

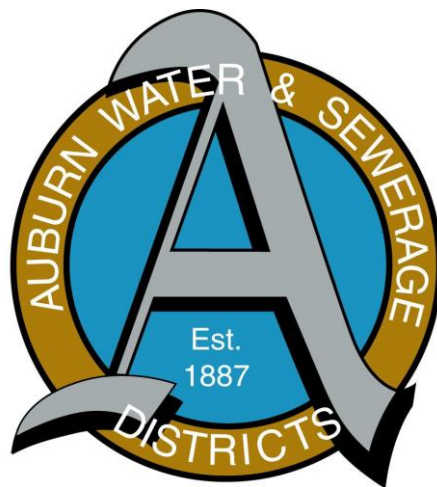
AUBURN WATER DISTRICT

Auburn, Maine

CROSS-CONNECTION CONTROL

PROGRAM

Adopted: August, 1983
Revised February 21, 2018



AUBURN WATER DISTRICT

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AUBURN WATER DISTRICT
CROSS CONNECTION CONTROL PROGRAM

1. **PURPOSE**

Cross-connection between water supplies and non-potable sources of contamination represent one of the most significant threats to health in the water supply industry. This program is to prevent the contamination of drinking water by the backflow of water or other liquids, gases, mixtures, compounds, or other substances into the Public Water Distribution System of the Auburn Water District from a source or sources other than its intended sources.

2. **AUTHORITY**

This program derives its enforceability from Title 22, MRSA, C 601, sub-chapter 2, Sec. 2612 (5) Maine Department of Human Services, Cross-Connection Rules 10-144ACMR226. In addition, authority rises from the Rules and Regulations as published by the Auburn Water District and as approved by the Public Utilities Commission of the State of Maine and from provisions of the Occupational Safety and Health Act, and from provisions of the State Plumbing Code Part I, 10-144A CMR 238.

3. **DEFINITIONS**

- A. Anti-backflow device – a device or means to prevent backflow
- B. Approved Source – a source of water utilized by a public water system for distribution to the public for consumption or other purposes and which is approved by the Department of Human Services for said use following an approved treatment process, if any, required by the Department.
- C. Backflow - The flow of water or other foreign liquids, gases or other substances into the distribution system of a public water supply from any source other than the intended.
- D. Backflow Preventer - A device or means to prevent backflow, sub-defined as follows:
 - 1. Air Gap - A physical separation sufficient to prevent backflow between the free-flowing discharge end of the potable water system and any other system.

2. Atmospheric Vacuum Breaker - A device which prevents back-siphonage by creating an atmospheric vent where there is either a negative pressure or sub-atmospheric pressure in a water system.
 3. Backflow Preventer with Intermediate Atmospheric Vent - A device having two check valves separated by an atmospheric vent.
 4. Double Check Valve - A device having two, weight or spring loaded, bronze faced with soft rubber disc check valves, with shutoff valves and test cocks for periodic testing.
 5. Hose Bibb Vacuum Breaker - A device which is permanently attached to a hose bib and which acts as an atmospheric vacuum breaker.
 6. Pressure Vacuum Breaker - A device containing a spring-loaded check valve and a spring-loaded atmospheric vent which opens when pressure approaches atmospheric. It contains valves and fittings which allow the device to be tested.
 7. Reduced Pressure Principle Backflow Preventer - An assembly of check valves and a reduced pressure zone which spills water to the atmosphere in event of the failure of the check valves. It has valves and fittings which allow the device to be tested.
 8. Residential Dual Check Valve – An assembly of two independent acting check valves used primarily on residential and low-hazard services.
- E. Back-Siphonage -Backflow resulting from negative or less than atmospheric pressure in the water supply system.
- F. Back-pressure - A condition in which the owner’s system pressure is greater than the supplier’s system pressure, causing a reversal of the normal direction of flow.
- G. Containment - A method of backflow prevention which requires a backflow preventer at the water service entrance.
- H. Cross-Connection - Any physical connection or arrangement between two otherwise separate piping systems, one of which contains potable water and the other water or other substances of unknown or questionable safety, whereby water or other substances may flow from one system to the other, the direction of flow depending on the pressure differential between the two systems. Any actual or potential connection between the public water supply and a source of contamination or pollution.

- I. Department - State of Maine Department of Human Services
- J. Fixture Isolation - A method of backflow prevention in which a backflow preventer is located to correct a cross-connection at an in-plant unit rather than at the water service entrance.
- K. Owner - Any individual, tenant, corporation, public or private, political subdivision or agency of the State, department, or agency of the State, or agency or instrumentality of the United States or any other legal entity.
- L. Permit - A document issued by the Department with the approval of the Supplier which allows the use of a backflow preventer.
- M. Person - Any individual, partnership, company, public or private corporation, political subdivision or agency of the State, department, agency or instrumentality of the United States or any other legal entity.
- N. Potable Water – Approved water, free from impurities present in any amount sufficient to cause disease or harmful physiological effects. Its physical, chemical, bacteriological and radiological quality conforms to the Maine Drinking Water Act, or any regulations pertaining thereto.
- O. Private Water Source – Any source of water which may or may not be approved by the Department, utilized by any Owner for consumptive and/or other purposes, and which is not under the immediate control of the Supplier.
- P. Public Water System – Any publicly owned system of pipes, structures, and facilities through which potable water is sold, furnished or distributed to the public for human consumption, and which is under control of the supplier. The system shall not include the portion of service pipe owned and maintained by the Owner.
- Q. Supplier - (i.e. Auburn Water District (AWD)) Any person who controls, owns, or generally manages a system of pipes, structures and facilities through which water is delivered for human consumption.
- R. Water Service Entrance - That point in the owner’s water system beyond the sanitary control of the supplier. This will ordinarily be the outlet end of the water meter at the building entrance and will always be before any unprotected branch.

4. ADMINISTRATION

- A. The supplier shall not allow a cross-connection at any point within its system unless deemed necessary and approved by the supplier. All parties seeking approval of a cross connection must submit an application for approval to the supplier.
- B. All connections to a public water system, including connections provided specifically for fire suppression systems, shall be evaluated by the supplier for cross connection potential and degree of hazard.
- C. All cross connections shall be protected by backflow prevention devices, assemblies, and methods specified in the Maine State Internal Plumbing Code at 02-395 CMR 4.
- D. The owner shall be responsible for ensuring the proper operation and maintenance of an anti-backflow device and the periodic regular testing of the device as required by the Maine State Internal Plumbing Code or by the public water supplier.
- E. The supplier shall be responsible for the administration of its cross-connection control program and ensuring that backflow preventers installed for containment purposes are periodically tested as required.

5. CROSS CONNECTION CONTROL PROGRAMS

- A. All suppliers serving a community population with one or more low or high hazard service connections or a non-community population with one or more high hazard service connections shall submit a written cross-connection control program to the Department for approval within sixty (60) days of the date the system is established or service is extended to the low or high hazard connection(s). The cross-connection control program shall be implemented and in effect within a period not to exceed nine (9) months of the date the system is established or service is extended to a low or high-hazard connection.
- B. Cross connection control programs, approvals, and device testing records must be available for review by the Department's field inspectors during regular sanitary survey or other on-site inspections.
- C. The Department specifically reserves the right to inspect all cross-connections. The supplier shall be administratively responsible for the corrections necessary as a result of a Departmental inspection. The owner and/or supplier shall comply with any Departmental or supplier's orders issued as a result of said inspections of the water system.
- D. Cross connection control programs shall include these sections (The model program in the EPA Cross Connection Control Manual can be used

as a reference for creating these sections, EPA 816-R-03-002, available at www.epa.gov/safewater):

1. Purpose & Scope;
 2. Authority;
 3. Responsibilities;
 4. Definitions;
 5. Administration;
 6. Requirements;
 7. Degree of Hazard;
 8. Cross Connection Approvals;
 9. Exemptions;
 10. Periodic Testing;
 11. Records and Reports;
 12. Fees and Charges
- Addendum

- E. Suppliers shall review their cross-connection control programs at least every five years. Updates shall be made as needed. Updated cross connection control programs shall be submitted to and approved by the Department.
- f. All new residential service connections shall have a State approved dual check valve preventer installed on the service line before service is turned on. Prior to re-initiating water service all existing Residential Services shall be required to have a State approved dual check backflow preventer installed if a request is made by the Owner or his agent to the Supplier to turn off service as the Supplier's curb stop. Any residential service may be required to have a testable backflow preventer installed if deemed necessary by the Supplier's inspection.

6. **DEGREE OF HAZARD**

The Supplier recognizes the difference in the threat to the public water system arising from different types of connection. These can be classified as follows:

A. Class I – Low Degree of Hazard

If backflow were to occur, the resulting health significance would be limited to minor changes in the esthetic quality such as taste, odor or color. Allowed devices are: air gap, a non-pressure type vacuum breaker, a residential dual check, a testable double check valve assembly, or a reduced pressure principle device.

B. Class II – Moderate Degree of Hazard

If Backflow were to occur, the resulting effect on the water supply would be significant changes in esthetic qualities. The foreign substance must be non-toxic to humans and non-bacterial in nature.

Allowed devices are an air gap, a testable pressure type vacuum breaker, a testable double check valve assembly, or a reduced pressure principle device.

C. Class III – High Degree of Hazard

If backflow were to occur, the resulting effect on the water supply could cause illness or death if consumed by humans. The foreign substance may be toxic to humans either chemically, bacteriologically or radiologically. Toxicity may result from either short or long-term exposure. Allowed devices are an air gap or a reduced pressure principle device.

7. **CROSS-CONNECTION CONTROL APPLICATION AND APPROVAL PROCESS**

- A. The supplier shall not allow a cross-connection within the public water system unless deemed necessary and approved by the supplier and protected by an approved backflow-prevention method.
- B. All cross-connection approval applications should be submitted to the supplier for review and approval.
- C. Records of cross-connection approvals and devices shall be kept on file with the supplier as long as the cross connection is present and until five years after the cross connection is eliminated. Records of tests for testable cross connection control devices shall be kept on file with the supplier for 5 years after the date of the test. Records must be available for inspection by Department staff.
- D. It shall be the supplier's responsibility to review the degree of hazard of the cross-connection, assign the proper hazard classification to a specific cross-connection and designate the proper classification on the specific cross-connection application.
- E. The owner shall apply for the approval of a cross-connection on appropriate forms provided by the supplier and submit said application to the supplier.
- F. The supplier shall record on the application the degree of hazard (High, Low or Residential) and the determination as to whether or not the cross connection is approved. Cross connections shall be reviewed for re-approval at the discretion of the supplier. Requests for re-approval of a cross connection shall be reviewed by the supplier, and if no changes have occurred, the cross connection shall be automatically renewed. If changes have occurred during any approved period, the cross-connection application shall be reviewed by the supplier for a modification to the degree of hazard determination.

G. Cross connection approvals shall be non-transferable.

8. **EXEMPTIONS**

A. Any existing backflow preventer shall be allowed to continue in service unless:

1. The supplier and/or Department considers the condition of any portion of the device to be such that replacement should be made, or
2. The degree of hazard is changed.

B. Refer to the Maine State Internal Plumbing Code at 02-395 CMR 4 for specific fixture isolation requirements.

C. The Commissioner may grant one or more exemptions from this rule to a public water system or owner, if the following exist:

1. The exemption will not result in an unreasonable risk to the public health; and/or;
2. The public water system or owner is unable to comply with the regulation due to compelling factors, not including economic factors.

D. An exemption shall not alter the degree of hazard classification of the cross-connection and shall not exclude the use of some appropriate anti-backflow device not necessarily assigned to the particular degree of hazard assigned to the cross-connection. Prior to granting an exemption, the Commissioner shall provide notice in a local newspaper and give an opportunity for public hearing on the proposed exemption. Each exemption may also be conditioned on monitoring, testing, analyzing or other requirements to ensure the protection of the public health, and shall include a compliance schedule.

9. **RESPONSIBILITY**

A. It shall be the responsibility of the supplier and owner to ensure that no unprotected cross-connection is present. If the supplier has reasonably ordered an owner to protect its water supply from a potential or actual cross-connection and the owner does not do so, the supplier is required to discontinue service to the owner within a period of time specified in the water supplier's Cross- Connection Control Program. Notice shall be given to the Department and to the Maine Public Utilities Commission.

- B. The owner shall be responsible for ensuring the proper operation and maintenance of a backflow preventer and the periodic regular testing of the device as required by the Maine State Internal Plumbing Code or by the public water supplier.
- C. All owners maintaining cross-connections between their private system and the supplier's water system shall eliminate and disconnect such cross-connections unless deemed necessary by the water supplier, and protected by a backflow preventer approved by the supplier and approved for the degree of hazard associated with the cross-connection, according to the Maine State Internal Plumbing Code. Such disconnection shall occur within six months of the effective date of the cross-connection control program.
- D. It shall be the responsibility of the owner to inform the supplier of any new, existing, proposed, or modified cross-connection.
- E. It shall be the responsibility of the owner to provide access during normal working hours to the premises for any representative of the supplier or to any representative of the Department or any other state or federal agency authorized to do so for the expressed purpose of inspecting for possible cross-connections or gaining information in the preparation of an approval. This shall include providing copies of any plans, drawings, reports or specifications relating to the water system or proposed cross-connection control devices.
- F. It shall be the responsibility of the owner to comply with all provisions of any cross-connection approval and the supplier's Cross-Connection Control Program.

STATUTORY AUTHORITY: 22 M.R.S.A. §2612(5)

EFFECTIVE DATE:

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February 21, 2018

CROSS CONNECTION CONTROL PROGRAM

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Approved by the Trustees of the Auburn Water District:

Signed:



Title:

President AND TRUSTEES

Date:

7/20/22