**21. Cross-Connection Control**

**21.1. Cross-connection control requirements and prohibitions.**

**21.1.1.** No public water system shall install or maintain a water service connection to any premises where actual or potential cross-connections to a public water system exist unless such actual or potential cross-connections are eliminated or controlled to the satisfaction of the owner of the public water system and the Division.

**21.1.2.** No public water system shall install or maintain any connection whereby water from an auxiliary water system may enter a public water system unless the auxiliary water supply and the method of connection.

**21.1.3.** In accordance with subsection 1.12.1, public water systems shall maintain acceptable water pressure throughout the distribution system so that the risk of backflow is reduced.

**21.1.4.** If a cross-connection exists or backflow occurs at a consumer's water system, the public water system may discontinue service to the consumer and water service shall not be restored until the deficiencies have been corrected.

**21.2. Cross-connection control programs.**

**21.2.1.** A public water system shall develop a plan for a comprehensive cross-connection control program for the elimination, prevention. and control of cross-connections appropriate to the number of service connections. size of the distribution system, and type of customers. The cross-connection control program shall include an individual designated by the public water system and appropriately trained and experienced in cross-connection control programs to be responsible for the program.

**21.2.2.** A cross-connection control program shall include an inventory and records of testing, repairs. And maintenance of all backflow prevention assemblies. and backflow elimination methods.

**21.2.3.** A cross-connection control program shall include appropriate policies to complete assessments of customer premises for potential cross-connections to establish hazard criteria to classify customer premises consistent with Table 1, and to determine the degree of hazard and adequacy of existing preventive measures.

Table 1
Backflow Prevention Assembly Types Required for Service Line Containment

| Premise - Degree of Hazard | |
|---|---|
| High Hazard | Low Hazard |
| Air Gap | Air Gap |
| Reduced Pressure Principle Back-flow Prevention Assembly | Reduced Pressure Principle Backflow Prevention Assembly |
| - | Double Check Valve Assembly |

**21.2.4.** An approved backflow prevention assembly or backflow elimination method shall be installed at premises where the following conditions exist in a location intended to prevent backflow into the distribution system:

**21.2.4.1.** Premises having auxiliary water system:

**21.2.4.2.** Premise types that are deemed by the public water system or the Division to represent a health or high hazard to the public water system, to include but not be limited to:

| | | |
|---|---|---|
| *Agricultural facilities (e.g., farms, dairies)* | *Beverage bottling plants* | *Car washes* |
| *Chemical plants* | *Dry cleaners (on site processing)* | *Film processing plants* |
| *Food processing plants* | *Laboratories* | *Medical facilities* |
| *Mortuaries* | *Metal plating industries* | *Mortuaries* |
| *Petroleum processing/storage plants* | *Piers, marinas, docks and waterfront facilities* | |
| *Radioactive material processing plants* | *Wastewater treatment facilities* | |

**21.2.4.3.** Premises where having internal cross-connections that, in the judgment of the public water system, are not correctable or are impractical to determine if cross-connections exist due to intricate plumbing arrangements:

**21.2.4.4.** Premises where because of security requirements or other prohibitions, it is impossible to complete a cross-connection control survey: or

**21.2.4.5.** Premises having a history of cross-connections being established or reestablished.

**21.2.5.** In lieu of assessments and installation of backflow prevention assemblies at customer premises deemed low hazard. a public water system may implement a public education program.

**21.2.5.1. The public education program shall include. at minimum:**

**21.2.5.1.1.** Causes and dangers of backflow and cross-connections. including health effects:

**21.2.5.1.2.** Information on how to identify actual and potential cross-connections

**21.2.5.1.3.** Preventive measures to reduce or eliminate cross-connection and backflow risks: and

**21.2.5.1.4.** Information on reporting suspected cross-connections to the

**21.3. Corrections and protective devices.**

**21.3.1.** Backflow prevention assemblies shall conform to the standards of the American Society of Sanitary Engineering (ASSE), the American Water Works Association (AWWA). and the American Society of Mechanical Engineers (ASME)

**21.4. Cross-connection control records and reporting.**

**21.4.1.** All backflow prevention assembly test records which document the test results of assemblies designed to protect the public water system shall be retained on file for a period of no less than 10 years.

**21.4.2.** All cross-connection control survey records which document results from the monitoring of cross-connections shall be retained on file for a period of no less than 10 years.

**21.5. Violations.**

**21.5.1.** The following items shalt be deemed to be violations of these regulations:

**21.5.1.1.** Failure to develop and implement a comprehensive cross-connection control program in accordance with Section 3.0 of this regulation within three years of the effective date of these regulations;

**21.5.1.2.** Failure to implement the cross-connection control program as prescribed; and

**21.5.1.3.** Failure to maintain all backflow prevention assembly test records on file for at least 10 years.

**21.6. Penalty Clause.**

Any person who neglects or faits to comply with these regulations shall be subject to penalty as provided in 16 Del.C. §122(3)(c).