

1. Call to Order

2. Confirmation of Disclosures of Conflicts of Interest

**North Weld County Water District
Notice of Special Meeting & Agenda – Work Session**

Thursday, January 7, 2021 at 10:00 AM

32825 Co Rd 39, Lucerne, CO 80646

**DUE TO COVID-19 THE BOARD MEETING WILL BE OPEN TO THE PUBLIC BY
TELECONFERENCE**

To Join by Phone, Call: (888) 858-9008

Conference ID 919449840

- 1. Call to Order**
- 2. Confirmation of Disclosures of Conflicts of Interest**
- 3. Action: Approve January 7, 2021 NWCWD Work Session Agenda**
- 4. Action: Presentation and Discussion regarding Amended Policy for Control of Backflow and Cross Connections**
- 5. Other Business**

ADJOURN _____ .M.



Backflow Prevention and Cross Connection Control Policy Revisions

January 2021

Background

- **1960s:** Colorado Revised Statutes require water suppliers provide cross-connection control
- **1980s:** Section 11.37 of Regulation 11 requires cross-connection control
- **2015:** Section 11.37 of Regulation 11 revised (now Section 11.39)
- **January 1, 2016:** Revisions became effective

“Inadequate protection, record keeping, reporting, operational, maintenance or other practices may be identified as a **significant deficiency and/or violation** that must be corrected for water suppliers to remain in compliance with Regulation 11.”



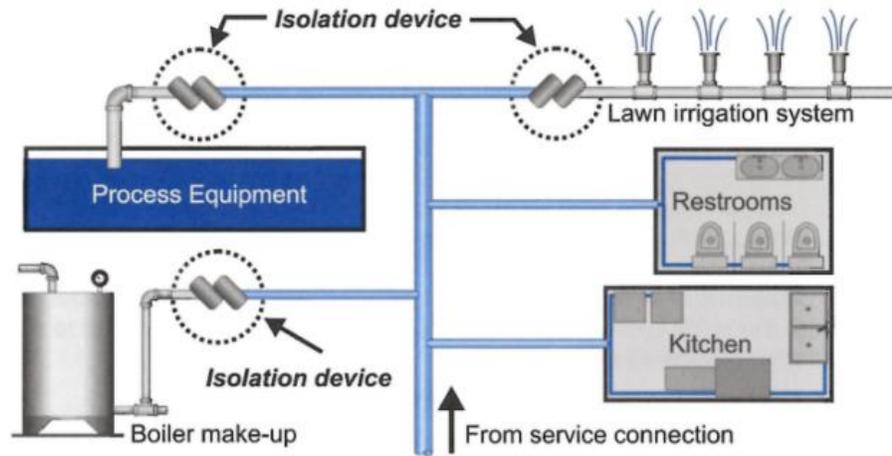
Purpose of NWCWD Policy Revisions

- Provide consistency with the NWCWD Cross-Connection Control Manual adopted in 2017, and clearly and accurately communicate CDPHE requirements to customers
- Protection by containment (direction given by the 2017 Manual) requires reduced pressure devices for cross-connection protection (except in special circumstances)
- Original Ordinance was drafted before NWCWD really had an approach to the Cross-Connection Control Program. This is essentially a new Policy created using some language from the original document



Containment vs. Isolation

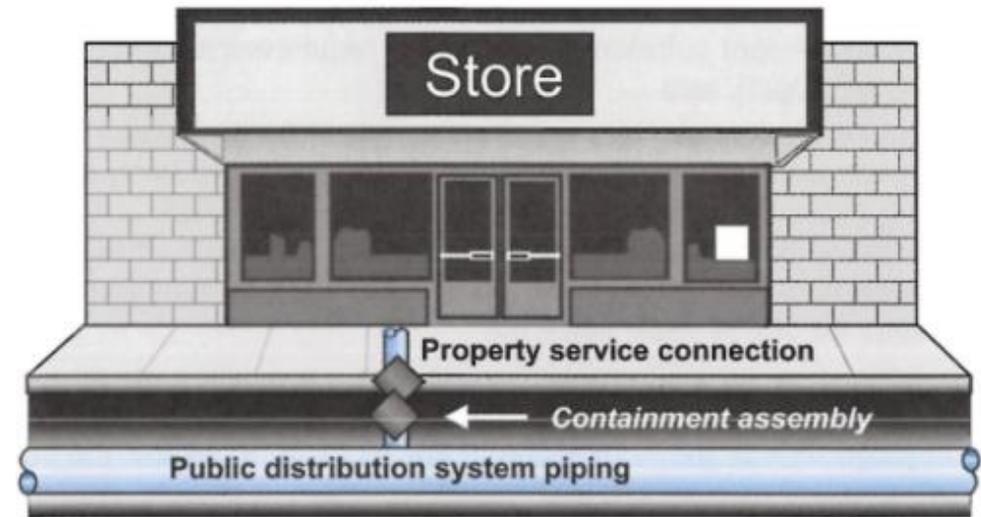
Backflow Prevention Education Council of Colorado – Formally known as the State's "Advisory Committee"



Isolation protection
Figure 4-2

NWCWD is responsible for activities, plumbing modifications, etc. on individual properties, in addition to annual testing/inspections.

This may still involve RP installations at individual locations



Containment protection
Figure 4-1

NWCWD is responsible for ensuring tests are performed annually

Graphics from Colorado Cross Connection Control Manual – August 2004



What is Required by CDPHE WQC Regulation 11.39?

- **Have a written program that covers the following:**
 - Process for conducting surveys
 - Legal authority to perform a survey, and legal authority to require customers to install/maintain/test backflow devices
 - The process the supplier will use to select a backflow prevention assembly or method
 - The process the supplier will use to track installation/maintenance/testing
 - The process the supplier will use to ensure backflow prevention assemblies are tested
- **Confirm cross connection is removed, suspended service to customer, or request CDPHE approve an alternative schedule in the following cases:**
 - Within 120 days of discovery of a cross connection, unless the cross connection is controlled with an approved device within this timeframe
 - Within 60 days of a failed test/inspection, if the device that produced the failed test is not repaired/replaced and retested in this timeframe



Why is NWCWD is requiring RPZ at each meter a cross-connection is discovered?

TABLE 6-2
Backflow Prevention Devices, Assemblies and Methods

Device, Assembly or Method ¹	Degree of Hazard				Installation ^{2,3}
	Pollution (Low Hazard)		Contamination (High Hazard)		
	Back Siphonage	Back Pressure	Back Siphonage	Back Pressure	
Air gap	X		X		See Table 6-3
Atmospheric Vacuum Breaker	X		X		Upright position. No valves downstream. Minimum of six (6) inches (152 mm) or listed distance above all downstream piping and flood level rim of receptor. ^{4,5}
Spill-Proof Pressure-Type Vacuum Breaker	X		X		Upright position. Minimum of six (6) inches (152 mm) or listed distance above all downstream piping and flood level rim of receptor. ⁵
Double Check Valve Backflow Preventer	X	X			Horizontal, unless otherwise listed. Requires one (1) foot (305 mm) minimum clearance at bottom for maintenance. May need platform/ladder for test and repair. Does not discharge water.
Pressure Vacuum Breaker	X		X		Upright position. May have valves downstream. Minimum of twelve (12) inches (305 mm) above all downstream piping and flood level rim of receptor. May discharge water.
Reduced Pressure Principle Backflow Preventer	X	X	X	X	Horizontal unless otherwise listed. Requires one (1) foot (305 mm) minimum clearance at bottom for maintenance. May need platform/ladder for test and repair. May discharge water.

1. See description of devices and assemblies in this chapter.
 2. Installation in pit or vault requires previous approval by the administrative authority.
 3. Refer to general and specific requirements for installation.
 4. Not to be subjected to operating pressure for more than 12 hours in any 24 hour period.
 5. For deck-mounted and equipment-mounted vacuum breakers, see Section 603.4.16.

- An RP is the only device that protects against **High Hazards** and **Back Pressure**
 - Once an RP is installed, NWCWD is protected and must only receive and track annual test results
- Customer could end up paying close to 2X
 - Cost of alternative device installation is not substantially different (not factoring in power)
 - If future surveys indicate vulnerability to high hazards and back pressure, customer could pay close to 2x as much
- Alternative Device Installation
 - Future re-survey to determine protection is still adequate
 - NWCWD must know what's going on at property (water usage) and pipe modifications



Why is NWCWD is requiring RPZ at each meter a cross-connection is discovered?

- **CDPHE allows the following devices but...**
- Air Gaps
 - Cannot be installed at the meter. Containment is not possible.
- PVBs
 - Does not protect against back pressure
- Double check valves
 - Does not protect against high hazards
 - **Appropriate when there is not adequate drainage for a RPZ, is subject to flooding, or where retro fits create an unreasonable burden (language adopted by Ordinance)**



NWCWD's Responsibilities with Variance

- Resurvey
 - ~500 Non-Single Family Residential Properties
 - ~700 Single-Family Residential Properties with Hobby Farms
- Ensure testing/ inspection at each device
- Ensure customer did not make modifications that:
 - Create a new cross connection
 - Create back pressure
 - Add/increase the hazard



Legal Counsel Discussion



Questions



5. Other Business