



CROSS-CONNECTION CONTROL PLAN

For

City of Seaford

City of Seaford Approved: (June 27, 2023)

TABLE OF CONTENTS

1. DEFINITIONS	3
2. INTRODUCTION	4
2.1 PURPOSE	4
2.2 LEGALITY	5
3. PROGRAM TEAM	5
3.1 AUTHORITY/ADMINISTRATOR	5
3.2 SURVEYOR	5
4. BACKFLOW PREVENTION ASSEMBLIES AND DEVICES	6
4.1 RESPONSIBILITY OF THE OWNER	6
4.2 APPROVED BACKFLOW PREVENTION ASSEMBLIES AND DEVICES	6
4.3 NON-RESIDENTIAL CONTAINMENT BACKFLOW PREVENTION ASSEMBLY PROTECTION	6
4.4 NON-RESIDENTIAL CONTAINMENT BACKFLOW PREVENTION ASSEMBLY EXCEPTION	9
4.5 RESIDENTIAL CONTAINMENT BACKFLOW PREVENTION ASSEMBLY PROTECTION	9
4.6 TESTING OF BACKFLOW PREVENTION ASSEMBLIES	10
4.7 ASSEMBLY AND DEVICE ABBREVIATION LIST	12
5 SURVEYS OF EXISTING CUSTOMERS	13
5.1 RESPONSIBILITY OF THE OWNER	13
5.2 INITIAL SURVEY	13
5.3 SITE SURVEY	13
5.4 NON-COMPLIANCE	15
5.5 RECORD KEEPING AND DATA MANAGEMENT SOFTWARE	16
6 SITE PLANS AND PERMITS	16
6.1 PROCEDURES	16
6.2 INSPECTIONS	16
6.3 NON-COMPLIANCE	17
7 EDUCATION AND AWARENESS	17
APPENDIX A – DELAWARE CCC REGULATION	18

1. DEFINITIONS

Air Gap: The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet conveying water or waste to a tank, plumbing fixture, receptor, or other assembly and the flood level rim of the receptacle. These vertical, physical separations must be at least twice the diameter of the water supply outlet and at no time less than 1 inch.

Approved: Accepted by the City of Seaford as meeting an applicable specification stated or cited in this plan or as suitable for the proposed use.

Auxiliary Water System: Any water system on or available to the premises other than the City of Seaford approved public water supply.

Backflow: The flow of water or other liquids, mixtures or substances, under positive or reduced pressure in the distribution pipes of a potable water supply from any source other than its intended source.

Backflow Preventer: An assembly, device or method designed to prevent backflow.

Backflow Prevention Assembly: A mechanical backflow preventer used to prevent backward flow of contaminants or pollutants into a potable water distribution system. An assembly has a resilient seated, full flow shut-off valve before and after the backflow preventer making it testable in line.

Backflow Prevention Device: A mechanical backflow preventer without shut-off valves.

Backpressure: A pressure, higher than the supply pressure, caused by a pump, elevated tank, boiler, or any other means that may cause backflow.

Backsiphonage: Backflow caused by negative or reduced pressure in the potable water supply piping.

Containment or Service Line Protection: Installation of an approved backflow prevention device, assembly or other method at the point of service in order to confine potential pollution or contamination caused by a cross-connection within the building or facility where it arises.

Contaminant: Any foreign substance (liquid, solid or gas) that degrades the quality of water and creates a health hazard.

Cross-connection: A connection or potential connection between any part of a potable water system and any other environment containing other substances in a manner that, under any circumstances, would allow such substances to enter the potable water system. Other substances may be gases, liquids, or solids, such as chemicals, waste products, steam, water from other sources (potable or non-potable), or any matter that may change the quality of the water.

High Hazard: A high hazard is referred to as toxic, health or contamination hazard where a backflow incident may pose a serious threat to the public water supply.

Low Hazard: A low hazard may also be referred to as a backflow incident that does not pose a serious threat to the public water supply or are non-health hazards that are considered aesthetically objectionable or a pollution hazard that will not have serious affects.

Non-Potable Water: Water that is not safe for human consumption or of questionable quality.

Owner: Person or entity receiving service from the public water distribution system.

Pollutant: Any foreign substance (liquid, solid or gas) that degrades the quality of water as to constitute a non-health hazard or impair the usefulness of the water.

Potable Water: Water that is safe for human consumption as described by the public health official having jurisdiction.

Premises: A house, building or facility, together with its land and accessory structures, including the privately owned portion of the water service connection(s).

Reclaimed Water: Water that, as a result of treatment of wastewater, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is not safe for human consumption.

2. INTRODUCTION

2.1 Purpose

The purpose of this document is to outline the City of Seaford Cross-Connection Control (CCC) program and policies for all non-residential, residential, and miscellaneous facilities having service connections to the City of Seaford public water supply. The goals of this policy are summarized as follows:

- Protect the public water supply from contaminants and pollutants that could backflow through the service connection(s); and
- Promote the elimination of actual and/or potential cross-connections between the public water supply and non-potable water systems, plumbing fixtures and sources or systems containing substances of unknown or questionable quality; and
- Promote the elimination of actual and/or potential cross-connections between the building or facility potable water supply and non-potable water systems, plumbing fixtures and sources or systems containing substances of unknown or questionable quality; and
- Identify all hazards, whether low or high, that may exist and may pollute or contaminate the

- public water supply; and
- Provide guidance for the maintenance of a continuing program for protection from the potential of service line and internal cross-connections within the building or facility; and
- Educate the Seaford Community on the dangers of cross-contaminants and the procedures needed to further protect the public water supply; and
- Provide procedures for the survey and testing of cross-connections, backflow prevention assemblies and/or backflow prevention devices to further protect the public water supply.

2.2 Legality

In accordance with the Delaware Department of Health and Social Services (DHSS), Division of Public Health, the City of Seaford proclaims this program as a continuing effort to maintain safe potable water. The City of Seaford shall comply with the CCC Rules in the Delaware Administrative Code 4662, Chapter 16, Section 21.

By reference to the DHSS Code requirement *“we hereby establish the City of Seaford Cross-Connection Control Program.”* This program was adopted by City of Seaford on June 20, 2021 and made effective on June 20, 2021.

3. PROGRAM TEAM

3.1 Administrator

City of Seaford, City Manager, Public Works Director or their designee (hereinafter “City”), shall be the Administrator of the CCC Program. The City may contract with a third party, as its Designated Agent, to perform the role of Administrator of the CCC Program. This CCC Program shall include, but not be limited to:

- Establishment of Applicable Rules and Regulations
- Approved Backflow Prevention Devices and Assemblies
- Testing Requirements of Backflow Prevention Assemblies
- Survey Process and Requirements
- Non-Compliance
- Data Management
- Reporting
- Public Education and Awareness

3.2 Surveyor

The City, or its Designated Agent(s), may conduct site surveys at premises connected to the City of Seaford public water supply. The Surveyor must have both 1) an experience component and 2) a certification/training component.

1) Experience

Acceptable experience may include one (1) or more of the following:

- Be employed or have been employed by a Water Utility, Water Purveyor, Building Department, Code Enforcement Department for a period of not less than 3 years, not more than 5 years ago; or,
- Held the position of Cross-Connection Surveyor, or similar position, with a municipal body or Branch of the Military for a period of not less than 3 years, not more than 5 years ago; or,
- Have not less than one-year full time experience in conducting cross-connection control surveys in non-residential and/or residential facilities for a private, non-governmental, entity.

2) Surveyor Certification/Training

Acceptable certification/training shall include successful completion of the American Society of Sanitary Engineers Standard 5120 – relating to Cross-Connection Control Surveyors and a valid certification of completion.

4 BACKFLOW PREVENTION ASSEMBLIES AND DEVICES

4.1 Responsibility of the Owner

Installation and maintenance of backflow prevention assemblies, devices and/or methods at all premises to protect existing cross-connections shall be the responsibility of the property Owner.

4.2 Approved Backflow Prevention Assemblies and Devices

- City of Seaford accepts ASSE recognized backflow prevention devices, assemblies and methods (downstream of containment or service line protection) appropriate to the level of hazard as recognized by the applicable Delaware Statutes, Rules and Regulations.
- New installation, repair, replacement, or relocation of all backflow prevention assemblies or devices, including but not limited to Reduced Pressure Backflow Prevention and Double Check Valve Assemblies, must conform to the applicable ASSE Standards, most recent versions.
- All work required by the City or their designated agent, including but not limited to installation, alteration, replacement, relocation or repair of backflow prevention assemblies, devices or methods shall be completed under an approved City of Seaford permit through the City of Seaford Code Department. The permit fee shall be waived.

4.3 Non-Residential Containment Backflow Prevention Assembly Protection

- Containment, or Service line protection, shall be required at all non-residential properties as

outlined in the DE Regulation 21.2.4, or as required by the City or their designee.

- Where a backflow prevention assembly or device is required, the Owner shall also install appropriate protection from thermal expansion within the premises.
- Service connections to fire protection systems shall be protected from backflow prevention in accordance with the applicable ASSE Standard.
- Fire suppression systems shall be independently protected against backflow by an appropriate backflow assembly/device. The installation of a backflow assembly or device on a fire suppression system, of whatever sort, shall be installed in such a way as to not adversely affect the operation of the fire suppression system. This shall be approved by the fire system company.
- Regardless of the level of hazard, a Reduced Pressure Backflow Prevention Assembly shall be required at all facilities which are also served by reclaimed water or where auxiliary water systems exist.
- Backflow prevention assemblies, devices or methods shall be installed immediately downstream of the water meter and prior to the first branch line in the plumbing system.
- Only Double-Check Backflow Prevention Assemblies or Dual-Check Backflow Prevention Devices are permitted to be installed below grade or in an underground pit, otherwise all other backflow prevention assemblies or devices are prohibited to be installed below grade or in an underground pit.
- Pressure Vacuum Breaker Assemblies and Atmospheric Vacuum Breakers shall not be installed as containment protection.
- All backflow assemblies or devices, except residential Dual Check Valves, shall be tested upon installation, upon repair, upon relocation, after a reported backflow incident at the premises, and on an annual basis.

With respect to backflow prevention assemblies installed at the service line, the City shall require the installation of a reduced pressure principle backflow preventer (RPPBP), also referred to as a reduced pressure zone (RPZ) backflow preventer, at the following facility types. Said facilities include, but are not limited to:

1. Medical Facilities

- Hospitals
- Clinics
- Laboratories
- Veterinary
- Nursing/convalescent
- Physical therapy/radiographic
- Morgues/mortuaries/autopsy/embalming
- Dental offices

2. Treatment Plants/Pump Stations

- Municipal/Industrial/Storm

3. Commercial Manufacturing/Storage

- Automotive/aircraft/watercraft
- Breweries/distilleries/beverage bottling
- Chemical (manufacturing, use, storage, treatment, disposal)
- Car wash facilities (self-serve and automatic)
- Agricultural facilities (farms, dairies, cold storage)
- Metals manufacturing/handling (cleaning, processing, refining, fabricating, plating)
- Paper and paper products
- Petroleum or gas processing/storage
- Photographic film processing
- Laundries and dry cleaners
- Power plants/facilities
- Radioactive materials/substance (processing/handling/treatment/disposal)
- Rubber plants (natural and synthetic)
- Sand, gravel, concrete and asphalt plants/facilities
- Technical schools, colleges, universities
- Solar heating systems (direct and auxiliary)
- Temporary services or hydrant use (street cleaning, tank trucks, all infrastructure testing/flushing not associated with the potable water system)
- Waterfront facilities (docks, marinas, etc.)
- Food processing (manufacturing, canning, packaging)
- Waterparks

4. Buildings

- With sewage ejectors/pumps
- With water booster pumps and/or water storage tanks
- Supermarkets/grocery (wholesale/retail)
- Restaurants/food preparation
- Schools, research facilities, any building with a laboratory
- Buildings with dedicated/combined fire service with fire pumps, storage tanks, private hydrants and fire department connections (FDCs)
- Warehouses used for the storage of hazardous materials
- Factories
- Shopping malls

All other non-residential properties, not listed above, shall be protected by a testable double-check valve assembly (DCV) at a minimum.

4.4 Non-Residential Containment Backflow Prevention Assembly Exception

1. Upon written request by the customer, an exception to this requirement may be granted by the Director if the customer can demonstrate that the site meets all of the following conditions:
 - Must be a Non-Residential property not requiring a RPPBA/RPZ listed in section 4.3 1-4
 - Only certain low risk, low use properties (Example: one restroom Accountant's office) will be issued an exception
 - The facility served by the water service line(s) does not contain any of the hazards listed below in section 4.5, or any other cross-connection hazard as determined by the Director
 - A clear functioning air gap must be maintained and inspected
2. It shall be the responsibility of the customer to provide any such information the Director deems necessary to evaluate the request for an exception. A site survey by the Director or their representative, at their option, may be required before granting the request.
3. Exceptions are granted to the customer based on the site use and plumbing configuration in existence at the time of the request and are not transferrable to the new owner or tenant. Customers will be required to periodically verify that they continue to meet the criteria to receive the exception.
4. An exception may be rescinded at any time if, in the opinion of the Director, the potential hazard justifies installation of a backflow prevention assembly. Reasons for rescinding an exception may include:
 - a. Change in site use
 - b. Addition of a non-potable system connected to the potable water system
 - c. Availability of new information showing that a potential hazard exists
 - d. Changes in laws or rules affecting backflow prevention and cross-connection control
 - e. Others as determined by the Director

4.5 Residential Containment Backflow Prevention Assembly Protection

At this time, residential customers on the City of Seaford public water system are not required to have or maintain a backflow device. Residents may install ASSE-complaint dual checks installed downstream of the water meter at their discretion. These dual checks may be replaced at the time of a City of Seaford meter exchange. Costs to install and replace the dual check valve are the responsibility of the customer.

- Exceptions (required installations at residential premise(s)):

a) Lawn Irrigation Systems

In-ground lawn irrigation systems including those with chemical injection systems on the City of Seaford public water system shall be equipped with a Reduced Pressure Backflow Prevention Assembly or Pressure Vacuum Breaker Assembly immediately downstream of the water meter and prior to the first irrigation branch line. These assemblies must be installed in accordance with the applicable ASSE standard for such assemblies, the applicable portions of the DE Plumbing Code IPC 2018, Section 608, most recent version, and the manufacturers' installation requirements, most recent versions.

b) Reclaimed Water and/or Auxiliary Water System(s)

Those premises that are connected to the City of Seaford public water system and who are also served by reclaimed water or auxiliary water system(s) shall be equipped with a Reduced Pressure Backflow Prevention Assembly downstream of the meter and prior to the first branch line. These assemblies must be installed in accordance with the applicable ASSE standard for such assemblies, the applicable portions of the DE Plumbing Code IPC 2018, Section 608, most recent version, and the manufacturers' installation requirements, most recent versions.

c) Pools

Those premises that are connected to the City of Seaford public water system and have a pool on the premises with a direct connection to the public water service, shall be equipped with a Reduced Pressure Backflow Prevention Assembly or Pressure Vacuum Breaker Assembly immediately downstream of the water meter and prior to the first branch line. These assemblies must be installed in accordance with the applicable ASSE standard for such assemblies, the applicable portions of the DE Plumbing Code IPC 2018, Section 608, most recent version, and the manufacturers' installation requirements, most recent versions.

d) Fire Suppression Systems

Those premises that are connected to the City of Seaford public water system and have a fire suppression system shall be equipped with an appropriate backflow assembly/device. The installation of a backflow assembly or device on a fire suppression system, of whatever sort, shall be installed in such a way as to not adversely affect the operation of the fire suppression system. These assemblies must be installed in accordance with the applicable ASSE standard for such assemblies, the applicable portions of the DE Plumbing Code IPC 2018, Section 608, most recent version, and the manufacturers' installation requirements, most recent versions.

4.6 Testing of Backflow Prevention Assemblies

- All testable backflow prevention assemblies, excluding residential dual-checks, but including required residential backflow prevention assemblies, as set forth in 4.4 (a-d), shall be tested upon installation, upon repair, upon relocation, after a reported backflow incident, and on an annual basis. Assemblies must be tested in accordance with applicable standards referenced within the DE Plumbing Code, Section 608 and/or ASSE 5000 Series.
- Equipment, such as three and five hose test gauges, used to field test assemblies must be certified and calibrated for accuracy annually. Single hose testing is prohibited.
- Assembly test form(s) to record test results will be maintained by the Owner and submitted to the City as required.
- Completed assembly test forms shall be filed in a location as directed by this program.
- The Owner shall have all assemblies tested by a tester having completed the applicable forty (40) hour ASSE Backflow Prevention Assembly Tester Training and Certification Course. All testers must also complete a recertification exam at an interval not to exceed once every three (3) years.
- The City of Seaford shall reserve the right to direct and administer testing and/or maintenance of any backflow prevention assemblies. All costs associated with testing and any necessary installation, alteration, replacement, relocation or repairs of these assemblies or devices shall be the sole responsibility of the Owner. If, in the interest of public safety and safety of the water supply, the City assumes the responsibility of backflow assembly installation, testing, maintenance or repair at a premises, all costs for such testing, maintenance, installation or repairs will be charged to the Owner in a manner deemed appropriate by the Director of Public Works.
- Failure to test assemblies and submit appropriate test forms, in accordance with this program, may result in termination of water service.

REST OF PAGE INTENTIONALLY BLANK

4.7 Assembly and Device Abbreviation List

Backflow Prevention Assembly and Device Legend			
A.S.S.E Standard	Legend	Acronym	Testable Device
1001	Atmospheric Type Vacuum Breakers	AVB	Yes
1002	Anti-siphon Fill Valves (Ballcocks)	ASBC	No
1011	Hose Connection Vacuum Breaker	HBVB	No
1012	Backflow Preventer w/Intermediate Atmospheric Vent	VDCV	No
1013	Reduced Pressure Backflow Prevention Assembly	RPBP	Yes
1015	Double Check Valve Backflow Prevention Assembly	DCV	Yes
1019	Vacuum Breaker Wall Hydrants	HBIVB	No
1020	Pressure Vacuum Breaker Assembly	PVB	Yes
1022	Backflow Preventer for Carbonated Beverage Machine	VMBP	No
1024	Dual Check Valve Type Backflow Preventers	DC	No
1024	Residential Dual Check	RDC	Yes/No
1035	Laboratory Faucet Backflow Preventer	LFVB	No
1037	Pressurized Flushing Devices (Flushometers)	PFD	No
1047	RP Detector Backflow Prevention Assembly	RPDA	Yes
1048	Double Check Detector Backflow Prevention Assembly	DDCV	Yes
1052	Hose Connection Backflow Preventer	HCBP	No
1055	Chemical Dispensing Systems	AG	No
1056	Spill Resistant Vacuum Breaker Assembly	SVB	Yes
1057	Freeze Resistant Yard Hydrant W/Backflow		No
A112.1.2	Air Gap	AG	No

5 SURVEYS of EXISTING CUSTOMERS

5.1 Responsibility of the Owner

The Owner shall be responsible for the protection of the public water supply from pollution or contamination due to backflow through the water service connection(s). The City may require the Owner, as a result of the survey and at their expense, to install, alter, replace, relocate or repair any plumbing connected to the public water system that may pose a threat to public health. Failure, refusal, or the inability on the part of the Owner to correct any deficiency or violation in the timeframe indicated within the Notice provided to the Owner by the City shall be unlawful and the City may deny or discontinue water service to the premises (See Section 5.4). The Owner shall be responsible for the elimination of all unprotected cross-connections, including but not limited to, any service line protection and any connections downstream of the service line supply to the premises.

5.2 Initial Survey

- The initial survey, which can be completed by the owner or their designee by mail or via an on-line portal, will be used by the City for premises served by the City of Seaford public water system in order to determine the level of hazard existing at the premises and obtain record of existing backflow prevention assemblies, devices, and methods installed. The CCC Plan, at inception, will first address all existing non-residential premises and required non-exempt residential premises.
- If it is determined by the City, or their designated agent, that a site visit is required as a follow-up to the initial survey, the Owner of the premises will be contacted to schedule the visit.
- If it is determined by the City, or their designated agent, that a backflow prevention assembly needs to be installed, altered, replaced, relocated, or repaired, the Owner of the premises shall have 60 days to perform the required work unless this timeline is extended by the City Manager or Director of Public Works.

5.3 Site Survey

Authorized Surveyors, having proper identification, shall be permitted to enter the building/premises at any reasonable time for the purpose of survey for the presence or absence of cross-connections, testing, repair, and maintenance of any part of the plumbing system related to any cross-connection control device connected to the water system. The City may deny or discontinue, after reasonable notice to the occupants, water service to any building/premises for refusal or failure to arrange for a cross-connection survey. The City shall deny or discontinue water service if there is reason to believe the building/premises pose an immediate danger to the public and/or occupants.

5.3.1 Service Line Protection Survey

- a) Existing service line connections should be reassessed/surveyed at an interval of no less than every ten (10) years (unless the service line is protected with an approved Reduced Pressure Backflow Prevention Assembly to determine if the existing backflow preventer/method is appropriate for the level of hazard, or if service line protection is required.
- b) Existing non-residential service line backflow prevention assemblies/methods shall be protected by, including but not limited to, Double Check Backflow Assemblies (DCVA) or Reduced Pressure Backflow Preventers (RPBP), as determined by the City.
- c) All high hazard non-residential customers are required to have, at a minimum, an RPBP installed immediately after the water meter and prior to any connections.
- d) The City, or their designee, has the right to require the installation of a testable backflow prevention assembly necessary to address the level of hazard.
- e) Failure to install backflow protection as required by the City may precede disciplinary action from the City, including but not limited to, termination of the water service connection(s).

5.3.2 Internal Plumbing System Survey

- a) Internal plumbing systems may require a survey at the discretion of the City, or their designee. The facilities internal water use practices shall be reviewed to determine whether there are actual or potential cross-connections to the plumbing system through which contaminants or pollutants could backflow into the public water supply and/or the facilities internal plumbing system.
- b) Recommendations for internal plumbing cross connection control and backflow prevention will be provided to the Owner upon survey completion.

5.3.3 Survey/Survey Forms

Initial surveys can be conducted by mail or on-line by the Owner or its designated agent. A *Survey/Survey Form* shall be used in every required physical survey and will be filed in a location as directed by this program. This form will be used to record the level of hazard existing at the premises, any existing backflow prevention devices discovered at the premises and any additional backflow prevention devices required or recommended to be installed at the premises at the time of the survey.

5.3.4 Survey Procedures

Completed CCC surveys shall include the following information:

- a) Identify the premises to be surveyed and date of survey.
- b) The building or facility contact/Owner, or their designated representative.
- c) Notation that the building or facility contact/Owner or their designated representative

was explained the purposes of the CCC Program.

- d) Survey/Evaluate the level of hazard present within the premises and the status of cross-connection control and backflow prevention containment protection on the premises.
- e) Survey the premises and record the following information:
 - Any identified deficiency in the exposed piping and water outlets/uses downstream of the service connection(s); and
 - All existing backflow prevention assemblies, devices and methods (including make, model#, size, serial # if applicable) that are currently in place on the premises; and
 - Any point of use or equipment supplied for each backflow prevention assembly, device or method; and
- f) Any required or recommended backflow prevention assemblies required to be installed at the premises for corrective action or containment or isolation protection.
- g) In addition to the field forms, a piping diagram or schematic of the plumbing system may be requested or required.

5.3.5 Request for Internal Cross-Connection Control Information

The City has the right to request specific CCC and backflow prevention related information, including but not limited to, containment or service line protection methods, backflow assembly installation, repair, relocation and test records, CCC Program compliance information, and piping diagrams for the premises.

5.4 Non-Compliance

Failure, refusal, or the inability on the part of the Owner to correct any deficiency or violation in the timeframe indicated within the Notice provided to the Owner by the City, or their designee, shall be unlawful and the City may deny or discontinue water service to the premises.

Timeline for Corrective Actions by Owner:

The Owner shall have sixty (60) days from receipt of the first notification letter from the City, or their designee, to correct any deficiency or violation noted in the letter. After the sixty (60) days have passed and the Owner has not corrected any deficiency or violation, a second notification shall be sent to the Owner from the City, or their designee, providing another forty-five (45) days from receipt of this second letter to correct any deficiency or violation noted in the letter. After the forty-five (45) days have passed and the Owner has not corrected any deficiency or violation, a third letter shall be sent to the Owner from the City notifying the Owner that they are now subject to fees or fines in accordance with the City of Seaford's applicable Codes, Ordinances, Rules or Regulations.

If there are any special circumstances in which the timelines above cannot be reached by the Owner, the City or their designee shall review on a case-by-case basis and may grant extensions of the time periods within this section.

5.5 Record Keeping and Data Management Software

All data, reports, test results and any other related information obtained by the City or their designee will be inputted into a data management system and held for a period of no less than ten (10) years. This information will include:

- Address and location
- Owner name and contact information
- Survey information
- Level of hazard classification
- Backflow Prevention Assemblies present at the premises
- Location of any assemblies
- Make, model, and size of assemblies
- Testing and maintenance records for the assemblies
- Description of other cross-connections within the building or facility
 - Air gaps
 - Non-testable devices

6 SITE PLANS AND PERMITS

6.1 Procedures

Site plans and permits submitted to the City of Seaford shall be reviewed by the City for compliance with the CCC Plan and Backflow Prevention requirements, where applicable.

6.2 Inspections

The City of Seaford shall continue to inspect the authorized work, in compliance with the City of Seaford applicable municipal code, building code, plumbing code, fire code or other codes, ordinances, policies, rules or regulations.

New service line connections shall be assessed by City staff *prior* to introduction of new water service to determine the level of hazard and the appropriate method of containment backflow protection required.

6.3 Non-Compliance

Failure, refusal, or the inability on the part of the Owner to comply with the CCC Plan and Backflow Prevention requirements in the timeframe indicated to the Owner by the City shall be unlawful. The water service and the certificate of occupancy may be initiated, for a limited period not to exceed 60 days, until compliance is achieved and approved. The City may deny water service to the premises.

Owner may be subject to fees or fines in accordance with the City of Seaford's applicable municipal code, building code, plumbing code, fire code or other codes, ordinances, policies, rules or regulations.

6.4 Records

All data, reports, test results and any other related information obtained by the Code Department and Fire Marshal offices for permit-required work including back flow prevention assemblies, devices and/or methods shall be provided to the City, or its designated agent. This shall also include any and all annual testing reports provided to the City and Fire Marshal offices from the Owner.

7 EDUCATION AND AWARENESS

The CCC program staff must have a thorough understanding of the program. Staff shall receive training focusing on terminology, backflow prevention devices/assemblies, regulations, and hydraulic concepts, coordinated by the public water system. In addition, staff will be encouraged to receive continuing education to be made aware of new backflow prevention devices/assemblies, regulation changes (i.e., plumbing code updates), new water use devices that pose cross-connection concerns, etc.

Furthermore, public education opportunities about cross-connections will be provided, including but not limited to, distributing pamphlets on common residential cross-connections, providing onsite education of facility management and maintenance staff during routine surveys, web site information, social media posts, newsletter article(s), or posting newspaper announcements. Education content will comply with the applicable DHSS, Division of Public Health, requirements with respect to public education.

Cross-connection staff or their designated administrative designee(s) shall be available upon request to provide backflow prevention education to pertinent community officials and City of Seaford employees.

APPENDIX A – DELAWARE CCC REGULATION

- 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.
- | Premise - Degree of Hazard | |
|---|---|
| High Hazard | Low Hazard |
| Air Gap | Air Gap |
| Reduced Pressure Principle Backflow 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:
- | | | |
|---|--|-------------------------------|
| <i>Agricultural facilities (e.g., farms, dairies)</i> | <i>Beverage bottling plants</i> | <i>Car washes</i> |
| <i>Chemical plants</i> | <i>Dry cleaners (on site processing)</i> | <i>Film processing plants</i> |
| <i>Food processing plants</i> | <i>Laboratories</i> | <i>Medical facilities</i> |
| <i>Mortuaries</i> | <i>Metal plating industries</i> | <i>Mortuaries</i> |
| <i>Petroleum processing/storage plants</i> | <i>Piers, marinas, docks and waterfront facilities</i> | |
| <i>Radioactive material processing plants</i> | <i>Wastewater treatment facilities</i> | |
- 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:**
- 21.2.5.1.1.1. Causes and dangers of backflow and cross-connections, including health effects;
- 21.2.5.1.1.2. Information on how to identify actual and potential cross-connections
- 21.2.5.1.1.3. Preventive measures to reduce or eliminate cross-connection and backflow risks; and
- 21.2.5.1.1.4. 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 shall 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 fails to comply with these regulations shall be subject to penalty as provided in 16 Del.C. §122(3)(c).