

**APPENDIX A: Backflow Prevention and Cross-connection Control**

**<<Public Water System Name>> BPCCC Program**

**Purpose**

This Backflow Prevention and Cross-connection Control Program (BPCCC) outlines how the supplier of water specified below will implement its written BPCCC program. The North Dakota Department of Environmental Quality (NDDEQ) has developed the ND Backflow Prevention and Cross Control Guidance to assist public water systems.

|  |  |  |
| --- | --- | --- |
| **Public Water System Name & PWSID:** |  | |
| **Public Water System Owner:** |  | |
| **BPCCC Administrative Contact:** |  | |
| **Address:** |  | |
|  | |
| **Email:** |  | |
| **Phone:** |  | |
| **Signatures of Owner or Administrative Contact:** | | |
| **Effective Date** | **Name** | **Signature** |
|  |  |  |
|

This BPCCC program will include and specify information regarding how this supplier identifies cross connections, performs surveys, and controls identified cross connections. This BPCCC program also address how this supplier will require that backflow prevention assemblies and methods be tested and inspected annually, how this supplier will track the installation, maintenance, and testing of assemblies and methods and how this supplier will ensure that assemblies are tested by a *Certified Cross-Connection Control tester or repairer (Uniform Plumbing Code 603.4.2 Testing)*.

\*\*\*\*This program must be kept on file for review by the department. It can be revised by the department as necessary.

**Backflow Prevention and Cross-connection Control Program**

1. Process for conducting surveys.

|  |
| --- |
|  |
|  |
|  |

1. Legal authority to perform a survey of a customer’s property to determine whether a cross connection is present unless the supplier controls all non-single-family residential connections to the public water system with the most protective backflow prevention assembly or backflow prevention method.

|  |
| --- |
| { } Ordinance (attach copy) { } User Agreements (attach copy) { } Other – explain below |
|  |
|  |
|  |

1. Process to select a backflow prevention assembly or backflow prevention method to control a cross connection.

|  |
| --- |
|  |
|  |
|  |
|  |
|  |

1. Legal authorities to install, maintain, test, and inspect backflow prevention assemblies and/or backflow prevention methods and/or require customers to install, maintain, test, and inspect backflow prevention assemblies and/or backflow prevention methods.

|  |
| --- |
| { } Ordinance (attach copy) { } User Agreements (attach copy) { } Other – explain below |
|  |
|  |
|  |
|  |

1. Process to track the installation, maintenance, testing, and inspection of all backflow prevention assemblies and backflow prevention methods used to control cross connections.

|  |
| --- |
|  |
|  |
|  |
|  |
|  |

1. The process the supplier will use to ensure backflow prevention assemblies are tested by a Certified Cross-Connection Control tester or repairer.

|  |
| --- |
|  |
|  |
|  |
|  |

**Sample Backflow Prevention and Cross-connection Control Program**

**Department Notification**

If we become aware of a suspected or **confirmed backflow contamination event**, the supplier **MUST** notify and consult with the department on any appropriate corrective measures no later than 24 hours after learning of the backflow contamination event. The notification should be made to (701) 328-6620 or (701) 358 5211. **Both numbers have a 24-hour Hotline for reporting after 5:00 pm.**

When reporting the event, please have available the as much of the following information as possible:

* Date and time of event;
* Location of event;
* Type of threat or event;
* Public Water System Name and Identification Number;
* Water supplier contact name and phone number;
* Method of discovery (consumer complaint, witness, perpetrator, employee report);
* Response actions taken (water quality parameter testing, isolation of affected water);
* Recovery actions taken;
* Notifications made (customers, law enforcement, news media, etc.);
* Assessment of threat, if possible.

PWSs should notify the NDDEQ within 48 hours in any instance the supplier becomes aware of any backflow prevention and cross-connection control violation(s) and any backflow prevention and cross-connection control treatment technique violation(s).

Such notifications to the department can be written, verbal, or made by other means. The department can be notified via telephone at (701) 328-6620 or (701) 358-5211 and contacting one of the department’s backflow prevention and cross connection control specialists. The department can also be notified via the Drinking Water Portal sent to the attention of the backflow prevention and cross-connection control specialist. The Drinking Water Portal can be found online at: <https://deq.nd.gov/MF/BPCCC/>

Public Notice Requirements

Policy requires that suppliers distribute Tier 2 public notice in any instance the supplier becomes aware of any backflow prevention and cross-connection control treatment technique violation.

Policy requires that suppliers distribute Tier 3 public notice in any instance the supplier becomes aware of any backflow prevention and cross-connection control violation.

Please contact the NDDEQ Public Notice officer at (701) 328 5211 with any questions regarding public notice.

**Sample Backflow Prevention and Cross-connection Control Program**

## *(i) Survey Process and Documentation*

Suppliers must survey all non-single-family-residential connections to the public water system to determine if the connection is a cross connection. The supplier must also survey all connections within the supplier’s waterworks to determine if there are any cross connections present which could contaminate the public water systems or the facilities water supply system.

The supplier must identify the total number of non-single-family-residential connections to the public water system and connections within the supplier’s waterworks. This number is the total number of connections to the public water distribution system that are not considered single – family connections. Acceptable survey process documentation includes the following: How the supplier will select service connections that need a survey; For example: Usage type - commercial, industrial, or multi-family; new or newly acquired connections; and/or questionnaire results.

Single-family means:

* A single dwelling which is occupied by a single family and is supplied by a separate service line;
* A single dwelling comprised of multiple living units where each living unit is supplied by a separate service line.
* If a water supplier has ownership and maintenance responsibilities of a service line up to a point of single-connections such connections may be considered a single-family-residential-connection even if this connection is to a multi-family dwelling unit. It is important to be aware that all other applicable parts will also apply to those new acquired waterworks (i.e. distribution system) and that any irrigation or other cross connections that are directly connected to the newly acquired service line would have to be controlled as well.

Once the supplier has identified the total number of non-single family residential connections, the supplier must survey the connections to identify cross connections. The supplier must document the process for conducting surveys. Surveys can be performed onsite by a person designated by public water system or can be of a questionnaire type. The supplier’s survey process should identify potential service connections and uses that when identified may trigger cross-connection control requirements. The supplier’s process should address how the supplier will select individuals to perform the survey including experience and/or training or certification qualifications to perform a survey. Additionally, the supplier must survey any waterworks and water supply systems associated with those facilities for cross connections.

If the supplier uses questionnaires, various methods may be used to distribute the questionnaires: email surveys, web-based surveys, written surveys, or telephone surveys. Questionnaires should provide examples of common cross connections to the customer who completes the survey. Questionnaires should ask that the property-owner indicate that the information is accurate to the best of their knowledge. If the supplier does not receive a response to a questionnaire or the results are inconclusive, the supplier is required to perform an onsite survey for cross connections or control the connection with the most protective backflow prevention assembly or method.

The results of surveys should be kept in a manner that allows the supplier to demonstrate that a survey has been performed and if any action was required based on the results of the survey.

It is important that newly constructed and renovated buildings are constructed in accordance with the local plumbing code. The code is intended to protect the internal potable water system and its occupants from contamination that can be introduced via restrooms, kitchens, boilers, irrigation, HVAC systems, etc. It is equally important that the water supplier protect their distribution system from contamination that can be introduced via car washes, auxiliary water sources, fire suppression systems, irrigation and many other sources. Water suppliers need to perform cross connection identification surveys to identify potential cross connections within their distribution system.

\*\*\*Note to supplier. Describe in this section how the supplier complies with the regulation and its survey requirements

***(ii & iv) Legal Authority***

The supplier must have a legally-enforceable mechanism that implements its written backflow prevention and cross connection control program. The department recommends that the legally-enforceable mechanisms include specific provisions identifying customer requirements under and the associated remedies that the supplier may utilize for failure of customer(s) to comply. If the supplier does not have a legally-enforceable mechanism in place, the department expects the supplier to perform the actions necessary to complete the indicated requirements in the regulation.

\*\*\*Note to supplier. Provide a copy of the ordinance or user agreement in this section or discuss how the supplier implements the actions necessary to complete the indicated requirements in the regulation. As a reminder, suppliers are prohibited from installing or permitting any uncontrolled cross connection to the distribution system or within the supplier’s waterworks.

* Installing an uncontrolled cross connection means modifications or additions to waterworks or water supply systems that create a cross connection. The supplier is prohibited from intentionally performing any actions which would result in the creation of a cross connection.
* Permitting an uncontrolled cross connection means the supplier has allowed their users or customers to continue to have an uncontrolled cross connection past the regulatory-defined timelines. If the regulatory-defined timelines have elapsed and the supplier has not taken any of the following actions; control the cross connection, remove the cross connection or suspends service to the identified connection\*\*\*, then the supplier is allowing, or permitting, the cross connection to exist and is a violation of NDAC 33.1-17-01-19(1).

\*\*\* Note to supplier. Before suspension of service can be considered appropriate action the department expects that the supplier will confirm the following:

The connection downstream of the valve used to suspend the service does not remain pressurized because the customer has access to an alternative source of water or a storage tank onsite.

* If the cross connection is to a fire suppression system; suspension of service would not result in the building being inadequately protected from loss of life through fire. If there are service connections at the property separate from the fire suppression system causing the cross connection, a supplier may suspend service to one or all those other service lines (e.g. domestic or irrigation) as an appropriate action.
* The supplier may receive a department approved alternative compliance schedule for identified cross connections that have not been controlled within 60 days. Department-approval of an alternative compliance schedule means either an email or other written communication from the department. The department has provided in [APPENDIX C – Cross-connection Control Extension Application](#bookmark=id.30j0zll) for such request.
* Suppliers must specify the process that the water system will use to require the installation, maintenance, testing, and inspection of all backflow prevention assemblies and backflow prevention methods used to control cross connections. Generally, this is specified in one of the following: local government ordinances, user agreements or the public water system assumes full responsibility.

***(iii) Identification of Cross Connections and Backflow Prevention Assembly or Backflow Prevention Method Selection***

If the supplier discovers an uncontrolled cross connection and believes that a backflow contamination event has not occurred, the supplier must: first determine the type of backflow prevention assembly or backflow prevention method needed to control the cross connection and second install and maintain or require the customer to install and maintain a backflow prevention assembly or backflow prevention method at the uncontrolled cross connection, suspend service to the customer, or remove the cross connection, no later than 120 days after its discovery.

\*\*\*Note to supplier. Suppliers should include in the written BPCCC program guidelines and criteria used to select the type of backflow prevention assembly or method used to control an identified cross connection. Guidelines and criteria should address examples of cross connections throughout the water systems distribution system along with the corresponding appropriate backflow prevention assembly and or backflow prevention method used to control the identified cross connection. Appendix J provides various examples of backflow prevention assemblies and methods and when the use of such assemblies and methods may be appropriate.

## *(v & vi) Tracking & Certified Tester Verification*

Suppliers must specify the tracking mechanism it will use to verify the installation, maintenance, testing, and inspection of all backflow prevention assemblies and backflow prevention methods used to control cross connections. This section may include the process the supplier will use to ensure backflow prevention assemblies are tested by a Certified Cross-Connection Control tester of repairer.

\*\*\*Note to supplier. Please provide a tracking spreadsheet or description of program or other method which the supplier is using to verify performance and compliance with NDAC 33.1-17-01-19.

1. To be considered adequate, test reports used to document compliance 11 must include all the following:

Assembly or method information:

* 1. Assembly or method type;
  2. Assembly or method location;
  3. Assembly make, model and serial number;
  4. Assembly size;
  5. Test date; and,
  6. Test result (pass/fail).

Certified Cross-Connection Control tester or repairer:

1. Certified Cross-Connection Control Technician certification agency;
2. Certification number;
3. Certification expiration date or statement that certification is current;
4. As a future alternative to a-c, suppliers may provide documentation of an alternative validation process such as electronic login to reporting software where only current, certified cross-connection control technicians (or their companies) are given a login.