

1.1 INTRODUCTION

The purpose of this section is to describe the Holyoke Water Works' cross connection and backflow prevention program. A cross connection is an actual or potential connection between a drinking water distribution system pipe and any waste pipe, soil pipe, sewer, drain, or other unapproved source. Backflow is the flow of water or other liquids, mixtures, or substances from any source into the water distribution system.

1.2 PURPOSE

The purpose of the cross connection and backflow prevention program is:

1. To protect the public potable water supply of the City of Holyoke from the possibility of contamination or pollution by isolating within the customer's internal distribution system or the customer's private water system such contaminants or pollutants which could backflow into the public water system;
2. To promote the elimination or control of existing cross-connections, actual or potential, between the customer's in-plant water system and non-potable water systems, plumbing fixtures, and industrial piping systems; and
3. To provide for the maintenance of a continuing Program of Cross-Connection Control which will systematically and effectively prevent the contamination or pollution of all potable water systems from a physical or potential cross-connection.

1.3 AUTHORITY

The Holyoke Water Works requires that any cross-connection, actual or potential, between a distribution pipe of potable water from the public water system and any waste pipe, soil pipe, sewer, drain, or other unapproved source, be maintained in accordance with the Federal Safe Drinking Water Act of 1974 (Public Law 93-523), the Commonwealth of Massachusetts Drinking Water Regulations (310 CMR 22.22), and Holyoke Water Works Rules and Regulations, as most recently amended.

1.4 RESPONSIBILITY

The Holyoke Water Works Board of Water Commissioners shall be responsible for the protection of the public potable water distribution system from contamination or pollution due to the backflow or backsiphonage of contaminants or pollutants. If, as a result of a survey of the premises, the Commission determines that an approved backflow prevention device is required at the City's water service connection or as in-plant protection, then approved backflow prevention devices shall be installed. The customer shall, within a time frame determined by the Commission, install such approved device or devices at its own expense, and failure or refusal or inability on the part of the customer to install said device or devices within the specified time frame shall constitute grounds for discontinuing water service to the premises until such device or devices have been properly installed.

1.5 ADMINISTRATION

The Commission will operate an active cross connection control program, including the keeping of necessary records, which fulfills the requirements of the MADEP's Cross Connection Regulations and is approved by MADEP.

The Owner shall allow its property to be inspected for possible cross connections and shall follow the provisions of the Commission's program and MADEP Regulations.

1.6 COMMISSION

On new installations, the Commission will provide on-site evaluation and/or inspection of plans in order to determine the type of backflow preventer, if any, that will be required, and notify the Owner of plan approval requirements by the appropriate reviewing authority.

For premises existing prior to the start of this program, the Commission will perform surveys of the premises and reviews of as-built plans and issue a cross connection violation form to the Owner detailing any corrective action required, the method of achieving the correction, and the time allowed for the correction to be made. The time period allowed shall depend on the degree of hazard involved.

The Commission will not allow any cross connection to remain unless it is protected by an approved backflow preventer for which a permit has been issued and which will be regularly tested to ensure satisfactory operation.

If the Commission determines at any time that a serious threat to the public health exists, the water service will be terminated immediately.

The Commission shall have on its staff, or shall have a delegated representative, who is a backflow prevention device tester certified by the Commonwealth of Massachusetts.

The Commission will continually conduct premise inspections to determine the nature of existing or potential hazards. The focus will be on high hazard industries and commercial premises.

1.7 OWNER

The Owner shall be responsible for the elimination or protection of all cross connections on its premises.

The Owner shall be responsible for applying for and obtaining all necessary approvals and permits for the maintenance of cross connections and installation of backflow prevention devices, and applying annually for the renewal of each permit.

The Owner shall have any device that fails an inspection or test repaired by a licensed plumber.

The Owner shall inform the Commission of any proposed or modified cross connection and also any existing cross connection of which the Owner is aware but has not been found by the Commission.

The Owner shall not install a bypass around any backflow prevention device unless there is a backflow prevention device of the same type on the bypass. Owners who cannot shut down operation for testing of the device must supply an additional device necessary to allow testing to take place.

The Owner shall install backflow prevention device in a manner approved by the MADEP and the Commission.

The Owner shall install only reduced pressure backflow prevention devices and double check valve assemblies approved by the MADEP.

Any Owner of industrial, commercial, or institutional premises having a private well or other private water source must have a permit if the well or source is cross connected to the Commission's system. Permission to cross-connect may be denied by the Commission. The Owner may be required to install a backflow prevention device at the service entrance if a private water source is maintained even if it is not cross-connected to the Commission's system.

The Owner of any residential premises having a private well or other private water source will not be allowed a physical connection with the public water system.

The Owner shall be responsible for the payment of all fees for permits, device testings, re-testing in the case that the device fails to operate correctly, and second re-inspections for noncompliance with Commission or MADEP requirements.

1.8 DEGREE OF HAZARD

The Commission recognizes the threat to the public water system arising from cross connections. As such, the Commission, whereas it is responsible for the quality of the public water supply, may require a containment device on the water service entrance to any customer who, as a result of unprotected cross connections, could contaminate the public water supply system.

1.9 ENFORCEMENT

The Commission shall not allow a cross connection to exist with the public water supply system unless it is considered necessary and all appropriate approvals and permits have been issued.

If an inspection of a facility or the premises reveals a cross connection does exist, whether physical or potential, the Commission shall issue a "Notice of Non-compliance Cross Connection Violation" detailing the violation(s) and a procedure for corrective action. The Owner shall be required to submit plans and specifications indicating the method of protection to both the Commission and the MADEP within 60 days of receipt of the notice.

If the Owner of the premises does not initiate corrective actions by the prescribed deadline, the Commission shall then issue a follow-up notice or a "Second Notice of Non-compliance Cross Connection Violation" indicating that the Owner remains in violation and under 310 CMR 22.22 Section 2(b) will have water service terminated unless corrective action is initiated within 15 days of receipt of the notice.

If the Owner of the premises fails to initiate corrective action by the prescribed deadline as required in the follow-up notice, a third and final notice or "Notice of Termination of Water Service" shall be issued notifying the Owner that water service will be terminated within 24 hours upon receipt of the notice. In addition, the Owner will be charged a Water Shut-off/Turn-On Fee for the physical termination of water service.

If the Owner of the premises fails to submit payment for testing and/or inspection of cross connection devices, the Commission shall issue a "Notice of Non-Payment" along with an additional copy of the unpaid invoice. The Owner shall be required to submit payment within X days of receipt of the notice.

If, after the required X days of receiving the "Notice of Non-Payment", the Owner still has not submitted payment for testing and/or inspection of cross connection devices, the Commission shall issue a "Water Shut-Off Notice" to notify the Owner that water service will be shut off within X days upon receipt of the notice. In addition, the Owner will be charged a Water Shut-off/Turn-On Fee for the physical termination of water service.

All notices addressing the cross connection policy are provided in Appendix C.

1.10 EXISTING IN-USE BACKFLOW PREVENTION DEVICES

An existing backflow prevention device shall be allowed by the Commission to continue in service unless the degree of hazard is such as to supersede the effectiveness of the present backflow prevention device or result in an unreasonable risk to the public health. Where the degree of hazard has increased, as in the case of a residential installation converting to a business establishment, an existing backflow prevention device must be upgraded to a reduced pressure backflow prevention device, or a reduced pressure backflow prevention device must be installed in the event that no backflow device was present.

1.11 IRRIGATION SYSTEMS

All new commercial systems shall install a new reduced pressure backflow prevention device for protection. All existing commercial systems will grandfathered until such time that the company changes owners or makes major renovations.

1.12 PERIODIC TESTING

Reduced pressure backflow prevention devices and double check valve assemblies shall be tested and inspected a minimum of two times per year. Double check valve assemblies shall be tested and inspected a minimum of one time per year.

The Commission's certified tester shall perform the testing. The Commission also reserves the right to require the Owner to test and inspect their own devices. A licensed certified tester shall perform all Owner device testing. The Commission will provide the Owner with a list of all Commonwealth of Massachusetts licensed certified testers.

The testing shall be conducted during the Commission's regular business hours. Exceptions to this, when at the request of the Owner, may require additional charges to cover the increased costs to the Commission.

Any backflow prevention device that fails during a periodic test must be repaired or replaced by a licensed plumber. When repairs are necessary, upon completion of the repair, the device will be retested at the Owner's expense to ensure proper operation. High hazard situations will not be allowed to continue unprotected if the backflow prevention device fails the test and cannot be repaired immediately. In other situations, a compliance date of not more than fourteen days after the test date will be established. The Owner is responsible for spare parts, repair tools, or a replacement device. Parallel installation of two devices is an effective means of the Owner ensuring that uninterrupted water service remains during testing or repair of devices and is strongly recommended when the Owner desires such continuity.

Backflow prevention devices will be tested more frequently where there is a history of test failures and the Commission feels that due to the degree of hazard involved, additional testing is warranted. Cost of the additional tests shall be borne by the Owner.

1.13 INCIDENT RESPONSE

Upon a report of a contamination event, the MADEP's cross connection inspector/tester shall investigate the nature of the contamination and in light of the circumstances found to exist, determine if in fact a backflow incident did or is occurring. Under the Drinking Water Regulations of the Commonwealth of Massachusetts, 310 CMR 22.22, Section 10(b)5, the MADEP shall take appropriate action to eliminate the hazardous conditions. Action may include immediate termination of water service to any premises suspected of contaminating the public water supply.

In any event where backflow is or was either suspected or confirmed, the following agencies will be immediately notified by the Commission:

1. The Massachusetts Department of Environmental Protection, Western Region
2. The Holyoke Health Department

Samples shall be taken by a certified laboratory for analysis to determine the nature of the contamination, if any. The scope of the incident shall be determined and all consumers affected by the contamination shall be notified immediately if there is any threat to public health.

Any remedial action to mitigate the contamination shall be initiated as promptly as possible. Mitigation actions shall include installation of backflow prevention devices, disconnecting

systems or equipment, or flushing and chlorinating affected water lines, all on the part of the Owner and under the supervision of the Cross Connection Inspector/Tester. No water in the affected area shall be used for drinking, bathing, or cooking until such time as further sampling and analysis indicates that no threat to the public health exists.

Any and all action taken shall be well-documented and recorded by the Cross Connection Inspector/Tester.

1.14 RECORDS AND REPORTS

The Commission will initiate and maintain the following:

1. Master files on customer cross connection tests and/or inspections
2. Master files on approved cross connection installations
3. Copies of lists and summaries supplied to the MADEP

The Commission will submit the following to the MADEP:

1. Initial listing of high hazard cross connections
2. Initial listing of low hazard cross connections
3. Annual updated lists of items 1 and 2 above
4. Annual summary of cross connection inspections and surveys

1.15 SURVEY PROCEDURE

1. The Commission shall determine if a cross connection survey is required for all commercial, institutional, and industrial establishments.
2. The Commission and/or delegated licensed representative shall notify the Owner that a survey of the premises is required.
3. The Commission shall determine if an actual survey will be conducted by in-house personnel, a delegated licensed representative, or if the Owner will be required to hire a certified cross connection surveyor.
4. The Commission and/or delegated licensed representative will provide an inspection/evaluation report checklist (Appendix C) for both in-house and Owner's surveyor for all survey work. If no cross connections are discovered, the checklist will be completed and no further action is necessary. Completed checklists will be provided to the Owner and kept on file at the Holyoke Water Works office.

5. If a cross connection is detected at the Owner's facility, the Owner must hire a licensed plumber and/or licensed surveyor who develops plans and data sheets for all associated work.
6. For non-fire service backflow prevention devices, the licensed plumber and/or licensed surveyor must submit plans and a permit application to the Commission for review and approval (meet Commission and CMR requirements). The Commission will notify the City Plumbing Inspector of the location of the devices. For cross connection prevention devices on a fire service, all plans must be submitted directly to the Fire Department for approval and permitting.
7. Once the Owner receives Commission approval, the Owner's licensed plumber and/or licensed surveyor must submit plans and application to the plumbing inspector.
8. Once the plumbing inspector reviews the plan and issues an authorization permit, the work may begin.
9. When the work is completed, the plumber must notify both the plumbing inspector for final inspection and the Commission for initial device testing. The Commission will verify that the approved appropriate device has been installed, installation is consistent with submitted design plans, the device has passed initial testing, and a spare repair kit is on site. It is the Owner's responsibility to ensure that both inspecting parties sign off on the initial inspection/evaluation report checklist.
10. When both inspecting parties have signed the initial inspection/evaluation report checklist, the Owner shall be considered to be in compliance.

1.16 RESIDENTIAL EDUCATION

The Commission will establish and maintain a residential education program by including the following "points of concern" in the annual Consumer Confidence Report:

1. Vacuum breaker installation on hose bibs
2. Home heating system protection with proper backflow prevention devices
3. Awareness of connection to swimming pools, home spas, etc.

1.17 FEES AND CHARGES

All fees and/or charges shall be paid prior to or at the time of testing if performed by the Commission's licensed tester. A summary of fees and charges associated with the cross connection and backflow prevention program is located in Appendix B.