This document is adopted by Copper Mountain Consolidated Metropolitan District to promote and sustain the high quality of drinking water furnished to the District's water customers; to protect the District's public potable water supply system from the possibility of contamination or pollution by backflow, back siphonage or back pressure; to promote the elimination or control of existing cross connections, actual or potential; and to provide for the maintenance of a continuing program or cross-connection program.

A. The authority to implement and maintain a cross-connection control program is contained in the following legislative actions:

1. Colorado Revised Statutes (CRS) Section 25-1-114 and 25-1-114.1.
2. Colorado Primary Drinking Water Regulations (CPDWR) Article 12 Control of Hazardous Cross-Connections.
3. Colorado Cross-Connection Control Manual, Colorado Department of Public Health and Environment, latest edition.
4. Code of Federal Regulations Occupational Safety and Health Administration.
5. Copper Mountain Consolidated Metropolitan District Cross-Connection Control Resolution.
6. Regional Building Code
7. Colorado Plumbing Code
8. Uniform Plumbing Code of the International Plumbing and Mechanical Officials/International Plumbing Code.
9. Uniform Swimming Pool, Spa and Hot Tub Code.
10. Colorado Swimming Pool and Mineral Bath Regulations.
11. Uniform Solar Code.

B. Reference manuals adopted for guidelines on cross-connection Control:

1. Colorado Cross-Connection Control Manual, Colorado Department of Public Health and Environment, latest edition.
2. American Society of Sanitary Engineering, Backflow Prevention Assemblies Standards Program.
3. The Environmental Protection Agency, Cross-Connection Control Manual.
4. Manual of Cross-Connection Control, Foundation for Cross-Connection Control and Hydraulic Research (FCC and HR), University of Southern California.
5. Recommended Practice for Backflow Prevention and Cross-Connection Control AWWA Manual M14.
6. Definitions of terms used in this regulation are those contained in "Colorado Department of Public Health and Environment Cross- Connection Manual" available for review at the District Office.

C. General Requirements:

1. Building plans submitted to the Copper Mountain Consolidated Metropolitan District will be reviewed and approved prior to issuance of a Summit County building permit. Building plans must show:
   a. Water service size, type, and location
   b. Meter size and location
   c. Backflow prevention assembly size, type, and location
   d. Fire sprinkling system(s) service line, size and type of backflow prevention device
2. Backflow prevention devices are to be installed in an accessible location to facilitate maintenance, testing and repair.
3. All backflow assemblies shall be installed immediately downstream of the water meter.
4. Before installing the backflow prevention assembly, pipelines should be thoroughly flushed to remove foreign material.
5. In no case will it be permissible to have connections or tees between the meter and service line backflow prevention assembly.
6. In no case is it permissible to connect the relief valve discharge on reduced pressure assemblies into a sump, sewer, drainage ditch, etc..
7. Backflow prevention valves are not to be used as the inlet or outlet valve of the water meter. Backflow preventer test cocks should never be used as supply connections and should be plugged except when being tested.
8. In order to ensure that backflow prevention assemblies continue to operate satisfactorily, it will be necessary that they be tested at the time of installation and on an annual basis thereafter. Such test will be conducted in accordance with FCCC and HR performance standards and field test procedures as directed by the Colorado Department of Public Health and Environment. Test results to be provided to the District. (Cross reference: F -1 Testing and Maintenance)
9. Final inspections on new or retrofit installations will be performed only after the backflow assembly has been tested. The test results, plumbing permit, and test permit number will be supplied at the time an inspection is scheduled or to the inspector on the job site. Inspection may be scheduled by phone 48 hours prior to the time requested. Access arrangements shall be made by the technician. (Cross reference: F -1 Testing and Maintenance)
10. Copper Mountain Consolidated Metropolitan District shall inspect all installations.
11. All cost for design, installation, maintenance, repair and testing are to be borne by the customer.
12. No grandfather clause exists. All laws and regulations apply regardless of the age of the facility.
13. All glycol (ethylene or propylene), or antifreeze systems shall have an approved Reduced Pressure Zone assembly (RPBP) for containment.
14. Dry fire systems shall have an approved Reduced Pressure Backflow Preventers (RPBP) installed upstream of the air pressure valve.
15. Single-family residence with a fire sprinkler system and domestic water combined shall have a RPBP when no chemicals are used.

16. All fire sprinkler systems shall conform to the following sections of the National Fire Protection Association Standard 13 and 25.

D. Standards for Backflow Prevention Assemblies:

1. Any backflow prevention assembly required herein shall be of a model and size approved by Copper Mountain Consolidated Metropolitan District. The term "Approved Backflow Prevention Assembly" shall mean an assembly that has been manufactured in full conformance with the standards established by the latest version of the Colorado Department of Public Health and Environment Cross-Connection Control Manual and the Copper Mountain Consolidated Metropolitan District.

   Final approval shall be evidenced by a "Certificate of Approval" issued by an approved testing laboratory certifying full compliance with Colorado Department of Public Health and Environment standards and FCCC & HR Specification. The following testing laboratory is qualified to test and certify backflow prevention devices:

   Foundation For Cross-Connection Control and Hydraulic Research
   University of Southern California
   OHE 430-D University Park-MC 1453
   Los Angeles, California 90089-1453

2. Only approved backflow prevention assemblies shall be used. See latest Colorado Department of Public Health and Environment "Cross- Connection Control Manual" available for reference the District Office. See Chapter 4 for selection criteria.

3. Backflow preventers currently installed which are not approved shall be replaced with an approved assembly within three (3) years of adoption of this regulation unless the backflow preventer fails an annual operational test. If the device fails any such test, it shall be replaced within 48 hours with an approved device.

4. Backflow devices used on fire lines shall have outside stem & yoke valves (O.S & Y. valves) and be listed by the National Fire Protection Association.

E. Installation:

1. Backflow prevention assemblies shall be installed in accordance with drawings and standards contained in the Colorado Department of Public Health and Environment manual of Cross-Connection Control.

2. Backflow prevention assemblies installations shall be inspected and approved for use by Copper Mountain Consolidated Metropolitan District. Inspections can be scheduled by calling (970) 968-2390 at least 48 hours in advance of the desired inspection time.

3. All backflow assemblies shall be installed in the horizontal position. Vertical installation shall be acceptable when approved by ASSE or USC FCCC & HR specifications. Variance may be granted by review from the Copper Mountain Consolidated Metropolitan District.

4. A pressure vacuum breaker shall only be used where the assembly is never subjected to backpressure and installed a minimum of 12 inches above the highest piping or outlet downstream of the device in a manner to preclude backpressure.

5. An atmospheric vacuum breaker shall be used only where the assembly is:
   a. Never subjected to more than 12 hours continuous pressure

b. Installed as an isolation assembly
c. Installed with the air inlet in a level position and a minimum of six (6) inches above the highest piping or outlet it is protecting

6. No valves shall be permitted downstream of the device.

7. The single check valve is not considered to be a backflow prevention device.

8. Reduced pressure backflow preventers will be installed above ground. The unit should be placed at least twelve (12) inches above the finish grade to allow clearance for repair work. A concrete slab at finish grade is recommended. Proper drainage should be provided for the relief valve and may be piped away from the location, provided it is readily visible from above grade and the relief valve is separated from the drain line by a minimum of double the diameter of the supply line. Vault installations are strictly prohibited. Freezing is a major problem in this area. Precautions should be taken to protect above ground installations.

9. Reduced pressure zone backflow preventer may be installed in a basement provided the assembly is equipped with an adequate drain with an effective opening of twice the diameter of the assembly.

F. Testing and Maintenance:

1. It will be the duty of the customer/user at any premises where the backflow prevention assemblies are installed to have certified inspections and operational test made of the assemblies at least once per year. In those specific instances where Copper Mountain Consolidated Metropolitan District deems the hazard to be great enough, they will require certified inspections at more frequent intervals. These inspections and tests shall be at the expense of the water user and shall be performed by a certified technician approved by the Colorado Department of Public Health and Environment District Manager or Water Distribution and Wastewater Collection Systems Certification Council. An inspection of the assembly may be performed at any time complying with Section 7.0 of the Colorado Department of Public Health and Environment Cross- Connection Control Manual.

2. As necessary, the device(s) shall be repaired at the expense of the customer/user whenever the device(s) are found to be defective. Records or copies of all such test, repairs, or replacements shall be kept with a copy sent to:

   Copper Mountain Consolidated Metropolitan District
   0800 Copper Road Box 3002
   Copper Mountain, CO 80443

3. The technician who will perform the test shall call Copper Mountain Consolidated Metropolitan District for a test permit number which must appear on all forms.

4. Existing assemblies shall be tagged or sealed by the technician performing the test at the completion of the test.

5. All testing gauges shall be checked yearly for accuracy, or more often in the event of questionable readings, and be kept in good operating condition.

6. Copper Mountain Consolidated Metropolitan District retains the right to test or otherwise check the installation and operation of any containment assembly at any time to assure proper operation.

G. Right Of Entry:

1. A representative of Copper Mountain Consolidated Metropolitan District will carry credentials of his/her office. By previously arranged appointment and upon presentation of proper credentials, the Copper Mountain Consolidated Metropolitan District representative shall have the right of entry to inspect any and all buildings and premises for cross- connections relative to possible hazards. This right of entry shall be a condition of water service in order to protect the health, safety and welfare of the people throughout the Copper Mountain Consolidated Metropolitan Districts distribution system. Where building security is required, the backflow assembly(s) should be located in an area not subject to security. Questions regarding proper credentials should be directed to the Copper Mountain Consolidated Metropolitan District.

H. Violations:

1. Failure of the Customer to cooperate in the installation, maintenance, testing or inspection of backflow prevention assemblies required by this resolution shall be grounds for the discontinuance of water service to the premises or the requirement for an air-gap separation from the public potable water system.
2. Service of water to any premises may be discontinued by Copper Mountain Consolidated Metropolitan District if unprotected Cross- Connections exist on the premises. When any defect is found in an installed backflow prevention assembly, or if backflow prevention assembly has been removed or bypassed, the service may be discontinued. Service shall not be restored until such conditions or defects are corrected.
3. Discontinuance of service may be summary, immediate, and without written notice whenever, in the judgment of Copper Mountain Consolidated Metropolitan District, such action is necessary to protect the public potable water supply or the distribution system.

I. Implementation:

1. Within or before the time periods listed below, each type of customer shall notify Copper Mountain Consolidated Metropolitan District of their compliance with this regulation:

CUSTOMER CATEGORY	COMPLIANCE DATE
All new construction	As constructed
Commercial/Industrial	Within 12 months
Residential incorporating fire sprinklers	Within 18 months

Notification shall include type, brand, serial number and location of the appropriate assembly, together with the date of installation and test results.