboratory (UL) in addition to the requirements of 25.5(1) “b.”

*d. Containment.* Containment is a method of backflow prevention that requires a backflow prevention assembly on certain water services. Containment requires that the backflow prevention assembly be installed on the water service as close to the public water supply main as is practical.

*e. Customer.* Customer means the owner, operator or occupant of a building or property that has a water service from a public water system, or the owner or operator of a private water system that has a water service from a public water system.

*f. Degree of hazard.* Degree of hazard means the rating of a cross connection or a water service that indicates whether it has the potential to cause contamination (high hazard) or pollution (low hazard).

*g. Water service.* Depending on the context, water service is the physical connection between a public water system and a customer’s building, property or private water system, or the act of providing potable water from a public water system to a customer.

**425.5(2) Proposed water service.**

*a.* No person shall install, or cause to have installed, a water service to a building, property or private water system before the administrative authority has evaluated the proposed water service for degree of hazard.

*b.* The administrative authority will require the submission of plans, specifications and other information deemed necessary for a building, property or private water system to which a water service is

proposed. The administrative authority will review the information submitted to determine if cross connections will exist and the degree of hazard.

c. The owner of a building, property or private water system shall install, or cause to have installed, an approved backflow prevention assembly for containment as directed by the administrative authority before water service is initiated.

d. Reconstruction of an existing water service shall be treated as a proposed water service for the purposes of rule 481—425.5(105).

**425.5(3)** *Existing water services.*

a. Each customer shall survey the activities and processes that receive water from the water service and report to the administrative authority if cross connections exist and the degree of hazard.

b. The administrative authority may inspect the plumbing of any building, property and private water system that has a water service to determine if cross connections exist and the degree of hazard.

c. If, based on information provided through paragraphs 425.5(3) “a” and “b,” the administrative authority determines that a water service may contaminate the public water supply, the administrative authority will require that the customer install the appropriate backflow prevention assembly for containment.

d. If a customer refuses to install a backflow prevention assembly for containment when it is required by the administrative authority, the administrative authority may order that water service to the customer be discontinued until an appropriate backflow prevention assembly is installed.

**425.5(4)** *Backflow prevention assemblies for containment.* The following standards shall apply:

a. Backflow prevention assemblies for containment will be installed immediately following the water meter or as close to that location as deemed practical by the administrative authority.

b. A water service determined to present a high hazard will be protected by an air gap or an approved reduced-pressure principle backflow prevention assembly.

c. A water service determined to present a low hazard will be protected by an approved double check valve assembly or as in paragraph 425.5(4) “b.”

d. A water service to a fire protection system will be protected from backflow in accordance with the recommendations of American Water Works Association Manual M14, fourth edition. Where backflow prevention is required for a fire protection system, an approved backflow prevention assembly for containment in a fire protection system will be used.

**425.5(5)** *Backflow incidents.*

a. The customer shall immediately notify the agency providing water service when the customer becomes aware that backflow has occurred in the building, property or private water system receiving water service.

b. The administrative authority may order that a water service be temporarily shut off when a backflow occurs in a customer’s building, property or private water system.

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