



Technical Customer Advisory Committee

AGENDA

Members

Melissa Armijo	Dave Hill
Andrew Bernard	Amy Miller
Janie Chermak	Ege Richardson
Amy Ewing	Scott Verhines
Mike Hightower	

Thursday, March 1, 2018	4:00 PM	ABCGC – 7th Floor Conference Room 7096
1. Call to Order		4:00-4:05
2. Approval of Agenda		4:00-4:05
3. Approval of January 10, 2018 Action Summary		4:00-4:05
4. Presentation on Cross Connection Ordinance Update		4:05-4:45
5. Status Report on Pharmaceuticals and Personal Care Products Study		4:45-5:00
6. Public Comment		5:00-5:05
7. Adjournment		5:05

NOTICE TO PERSONS WITH DISABILITIES: If you have a disability and require special assistance to participate in this meeting, please contact the Water Utility Authority Office, Suite 5012, Albuquerque/Bernalillo County Government Center, phone 289-3100, as soon as possible prior to the meeting date.



Technical Customer Advisory Committee

ACTION SUMMARY

January 10, 2018

Members Present:

Melissa Armijo
Andrew Bernard
Amy Ewing
Dave Hill
Amy Miller
Ege Richardson
Scott Verhines

Members Excused:

Janie Chermak
Mike Hightower

Water Authority Staff Present:

Frank Roth, Senior Policy Manager
Carlos Bustos, Water Conservation Manager
Angelique Maldonado, Water Use Compliance Manager
Amos Arber, Xeriscape Incentive Inspector
Denise Rumley, Water Conservation Specialist
Kerry Bishop, Water Conservation Specialist

Meagan Oldham, Intern
Mo Hobbs, Intern
Shaun Patterson, Intern

Item 1 – Call to Order - Note presence of quorum

The meeting was called to order at 4:00 pm by Chair David Hill.

Item 2 – Approval of Agenda

Melissa Armijo made a motion to approve the agenda. Amy Ewing made a motion to move Public Comment before Item 4. Amy Miller seconded the motion to approve the agenda as amended. The motion passed on a 7-0 vote.

For: 7	Armijo, Bernard, Ewing, Hill, Miller, Richardson, Verhines
Against: 0	
Excused: 2	Chermak, Hightower

Item 3 – Approval of November 2, 2017 Action Summary

Ege Richardson made a motion to approve the action summary. Andrew Bernard seconded the motion. The motion passed on a 7-0 vote.

For: 7 Armijo, Bernard, Ewing, Hill, Miller, Richardson, Verhines
Against: 0
Excused: 2 Chermak, Hightower

Item 4 – Review and Recommendation of Water Conservation Plan, Drought Management Strategy, Water Waste Reduction Ordinance

Carlos Bustos provided an overview of the changes to the three documents. TCAC members asked questions and provided feedback. Melissa Armijo made a motion to recommend approval to the governing board the water conservation plan, the drought customer demand reduction plan, and water waste reduction ordinance. Ege Richardson seconded the motion. The motion passed on a 7-0 vote.

For: 7 Armijo, Bernard, Ewing, Hill, Miller, Richardson, Verhines
Against: 0
Excused: 2 Chermak, Hightower

Item 5 – Approval of Open Meetings Resolution

Scott Verhines made a motion to approve the resolution. Amy Miller seconded the motion. The motion passed on a 7-0 vote.

For: 7 Armijo, Bernard, Ewing, Hill, Miller, Richardson, Verhines
Against: 0
Excused: 2 Chermak, Hightower

Item 6 – Approval of 2018 Work Plan

Two items were added to the work plan: report on coordination with the city and county in capital program planning and status report on coordination efforts on the MS4 permit. Amy Ewing made a motion to approve the work plan. Melissa Armijo seconded the motion. The motion passed on a 7-0 vote.

For: 7 Armijo, Bernard, Ewing, Hill, Miller, Richardson, Verhines
Against: 0
Excused: 2 Chermak, Hightower

Item 7 – Election of Chair/Vice-Chair

Amy Ewing nominated Ege Richardson for the position of chair. Scott Verhines seconded the motion. The motion passed on a 7-0 vote.

For: 7 Armijo, Bernard, Ewing, Hill, Miller, Richardson, Verhines
Against: 0
Excused: 2 Chermak, Hightower

Ege Richardson nominated Dave Hill for the position of vice-chair. Amy Miller seconded the motion. The motion passed on a 7-0 vote.

For: 7 Armijo, Bernard, Ewing, Hill, Miller, Richardson, Verhines
Against: 0
Excused: 2 Chermak, Hightower

Item 8 – Public Comment

Elaine Hebard and Mike Neas provided comments to the committee.

Item 9 – Adjournment

The meeting concluded at 6:01 pm.

Compliance Division Update

Pharmaceuticals and Personal Care Products, Draft Cross Connection Ordinance

March 1, 2018

Mark Kelly, P.E.

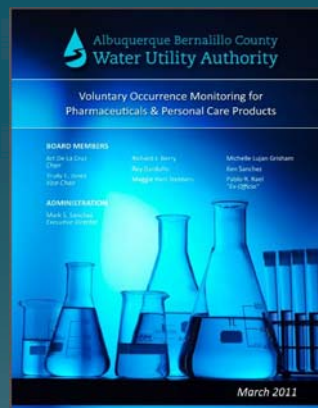


Pharmaceuticals and Personal Care Products Monitoring



PPCPs - History

- 2011 Report
 - Sampling 2009 – 2011
 - 113 PPCPs Tested
 - 5 Locations
 - Detections
 - Ibuprofen
 - Testosterone
 - Naproxen
 - Cholesterol



PPCPs - History

Figure a. Frequency of Occurrence of 113 PPCPs in Finished Drinking Water

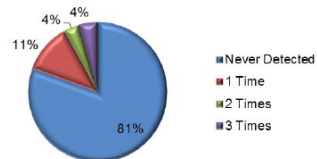
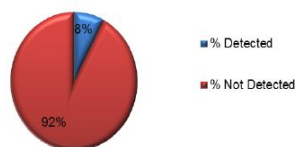


Figure b. Percent of Detections (After Blank Correction) vs. Total Analyses in Finished Drinking Water



PPCPs - History

Table 4a. Comparison of Substance Concentration in Finished Water to Commonly Prescribed Dose or Dietary Amount

Substance	Classification	Level Detected (ng/L)	Commonly Prescribed Dose or Dietary Amount	Volume of Water Needed to Consume to Meet Prescribed Dose or Dietary Amount		Years of Consumption at Two (2) Liters to Meet Prescribed Dose
				Liters	Gallons	
Ibuprofen	Analgesic	50.8	200 mg	3,940,000	1,041,000	5,390
Testosterone	Sex hormone	23.3	200 mg	8,580,000	2,270,000	11,800
Campesterol	Plant sterol	23.9	33.7 mg/Tbsp Vegetable Oil	1,410,000	372,000	1,930
Stigmasterol	Plant sterol	114	0.4 mg/Tbsp Vegetable Oil	3,510	927	5
Naproxen	Non-steroidal anti-inflammatory drug	210	250 mg	1,190,000	314,000	1,630
2-Hydroxy-Ibuprofen	Metabolite of Ibuprofen	545	200 mg	367,000	97,000	503
Beta-Sitosterol	Plant sterol	462	57.8 mg/Tbsp Vegetable Oil	125,000	33,000	171
Cholesterol	Sterol	4060	200 mg	49,300	13,000	67

PPCPs - Analytes

- Same as 2011 study
 - Pharmaceuticals
 - Steroids and Hormones
- Additionally Sucralose
- Grab vs Composite Sampling

PPCPs - Locations



PPCPs - Timing

- Timing to Match Rio Grande
 - Base Flow – January/February/March
 - High Flow – May/June
 - Irrigation – July/August
 - Low Flow – September/October/November
- Staggering of Sampling



PPCPs – Sampling Protocols

- Grab vs Composite Sampling
- Eliminating Contamination



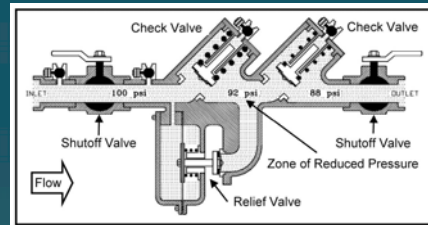
PPCPs – Report

- Similar to 2011
- Compare results from 2018 to 2011



Draft Cross Connection Ordinance

- Last updated 2008
- Basic Requirements
 - Installation of Backflow Prevention Devices
 - Testing of Backflow Prevention Devices
 - Certification of Repairmen and Testers



 Albuquerque Bernalillo County
Water Utility Authority

Clarifications

- Indoor/Outdoor Clarification
- Irrigation Well Disconnect Clarification
- Removal of Isolation – Containment Only



 Albuquerque Bernalillo County
Water Utility Authority

Clarifications

- Explicitly Prohibits Removal of an Assembly
- Explicitly Prohibits Unauthorized Modification of Assembly
- Late Fees
- Enforcement Options

Stakeholders



ALBUQUERQUE BERNALILLO COUNTY
WATER UTILITY AUTHORITY (WATER AUTHORITY)
CROSS CONNECTION PREVENTION AND CONTROL ORDINANCE

8-1. GENERAL PROVISIONS

8-1-~~12~~. SHORT TITLE.

This Ordinance shall be known and may be cited as “The Cross Connection Prevention and Control Ordinance.”

8-1-~~23~~. APPLICABILITY.

Compliance with this Ordinance shall be a precondition to receiving or continuing to receive water service from the ~~public water system~~ Water Authority.

8-1-3. PURPOSE AND POLICY.

(A) This Ordinance sets forth uniform requirements for, and applies to all customers of, the Water Authority.

(B) The purpose of this ordinance is to enable the Water Authority to comply with applicable state and federal laws, including the Safe Drinking Water Act of 1974.

(C) The objectives of this Ordinance are to:

(1) Protect the public potable water supply 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; and

(2) Establish and maintain a Cross-Connection control program ~~that~~ will systematically and effectively prevent the contamination or pollution of all potable water systems under the jurisdiction of the Water Authority.

(D) This Ordinance provides for monitoring, compliance and enforcement activities; establishes administrative and judicial review procedures; requires submission of test reports; and provides for the setting of fees for inspection and administration.

8-1-4. DEFINITIONS.

For the purpose of this Ordinance, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

APPROVED BACKFLOW PREVENTION ASSEMBLY. An assembly or other means designed to prevent backflow. The assembly shall be listed by the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California, accepted by the Water Authority, and shall be limited to the following method and five-four (4) types of assemblies unless otherwise stated:

(1) AIR-GAP. The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet conveying potable water into a tank, plumbing fixture, receptor and the flood level rim of the receptacle. An approved air gap shall be at least double the effective opening of the supply pipe or faucet and in no case less than one (1) inch above the flood level. An Air-Gap is the only Backflow Prevention method approved between potable water and sewage, and between reclaimed water and sewage.

(2) PRESSURE VACUUM BREAKER. Shall c~~Consists~~ of one independently operating spring-loaded check valve and an independently operating spring-loaded air inlet valve located on the discharge side of the check valve, two full-ported, resilient seated shut-off valves and equipped with two (2) properly located resilient seated test cocks.

(3) REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY. Shall c~~Consists~~ of two independently acting check valves together with a hydraulically operating, mechanically independent pressure differential relief valve located between the check valves, including two full-ported, resilient seated shut-off valves at each end of the assembly, and equipped with four (4) properly located resilient seated test cocks. A reduced pressure principle backflow prevention assemble is approved for containment backflow prevention assembly.

(4) SPILL-RESIST~~A~~ENT PRESSURE VACUUM BREAKER. Shall c~~Consists~~ of one independently operating spring-loaded check valve and an independently operating spring-loaded air inlet valve located on the discharge side of the check valve, two full-ported, resilient seated shut-off valves and equipped with properly located resilient seated test cock and vent valve.

(5) DOUBLE CHECK VALVE ASSEMBLY. Shall c~~Consists~~ of two independently acting, approved check valves, including two full-ported, resilient seated

shut-off valves at each end of the assembly and equipped with four properly located resilient seated test cocks. ~~Any existing double check valve assemblies are approved to continue in service provided that the assemblies can be maintained, tested and repair parts are available through the manufacturer.~~

ALTERNATE WATER SOURCE. Nonpotable source of water that includes, but not limited to gray water, on-site treated nonpotable water, rainwater, and reclaimed (recycled) water.

AUXILIARY WATER SUPPLY. Any water source on or available to a premise other than potable water from the Water Authority. Auxiliary water supply may include water from another purveyor's public potable water supply or any natural source such as a well~~the public water system.~~

BACKFLOW PREVENTION ASSEMBLY, CONTAINMENT. An approved assembly installed in a customer's water system to protect the public water system from an actual or potential threat of contamination or pollution of the public water system.

BACKFLOW PREVENTION ASSEMBLY, ISOLATION. An assembly installed within the customer's water system at the point of each cross-connection to protect the customer's potable water system from other non-potable water sources within the customer's water system.

BACKFLOW. The undesirable reversal of water flow.

BUILDING SUPPLY. The pipe carrying water from the public system or other source of water supply to a building or other point of use or distribution on the premises.

CERTIFIED BACKFLOW PREVENTION ASSEMBLY TESTER. A person who is currently certified by the Water Authority to test backflow prevention assemblies.

CERTIFIED BACKFLOW PREVENTION ASSEMBLY REPAIRMAN. A person who is a certified backflow prevention assembly tester and licensed by the appropriate mechanical classification to repair or replace backflow prevention devices in accordance with the New Mexico Construction Industries Licensing Act, NMSA 1978, §§60-13-1 through 60-13-59 ~~NMSA 1978~~, and is a current certified backflow prevention assembly tester ~~holds a current certificate issued~~ by the Water Authority.

HAZARD, CONTAMINATION. Contamination is a hazardous substance that may cause death, illness, injury, or the spread of disease if introduced into a potable water

system. Contamination includes, but is not limited to: corrosion inhibitors; anti-freeze solutions; chemical water treatment for boilers and cooling systems; fertilizers, herbicides and pesticides used in irrigation systems; heavy metals and total coliform bacteria found in fire systems; and other hazardous substances.

CROSS CONNECTION. An actual or potential connection between a potable water system and a non-potable water source.

CROSS-CONNECTION CONTROL CONTAINMENT. The protection of the public water system by the installation of an approved backflow prevention assembly ~~after~~at each service connection to a customer's water system from the public water system with no tees, branches or possible connection fittings or openings are allowed between the containment backflow prevention assembly and the service connection unless a variance is approved, ~~and accepted~~ by the Water Authority.

~~CROSS CONNECTION CONTROL ISOLATION. The protection of the customer's water system by the installation of an approved backflow prevention assembly within the customer's water system at the point of each and every cross connection.~~

~~CROSS CONNECTION ADMINISTRATOR. The person designated by the Water Authority to administer the cross connection control program and who is charged with certain duties and responsibilities by this Ordinance.~~

CROSS CONNECTION ENGINEER. The person designated by the Executive Director of the Water Authority as a technical expert in cross connection matters ~~and to help the Cross Connection Program Manager responsible for~~ enforc~~ing~~e the cross connection control ordinance. The Cross Connection Engineer shall be a registered professional engineer in accordance with the State of New Mexico Board of Licensure for Professional Engineers and Surveyors, pursuant to the Engineering and Surveying Practice Act, NMSA 1978, §§ 61-23-1 through 61-23-32, ~~NMSA 1978~~ and meet all the requirements of the job description approved by the Executive Director, and be a certified backflow prevention assembly tester.

CROSS CONNECTION OPERATIONS AND MAINTENANCE SUPERVISOR/INSPECTOR. The person (s) designated by the Water Authority to assist the Cross Connection ~~Program~~ Manager in the enforcement of the ~~cross connection control~~ e~~O~~rdinance and who is charged with certain duties and responsibilities by this

Ordinance. The Cross Connection Operations and Maintenance Supervisor/-Inspector shall be a certified Water Operator Level IV and be a certified backflow prevention assembly tester.

CROSS CONNECTION ~~PROGRAM~~-MANAGER. The person designated by the Water Authority to enforce the ~~cross connection control~~ Ordinance and who is charged with certain duties and responsibilities by this Ordinance. The Cross Connection Program ~~Manager~~ shall be a certified Water Operator Level IV and be a certified backflow prevention assembly tester.

CUSTOMER. Any person, association, corporation, or entity receiving Water Utility service, related products or services in the metropolitan Service Area. ~~The person responsible for payment of fees as determined pursuant to the Albuquerque Bernalillo County Water Utility Authority Water and Sewer Rates Ordinance as it may be amended.~~

CUSTOMER'S WATER SYSTEM. The water system on a customer's premises beginning at the service connection.

DOMESTIC SERVICE. Service line for potable drinking water.

EXECUTIVE DIRECTOR. The Executive Director of the Water Authority or his/her designee.

~~HAZARD, CONTAMINATION. Contamination is a hazardous substance that may cause death, illness, injury, or the spread of disease if introduced into a potable water system. Contamination includes, but is not limited to, corrosion inhibitors; anti-freeze solutions; chemical water treatment for boilers and cooling systems; fertilizers, herbicides and pesticides used in irrigation systems; heavy metals and total coliform bacteria found in fire systems; and other hazardous substances.~~

~~HAZARD, POLLUTION. A low hazard substance that will degrade the taste, color, odor or other aesthetic quality of the water if introduced into a potable water system, but will not cause death, injury or spread of disease. Pollution includes, but is not limited to, backflow of domestic water from tall buildings; backflow of domestic hot water from water heaters; and other similar low hazard substances.~~

NON-RESIDENTIAL WATER CUSTOMER. Any water customer who is served by the public water system and is classified in the ~~Albuquerque Bernalillo County~~ Water ~~Utility~~ Authority Water and Sewer Rates Ordinance as follows:

- (1) Commercial. Retail, offices, hotels, motels, shopping centers, none of which use process water in the conduct of business.
- (2) Industrial. Manufacturing or process facility, which is engaged in producing a product.
- (3) Institutional. Government buildings, hospitals, schools, and other facilities that provide public and quasi-public services.
- (4) Multifamily dwelling of three or more stories.

RESIDENTIAL WATER CUSTOMER. Any water customer who is served by the public water system and classified in the ~~Albuquerque Bernalillo County~~ Water ~~Utility~~ Authority Water and Sewer Rates Ordinance as follows:

- (1) single-family detached,
- (2) condominiums served by individual meters
- (32) townhouses served by individual meters,
- (43) duplexes served by individual meters,
- (4) triplexes served by common or individual meters,
- (5) mobile homes served by individual meters,
or, for the purpose of the Cross Connection Ordinance
- (6) multi-family dwelling of less than three (3) stories.

POLLUTION. A low hazard substance that will degrade the taste, color, odor or other aesthetic quality of the water if introduced into a potable water system, but will not cause death, injury or spread of disease. Pollution includes, but is not limited to, backflow of domestic water from tall buildings; backflow of domestic hot water from water heaters; and other similar low hazard substances.

PREMISES. A building, a tract of land with buildings, or parts of buildings thereon.

PRIVATE FIRE PROTECTION SYSTEM. A Private Fire Protection System begins at the property boundary or at the water utility easement boundary to a customer's premises. The Private Fire Protection System includes sprinkler, hose

connections, hydrants, reservoirs, tanks, stand-pipes, pumps, distribution pipes, and other appurtenances within a premises that are owned, operated and maintained by the customer for the purpose of fire suppression.

PUBLIC WATER SYSTEM. The potable water system that supplies water service to residential and non-residential water ~~users~~ customers within the service area of the Water Authority.

SERVICE AREA. Those parts of Bernalillo County and contiguous territory served by the Water Authority.

SERVICE CONNECTION. The terminal end of the water service from the public water system and point of delivery to the customer's water system, more particularly defined as follows:

(1) The service connection for a metered water service is the downstream end of the water meter or meter setter.

(2) The service connection for un-metered water services and ~~fire supply lines which serve~~ private fire protection systems ~~is~~ located at the property boundary or at the water utility easement boundary to a customer's premises; or

~~and~~ (3) _____ The service connection for a fire hydrant and all other temporary or emergency water services that is located at the point of connection to the public water system.

SEWAGE. Wastewater and excrement conveyed in sewers.

WATER AUTHORITY. The Albuquerque Bernalillo County Water Utility Authority.

WATER, POTABLE. Water delivered by the public water system intended for human consumption and meeting Federal and State drinking water standards.

WATER, NON-POTABLE. Water that does not meet Federal and State drinking water standards. Water that is not safe for human consumption or that is of questionable quality. Any water delivered by the non-potable water system and intended for irrigation, industrial or used for other allowable non-potable applications.

WATER, USED. Any water delivered by the public water system to a customer's water system after it has passed the service connection.

8-1-5. ADOPTION OF TECHNICAL SPECIFICATIONS.

The Water Authority ~~shall~~may adopt technical specifications to define backflow prevention assembly installation standards ~~from, but not limited to, the~~ International Association of Plumbing and Mechanical Officials (IAPMO) Uniform Plumbing Code (UPC), and the University of Southern California Manual of Cross-Connection Control, guidelines and criteria. The Water Authority shall update ~~the current Manual of Procedures and the Water Authority's portion of the City of Albuquerque S~~standards and Sspecifications for Ppublic Wworks Construction to incorporate the provisions of this Ordinance.

8-1-6. RESPONSIBILITY.

It shall be the responsibility of the Water Authority to administer and enforce the provisions of this Ordinance. This Ordinance also assigns responsibilities to customers, ~~and to~~ certified backflow prevention assembly testers, and repairmen as described in this section.

(A) Water Authority. The Water Authority shall be responsible for the protection of the public water system from contamination or pollution due to the backflow of contaminants or pollutants through the water service connection. The Water Authority shall enforce all ~~the~~ provisions of this Ordinance that relate to cross connection control by containment; shall approve all cross connection containment control backflow prevention assemblies; shall administer a continuing cross connection control program; maintain a customer and current backflow prevention assembly data base; and shall not knowingly install, maintain, or approve installation of a water service connection unless the public water system is protected, as required by this Ordinance.

(B) Customer. All customers shall be responsible, without further notice, for the prevention of contaminants, pollutants, water from alternate sources, or water from auxiliary water supplies from entering ~~the customer's potable water system and~~ the public water system. Customers shall provide approved backflow prevention assemblies as required by local plumbing codes and this Ordinance. Regardless of the location of the containment backflow prevention assembly, t~~t~~he customer's responsibility begins at the service connection and extends throughout the entire length of the water system within the premises. No tees, branches or possible connection fittings or openings are allowed between the containment backflow prevention assembly and the service

connection. Customers shall install, have tested, and maintain, at their own expense, backflow prevention assemblies as directed by the Water Authority. ~~Test reports shall be delivered to the Water Authority within seven (7) calendar days of testing. Accurate records of all inspections, tests, repairs, and replacement of backflow prevention assemblies shall be maintained by the customer for a period of three (3) years.~~

(C) Certified backflow prevention assembly tester. Only certified backflow prevention assembly testers are permitted to inspect and test backflow prevention assemblies. They shall complete and provide accurate test reports to the ~~Water Authority~~Cross Connection Manager and Customer. ~~within seven (7) calendar days of the test, submit test reports to the customer and~~ They shall submit test gauge calibration test reports annually to the ~~Water Authority~~Cross Connection Manager. ~~Report~~ They shall report to the ~~C~~customer and the ~~Water Authority~~Cross Connection Manager any discovered discrepancies or violations ~~which that~~ the tester may have observed during the course of testing a backflow prevention assembly.

(D) Certified backflow prevention assembly repairman. Only certified backflow prevention assembly repairmen are permitted to inspect, repair, replace, and test backflow prevention assemblies. They shall complete and provide accurate test reports to the ~~Water Authority~~Cross Connection Manager and Customer. ~~within seven (7) calendar days of the test, submit test reports to the customer and~~ They shall submit test gauge calibration ~~test reports~~certification annually to the ~~Water Authority~~Cross Connection Manager. ~~They shall r~~Report to the ~~C~~customer and the ~~Water Authority~~Cross Connection Manager any discovered discrepancies or violations which the repairman may have observed during the course of testing and or repairing a backflow prevention assembly. Such repairman shall not change the design, material or operational characteristics of a backflow prevention assembly without prior approval of the ~~Water Authority~~Cross Connection Manager.

8-1-7. REQUIREMENTS.

(A) Mandatory cross-connection control by containment:

(1) Effective February 15, 2009, all new non-residential premises ~~must~~ shall have a containment reduced pressure principle backflow prevention assembly approved by the Water Authority installed ~~at each~~after the domestic service connection

~~to the customer's water system or at a location approved by the Water Authority~~, as set forth in the Uniform Plumbing CodeUPC and this Ordinance.~~No tees, branches or possible connection fittings or openings are allowed between the containment backflow prevention assembly and the service connection.~~

(2) Effective February 15, 2009, all remodeled non-residential premises, when the work area of the building undergoing repairs, alterations or rehabilitation, as defined in the International Existing Building Code, exceeds 50 percent of the aggregate area of the building regardless of the costs of repairs, alteration, or rehabilitation, ~~must~~shall have a containment reduced pressure principle backflow prevention assembly approved by the Water Authority installed ~~after the~~ at each domestic service connection ~~to the customer's water system or at a location approved by the Water Authority~~, as set forth in the Uniform Plumbing CodeUPC and this Ordinance.~~No tees, branches or possible connection fittings or openings are allowed between the containment backflow prevention assembly and the service connection.~~

(3) All construction premises with temporary service connection shall have a containment reduced pressure principle backflow prevention assembly approved by the Water Authority installed at each temporary service connection to the construction site, as set forth in the UPC and this Ordinance.

(43) All non-residential irrigation water systems connected to the public water system ~~must~~shall have a pressure vacuum breaker, spill-resistant pressure vacuum breaker or a reduced pressure principle backflow prevention assembly installed after ~~at~~ the service connection ~~on the public water system~~. Such devices shall be approved by the Water Authority. No tees, branches or possible connection fittings or openings are allowed between the containment backflow prevention assembly and the service connection.

(54) All non-residential customers connected via piping to an alternative water source or an auxiliary water supply ~~non-potable water system~~ and the public water system shall install a containment reduced pressure principle backflow prevention assembly approved by the Water Authority ~~after~~ the potable service connection.

(65) All fire hydrants used for drawing water for filling tanks and tank trucks and for temporary irrigation systems must have an air-gap or approved

containment reduced pressure principle backflow prevention assembly ~~in accordance to the Manual of Procedures and~~ approved by the Water Authority, as set forth in the UPC and this Ordinance.

(76) Any residential premises having existing private wells, and who desire to connect to the public water system, shall have two options as follows:

(a) Customers shall permanently abandon the use of private wells by plugging the wells as accepted by the Water Authority prior to connecting to the public water system; or

(b) Customers who choose to maintain their private wells shall completely sever the private well from the premises' potable plumbing system ~~and shall install a reduced pressure principle backflow prevention assembly approved by the Water Authority at the terminal end of the water service from the public water system (e.g., service connection).~~

(87) Effective February 15, 2009, all new ~~fire supply line~~ services to private fire protection systems shall be equipped with a containment reduced pressure principal backflow prevention assembly approved by the Water Authority and Fire Marshal having jurisdiction installed after the service connection. No tees, branches or possible connection fittings or openings are allowed between the containment backflow prevention assembly and the service connection. ~~at each service connection.~~ A double check valve assembly approved by the Water Authority and Fire Marshal having jurisdiction may be installed instead of a reduced pressure backflow prevention assembly provided the private fire protection system ~~contains-meets or exceeds~~ ANSI/NSF Standard 60 ~~or and~~ 61 ~~water piping~~ throughout the entire private fire protection system, the fire sprinkler drain discharges into atmosphere, and there are no reservoirs, fire department connections nor, connections from auxiliary water supplies, ~~antifreeze nor other additives.~~

(98) Premises with existing private fire protection systems containing double check valve assemblies installed and approved by the Water Authority prior to 2009 are approved to continue in service as long as the device tests and functions properly.

(109) Effective February 15, 2009, all remodeled non-residential premises, when the work area of the building undergoing repairs, alterations or rehabilitation, as defined in the International Existing Building Code, exceeds 50 percent of the aggregate area of the building regardless of the costs of repairs, alteration, or rehabilitation with existing private fire protection systems without ~~any containment~~ backflow prevention assemblies ~~must~~shall be retrofitted with an approved ~~double-check valve~~reduced pressure principle backflow prevention assembly approved by the Water Authority and Fire Marshal having jurisdiction. Assemblies shall be installed at each private fire protection after the service connection to the customer's water system. Approved reduced pressure principle backflow prevention ~~double-check valve~~ assembly~~ies~~ ~~must~~shall be installed by a person who is licensed by the appropriate mechanical classification in accordance with the New Mexico Construction Industries Licensing Act. Fire sprinkler system hydraulic performance ~~must~~shall be verified by an engineer registered in accordance with the State of New Mexico Board of Licensure for Professional Engineers and Surveyors, pursuant to the Engineering and Surveying Practice Act, NMSA 1978, §§ 61-23-1 through 61-23-32, ~~NMSA 1978~~.

(110) Once an approved backflow prevention assembly ~~for containment~~ ~~has been~~is installed at a premise as a cross connection control containment assembly, the ~~customer, the backflow prevention tester or the backflow prevention repairman shall not have the device assembly shall not be~~ removed without prior approval from the Water Authority. ~~Permanent removal of a containment backflow prevention assembly will result in termination of water service and/or revocation of backflow certification.~~ Backflow-Containment backflow prevention assemblies that cannot be repaired must be replaced in kind per the terms of this Ordinance.

(12) Once an approved backflow prevention assembly for containment has been properly installed at a premises, the assembly shall not be modified.

~~.(11) Approved backflow prevention assemblies may be installed inside or outside the premise.~~

(B) Inspection of premises.

(1) Right of entry. Whenever necessary to make an inspection to enforce any of the provisions of this Ordinance, or whenever the Water Authority or its

authorized representative has reasonable cause to believe that there exists in any building or upon any premises, any condition which may endanger the public water supply ~~makes such building or premises unsafe as defined in this Ordinance~~, the Water Authority or its authorized representative may enter such building or premises at reasonable times to inspect the same or to perform any duty imposed upon the Water Authority by this Ordinance; provided that if such building or premises be occupied, ~~he/she~~ the Water Authority representative shall will first present proper credentials and demand entry; and if such building or premises be unoccupied, the Water Authority representative shall will first make a reasonable effort to locate the owner or other persons having charge or control of the building or premises and demand entry. If entry and/or inspection is refused, the Water Authority shall may immediately terminate water service to the premises.

(2) Inspection of premises. ~~The Water Authority shall schedule an inspection at a reasonable date and time and give the customer written notice prior to an inspection.~~ The purpose and authority to conduct such an inspection shall be disclosed in the notice to the customer. If actual or potential cross connections, which could result in backflow of contaminants, pollutants, ~~and~~ water from auxiliary water supplies, or water from ~~the non-potable water systems through the water service connection and into the public water system~~, are determined to exist during the premises inspection, the Water Authority shall ~~evaluate the hazards and~~ proceed as follows:

(a) ~~In the event a~~ contamination hazard of the public water supply is determined to exist, the Water Authority shall immediately terminate water service to the premises. The Water Authority shall restore water service to the premises once the contamination hazard has been controlled or eliminated.

(b) ~~In the event no~~ contamination hazard or substantial dangers are is determined to exist, but actual or potential cross connections require control by containment, the Water Authority shall give the customer written notice to install an approved ~~reduced pressure principle~~ backflow prevention assembly as a cross connection control containment assembly after ~~at~~ the service connection, at the customer's own expense. The backflow assembly shall be installed, inspected and

tested within ~~fifteen~~(15) calendar days from the date of the notice. For good cause, the Water Authority may extend the time to comply with the requirements of this Ordinance.

(C) Re-inspection. Re-inspection of premises shall be conducted by the Water Authority to verify corrective action has been implemented as required by this Ordinance.

(D) Installation of backflow prevention assemblies. Any contractor licensed by the appropriate mechanical classification in accordance with the New Mexico Construction Industries Licensing Act may install backflow prevention assemblies in accordance with the UPC and this Ordinance~~Manual of Procedures~~. The contractor shall be responsible for obtaining all required approvals, such as approved plans, permits and inspections. Such contractor shall not change the design, material or operational characteristics of a backflow prevention assembly without prior approval of the Water Authority.

(E) Tests and maintenance of backflow prevention assemblies. Customers shall have their existing containment and isolation backflow prevention assemblies tested at least once a year by a certified backflow prevention assembly tester. Assemblies that fail a test shall be repaired or replaced by a certified backflow prevention assembly repairman and immediately retested by a certified backflow prevention assembly ~~repairman~~tester. A test report shall be submitted to the customer and the Water Authority within seven (7) calendar days of test, or the test will be void, and retesting will be required. Tests and repairs shall be at the expense of the customer.

-All new installations of backflow prevention assemblies shall be tested immediately upon installation (if/when water service is available), and test reports submitted to the Water Authority within seven (7) calendar days, or the test will become void, and retesting would be required. Once the backflow prevention assembly is tested and operating properly, water service to the premises may continue. Water Authority shall inspect all newly installed containment backflow prevention assemblies.

-The ~~customer~~repairman and tester shall use separate tools and gauges for testing backflow prevention assemblies on potable water systems, such tools and gauges are never to be used on non-potable water, including alternate water sources.

They shall submit all test reports to the Water Authority and customer with seven (7) calendar days of the test, or the test becomes void, and retesting of assembly would be required. Water Authority shall provide the test report form to customers, certified backflow prevention assembly testers, and repairmen upon request. They shall submit test gauge calibration test report annually to the Cross Connection Manager. Tests performed with a test gauge that has not had a yearly calibration certification are void. Accurate records of all inspections, tests, repairs, and replacement of backflow prevention assemblies shall be maintained by the customer for a period of three (3) years.

(F) Existing, previously approved, backflow prevention assemblies. Any existing backflow prevention assemblies that were previously are not on the current list of approved backflow prevention assemblies may approved may be approved to continue in service provided that the assemblies test and can be maintained, tested and repaired with parts available through the manufacturer function properly. Whenever When required, obsolete assemblies are replaced, they shall be replaced with current, approved, backflow prevention assemblies.

(G) Certification of testers and repairmen. To be certified as a backflow prevention assembly tester, a person shall attend a training course that has been approved by the Water Authority and successfully complete the written and practical examinations administered as part of the approved training course. A person who is licensed by the appropriate mechanical classification in accordance with the New Mexico Construction Industries Licensing Act and attends and successfully completes the approved training course may be certified as a backflow prevention assembly repairman.

(H) Re-certification of testers and repairmen. A certified tester or repairman who wants-wishes to remain active as a backflow assembly tester or repairman shall renew their certification every three (3) years. To re-certify prior to existing certification expiring, testers and repairmen have the following options: (1) must complete an approved eight- (8) hour training course and accrue 16 hours of approved continuing education credits Complete an approved 40-hour training course.; or (2) Otherwise, the certified tester or repairman must complete an approved 40-hour training course. Prior

~~to existing certification expiring. c~~Complete an approved eight (8) hour training course and accrue sixteen (16) hours of approved continuing education credits. Testers or repairmen with non-expired certifications shall provide proof of training credits earned, and training course attended, prior to re-certification.

(I) Approved training courses. The Water Authority shall approve training courses. The approved course shall be conducted by an instructor who is a certified tester ~~and/or~~ repairman; duration of the course shall be at least ~~forty (40)~~ hours; and the minimum material covered shall be based on the University of Southern California's Foundation for Cross Connection Control and Hydraulic Research training course.

-The approved re-certification training course shall be conducted by an instructor who is a certified tester ~~and/or~~ repairman; duration of the course shall be at least eight (8) hours, and the course shall include rules, regulations, the Cross Connection Ordinance, and a minimum of six (6) hours practical training, and practical examinations.

-The instructor conducting the certification and re-certification courses shall administer the written and practical examinations. A performance of over 70% on the written examination, and satisfactory completion of the practical examination, constitutes successful completion of the course.

Administrator of the approved training course or approved re-certification training course shall submit the course syllabus once a year, or upon any changes to the syllabus for approval by the Water Authority.

~~(J) — Revocation. The Water Authority shall revoke certification of any certified backflow prevention assembly tester or repairman for any of the following reasons:~~

- ~~(1) — falsification of tests, records or reports;~~
- ~~(2) — failure to properly maintain test equipment;~~
- ~~(3) — failure to submit calibration test report annually;~~
- ~~(4) — alterations of an existing backflow prevention assembly without the approval of the Water Authority; or~~
- ~~(5) — failure to inform the Water Authority of an existing cross connection or a fire protection system without an approved backflow prevention assembly.~~

8-1-8. FEES.

The Water Authority shall assess fees associated with the implementation of this Ordinance as determined and set by the Water Authority Water and Sewer Rate Ordinance. The fees imposed by this Ordinance are as follows:

(A) Inspection fees. An inspection fee plus applicable gross receipts tax ~~shall~~ may be assessed for an inspection conducted on the customer's premises. The fee shall be assessed only to those customers whose premises are not in compliance with this Ordinance at the time of inspection and to recover the expenses incurred by the Water Authority to inspect the premises.

(B) Administrative fees. All customers shall be assessed an annual administrative fee plus applicable gross receipts tax for each backflow prevention assembly located at the premises. The fee shall recover the expenses incurred by the Water Authority to maintain records, process notices, enter test results and maintain the database.

(C) Late report fees. If a passing test report is not submitted by the due date, a late report fee may be assessed, beginning 30 days after the due date. (Per the Requirement Section above, the test report is only valid for seven (7) days after testing.)

(D) Non-existent containment backflow preventer assembly fee. Non-exempt service connections, which do not have a containment backflow preventer assembly, or have an unapproved backflow preventer assembly, may be assessed a containment backflow preventer assembly fee when the second notice of violation is issued for lack of an approved containment backflow preventer assembly.

(E) Unauthorized connection fee. Unauthorized tees, branches, connection fittings, or openings between the containment backflow prevention assembly and the service connection, may be assessed an unauthorized connection fee when the second notice of violation is issued for an unauthorized connection.

(F) Ordinance documents. Copies of this Ordinance may be obtained at the City Treasurer, Albuquerque/Bernalillo County Government Center for a feeWater Authority web site.

~~(D) Manual of Procedures. Copies of the Manual of Procedures may be obtained at the City Treasurer, Albuquerque/Bernalillo County Government Center, and Albuquerque, New Mexico for a fee.~~

(EG) Payment. All fees shall be payable to the office of the Water Authority Customer Services Division, Albuquerque/Bernalillo County Government Center, Albuquerque, New Mexico, and will become delinquent fifteen (15) days following the due date on the customer's statement.

(FH) Penalty. A penalty of 1.5 percent% per month shall be imposed on all delinquent accounts.

(GI) Responsibility of payment, liens and deposit. The persons responsible for payment of the fees included in this Ordinance shall be the customer upon whom charges are imposed under with the Water Utility Authority Water and Sewer Rates Ordinance as it may be amended.

8-1-9. ~~ALTERNATE METHODS TO ACHIEVE COMPLIANCE.~~

~~(A) Remote installations of containment backflow prevention assemblies. In instances where the containment backflow prevention assembly(ies) cannot be installed at the service connection, the customer may install the approved backflow prevention assembly(ies) at a remote location with the approval of the Cross Connection Engineer or the Cross Connection Program Manager.~~

PENALTIES AND VIOLATIONS

(A) Notice of Violation. When the Cross Connection Manager finds that a customer has violated, or continues to violate, any provision of this Ordinance or order issued by the Cross Connection Manager or Engineer, the Cross Connection Engineer may serve upon the customer a written notice of violation. Within fifteen (15) days after receipt of the notice of violation, the customer shall give the Cross Connection Engineer an explanation of the violation and a plan for correcting and preventing the violation, including the specific actions that may be required. Submission of a plan shall not relieve the customer of liability for any violations occurring before or after receipt of the notice of violation.

(B) Customers issued a third notice of violation may be required to relocate the containment backflow prevention assembly next to the water meter, property line or easement line.

(C) Revocation. The Water Authority may suspend or revoke a tester's certification for any of the following:

(1) falsification of tests, records or reports;

(2) failure to properly maintain test equipment;

(3) failure to submit test gauge calibration test report annually;

(4) recurrent submittal of inaccurate or incomplete test reports;

(5) alterations or removal of an existing backflow prevention assembly without the approval of the Water Authority;

(6) failure to inform the Water Authority of an observed cross connection; or

(7) certified backflow prevention assembly tester/repairman is working outside of his/her certification.

8-1-10. GROUNDS FOR TERMINATION OF WATER SERVICE UNDER THIS ORDINANCE.

(A) Any person who willfully removes, modifies or bypasses any approved backflow prevention assembly without prior approval of the Water Authority, falsifies tests records or reports, obtains water from a fire hydrant in violation of cross connection control requirements, connects ~~a building fire protection service~~ an alternate water source to potable water service, connects an auxiliary water supply to a normal potable water service, or connects Water Authority reclaimed water to non-potable water without approved backflow protection, thus creating a cross-connection, or otherwise violates any provision of this Ordinance may have water service terminated.

(B) In the event the Cross Connection Engineer or Cross Connection ~~Program~~ Manager determines that a potential contamination exists and may be a threat to the public water system, water service to the premises shall be terminated immediately. The Water Authority shall restore water service to the premises once the customer has controlled or eliminated the contamination hazard.

(C) Failure to install required backflow prevention assemblies as directed by the Water Authority, failure to conduct required tests, failure to submit accurate test reports within seven (7) calendar days of the test, failure to perform testing and maintenance of backflow prevention assemblies, or failure to allow the Water Authority entry into a premises shall constitute grounds for termination of water service to the premises. Service shall not be restored until such conditions or defects are corrected. If water service is terminated for any of these reasons, a turn-off and turn-on water service fee will be assessed to the customer as per the Water Utility Authority Water and Sewer Rates Ordinance.

(D) The Water Authority may terminate water service for non-payment of the fees included in this Ordinance and in accordance with the Water Utility Authority Water and Sewer Rates Ordinance as it may be amended.

8-1-11. TERMINATION OF WATER SERVICE; HEARING.

(A) The Cross Connection Engineer or the Cross Connection ~~Program~~ Manager may terminate the water service to the property for failure on the part of the customer to comply with any provision of this Ordinance.

(B) In order to terminate service, a written notice shall be sent to the customer giving him/her at least ten (10) calendar days notice of the proposed termination of water service and notice of his/her right to protest the Cross Connection Engineer's or Cross Connection ~~Program~~-Manager's action at a hearing.

(C) In the event a hearing is requested, the water service shall not be terminated until and in accordance with the decision of the hearing officer. However, the Cross Connection Engineer or Cross Connection ~~Program~~-Manager shall immediately terminate water service to the premises in the event that contamination is determined to exist or entry for an inspection to a premises is denied.

(D) The customer must request that a hearing be held by delivering such request in writing to the Executive Director on or before the date the water services are to be terminated. In the case of immediate termination, such written request shall be delivered within ten (10) calendar days after the date of termination.

(E) At such hearing, the customer may present evidence as the Hearing Officer finds relevant. The Hearing Officer shall make findings, conclusions and

recommendations to the Executive Director. The Executive Director may affirm, overrule or modify the decision to terminate the services. The decision shall be final.

(F) A non-refundable hearing fee of \$50.00 shall accompany each request for hearing pursuant to this Section.